國立政治大學英國語文學系碩士在職專班碩士論文

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九年級生使用英語電子繪本之可供性探究 -- 以新北市一所私立中學為例

AFFORDANCE OF ENGLISH ELECTRONIC PICTURE BOOKS FOR THE NINTH GRADERS – A CASE STUDY IN A PRIVATE HIGH SCHOOL IN NEW TAIPEI CITY

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AFFORDANCE OF ENGLISH ELECTRONIC PICTURE BOOKS FOR THE NINTH

GRADERS – A CASE STUDY IN A PRIVATE HIGH SCHOOL IN NEW TAIPEI CITY

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國立政治大學英國語文學系碩士在職專班

碩士論文提要

論文名稱：九年級生使用英語電子繪本之可供性探究 -- 以新北市一所私立中學為例

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論文提要內容：

　　本研究旨在探討九年級學生對於在英文課使用英語電子繪本的看法。本研究不僅探索學習者在閱讀英語電子繪本學習過程中認定的可供性，並縱向觀察學習者在時間軸下的英文認知和情意面項變化以及探究造成此變化背後原因，藉此以期盼提出適切的應用方法。

　　本研究採用質性個案研究。研究對象為新北市某私立中學兩名九年級學生。這兩名個案學生就讀研究者某一任教班級。教學研究者運用英語電子繪本為媒介進行每月一次為期四個月的閱讀課程。每次英文閱讀課程先後分成兩部分：（1）分享閱讀，教學者分別運用不同程度的多媒體英語電子繪本進行閱讀教學活動。（2）廣泛閱讀，教學者依照不同多媒體程度，提供學習者相關電子網站，讓學習者能自選閱讀材料。研究者透過問卷、半結構式訪談、刺激回憶法、自我回饋表、課室錄影觀察等蒐集資料。

　　研究結果顯示學習者藉由與教學者互動、與同儕互動、與閱讀材料和評量互動增進英語電子繪本教學閱讀。透過此三種可供性相互作用下，讓學習者在認知面向（包括聲韻覺識、聽覺衝擊、字彙建構、閱讀理解、跨界讀寫能力）以及情意面向（包含興趣、動機、自信和自主性）助於英語學習。雖然閱讀中不同多媒體程度的電子繪本帶給學習者在認知以及情意面相皆有正向及負向變化過程，但三項可供性仍持續運作並促進英語

學習。因此本研究建議在課堂帶領學生運用英語電子繪本教學時，教學者須注意提供學習者鷹架後，視學生學習情形而轉換教學角色，讓學習者能自主閱讀與學習。此外，教學者須提供學習者更多課堂時間自我閱讀，並且可依造學習者英文能力和學習態度調整其座位。再者，教學者可活絡教學活動，增加使用英語電子繪本教學方法，例如小組討論、競賽遊戲、角色扮演、讀者劇場、戲劇演出等。此外，建議教學者能融入英語教學課程規劃，讓學習者能利用正規課堂更充裕時間去浸潤在英語電子繪本內學習英文，並提供貼近學生真實生活和程度的英語電子繪本，增加學生英文閱讀與學習機會。最後，本研究亦提供教師教學現場以及未來研究方向之建議。

關鍵字：可供性、英語電子繪本、分享閱讀、廣泛閱讀

Abstract

This research aims to investigate how the ninth graders' perspectives towards the implementation of English electronic picture books in English class. In particular, it explores not only the affordance perceived by learners in the process of reading electronic English picture books but also observes learners' cognitive and affective changes of English learning across time.

Adopting a qualitative case study design, this research recruited two Taiwanese male ninth graders from one class in a private high school in New Taipei City taught by the teacher researcher. This class was taught how to read electronic picture books once a month for four months. Every reading class was divided into two parts: (1) in shared reading, the instructor guided reading through employing an electronic English picture book with distinct levels of multimedia features (a total of four picture books were used); (2) in extensive reading, the instructor provided leaners with websites where there were different electronic English picture books for learners to choose so that they could read materials autonomously. The data collected for the research included questionnaires, semi-structured interviews, stimulated recalls, student written feedback, and classroom observations.

The important findings are listed as follows. First, learners' English was facilitated through interaction with the instructor, the peers, and the reading materials and assessment. Second, through the interdependent function of the three affordances, learners have changed in the presence of cognitive domain (phonological awareness, auditory impact, lexical development, and trans-literacy) and affective domain (interest, motivation, confidence and autonomy). Although there were positive and negative changes in the reading process of the implementation of electronic English picture books with different multimedia levels, the three affordances functioned consistently, fostering English learning.

Based on the research findings, six pedagogical suggestions are provided. First, the two participants advised to incorporate electronic picture books English reading into English curriculum so that learners would have more chances for being immersed in electronic English picture books when learning English in regular courses. Second, it is necessary for instructors to provide learners with electronic English picture books close to their real life and corresponding to their levels, which is helpful in increasing learners' opportunities of English reading and learning as well. Third, the instructors were advised to change their roles according to learners' learning conditions. Fourth, the instructors should provide learners more self-reading time in class. Fifth, they could arrange seats according to leaners' English proficiency and learning attitude. Sixth, the instructors could activate teaching activities with electronic English picture books, such as small-group discussions, competitions, role-play, reader's theater, and dramas.

Key words: affordance, electronic English picture books, shared reading, extensive reading

CHAPTER 1

INTRODUCTION

Background and Motivation

There is no doubt that English has been of great importance for the academic

field in Taiwan. Given the primacy of reading, writers for English textbooks adopt

articles which contain a wide variety of topics to make it accessible for students to

broaden their horizons and enhance their literary experience. However, these texts are

often criticized for their lack of authenticity. Accordingly, supplementary teaching

materials are needed to provide learners with authentic texts which may increase their

motivation and interest. One of the useful authentic materials is picture books. The

books with vivid and dramatic illustrations have "the potential to act as a magnifying

glass that enlarges and enhances the reader's personal interactions with a subject

(Vacca & Vacca, 2005, p. 161). In particular, the use of electronic picture books may

better boost teenagers' reading motivation, interest, and comprehension, as teenagers

nowadays are getting accustomed to using multimedia to gain knowledge.

Viewed as "the digital equivalent of a printed page" (Cahill & McGill-Franzen,

2013, p.31), electronic picture books with diverse designs and interactive functions

offer a supportive, intriguing, and stimulating digital learning world for students to

explore. Lin and Lin (2012) noted that the combination of visual and auditory input

"not only offers students an escape from routine lectures in traditional classrooms but

also promotes and encourages interest in learning" (p. 54). Thus, it is believed that

electronic picture books engage students in meaningful pleasure learning.

A great number of studies related to electronic picture books have been

conducted on toddlers or elementary school students. For example, Trushell, Burrell,

and Maitland (2001, 2003) contended that interactive features in-built in electronic

picture books appeal to young learners. Hoffman and Paciga (2014) also supported

that electronic picture books facilitate the development of kids' language and literacies "at least to the same extent as printed books" (p.386). As such, reading electronic picture books may provide them with a relaxing learning environment to reduce their stress as well as help develop literary skills and strategies. Although with few exceptions (Fu, 2008; Lee, 2008; Liu, 2006), the research mostly focus on young learners, there has been little research focusing on the investigation of integrating English electronic picture books into the curricula for adolescents in Taiwan, especially the ninth graders who are under increasing academic pressure. It is believed that animation, sound effects, and hypermedia (Fu, 2008; Lee, 2008) incorporated in reading electronic picture books may flavor these adolescents' learning styles, lower their anxiety, and facilitate their performance.

In addition, prior research on electronic picture books has focused on the effects of distinctive levels of interactive digitalized picture books on reading achievement and motivation (Chang, 1998; Chen, 2002; Huang, 1996; Huang, 1997; Lee, 2008; Lin, 2002; Tseng, 2003; Wu, 1999; Yang, 2010; Yokota & Teale, 2014). Nevertheless, there was disagreement among the past studies carried out to analyze the contents, visual and aural functions, and interactive effects in the digital reading process. Multimedia features embedded in electronic picture books were highly recommended (Chera &Wood, 2003; Davis, 1995; Day & Bamford, 2002; Doty et al.,2001; Fry, 1991; Hung, 1997; Kim & Hall, 2002; Labbo, 2000; Smith, 2001; Tseng, 2003; Underwood & Underwood, 1998) to increase students' reading comprehension and word recognition, while those features were regarded as impediments distracting students' attention from the development of the textual relationship (Bus, Verhallen & de Jong, 2009; de Jong & Bus, 2003; Labbo, 2000; Lefever-Davis and Pearman, 2005; Lewin, 2000; Lin, 2002; Trushell et al., 2003). Such contradictory claims supported by quantitative evidence may simplify the underlying factors, such as the topics of the

texts, the intervention of multimedia, teachers' teaching methods, students' learning history, and peer interaction. Therefore, further detailed information and implied reasons are discovered through qualitative research in this study.

Previous research on electronic picture books has also examined the acquisition of such basic language capabilities as phonological awareness (Chera & Wood, 2003; Lewin, 2000; Segal-Drori et al., 2010), word recognition (Chiou, 2009; Hsu, 2005; Huang, 2004; Korat, 2010; Korat & Shamir, 2007, 2008; Lee, 2003; Lefever-Davis & Pearman, 2005; Lewin, 2000; Liu, 2009; Segers & Verhoeven, 2002; Segal-Drori et al., 2010; Tang, 2004) and traditional literacies (Lubke, 2012). A large number of studies have focused on cognitive domain, thus examining the influence of electronic picture books on reading comprehension (Bus, Verhallen, & de Jong, 2009; Doty, Popplewell & Byers, 2001; Greenlee & Smith, 1996; Ju, 2004; Labba & Kuhn, 2000; Lin, 2002; Mathew, 1996; Moody, Justice, & Cabell, 2010; Ricci, 1998; Tseng, 2003; Underwood & Underwood, 1998; Vacca, Vacca, & Mraz, 2005; Yang, 2005). Such research has found that electronic picture books positively foster the development of not only bottom-up skills but also top-down abilities.

In addition to the aforementioned competences from a cognitive perspective, some researchers have investigated the influence of electronic picture books on reading attitudes, interest, and motivation in regards with affective domain. Matthew (1996) advocated that interacting with digitalized books "has the potential to be a powerful motivating force for even the most reluctant readers" (p.380). Chu (1995) also claimed that it was an "exciting, meaningful, and most of all, enjoyable" reading experience for learners to utilize digitalized picture books (p.361). Although many investigators have highlighted the multiple and stimulating functions of electronic picture books, the dynamic relationship between the environment and the learners is less presented in the prior research. The importance of such action-oriented mutual

interaction has been recognized as affordance by van Lier (2000, 2004a, 2004b, 2007, 2008b) and cannot be captured without a qualitative research method.

Purpose of the Study

In order to fill these gaps, the present study aims to explore the learning process of the Taiwanese ninth graders' use of electronic picture books through a qualitative case study approach under van Lier's notion of affordance. The research question is presented as follows:

(1) What kinds of learning chances and milieu perceived by learners are afforded in the process of implementing electronic picture books in learning English and how did they change across time?

It is hoped that this study may give a holistic and in-depth understanding of the ninth graders' thoughts and make some suggestions to both instructors and students who are interested in using English electronic picture books.

CHAPTER 2

LITERATURE REVIEW

This section presents the literature relevant to the present study in

five parts: (1) the definition of electronic picture books, (2) types of electronic picture

books, (3) significance of electronic books, (4) the implementation of electronic

picture books in teaching, and (5) the framework of van Lier.

It is noticeable that electronic picture books have already changed the nature of

reading. They are regarded as "the e-equivalent to picture books – have become a

major force" (Yokata & Teale, 2014, p.577). In other words, the prominent trend of

using electronic picture books may change the publishing industry and influence the

readers. The following section starts with the definition of electronic picture books,

elaborate their distinct features, and then demonstrates why employing electronic

picture books is important and helpful in complementing the learning context.

Electronic Picture Books

The Definition of Electronic Picture Books

Electronic picture books refer to digitalized picture books which are available in

many forms, including online, CD-ROM, and even in download applications, or the

so-called "app." They share some features with traditional printed picture books;

namely, the combination of printed text and illustrations are intertwined to make

stories progress. Compared to the static printed ones, electronic picture books are

equipped with distinct multimedia features. Animations, music, sound effects, sound

files, highlighting effects, and other user-activated hotpots in electronic picture books

enable students to explore their reading by increasing the "level of user interactivity

and the extent of user control in choosing directions" (Chera & Wood, 2003, p.35). In

addition to the typical multimedia functions, some electronic picture books have

supportive hotpots which enable students to read photographs or maps, to watch extra

video clips, and to navigate attached texts so to develop an in-depth understanding of the subject matter.

Types of Electronic Picture Books

Generally, electronic picture books are presented in multifaceted formats with different purposes and functions. In the following session, three types of electronic picture books are discussed.

First, Tseng (2003) categorized electronic picture books into two aspects: non-interactive and interactive. The former presents the content in a sequential order, in which users could not change the ending of the story; while the latter utilized the interactive features accessible with games and activities, in which the story development controlled by learners may be diverse.

Secondly, Huang (1996) stated that based on the process of the plot of stories, electronic picture books may appear in four types: (1) single point, (2) single line, (3) multiple line, and (4) conditional line. Single point electronic picture books refer to the electronic books with stories developed from the beginning to a single ending and so readers can start, stop, pause, forward, and rewind in the process. Single line electronic picture books refer to the electronic picture books with fixed scenes presented in the stories. Different from the previous two types, multiple line electronic picture books allow readers to transfer different scenes in the books, thereby resulting in different endings. Last, in the fourth type, learners' interactive speeches and response to the digitalized texts may influence the plots and change the endings.

Last, in terms of forms, electronic picture books can be classified into four categories: (1) printed text presented visually on a screen, (2) digitalized printed picture books with built-in digital features, (3) book-like configuration with multimedia enhancement, and (4) specially made in the digital format (Anderson-Inman, Horney, & Anderson-Inman, 1997; Buckleitner, 2011; Unsworth, 2006;

Yokota & Teale, 2014). Specifically, in the first category, the printed text presented visually on a screen means digitalized the printed electronic picture books without any additional multisensory information. In the second category, technology is employed effectively to add animations, music, sound effects as stimulations to foster the development of students' comprehension and interests. In the third category, electronic picture books with multimedia enhancement are incorporated not only with aforementioned technology but also with personalized interactive devices, such as rates of scene and character change to conform to individual requirements. In the fourth category, electronic picture books are only published in a digitalized format or designed as apps widely accessible for users. This classification scheme was exploited in this study to investigate how the ninth graders respond to electronic picture books with distinct density of digitalization. That is, the four types of digitalized storybooks were distributed from the basic digital level to the advanced one according to the intervention and reinforcement of multimedia.

Significance of Electronic Picture Books

Although some investigators argued that there are some drawbacks in reading electronic picture books such as lack of well-organized e-picture books, distracting learners' attention, impeding English learning in reading electronic picture books (Bus, Verhallen & de Jong, 2009; de Jong & Bus, 2003; Labbo, 2000; Lefever-Davis and Pearman, 2005; Lewin, 2000; Lin, 2002; Trushell et al., 2003), many other researchers claimed that electronic picture books made students engaged in learning and fueled their interests if selected and mediated well (Chera &Wood, 2003; Davis, 1995; Day & Bamford, 2002; Doty et al.,2001; Fry, 1991; Hung, 1997; Kim & Hall, 2002; Labbo, 2000; Smith, 2001; Tseng, 2003; Underwood & Underwood, 1998). Furthermore, Lin and Lin (2012) also suggested that electronic picture books with interactive features are appealing to ninth graders in northern Taiwan, thereby

stimulating their motivation and competence towards English reading. Indeed, picture books with the multimedia functions provided by technology may foster language learning.

In the following section, the significance of electronic picture books is discussed in two domains: the cognitive domain, including (1) phonological awareness, (2) auditory impact, (3) lexical development, (4) reading comprehension, and (5) trans-literacies, and the affective domain, or (1) interest, (2) motivation, (3) confidence, and (4) autonomy.

Cognitive Domain

In the cognitive domain, five aspects of the significance of electronic picture books are partially of interest. First, some researchers considered that auditory features implemented in electronic picture books may support authentic conversations about story elements and raise students' phonological awareness (Chera & Wood, 2003; Lewin, 2000; Segal-Drori et al., 2010).

Second, the remarks made by different characters in the books made static dialogue come alive, which may engage students in comprehensible and meaningful texts. For example, Verhallen, Bus, and de Jong (2006) claimed that students were able to make inferences from the characters' movements, emotions, and mentality through multimedia features. Consequently, it was supported that learners constructed the psychological guessing game (Goodman, 1970) relying on the auditory impact of electronic picture books, which can encourage learners' investment as well as improve their comprehension.

Third, distinctive components and functions in electronic picture books allowed learners to develop traditional literacy skills such as phonological awareness, lexical development, and reading comprehension (Bus & de Jong, 2012). Additionally, Larson (2010) and Lubke (2012) claimed that the development of children's

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traditional literacy was advanced by reading well-organized electronic picture books. In traditional literacy skills, lexical development can be viewed as one of the sub-components of language acquisition. Electronic picture books were supportive in the area of lexical development. (Hsu, 2005; Korat, 2010; Korat & Shamir, 2007, 2008; Lefever-Davis & Pearman, 2005; Lewin, 2000; Segal-Drori et al., 2010; Segers & Verhoeven, 2002; Tang, 2004). For example, Tang (2004) indicated that acquiring English vocabulary with electronic picture books was highly supported by her study with a group of seventh graders in her study.

Fourth, animations and interactivity helped deepen the understanding of significant story events. In this regard, the benefits of foreign language learning through electronic picture books facilitated the development reading comprehension (Bus, Verhallen, & de Jong, 2009; Lin, 2002; Ju, 2004; Moody, Justice, & Cabell, 2010; Tseng, 2003; Vacca, Vacca, & Mraz, 2005; Yang, 2005). Many researchers strongly recommended that the audio element be incorporated with reading input (Boone & Higgins, 2003; Bus et al., 2009; Davis, 1995; Day & Bamford, 2002; de Jong & Bus, 2004; Doty et al., 2001; Fry, 1991; Grimshaw et al., 2007; Kim & Hall, 2002; Korat & Shamir, 2007, 2008; Korat, 2010; Labbo, 2000; Lefever-Davis & Pearman, 2005; Lewin, 2000; Matthew, 1996; Shamir et al., 2008; Segal-Drori et al., 2010; Smith, 2001; Trushell et al., 2013; Underwood & Underwood, 1998; Verhallen et al, 2006) because it supports students to interpret audio and visual cues for better reading comprehension. For instance, Verhallen, Bus, and de Jong (2006) noticed that the capability and strategies of reading printed text could be positively transferred to foster digital reading comprehension, and vice versa. Specifically, visual and auditory features incorporated into electronic picture books add the creation of mood in a story, thus fostering learners' reading comprehension.

Fifth, in addition to those traditional literacy skills, trans-literacies which could not be perceived by reading printed books (Buckleitner, 2011; Moody et al., 2010; Smith, 2001; Unsworth, 2003) were also facilitated through the employment of electronic picture books. To be more specific, trans-literacy is the repertoire that enables readers to understand or communicate in a wide variety of media platforms. It is also closely related to digital reading or online reading. Provided with authentic reading texts on-screen, learners are introduced to the real society where picture books have gradually been digitalized (Roskos & Brueck, 2009) so that they can apply what they acquire in the digitalized reading to the genuine world as well as increase the ability to communicate and comprehend across all communications platforms.

In conclusion, cognitive development, such as phonological awareness, auditory impact, lexical development, reading comprehension, and trans-literacies can be enhanced through reading electronic picture books.

Affective Domain

Electronic picture books not only help students with those cognitive elements indicated above but also provide opportunities for learners to be stimulated and motivated. To be more precise, auditory components effectively made a contribution to the mood of the story (Hoffman & Paciga, 2014) and thus they are highly recommended to be incorporated into electronic picture books to make learners involved in the texts. Besides music and sound effects, Ho (2002) claimed that animations could directly convey emotions and elicit compassion to learners. Electronic picture books comprising a wide variety of topics are beneficial for students to develop individual interests and acquire life experiences, and make connections to their genuine life experiences (Blake et al., 2006; McAurthur et al., 2006). Learners can echo with the characters and stories in the electronic picture

books and feel some connections with the materials, which promote meaningfulness for them. Furthermore, learners can escape from tedious lectures and get motivated in pleasure reading (Davis, 1995; Day & Bamford, 2002; Fry, 1991; Kim & Hall, 2002; Labbo, 2000; Smith, 2001; Underwood & Underwood, 1998). In this respect, learners can gain supports with animations and auditory features supplemented because they do not have to totally rely on semantic and syntactic components.

Students get bored easily by reading traditional books; however, electronic picture books transfer "reading" to "watching". "Watching" the digitalized texts can satisfy learners' psychological needs (Feng, 1998). Labbo (2009) and Smith (2001) claimed that reading electronic picture books could be "highly engaging and enjoyable learning experience for both adult and child" (Hoffman & Paciga, 2014, p.379) to trigger users' motivation to read. Therefore, the results showed that electronic picture books could support students' emotional requirements.

Learners' autonomy is another crucial affective factor for language learning. In some electronic picture books, individuals can make adjustments to turn on or off some multimedia features while reading (Hoffman & Paciga, 2014). Likewise, personalized digital reading gives learners chances to choose suitable interactive features (Reinking & Schreiner, 1985). That is, learners are empowered to have alternatives to decide where to begin the exploration of the story. In this respect, students are motivated to read and their reading attitude became more positive (Adam & Wild, 1997; Arnold, 2009; Chu, 1995; Huang, 2004; Lefever-Davis & Pearman, 2005; Matthew, 1996; Segers & Verhoeven, 2002; Smith, 2001; Underwood & Underwood, 1998).

Furthermore, Asraf and Ahmad (2003) and David (1995) concluded that readers' self-selection and the implied philosophy of enjoyment from reading in large quantity made the use of e-books suitable for independent readers. Arnold (2009) also

explained that electronic picture books not merely increased motivation to read but enhanced confidence and ability in L2 reading.

In sum, the previous studies have focused on the behavioral outcomes of learning from either cognitive or affective dimensions. However, there is no clear cut in the process of language learning. Instead, it is in a continuous, progressive, and dynamic nature, which is in line with the claim that language learning was "influenced by the past history, interacted with the present exposure, and expected for the future" (van Lier, 2007, p.58). This illustrated that students did not only learn from the past (That is "this is where I come from") but also the present and the future (That is "this is what I am doing right now; this is where I want to go"). Therefore, research on language learning cannot overlook its complex evolution or overemphasize learners' immediate responses. In this respect, the current study aimed to explore the interaction of implementation of English electronic picture books in a multi-dimensional and holistic perspective.

The Implementation of Electronic Picture Books in Teaching

The employment of electronic picture books will be discussed in the three sequential stages of teaching: pre-teaching, in-teaching, and post-teaching.

Pre-teaching: How to Select a Quality Electronic Picture Book

High quality multimedia features embedded in electronic picture books will enrich and extend the plot and information to assist readers better understand story elements and concepts presented. Cahill and McGill-Franzen (2013) advocated that "quality literature interactions start with quality literature" (p.33); likewise, poor quality reading materials gave rise to bad reading experience (Ciampa, 2012; de Jong & Bus, 2003; Vardell, 2008a). Labbo and Kuhn (2000) contended that "considerate" electronic picture books "include multimedia effects that are congruent with and integral to the [text]" (p. 187), which facilitated students' comprehension and other

capabilities mentioned above. Without "considerate" electronic picture books, multimedia and interactive features would be deemed as hindrance distracting students' attention from the texts and led to seductive interaction effect (Garner, Gillingham, & White, 1989; Mayer & Anderson, 1991; Ozdemir & Doolittle, 2015; Park, Moreno, Seufert, & Bruken, 2011; Schugar, Smith, & Schugar, 2013).

It is little surprise that the quality of electronic picture books varied (de Jong & Bus, 2003; Korat & Shamir, 2004; Labbo, 2000); consequently, "considerate" digital picture books must be evaluated and chosen carefully before incorporating into curricula. Well-constructed electronic books should be tailored to meet not only teachers' demands but also students' needs. It is advisable to take the following considerations into account (Schugar, Smith, and Schugar, 2013, p. 620).

(1) Do the interactions provide support that would help a reader make a text-based inference or understand difficult vocabulary?

(2) Are there more supporting and extending interaction than distracting interactions?

(3) Are the interactions time-consuming, or are they relatively brief in nature?

(4) How often are interactions used in the book? Are the interactions strategically placed to enhance motivation without distracting the reader from the text? Do the interactions occur within the text, or are readers directed to another screen while reading?

Hoffman and Paciga (2014, p.386) who adapted Yokota and Teale's version and claimed that additional considerations should be taken into account for selecting high-quality e-books:

(1) Is the text appropriately presented in digital format?

(2) Does the story take appropriate advantage of features the digital world allows beyond what is possible in print?

(3) Do the interactive features within the text maintain the integrity of central meanings of the text?

(4) Do any supplementary features (add-ons to the text) align with central meanings of the text?

In addition to these criteria for selecting quality electronic picture books, teachers should be mindful of providing various types of the books to meet individuals' requirements some to construct the learner-friendly environment and meaningful teaching activities. Normally, class members are heterogeneous; in other words, low-achievers as well as high-achievers come in the same class. As for struggling readers, electronic picture books are beneficial for them to read more challenging texts with the aid of digital medium which creates an easy and enjoyable atmosphere (Neuman, 2009). Specifically, film-like electronic picture books were more appealing to struggling readers and second language learners than conventional printed books (Jeong, 2012; Zipke, 2013). Nevertheless, the shorter literary texts don't necessarily lead to easier comprehension; thus, "the readability of picture books often exceeds the age level for which they are intended due to their complexity of vocabulary and density of information" (Costello & Kolodziej, 2006, p.28) In other words, electronic picture books can facilitate high-achievers' comprehension as well.

To conclude, the recommendations made by Schugar, Smith, and Schugar, and Hoffman and Paciga will be taken into account to exclude inconsiderate electronic picture books for fear that they may divert students' attention. Those sub-questions will be treated carefully as the criteria so as to provide students with considerate electronic picture books in this study.

In-teaching

Despite pedagogical approaches which will be elaborated later (see 4.2.1 & 4.2.2), there are five identical teaching principles for teachers to bear in mind and

apply to teaching.

First, teachers have to teach students some strategies to make them familiar with the digital devices, even the basic multimedia functions. Teachers may follow the following suggested routine (Schugar, Smith, & Schugar, 2013, p.618):

(1) Show students how to turn on the device and access the apps they will need.

(2) Show students how to orient the screen.

(3) Demonstrate how to open an e-book, turn the page, and access interactive features.

(4) Set expectations for students' interactions.

Second, teachers can model how to transfer print-based reading skills gained from prior experience, such as inference, prediction, summary, and comprehension monitoring. It is advisable that teachers offer their e-reading strategies to support students. For example, teachers can ask students to guess the content from the illustrations on the cover. Moreover, students are encouraged to gain visual and auditory cues to determine the main idea and the words they do not comprehend. Third, teachers should have warm-up activities with some guided instructions regarding the electronic picture book which is going to be taught, which activate students' schema and construct some background knowledge. Fourth, in the process of teaching, teachers need to observe students' eye contact, emergent feedback, and interaction with teachers and peers to adjust their instruction and the pace of teaching. For instance, teachers may switch off the ongoing narration or auditory features whenever they become deterrents. Fifth, most importantly, prompting questions are essential to assure if students get comprehension or require extra aids (Schugar, Smith, & Schugar, 2013).

In the next section, two pedagogical methods in accordance with reading electronic picture books will be illustrated: one is sharing reading and the other is

extensive reading. The former one is scaffolded by teachers' facilitation and

elicitation along with teacher-student interaction while the latter one is independent

reading on one's own. In this study, the first session of the lesson will use shared

reading to give students some scaffolding and the last part of the lesson will ask

students to do extensive reading for the purpose of stimulating their autonomy as well

as extending their knowledge.

Shared Reading

Shared reading is defined as a scaffolding reading experience where adults

operate as facilitators to interact with children so that negotiated meanings are

collaboratively made from texts. Roskos et al. (2009) supported that shared reading

can enhance the construction of language skills and literacies. Labbo (2009) and other

investigators (Fisch et al., 2002; Kim and Anderson, 2008; Smith, 2001; and Zucker

et al., 2009) found that electronic picture books can advance learners' language and

literacies with the adults' mediation during sharing reading. In the reading process,

teachers are supposed to use contextualization to provide comprehensible input

(Krashen, 1985, 2003) and stimulate students to produce output (Swain, 2005). It is

believed that continuous questions and prompts are necessary in the process of shared

reading (Blake et al., 2006; Deckner et al., 2006; McArthur et al., 2005; Whitehurst et

al., 1988).

Extensive Reading

In addition to immediate class observations and emergent evaluation after each

lesson, extensive reading with electronic picture books can be treated as a long-term

method to evaluate the interrelationship connected in the whole process to cultivate

students' reading habits. For example, Sun (2003) utilized an online reading program

with electronic picture books to enhance autonomous and independent learners with

long-term reading interest. It is thus hoped that autonomous learners will be on the

increase by reading electronic picture books out of lesson with quality multimedia incorporated.

Post-teaching

According to much previous research which has been devoted to the effects of electronic picture books, a number of assessments are created and utilized to evaluate the product-oriented effectiveness. For young learners, colloquial response, physical reaction, and drawings are regarded as the evaluation tools (Lin, 2002). In terms of young students in elementary schools, evaluation forms, such as reading comprehension with multiple choices, picture sequences, retelling, are utilized to see the variance is significant. Namely, reading electronic picture books is proved statistically to be helpful to lexical development and reading capabilities (Chen, 2003; Ju, 2004; Tseng, 2003; Yan, 2005).

However, few studies have been done on the ecological approach to English electronic picture books on Taiwanese adolescents. It is necessary to do this study because many prior studies regarding English electronic picture books were constructed in the English-speaking countries, not in the EFL learning context. And some only focused on learning outcomes of young learners in Taiwan after reading English digitalized storybooks. In consequence, this study will employ the qualitative methodology to get the whole picture of the organismic learning process. Because the contextualized factors involving in the dynamic learning process, the notion of affordance and agency (van Lier, 1997, 2000, 2004, 2007, 2008) should be weighed.

The Framework of van Lier

van Lier (1997, 2000, 2004, 2007, and 2008) adopted the notion of affordance coined by James Gibson (1979) to investigate language learning. Affordance is referred to "the fit between an animal's capabilities and the environmental supports and opportunities (both good and bad) that make possible a given activity" (Gibson &

Pick, 2000, p.15), which is coordinated with the interactive relationship between learners and their environments. Furthermore, good affordances can "provide potential for action," while bad affordances are considered "complementary and equally necessary for activity to take place" (Kennewell, 2001, p. 106). Hence, the construction of language learning results from not only good but also bad affordances.

Affordance in language teaching does not make linear causal relationship but affords further actions and learning opportunities. van Lier (2000) emphasized that language learning cannot be achieved only by outcome-driven activities paying attention merely to linguistic components and structures but through "contextualized and process-oriented thinking" and "contextualizing language into other semiotic systems, and into the contextual world as a whole" (p.259). Because other factors may interfere with the construction of language learning, the combination of linguistic and non-linguistic affordances should be treated as a whole not separately (van Lier, 2007).

van Lier (2000) also argued that affordance is the bond among the participants in learning and the environment and consists of "what the organism does, what it wants, and what is useful for it" (p.252). To put it differently, it is what the agent wants and what is useful for the agent that determine the route of learning. The main principle of agency relies on learners' initiative as well as the activity (van Lier, 2008). Specifically, agency is not an isolated element but an active organism; it refers to "the socialculturally mediated capacity to act" (Ahearn, 2001, p. 112). This notion is closely related to self-selection, initiative, autonomy, and motivation. For instance, if a language learner is active and engaged, he or she will perceive linguistic affordances and make use of them for language learning. On the contrary, some learners are likely to be ignorant of the given affordances rather than viewing them as learning chances. Due to the reflexive characteristic of the notion of agency, factors towards language

learning become multiplied and complicated. In other words, different properties of affordances are perceived and acted upon by different learners, which may contribute to distinct learning process.

The concepts of affordances and agency have increasingly been researched in educational literature. Day and Lloyd (2007) attributed learning to such affordances as learning history, styles, volition, and the milieu. Kim and Kim (2013) contended that the same environment provides learners with affordances in diversity in their research on four learners in the EFL context. Huang and Jhuang (2014) noted that individual, contextual, and the reciprocal interactions between them play a vital role in English learning. Moreover, a number of studies have been focused on the implementation of the notion of affordances on CALL. Anderson (2004) supported that "the greatest affordance of the web for educational use is the profound and multifaceted increase in communication and interaction capability" (p.42). Kashihara, Sakamoto, Hasegawa, and Toyoda (2001) supported that the notion of affordances fosters the exploratory development of knowledge through hypertext resources on the Web.

Although many studies have been done on affordances, little information is available on the employment of English electronic picture books in Taiwan. Given that the dynamic process of reading English electronic picture books in this study is closely aligned with the core concepts of affordances and agency, the present study attempts to navigate how the learning chances and milieu afforded by employing English electronic picture books on the ninth graders with van Lier's framework of affordance through a qualitative case study methodology.

CHAPTER 3

METHODOLOGY

This study adopted a qualitative case study approach to explore, describe, and explain the scenarios and processes in a holistic perspective (Fraenkel & Wallen, 2006; Meyer, 2001; McMillan, 2004; Yin, 2009). Yin (2009) mentioned that the case study is "an empirical inquiry that investigates a contemporary phenomenon in-depth and within its real-life context" (p.18). The fundamental purpose of implementing a case study is thus to collect various data, to detect subtle and continual changes, and to provide in-depth interpretations in response to my research question. This section includes (1) context and participants, (2) selection of electronic picture books, (3) teaching procedure, (4) data collection, and (5) data analysis.

Context and Participants

This research was conducted in a private high school consisting of students ranging from the 7th graders to the 9th graders in Xin Chuang in New Taipei City and focused on the forty-six participants in one lesson in the ninth grade: fourteen are females while thirty-two are males. Due to individual differences, the lesson was designed for heterogeneous students with different levels of English capacity.

According to the background information from the questionnaire (see Appendix A), most (n=42) of the forty-six participants have read printed picture books either in English or in Chinese while a number of the participants (n=31) have not had the experience of reading English electronic picture books. To eliminate limitations of generalizability and information-processing biases (Eisenhardt, 1989) from qualitative methodology, multi-case approach advocated by Leonard Barton (1990) was adopted. The researcher used purposive sampling (Miles & Huberman, 1994) by choosing three from those who had had experiences of reading English electronic books and another three from those who had not had the experience. These six participants were

interviewed individually by the researcher in order to choose two target participants for this study. The two focal participants were Rain and Prince (all names are pseudonyms). They were chosen on account of their willingness to share their learning experiences and their verbal expression ability to elaborate their thoughts in the process of learning English through reading electronic picture books. Additionally, they were also chosen for this research based on two other characteristics. First, the two participants had similar English ability according to their academic scores in order to eliminate the discrepancy of English capacity. In doing so, this study could focus on the following characteristic. The second characteristic was that they had different experiences of reading English digitalized books. That is, Prince had the experience of reading digitalized English storybooks, while Rain did not. In this respect, the data analysis was more likely to navigate holistically through the digitalized reading process to investigate both of them who had different reading history.

After selecting the two students as participants, the researcher informed them that they could choose to (or not to) join in this study. Furthermore, a letter of consent (see it in Appendix B) was provided and respectively signed by the two participants and their parents. Most importantly, it was clearly stated that although the researcher was the participants' teacher, none of the data would influence the participants' scores.

Rain has been learning English since he was five years old in kindergarten. After being an elementary school student, he was exposed to English not only in the regular school but also in cram schools. During those years, he was stimulated by native English-speaking teachers in cram schools to get more involved to learning activities as well as was confronted with some discouraging experiences of learning English in the regular school. However, he still remained positive and passionate about acquiring

English even though the learning context in his first and second years in junior high school did not seem appropriate to support the construction of learning.

On the other hand, Prince has been learning English since he was in elementary school. Like Rain, Prince learned English in the elementary school and private cram schools. It was in his fifth grader in elementary school that he was exposed to electronic English picture books which were served as reading materials in class by his native English-speaking teacher. What made him feel confident in his English ability was the experience in the second cram school in his sixth grade in elementary school. After he got into the cram school, it appeared that his English capacity and self-identification on English learning were improved and motivated. Due to the increasing confidence, he began to love English and devote himself to learning the language. With abundant but different learning experiences, each of the two participants demonstrated distinctive learning attitude. Rain could be viewed as an active learner while Prince, a passive one. Their English learning history and prior experiences would be elaborately illustrated more in Chapter Four and Chapter Five respectively to provide background information about both participants.

Selection of Electronic Picture Books

This section is divided into two parts: The first discusses the criteria on which the selection of four electronic English picture books in the study was based. The second is a brief introduction of the digitalized storybooks implemented in the four classes.

Criteria for Electronic Picture Books Selection

In this study, electronic picture books were selected based on the following four criteria: (1) types and quality of electronic picture books, (2) free of charge and presented on the Internet, (3) students' interests, and (4) difficulty levels.

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Types and Quality of Electronic Picture Books

The first criteria was types and quality of the four English electronic picture books. All of the four books in this study were selected based on the combination of the criteria questions proposed by Hoffman and Paciga (2014) and Schugar, Smith, and Schugar (2013) and on the four categories with different intervention of multimedia (Yokota & Teale, 2014). In this respect, the electronic picture books used in this research were in accordance with the first three main criteria items. First, "is the text appropriately presented in digital format?" Second, "does the story take appropriate advantage of features the digital world allows beyond what is possible in print?" Third, "do the interactive features within the text maintain the integrity of central meanings of the text?" (Hoffman and Paciga, 2014, p.386). For the purpose of investigating the process of employing different digitalized English storybooks, the books with different levels of digital functions were employed in four classes respectively. The first book used in the research contained less digitalized components than the second one. The book utilized in the fourth class contained multiple electronic elements and extra games or exercises. In addition to the first three required criteria, the last one, "do any supplementary features (add-ons to the text) align with central meanings of the text?" (Hoffman and Paciga, 2014, p.386), was considered optional. The adaptive criteria for this research were represented in Appendix C.

Free of Charge and Presented on the Internet

Second, this study chose electronic picture books which were free of charge and presented visually on the Internet as well as incorporated with animations and auditory functions, enhanced by multimedia with hotspots, and supplemented with hyperlinks and activities. It was because some of electronic picture books with high-quality interactive functions were not free, which would lead to extra costs. Furthermore, these electronic picture books could only be used in one single computer

after downloading, which would make it impossible for students to use not only in class but also after class.

Students' Interests

The third criterion was based on the students' preference for reading topics. This data was collected from the 46 students' background information questionnaire conducted in August 2015. The survey results revealed that the students preferred science fiction (n=21), fantasies (n=15), adventures (n=13), romance (n=11), encouragement (n=8), stories in campus and friendship (n=8), social science (n=7), science (n=7), family relationships (n=6), and sports (n=5). This study thus incorporated fantasies, adventures along with friendship, encouragement, and relationships among family members. Science fiction and romance, despite their popularity among students, were not chosen because few free and well-designed Web-based English digitalized books on these topics were accessible.

Difficulty Levels

Last, electronic picture books with similar readability and difficulty levels were chosen. Considering these two aspects, the researcher adopted the Flesch–Kincaid readability scale. The grade-level range spanned from 0 to 12, and it could function automatically in Microsoft Word. The Flesch–Kincaid scale was employed to evaluate the readability of the four assigned electronic picture books and to make sure their levels are similar. This test rated text on a U.S. school grade level based on the average quantity of syllables per word as well as words per sentence (Paasche-Orlow, Taylor, and Brancati, 2003). For example, a score of 8.0 meant that an eighth grader could understand the document. The result shows that the grade-level of all of the four books in this research was 9.0, which means they provide a comprehensible reading materials in line with the ninth graders' reading level.

Based on the four criteria: (1) types and quality of electronic picture books, (2) free of charge and presented on the internet, (3) students' interests, and (4) difficulty levels, the four electronic English picture books were chosen and arranged for the teacher-guided reading session of the four classes. Overall, the four electronic books met all of the four criteria. To provide more information, the illustrations of the four books are presented in the subsequent section.

Brief Introduction to the Digitalized Storybooks Implemented in the Four Classes

The first book was *Sniffy and Fluffy*, written and illustrated by Aimee Bruneau (2000). It was an adventurous expedition completed by two friends with the most basic digitalization level among the four books utilized in the research. That is, the content was digitalized to be seen on a screen without any additional multimedia enhancements, such as animations, sound effects, background music, and interactive hotpots. The second book was *Harry, the Dirty Dog*, written by Gene Zion and illustrated by Margaret Bloy Graham (1956). It was a story of a pet dog who was regarded as one of the family members. Unlike the first book, it provided not only visual features but also auditory elements with the help of storyreaders. The third book, *Abra Cadabra and the Tooth Witch*, written and illustrated by Nurit Karlin (1999), was a fantasy where the main character was entitled as a tooth witch. After the empowerment, she was confronted with a series of challenges. Not giving up, she eventually became a tooth witch with great reputation. In addition to the book-like configuration, more multimedia enhancements were built in the story. The fourth book was *the Dot*, written and illustrated by Peter Raynolds (2003). The storyline revolved the transformation and growth of a girl who used to be lack of confidence in painting. With her teacher's encouragement and persistence, she turned out to be an outstanding artist. She also did what her teacher had done to her to encourage another student who was just as unconfident as she used to be. Moreover, the information of

the four English electronic picture books with such additional details as sources, links, the quantity of words and sentences, readability was demonstrated in Appendix D.

Teaching Procedures

There were four lessons conducted from September to December 2015. That is, one electronic English picture book was introduced by the instructor in a ninety-minute class every month. All of the four ninety-minute classes were composed of shared reading and extensive reading. In shared reading, the teacher provided learners with the digitalized picture book along with warm-up activities and instruction. By contrast, in extensive reading, after the instructor's brief introduction to the websites of electronic English picture books, from which learners chose one book they were interested in by reading on their own (For detailed illustrations, see Appendix E).

Shared Reading

In shared reading, the students were offered an English electronic picture book. At first, the instructor presented the cover of the book and encouraged learners to start brainstorming. In order to stimulate learners' background knowledge which would be applied to reading the story, the instructor prompted thought-provoking questions with which the leaners' were expected to create knowledge which was associated with the story. The instructor elicited queries and carefully observed learners' involvement and feedback. Above all, the instructor showed the website of the book where the book was accessible and basic digitalized functions such as some hotpot icons that allowed users to turn to the next page, move to the previous page, pause, and stop.

After the warm-up activity, the instructor guided the reading session by oral reading or playing the story when there was digitalized supplement. Because of different digital features, the teacher introduced the contents of books differently. The teacher guided the reading along with supplementary multisensory features. If

necessary, the teacher would pause for a while for students to ponder, ask some questions to make sure students' comprehension, clarify unclear statements, or even turn off distracting multimedia functions. Specifically, in the first class, the teacher read the story out loud if there were no animated or sound effects. In the next three classes, the teacher played the story since more digitalized properties were embedded in the books. In the process of guided reading, the instructor scaffolded the reading through numerous inquiries to facilitate learners' thinking, to clarify confusion, and to make sure that learners comprehended the stories. After the shared reading session, the students were expected to fill out the worksheet deemed as evaluation to make sure that the learners have a clear picture of the stories (see Appendix F). In addition, the learners needed to complete a student written report to express their own views on the shared reading session (see Appendix G).

Extensive Reading

During the extensive reading session, the students were recommended some sources for them to find English electronic picture books they would like to read. As such, the students could make good use of the resources or to explore the reading for themselves. The content of the book which they chose for extensive reading had to be documented in the worksheet. The instructor walked around the classroom to supervise the students' learning and to help them tackle problems generated in the process.

Data Collection

Based on the convention of case study (Yin, 2009), multiple sources of data were gathered through these five methods: (1) a questionnaire for background information, (2) semi-structured interviews, (3) a stimulated recall, (4) student written feedback, and (5) class observations. These qualitative data collection methods are elaborated in the following section.

A Questionnaire for Background Information

This survey inquired about (1) individual information, (2) experience of English learning, (3) reading habits and preference, and (4) experience of utilizing high-tech device (see Appendix A). The results from the questionnaire revealed the participants' previous history regarding English learning, reading, and technological utilizing, which were viewed as not only the basis for the selection of participants but also the database for the first face-to-face semi-structured interview with the two participants.

Semi-Structured Interviews

Three 30-minute individual semi-structured interviews were adopted in this study. The semi-structured interviews were constructed with a view to elicit elaborative responses (Creswell, 2005). The interview protocols were developed on the basis of the framework of van Lier (1997, 2000, 2004, 2007, 2008), and Kim and Kim's (2013) sample interview questions. The first interview aimed to understand the students' background information, as well as reading habits, experiences and thoughts. It was also used to confirm the written data in the questionnaire and to find the two suitable participants based on their willingness of participation as well as verbal expression ability. The second interview attempted to probe into students' reading experiences and opinions during the first and second lessons; the third interview intended to understand students' reading experiences and opinions in the third and fourth lessons, as well as to understand the experiences of the participants across the time. Please note that slight modifications were made according to the data from lesson observations and student written feedback after each lesson. For the three interview protocols, please see Appendix G. All the interviews were conducted in Chinese, recorded, and transcribed verbatim for data analysis.

Stimulated Recall

Stimulated recall is a kind of introspection technique in qualitative methodology. Bloom (1954, p.25) supported that "a subject may be enabled to relive an original situation with great vividness and accuracy if he is presented with a large number of the cues or stimuli which occurred during the original situation." In this study, each participant was expected to verbalize his thoughts at the time of the event in the process of stimulated recall while sitting down and watching the video-taped reading sessions recorded in class with the researcher. In each stimulated recall, the researcher interviewed the participants with some stimuli to prompt them to recall what they were doing, thinking, and feeling during the reading process. During the process, the respondent could pause the video if he wanted to provide had information in order to make clarification. The protocol of the prompts for the stimulated recall adapted from Gass and Mackey (2000, p.19) was presented in Appendix H. The process of the stimulated recall was audio-recorded and transcribed in written forms afterwards.

In this study, stimulated recalls was employed four times. Each stimulated recall was at least fifteen minutes for per participant. Because the accuracy of the data obtained from stimulated recall would decline due to the issue of memory (Bloom, 1954; Gass & Mackey, 2000), the four stimulated recalls were conducted within the intervening time of less than 48 hours. By doing so, the investigator could gather the most genuine feedback and interaction from the participants.

Student Written Feedback

The reciprocal interaction of using electronic picture books in English learning was examined by means of post-teaching questionnaires, so-called student written feedback. After each lesson, the students were given 10 minutes to fill out the student written feedback form which was adapted from Lin and Lin (2012) to obtain feedback towards the electronic picture book employed in the lesson (For the sheet of student

written feedback, see Appendix I). Such responses were used not simply as a means to evaluate the effectiveness of teaching but also to generate questions for follow-up individual interviews.

Class Observations

Four class observations were conducted; that is, both participants were observed and their actions were videotaped. The participants sat beside each other so the video could be set near them and faced towards both of them in order not to miss any scenes or mutual interactions in class. During the process, the researcher also took field notes of what the participants were doing and how they were interacting with others in the process of reading. Class observations mainly focused on the following six items to investigate how the two participants interacted in class, including (1) paying attention, (2) giving spontaneous verbal feedback, (3) answering the teacher's questions, (4) asking questions, (5) interacting with classmates, and (6) engagement in learning (see Appendix J). After every class, the investigator wrote down what she was observing during the class, from which some of the questions for semi-structured interviews were derived.

After each class, the researcher would also conduct informal talks with each participant when necessary. Informal talks contained questions initiated by the researcher after rereading the data collected from stimulated recalls and semi-structured interviews. In so doing, the researcher aimed to confirm her interpretation of the data and even generate relevant topics or questions.

The above-mentioned data of class observations and informal talks functioned as supplementary data, meaning that they were used to clarify questions left unanswered in interviews. All of the contents of the video clips, field-notes, and informal talks were member-checked with the participants during the second and last interviews.

Procedures for Data Collection

Questionnaire for Background Information

1st Semi-Structured Interview

Student Written Feedback (1) / Stimulated Recall (1)

Student Written Feedback (2) / Stimulated Recall (2)

2nd Semi-Structured Interview

Student Written Feedback (3) / Stimulated Recall (3)

Student Written Feedback (4) / Stimulated Recall (4)

3rd Semi-Structured Interview
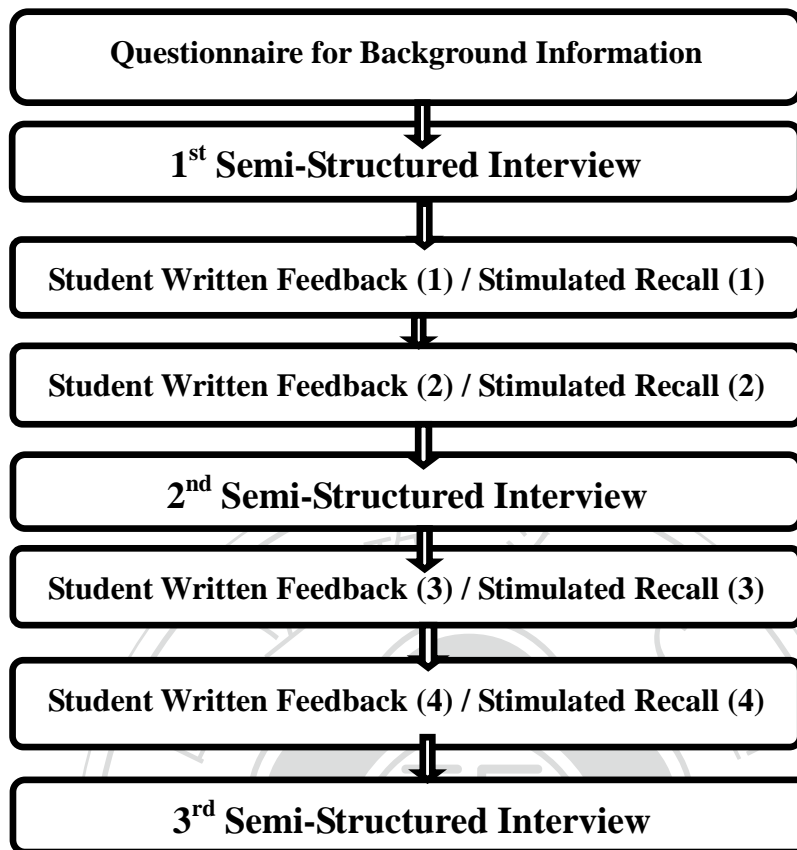
Figure 1: Procedures for Data Collection

Figure 1 shows the procedures for data collection. At the beginning of the semester, a questionnaire and an interview were conducted in early September 2015; then, the first student written feedback and stimulated recall were carried out in the middle of September; after two weeks, the second data of student written feedback and stimulated recall were collected in October; after the first monthly exam, the second interview was carried out in October as well. The third student written feedback and stimulated recall were expected to be in November; the fourth student written feedback and stimulated recall were about to be conducted in December. Finally, the third interview was conducted in January 2016 (see Figure 1). The process of this research will be presented in Appendix K.

Data Analysis

Because "affordances" in this study were considered dynamic, the empirical method taken to analyze voluminous unstructured data was inductive analysis. Parsons and Brown supported that it was "systematically organizing and presenting the findings in ways that facilitate the understanding of these data" (Parsons and Brown, 2002, p.55). For the purpose of this study, data were reread numerous times carefully and analyzed throughout the research by (1) reducing the volume of data, (2) segmenting the database, (3) constructing categories, (4) coding segments, (5) grouping category segments by identifying themes and matching patterns, and (6) drawing conclusions by describing and interpreting accordingly (Yin, 2009).

In terms of viewing the development of learning a language as a contextual whole process, not an incidental fragment (van Lier, 2007), class observations, semi-structured interviews, stimulated recalls, and self-evaluation were employed as the main sources of the data while subsequent informal talks were seductively used as the supplementary to offer more information. Three themes emerging from data analysis included interaction with the instructor, interaction with peers, and interaction with the reading materials and assessment, which were used to support the statement that English learning may not be oversimplified as a causal effect but be referred as a multitude of factors.

On account of categories identified from the literature and the perceived-affordances emerging in the phenomenon within the investigation, the coding scheme was comprised of such categories as not only (a) interaction with the instructor, interaction with peers, and interaction with the reading materials and assessment (see Appendix L), but also (b) phonological awareness, auditory impact, lexical development, reading comprehension, trans-literacies, interest, motivation, confidence, and autonomy (see Appendix M). It was expected that the findings would

reveal how the agents' dynamic interaction within affordances was activated in the process of implementing electronic picture books in learning English.

For the purpose of trustworthiness, all of the data collected from aforementioned data collection methods were used to construct thick description (Carspecken, 1996) and to undergo member checking (Lincoln & Guba, 1985). The bulk of data collected from multiple sources are often employed in conjunction with the other data collection methods, as a means of triangulation to support internal validity (Lincoln & Guba, 1985; Miles & Huberman, 1994; Nunan, 1992) and to "provide stronger substantiation of constructs" (Meyer, 2001, p. 336).
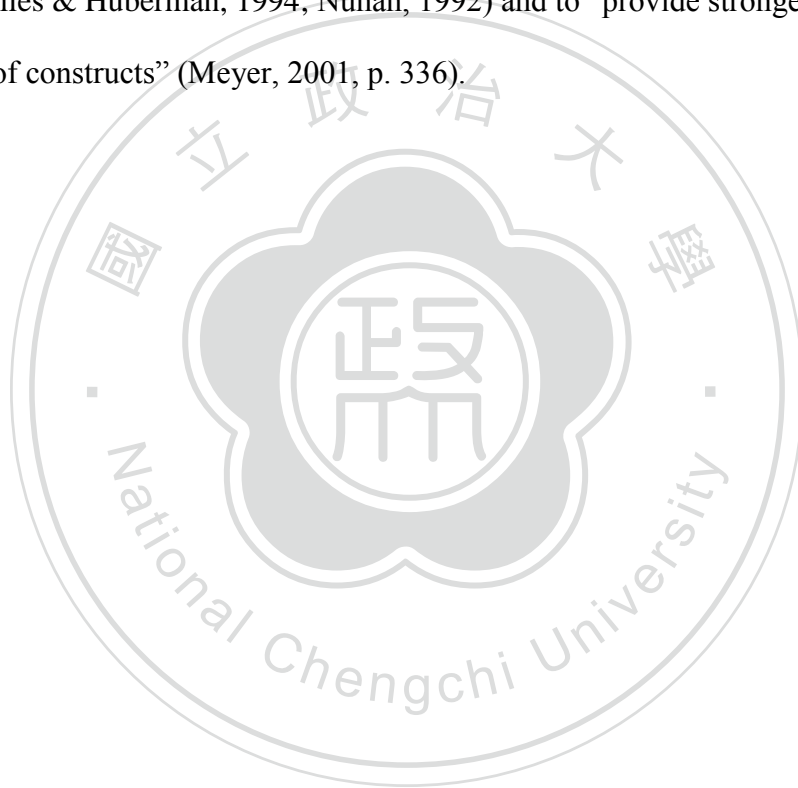
CHAPTER 4

FINDINGS (CASE ONE: RAIN)

Rain's case will be discussed in Chapter 4, while chapter 5, Prince's. The two

cases will be presented in the same sequence: the participant's background

information and his reading process in the first, the second, the third, and the fourth

class. In each class, interaction with the instructor, peers, the reading materials and

assessment will be explained and concluded with a brief summary.

Rain's experiences in his prior histories of English learning will first be

introduced in a chronological order from the starting point to the latest phase of

English learning before this research was conducted. In so doing, I hope his individual

English learning background could be portrayed as primary information that would be

compared with the subsequent findings from this research to see if there were any

changes during the investigation process.

Rain's Background Information

Rain is a ninth grader who has learned English since he was around five years

old in the kindergarten where he first encountered the target language, English. He

was exposed to learning it through games and activities that were conducted by native

English-speaking teachers at that time. Within the two years' learning in the preschool,

phonological awareness as well as basic vocabulary building started to be implanted

inside of Rain in a natural way. After enrolling in elementary school, he not only had

English class in the daily regular school but also learned it in cram schools. During

the six years of elementary school, he had attended two different cram schools,

respectively four years and two years. In addition to the lessons on a regular basis, he

had the chance to participate in a story-telling competition when learning English in

the second cram school. Despite the fact that he eventually lost the competition, the

unique experience gave him the unforgettable memory. After his mother's encouragement, he has not attended any cram schools since the first year in junior high school. Instead, he chose to learn English by paying attention to the daily courses and self-learning from reading such supplementary materials as magazines and short stories for learning English.

Interaction with the Instructor

Rain had many experiences of interacting with different instructors in different learning contexts, not merely with non-native speakers in regular schools but also with native speakers in cram schools. When Rain was five years old, it was his first time to be given a thirty-minute English class every day before lunch break. The English teacher was a non-native speaker. The teacher tended to speak English and at times explained in Chinese when students had comprehension problems. Before each class, she would stick to the whiteboard such teaching aids as flashcards and posters about sentence structures. Due to Rain's inadequate competence in either Chinese characters or English words resulting from his young age, the teacher wrote English words along with the Mandarin phonetic alphabet, Bopomofo. In this period, Rain tried to understand English by listening to the teacher with care, given that if he could not recognize the sound, he would miss the word and have trouble comprehending his teacher's expressions.

Rain also recalled that the English teacher in kindergarten devoted most of the time to making him and other classmates familiar with basic vocabulary with abundant pictures. The teacher particularly conducted quick answer races for students to spell the vocabulary learned in that class. During the races, the students who were able to spell the words fast and accurately got the point. However, Rain used to be so introvert that he was less likely to volunteer opinions in public.

Being an elementary student, Rain acquired English not only in the regular

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school but also in cram schools after school. When he was the first grader in elementary school, it was his first time to be exposed to the learning environment where instructors were native speakers. Comparing to the non-native teacher in preschool and elementary school, Rain had a sense of novelty. Out of curiosity, he concentrated on the teaching methods the native speakers utilized. What impressed him during the English learning was the teaching style of the teacher from America. As Rain noted,

> When we were reading the storybooks, I remembered there was a puppet in my American teacher's hand. My American teacher would speak in a funny voice and do hilarious movements. I still remember when we were talking about washing machines; he acted as if the puppet had fallen into the washing machine with a loud scream. He wanted us to utter the vocabulary, "washing machines"…Besides, he would write vocabulary on the whiteboard. When the word on the board was hit, we were expected to spell it out.

From this excerpt, it is clear that the teacher created a relaxing learning context, inspiring students to be involved in English with the help of exaggerating gestures along with entertaining intonation and interesting auditory components. Under such a learner-friendly context, Rain was triggered to pronounce the word and to assemble words into meaningful sentences in response to the teacher's questions. Immersed in the partially authentic English environments, Rain used to be sensitive to what was happening in class, what the foreign teacher was saying, how people were interacting during the class. Accordingly, he regarded English as a tool for communication. When needed and required, the language functioned naturally.

Nevertheless, the learning context changed when he encountered another native speaker from the UK when he was in 3rd grade. Rain found it difficult to get used to the British accent. Not giving up, he spent time getting adapted to the differences between American English and British English. As he explained,

In the beginning, I could not understand what the British teacher was talking about because I had gotten used to the accent of American English. I got confused all the time during the class. What the teacher said was like a bluster of sounds which meant nothing to me...After several weeks, I found I could pick up some words from his expressions, realizing the meaning gradually. In addition to the sound, I also discovered that they [the American teacher and the British teacher] used different words to refer to the same thing.

Rather than being defeated by the difficulties resulting from the differences of American and British Englishes, Rain treated them as chances for learning. In order to understand what the teacher had said in British accent, he paid much attention to the pronunciation of delicate nuances in class. In the end, he was even capable of differentiating between American terms and British ones.

Due to the frequency of changing native teachers, his mother decided to make him leave his first English cram school. He transferred into his second cram school when he was a fifth grader in elementary school. The teacher's deductive methods of teaching English grammar made Rain feel learning English a boring thing. That is, different from his previous activities-oriented learning experiences, the teaching approaches in Rain's second cram school were duller than the former ones. As Rain noted,

Unlike the teachers [in the previous years], the teacher [in the second one] gave me more elaborations on vocabulary and grammar, especially the grammatical parts…The way in which he taught to explain grammatical rules was kind of boring. Probably because he was a foreign teacher [was incapable of explaining in Chinese], I found it hard to understand and practice in real life. Even now, I still know not that much about some of the usages. How to use it properly and well still puzzles me…And the boredom of his teaching style made me less interested in learning the language. However, it did not really change my ways of learning English.

Learning English in activity-based contexts in the kindergarten and in the first five

years of the elementary school was considered much more intriguing and meaningful than the grammar-oriented course in the second cram school. It was emphasized in the excerpt above that such realization of Rain's requirement to create a well-structured learning environment in which learners were able to participate in with ease; otherwise, the learning context became less lively and vivacious, which made Rain feel bored and monotonous. In this case, Rain's affective change played a part in the process of English learning when he was in elementary school.

After entering the elementary school, Rain, who used to sit back and let other classmates take center stage, was forced by the English teacher in his sixth grade to be engaged in the class activities and group discussions. He mentioned that he tried raising hands to convey his ideas. With much more chances of practice and encouragement from the teacher, he became accustomed to the learning context where learners could directly converse with the teacher on stage. As Rain explained,

> I still remembered that I felt uneasy in the beginning [answering questions in class]. I was always among the last two or three students in my class to raise hand when the teacher asked for a response from groups. But for the teacher's requirement, I would not have had the courage to ask questions in English, especially in public. With more practice and experiences, I felt it [answering questions of the teacher in English] not that hard and embarrassing anymore. Probably, it was because of the experience that I tended to promptly answer teachers' questions in class right now.

This excerpt showed that Rain who used to be quiet and wait for others to be responsible for responding to the teacher's questions turned to be a student who was willing to express his inner thoughts. Owing to his teacher's positive feedback and persistence, he adjusted his attitude towards the mutual interaction with his English teacher. The passive learning habit was replaced with more active involvement in the class under the right situation and learning context.

After being a junior student in a private Catholic high school where teachers put

much emphasis on English learning, he kept the notion that acquiring good English was necessary in terms of academic purposes. However, according to Rain, in the past two years, the learning environment filled with loud noises, distracting behaviors, and less student-teacher interaction was not beneficial to learners. Rain, one of the few students who would like to pay attention in class, learned English by the teacher's lectures and sometimes would ask questions after class. As Rain explained,

> Most of my classmates did not like the teacher so they talked in class and did everything to irritate her. The teacher was always angry… I was sitting near the front, therefore, I tried to listen to her teaching. By the way, I found the teacher was nice to me because she would explain grammar with patience. Thus, I would ask questions to clarify some misunderstanding after class.

This excerpt showed that Rain kept a good individual interaction with the teacher when he was the seventh and eighth grader in junior high school. Although the learning context was not friendly for learners in learning English, Rain did not give up learning English and tried to have a good relationship with the teacher by consulting her some questions. With the interaction with the teacher, Rain earned much knowledge, keeping his English grades above the average.

Interaction with Peers

Rain also had different interaction with peers in different phases of English learning. During kindergarten, Rain stated that there was little interaction with other classmates. What he remembered was that the classmates studying in the same kindergarten always followed the teachers' instructions to dance and sing. The teacher plotted a five-minute drama for the celebration of Christmas and assigned each of their characters in the play in which he played a role with other classmates.

In Rain's memory, the frequency of the social interaction with his classmates in his first five academic years in elementary school was few. As for the interaction with his classmates in cram schools, he mentioned,

I had to pay attention to the teacher all the time. Besides, I did not know how to speak English [to convey what I wanted to express] at that time.

Rain seldom talked to classmates in class because the teachers drew most of his attention in class and he possessed limited English ability to share his ideas in English with others.

However, from his last year in the elementary school, Rain was recruited as a member of the study group in which everyone took turns for presenting each week. As Rain said,

There were some classmates whose hands shot straight up into the air when they were asked a question or the teacher needed someone to be the volunteer. My classmates seemed to be well-prepared and eager to stand out in any academic situation. On the contrary, I was still somewhat shy; thus, I would not be the one talking [during the discussions]. If I was the one to do the presentation, my [group] leader would help me [by writing a note for me]. I just came up to the front to read what he had written for me.

Rain appeared passive and quiet in group discussions. To some extent, he was dependent on his team members, especially the leader in the same group. He followed what others did and even believed what others said, which made him less nervous when being in front of the whole class. In sum, students with distinct characteristics as well as in different levels earned different benefits from other classmates.

Nevertheless, the English teacher in his last year in cram school altered his original model of mutual interaction with peers in class. He provided Rain chances to reflect quietly on a problem, allowing him to engage in his thoughts and make responses. In so doing, Rain not only thought deeply by himself but also showed better ability of expression. Rain said:

Although I was not against group discussions, I was used to thinking on my own first [in language learning]. However, in his [the English teacher in my fifth and sixth grade] class, I was one of the twenty students. There were very few students in my class. So when my English teacher asked us to contribute to our

group and interact with group members, the teacher would wander around to check if we had some discussions with one other…Because I had observed many classmates [expressing their thoughts], I thought maybe I was able to share what I had thought with those who would like to be my listeners just like them [my classmates]. While talking, sometimes I would ask the person who was listening to me that if he would like to continue the topic.

From the training in the second cram school in his sixth grade in the elementary school, he was encouraged to present his thoughts by speaking it out. Instead of being static and keeping everything in mind, he was converted to be a more active participant in the learning activities. In other words, Rain who used to be quiet in the process of learning turned to be an inquisitive student who was confident in sharing his problems and ideas.

When it comes to the interaction with classmates in his first and second year in junior high school, Rain noted that the interaction with his classmates in the same class was quite different from that with his classmates in his previous experiences. As he explained,

Few of my classmates paid attention in English class. Most of the time, they were talking, chatting, and playing with each other. I admitted that sometimes I would be one of them [to interrupt the class], but not that often. In fact, we seldom discussed the problems from the content of the English textbook…But we joined English Singing Contest two times. In the first year, we often had different ideas; therefore, we fought all the time and lost the contest. However, in the second year, with the help of our homeroom teacher, we realized the importance of collaboration. Luckily, we won the first prize in the end, which impressed me most.

From the perspective of academic performance, Rain did not gain much benefit from other classmates; however, the interaction with peers in class seemed to be the distractive factor to impede the learning flow. Moreover, although the first experience of English Singing Contest was miserable with a discouraging result, the second

experience in his second year was a turning point to make his classmates unite.

Interaction with Reading Materials and Assessment

Rain was exposed to distinctive reading materials and assessment methods for different learning requirements and purposes. Since Rain was in the preschool, he was given an English book which aimed to introduce basic grammar with pictures, dialogues, and vocabulary. However, the teacher emphasized more on the development of vocabulary. In other words, vocabulary building was essential in this period of learning English. After reading the stories or articles in the book, he was required to take a vocabulary quiz every two days. As Rain explained,

> There were four new words on the margin of my textbook. In addition to the words, there were dialogues designed to introduce some basic grammar, such as the usage of auxiliary verbs, do, does, and did…I remembered I had quizzes for spelling, but I could not really remember how they were carried out.

His first encounter with English reading materials and the subsequent assessment did not give him an impressive memory. However, the experience was viewed as a gateway towards his English learning.

When he learned English in regular elementary school, the teachers provided different learning materials but no supplementary reading materials. There were comprehensive language tests to evaluate the current level of Rain's English, including his phonological knowledge, vocabulary, grammar, and reading skills and then gave him scores. Rain noted that,

> The test paper was like the one we used in the present English class in junior high school, including items such as vocabulary, multiple choices, basic sentence making, etc. Sometimes, we were asked to take it as a quiz; sometimes, the teacher would lead us to finish the [test] paper in class.

Therefore, Rain was used to finishing typical written tests instead of being evaluated from in-class performance and interaction. In our informal talks, he added that the

experience made him form a habit of taking paper-based assessment.

When he was learning English in his first cram school in elementary school, a sheet of English questions was used by the American teacher as a handout in class. The handout consisted of blanks in which he should fill in those words that had been taught. Rain emphasized that the evaluation was similar to the midterm in the elementary school. On the contrary, the British teacher started to choose some well-known novels as teaching materials, such as *Alibaba* and *Aladdin*. Although all of the contents were in English without any Chinese annotations and explanations, they were specially chosen and considered readable and understandable for the children. As Rain explained,

> At that time, my teacher chose roughly thirty new words from one lesson and asked everyone to memorize ten words per time for a pop-quiz. After the quiz, the teacher would elaborate on grammatical rules… the boring teaching method was like the one applied in junior high school. In addition to building vocabulary which was in my prior experience, grammar is emphasized. Although my British English teacher was not that fun, he introduced some good books for me. That was my first time to read stories in English. Even nowadays, I would pick up one of those stories and read it again to have a newly fresh experience.

Although Rain experienced different teaching materials and methods in kindergarten, elementary school, and cram schools, he still found enjoyment to support his English learning.

In addition to in-class reading materials, outside reading was another factor to accelerate Rain's comprehension, which was vital in learning English. He has kept a habit of outside reading in Chinese since he was in preschool. It was in his second grade in elementary school that he was given a series of *Grimm's Fairy Tales*, which contained English as well as Chinese. Confronted with the problems of unrecognizable words and of memorizing long ones, he learned from his father and

elder sister about how to consult traditional Chinese-English dictionaries. Moreover, influenced by Rain's father who had a good reading habit, he was used to making efforts to comprehend reading not by viewing pictures but by reading texts. No matter in Chinese or in English, he had the tendency to read words instead of looking at pictures for information. Rain explained that words could make his imagination go wild and bring about infinite possibilities and pleasure. As Rain noted,

> Speaking of reading, I would prefer to reading books made up of words merely. It occurred to me that when I was the second grade in elementary school, I was given six books of *Grimm's Fairy Tales* in Chinese along with English version by my parents. Since then, I had not been interested in reading picture books because I thought stories with more pictures than words were awkward. For me, imagination was the best and most intriguing thing in reading.

To sum up, what Rain experienced at his young age trained him to read autonomously. When encountering unknown words from the reading, he tended to turn to his father, who not directly told him the accurate answers but also taught him the device to tackle the problems. Knowing how to solve the problems, he felt it less difficult to read English picture books. Furthermore, Rain was used to re-reading the books which had been taught in elementary school when he had leisure time. By reading them, he was able to recognize unfamiliar words and come up with other ideas by reviewing grammar books. Sometimes, it was necessary for him to consult those books so as to know how to write sentences in English. As Rain explained,

> Probably because of my father, when I was in kindergarten and in elementary school, I used to find the solutions to tackle any problems in the beginning by thinking as well as consulting books or dictionaries. Whenever I could not solve a problem by myself, I would ask my classmates or family.

Therefore, learners' autonomy has been grown since he was in kindergarten. With his knowledge and experience developed gradually, he learned the target language from

coping with difficulties aggressively.

When he was learning English in the second cram school in elementary school, Rain was one of the ten competitors in his class to participate in an English speech contest hosted by a famous publisher in Taiwan. Unfortunately, he failed to join the final round of the speech contest, and what bore in his mind was the unique and unforgettable experience. As Rain mentioned,

> Besides reading the article which was about the life of teachers in summer vacation when teachers were also busy devising teaching plans for students in front of judges composed of three foreign teachers and some parents invited with fluency, I added some appropriate gestures to make the speech favorable and impressive. Although I did not win the competition, if there had been second chance for me, I would have been willing to participate in the contest again.

As for the reading materials in junior high school, Rain mentioned that reading materials employed in English class included official textbooks, English magazines, reading comprehension, and handouts. Official textbooks were designed for different graders; therefore, vocabulary and grammatical patterns in the books were arranged according to the complexity of learners' cognition. In order to sharpen learners' English ability, his teachers assigned English magazines, books (with reading comprehension questions), and handouts as supplementary materials. In the first year of junior high school, he felt the loading of reading was much heavier than his experiences in elementary school. As he noted,

> In addition to the textbooks, every Monday and Thursday, everyone in my school had to watch the [broadcast of the English magazine] program on the TV. One of us would be chosen to read the content of the magazine which played on that day to the teacher. If we failed to read it out, we would be punished. Besides, everything would contain in the term paper for written tests and listening tests…Although it was not easy to prepare all of them, I believed that all of these were good for me. Only if I studied hard could I be good at English. Thus, I would be capable of using this language to communicate with other foreigners.

From the excerpt, the exposure to different varieties of learning materials was referred to as a learning chance by Rain. He gained knowledge of English not only from textbooks but also from the supplementary materials. In addition to learning by reading, listening was stressed through the employment of the English program which was especially devised for the magazine users.

Since Rain learned English at the age of five, he has experienced different phases of learning English. His English ability was developed from his experience of interacting with native-speaking instructors from activity-oriented classes and with non native-speaking teachers from lecture-based learning contexts. Also, interaction with peers turned him to be an inquisitive learner. Due to different reading materials along with assessment, he was familiar with English textbooks for different levels and paper-delivery tests. After these years, he also became an autonomous English learner. Although he had never read electronic English picture books, he said he was looking forward to them.

An Overview of the Patterns Emerging from the Four Courses

Table 1 summarizes the scenarios in Rain's reading process when electronic English picture books were incorporated in the four classes in three themes: interaction with the instructor, interaction with peers (public sharing and private sharing), and interaction with reading materials and assessment. The three themes and their relationships will be explained in a chronological order, that is, from the first to the last course. The summary of each course will be offered as follows.

Table 1: Rain's Interactive Changes in the Four Classes

	Interaction with the Instructor	Interaction with Peers		Interaction with	
		Public Sharing	Private Sharing	Reading Materials	Assessment
The 1st Class	Respond voluntarily and rely much on the instructor verbal guidance and pronunciation	Facilitated by self-perceived peer pressure to engage in sharing ideas actively	Initiate conversations to discuss and to ask questions with Prince	Deep impression and freshness due to his first encounter with electronic storybooks	Write in Chinese
The 2nd Class	Less interaction with the instructor	Participate in public sharing and expect massive mutual discussions	Sharing opinions with Prince increased	Spend more time on reading stories	In Chinese
The 3rd Class	Less attention to the instructor's guidance	Still compelled by self-perceived competitive atmosphere to get involved in public sharing	Have more discussions and well-coordinated interaction with Prince	Spend more time reading and make inferences to compare and contrast with his experiences	Still present in Chinese
The 4th Class	The interaction was declining due to reliance on the instructor and bad learning memory	Keep highly involving in public sharing	Remain interactive in mutual discussions and found their relationship closer	Take reading electronic storybooks as an alternative and joyful experience to learn English	In Chinese

In the First Class

The data collected from the stimulated recall, student written feedback, class

observations, and the second semi-structured interview showed that with cognitive

and affective engagement in this continual process, Rain developed the relationship with the surrounding environment composed of the instructor, peers, and reading materials and assessment. In this study, assessment refers to worksheet and student written feedback that every learner was required to complete to share his or her knowledge and opinions after every class. These assessment methods were also used to evaluate what the two participants learned and how they viewed the class.

In the following section, the interaction with the instructor, peers, and reading materials and assessment would be analyzed for the purpose of seeing if there were any alterations on Rain, who was introduced electronic English picture books as teaching materials for the first time and of providing possible reasons for the differences emerging in the process of English learning in the first class.

Interaction with the Instructor

From class observations, when the teacher was introducing and demonstrating the electronic picture books, Rain was always passionately involved in the activities where the teacher asked some prompt questions to warm up the class or to elicit more feedback from learners. For example, Rain voluntarily raised his hand to answer the teacher's questions. In addition to sharing his ideas with the whole class when he was chosen by the teacher, he discussed with the classmate sitting next to him often to assure his answers were correct. Specifically, he noted that he was afraid that his teacher would have bad impression of him and his classmates would look down on him because he provided wrong answers. Therefore, he did not utter his responses relentlessly; instead, he would need others' support or approval. As Rain explained,

> This time, I was chosen by the instructor to answer what Sniffy and Fluffy were
> sitting on and what they were doing then. Because the teacher reminded us
> to respond in English, I answered in English. Actually, I already had a quick
> discussion with the classmate [, Prince,] beside me.

Rain volunteered to answer the teacher's questions and got the chance to have a good

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beginning of the interaction with the teacher giving simultaneous feedback. Confirmed by Rain in the second interview, the teacher's instant feedback made Rain feel confident in responding to her and thereby a good relationship was established between Rain and the teacher.

Furthermore, Rain relied much on the teacher's demonstration to know how to pronounce the words correctly. As he explained,

> During the class, I paid more attention to the words or sentences that the teacher had taught or was explaining.... While I was reading, I was paying attention to the teacher's pronunciations. Whenever there was a word I did not know, I would try to remember the sound…The teacher kept asking questions. When asked questions, I tended to think ahead of the time and assure that my answers were correct before raising my hands.

Without any auditory features in the first book, *Sniffy and Fluffy*, what he could do to know the pronunciations of the words was to pay attention to the teacher's oral demonstration of certain unknown words. Rain needed to raise his own phonological awareness lest he miss the words in the story. He even emphasized that he would imitate the teacher's pronunciation during the class to reinforce his memory, which was the method he used in his past learning experience.

Rain emphasized that he benefited more from the current approach to teaching than those used in kindergarten and elementary school. Although Rain's foreign teachers in elementary school made English learning exciting and interesting, he did not get full understanding of the teachers' expressions and the content of the books. However, in this study, the instructor scaffolded the reading by guiding learners to make predictions, asking thought-provoking questions, and explaining either in English or in Chinese when needed, which were taken as verbal cues to foster Rain's thinking to comprehend the story.

In favor of the teacher's guidance, Rain even expected that the teacher could

explain practical grammatical usage shown in the electronic picture books at the first class. As he noted,

> [In my prior experiences], my native-speaking teacher did not make explicit explanations for me to know grammar as well as the vocabulary and whole content. Therefore, I didn't get enough information and additional knowledge at that time. For me, it was a hard task to read most of the words and completely understand the content…But this time [in this study] was different, the teacher explained and asked guiding questions. I still hope the teacher could take advantage of the grammar rules, such as present progressive, to provide with information which was unable to be acquired in normal English lessons.

Also, in the second semi-structured interview, Rain suggested the teacher might ignore individual needs and neglect student-initiated interaction in the first session of the class as a result of the big size of the class and inadequate time. Thus, he hoped there could be more time and chances for student-teacher interaction. As Rain explained,

> Besides the teacher asked some questions, explaining the words and sentences orally along with the story in the initial period, there seemed to be less time that we could think on our own or exchange our ideas with the teacher and other students than group discussions [which were conducted in Rain's prior English classes]. Only some or few students answered the teacher's questions. In addition to asking more students, if I were the teacher, I would not ask yes-no questions or easy ones. Further questions would be better to check whether students paid attention or understood the meanings [of words or sentences].

Although Rain enjoyed his first experience of digitalized English reading, he perceived two problems which were supposed to be modified to make the class more successful. The first problem was the lack of student-initiated interaction with the instructor. The students, including Rain, were not given sufficient time and chances to start the conversations. Thus, he chose to respond to the teacher passively. In this respect, the instructor may need to provide learners with more time and opportunities

to think, to pose questions, to negotiate, and even to reread the book so that they could have the opportunities to utter what they are thinking or wondering in the future.

The second problem was that those questions which the instructor asked in class were so simple and superficial that the students without profound knowledge or understanding could still answer with ease. Worse, only certain students were willing to be engaged in the conversation with the instructor. Rain was thus afraid that not everyone in class comprehended the content and that some of the students did not pay attention to the class. Thus, the instructor may choose students to share their answers randomly to keep them alert or to assign some students who seemed to be absent-minded in the process by observing while conducting the class in the future.

Interaction with Peers

After his experience in the sixth grade in elementary school, Rain has tended to ask questions and lead further discussions with classmates. Whenever some ideas or questions occurred to him, he could not help sharing with others, especially the peers who were considered by him more easygoing and friendly than the teachers. Thus, compared to the interaction with the instructor, Rain stated that he had more interaction with his peers instead.

In the present research, his interaction with peers in public sharing and private sharing in the first class will be presented. Public sharing refers to the class time when one individual showed his or her responses to the instructor in public, usually followed by other peers' feedback, while private sharing refers to the student-student talk in silent reading.

In public sharing, Rain mentioned that the nature of competition among classmates compelled him to get engaged in sharing his opinions publicly. As Rain explained,

Hearing the answers offered by my classmates, I had a feeling that I did not want

to be inferior to my other classmates. Thus, I felt like raising up my hand as fast as possible to answer as many questions as I could. I not only shared my answers but listened to others as well. Sometimes, it [public sharing] made me have more ideas after hearing others' responses. At the same time, I was still wondering how to answer the same question in a more complete and direct way.

Thus, the self-perceived peer pressure facilitated Rain to engage in the learning activity where the teacher asked questions to provoke students' thoughts based on their background knowledge and their comprehension of the story they were reading. Rain emphasized that if it had not been for their classmates, he might not have been so eager to answer the questions and to think deeply for fear of making mistakes in front of everyone. Consequently, the interaction with peers in public sharing may be one positive factor for Rain in the first class.

In private sharing, Rain had only one audience, that is, Prince because no other students sat beside him. Therefore, whenever he had the temptation to share, he would turn to Prince without any hesitation. As Rain noted,

I was used to having discussions with others in order to make sure my answers correct [before answering the teacher]. Prince and I would have small talks. This class, only Prince sat next to me; therefore, he was the only I was able to share ideas with. So whenever I had some ideas or questions, I would tell or ask him. He would listen to me or solve my problems [during the class]. I would ask him some questions regarding vocabulary and grammar, such as "What does this word mean?" or "How can we utilize the word to make a sentence?"

The finding showed that Rain not only liked collective information from other classmates through public sharing but also enjoyed telling what he was thinking to the person sitting next to him during private sharing. This classmate was his only audience, and he was the more talkative one of the two.

For Rain, public sharing and private sharing functioned differently, with the former providing him with different perspectives and the latter, private sharing, the

opportunities to express and clarify. As he noted,

> Some of my classmates were picked up to share their version. I enjoyed listening
> to their sharing. Whether it was wrong or not encouraged me to think about my
> own answer. Although sometimes I did not speak it out in class, I had some small
> discussions with the classmate sitting next to me. Compared to [public speaking],
> I had more talks with Prince. In the second session, we discussed what the book
> was about or what that book was about [for the self-selected book].Whenever   I
> encountered some words I did not know or some context I was not sure, I would
> turn to Prince, one question after another question. Most of the time, I asked
> questions of him and he would respond me in return.

In private sharing, Rain enjoyed posing problems and initiating the discussions. As
long as there was audience, he would open his arms to share personal viewpoints
towards the book passionately.

Interaction with Reading Materials and Assessment

In this study, interaction with reading materials refers to how participants
perceived and acted upon the English electronic picture books; interaction with
assessment means how they comprehended the stories, interpreted the plots, enjoyed
the readings, and the reasons via worksheet and student written feedback.

In this section, how Rain interacted with electronic English picture books and his
writing feedback will be discussed in terms of his first impression of the book, the
reading procedures which Rain adopted, his perspective towards the digitalized
English reading, and recommendations for the future reading after the first class.

In spite of a wide variety of prior English learning experiences, Rain was curious
and passionate about his first lesson in this present research due to lack of experience
in reading English electronic picture books. Because Rain did not have the experience
of reading any electronic picture books, not to mention the books in English version,
he emphasized in the second interview that he felt a sense of freshness. As Rain noted,

> Since I started learning English when I was roughly five years old, I haven't read

a book like that [digitally]. The experience [of electronic picture books] was totally fresh to me, which left me a strong and impressive image…From this experience, I found it convenient to read electronic picture books. By reading digitally, readers would not lose reading interest by hold heavy books or interrupt the reading flow by checking every single word.

Rain seemed to enjoy his first exploration in the digitalized reading world. The first impression of digitalized reading materials left him a fresh and easy image which was accessible from traditional reading strategies.

In the beginning, Rain was misled by the cover of the book before reading it. He switched the names of the two characters. Such misunderstanding, interestingly, activated Rain's curiosity about the story and thereby he began to discover as much as he could about the story. And he was focusing on reading the lines, while the teacher was demonstrating the content by reading sentences out. As he explained,

My first impression was that the simple cover seemed easy to read. At first, I thought Fluffy with an initial "F" was the frog. To my surprise, it turned out to be the fish. On the other hand, Sniffy was the frog which loved to sniff [the fragrance of] flowers. After the teacher's explanation the definition of "sniff" during the reading process, I realized "Sniffy" was supposed to be the frog who liked the fragrance of flowers. I still remembered the term "to sniff" meant "to smell." Also, I was thinking about how the story was going to develop and how I could tackle with the words I did not know.

The excerpt above showed that the misunderstanding resulting from the wrong association of key words could be regarded as learning chances for Rain to pique his interest in predicting the employment of the story and to acquire new vocabulary. He not only rectified his error predictions but also learned English words in an inductive way. He also came up with ideas and questions along the process by using the previous reading strategies, i.e., seeking explanation and information.

Although Rain had been unfamiliar with *Sniffy and Fluffy*, he did not get

confused with the unknown words; instead, he tried to "re-arrange the puzzles" via synthesizing from not only the responses from the instructor and peers but also inferences from pictures. As he mentioned,

> Most of the words in the book were easy so I guessed the unknown words first from those I had known. Sometimes, the given pictures did help to give some cues to me. After listening to the teacher's explanations and other classmates' responses, or discussing with my classmate nearby, I rearranged the puzzles in my mind, completing an organized and more comprehensible one.

In so doing, although Rain originally expressed a strong preference to read text-only version, he started to accept the idea of reading the supplementary illustrations.

In reading process, Rain not only paid attention to unknown vocabulary, but also spotted the grammatical rule which was being taught in his English classes at that time. Not only did he recognize the pattern, but he also had the chance to realize how to use such patterns authentically. As he explained,

> In previous English lessons, my teacher once made an example sentence with the name of one of my classmates to teach present progressive, which impressed me a lot. To my amazement, present progressive was used in the story. Accordingly, those sentences in the book caught my attention. And it appeared that I was capable of understanding because I had learned the usage before…It greatly helped me to read the story whose content was in relation with what I had learned.

Although he anticipated that the teacher could teach grammar shown in the picture book in an explicit way in the first interview, he still learned in the first class that grammar did not have to be taught explicitly but can be learned incidentally.

Although Rain valued reading electronic picture books, he believed it would be better if the following two problems were solved. The first problem was that the story was so short that Rain who got used to reading novels expected to read more. He even imagined that if he had been the author, what could have been added to magnify the

length of the book. As he explained,

> Although I liked the story personalized animals to stress the theme of the story, the importance of friendship, I was not that interested in this book since I thought it was a little bit short. I preferred to read long stories.… After reading it, I was wondering whether some plots might be added to enrich the story.

The excerpt suggested the instructor could choose some other reading materials in length or prepare other well-designed digitalized English picture books with longer stories after reading the shorter one. By doing so, Rain's English reading abilities may be facilitated through broadening his reading span and experiences.

The second problem was that there was inadequate auditory effect and visual stimulates to provide more information. Therefore, Rain recommended that digitalized English picture books be equipped with more animated features and auditory effect. In his opinion, creating more vivid imagery in the electronic picture stories would be more adorable. As he noted,

> In spite of being shown on the computer screen, this book was like a traditional one. If there had been animations or sounds provided, the story would have been more appealing. For example, it would be more vivid with the lily pads floating when it said "they swim and swim". Or the author could exaggerate the movements of the frog to emphasize the image of swimming.

Therefore, it occurred to Rain that electronic English picture books should integrate animations or auditory features into their content for the purpose of adding more elements within the book. In this respect, interactive digitalized features may support English reading when learners are first introduced to a new book.

Speaking of the extensive reading session, Rain followed the teacher's instructions to search the book he was interested. His criteria for choosing the book remained the same—that is, his interest. If he was interested in the topic based on the title of the book, he would start reading the story. If he did not like the plot while reading, he would choose another story book. As he said,

I started to browse through on the Net. If the title was interesting to me, I clicked the mouse to enter the story. If the plots still caught my attention, I would keep reading; otherwise, I would find another one.

The above excerpt showed that both the titles of the books and the plots of the stories played a great part in Rain's selection of the interesting electronic picture books. Additionally, Rain enjoyed the freedom to choose what to read which he had never experienced before. As he noted,

I had never read electronic picture books so I thought it was fun. Choosing the book [from a pool] was new to me. I was kind of in a rush. When I finished the first student written feedback, I did not have enough time for the search. But I would like to try more…I would find some other time to read *The Blue Sky* [the book I did not finish because of its lexical quantity and the time deficiency].

The excerpt proved that giving learners the power to make choices of their own reading materials may sustain their reading interests.

The student written feedback showed that Rain did not have much difficulty understanding the electronic picture book. Although writing in Chinese was easier for Rain than that in English, his motivation to acquire better English was stimulated. He wanted to improve his English to "use" it with fluency. In this respect, learning English was meaningful and pragmatic for him. As he explained,

The student written feedback was not hard for me. I was afraid that I could not fully express myself, so I chose Chinese to finish it. But I hoped my English could be better to be able to use English [to complete it].

As an autonomous English learner, Rain who perceived his deficiency in English intended to engage more in English learning for improvement than before and to express his opinions in English.

Summary

In summary, Rain's first interaction with the instructor, with peers, and with

reading materials and assessment was perceived by him as a great start. For example, he voluntarily responded to the instructor's questions and learned from the responses as well. He also gained information in public and private sharing. Moreover, after reading the first digitalized English storybook, he perceived not only linguistic affordances, i.e., vocabulary and reading comprehension, but also affective affordance, the willingness to improve his English competence.

In addition, every interaction in his first reading experience is reciprocal and highly related to each other. That is, although the instructor guided learners to read electronic English picture books and allowed student-teacher and student-student interaction, the learner, Rain, did not do so passively but rather actively, evident in his question-posing and problem-solving in private and public sharing moments, in silent reading, and even in selecting extensive reading materials. Without his willingness and ability to notice and incorporate these different sources of information, Rain was probably unable to enjoy reading electronic English picture books. His agency underscores the primacy of learner freedom to choose and the interactive nature of reading materials, the learner, peers, and the instructor.

In the Second Class

This section shows how Rain reacted to the second electronic English picture book with advanced digitalized features, including sound effects and the function of storyteller. It also focused on the changes he made after the second class and his reasons behind such changes.

Interaction with the Instructor

Rain recalled from his previous learning experiences of elementary school in the second stimulated recall that he had hardly inclined to ask questions of the instructors on account of the authority of them. Hence, if necessary, he would prefer seeking help

from classmates rather than from teachers. As Rain explained,

> In addition to thinking on my own, I preferred to asking classmates questions
> rather than consulting the teacher because teachers made me feel scared. Some
> of my teachers in my [daytime] elementary school answered questions while
> blaming on me. For example, they would like to say, "Didn't I just explain the
> questions?" in Chinese [especially in an insulting tone], which made me
> embarrassed. Conversely, my classmates would explain to me in a simpler and
> funnier manner, even with some jokes, which made me feel relaxed and
> comprehensive. Little by little, I did not ask teachers in class what I did not
> realize but ask classmates after the class.

The excerpt above suggested that consulting the instructor would be the last thing he
would do in the past after elementary school. That is, he tended to solve his problems
by finding a solution on his own or asking classmates for help since he had had an
unhappy memory from his past learning experience.

However, from the second class observations and the second interview, Rain
engaged in responding to the teacher's questions as what he had done in the first class
when the instructor elicited thought-provoking questions to guide students' thinking.
Moreover, Rain not only kept attention to the shared-reading session by answering the
teacher's prompt questions but also asked questions in the extensive-reading session
when the teacher was walking around to supervise if everyone was earnest in
selecting a book and how he or she chose one. As Rain explained,

> In the [second] class, I asked the teacher some technical questions to find the
> method to find the book [I was interested in] more efficiently. Besides, I also
> asked one or two unknown words [of the teacher]. [With the teacher's immediate
> feedback], I was comfortable asking [more] questions of the teacher in class.

Unlike those teachers in Rain's elementary school, with the rapport from the
instructor in this study, he felt at ease in the learning environment. It appeared not
simply because Rain was naturally inquisitive and exploratory but more significantly
because an amiable and caring disposition in the instructor's nature had provided Rain

a pleasant learning context which stimulated Rain to desire to know or learn from the instructor. Despite the fact that Rain said that he had less interaction with the instructor in the second class than that in the first one in terms of frequency, the good interaction with the teacher increased from the perspective of depth and profundity.

Due to the well-designed addictive animated and auditory features, Rain advised that the teacher's instruction could be lessen. In other words, the teacher was expected to provide much more thought-provoking questions instead of explaining explicitly in detail in a deductive manner. As Rain explained,

> I thought the teacher did not have to read every sentence or explain every detail in the story. If I were the teacher, I would ask some questions for students to answer in order to strengthen their impression. Moreover, I believed the technique of inquiry would be an intriguing and effective method [in teaching].

The digitalized functions in the second electronic English picture books changed Rain's original concept of anticipating more explicit lectures from the teacher. In fact, the well-structured electronic English picture books with proper animations and auditory functions gave Rain a context, from which he was introduced new information during the progressive story. To put it differently, lecturing with discrete grammatical rules was not the necessity in comprehension digitalized English stories.

What's more, with the function of the native-speaking storyteller equipped in the second picture book, Rain was aware of phonological cues as multifunctional digitalized English picture books continued being employed. Explicit lectures from the instructor should be gradually removed, so that learners would eventually have the ability to demonstrate comprehension and develop the habit of reading independently. As such, the instructor can devote more class time to monitoring and supporting individuals' learning instead.

Interaction with Peers

Interaction with peers in public sharing at the second class was not satisfying to Rain. He even advised that the class be divided into several teams for group discussions where higher achievers and lower achievers may learn reciprocally. As Rain noted that,

> Only few students responded to the teacher [in the second class], some of whom were those who had presented in the first class. I thought, the class could be carried out like what I had in [previous] cram schools. One group was composed of some who were better at English and some who were not. [I think] not to put students with the same level together. It would be great to give students with different levels chances to learn from each other.

Owing to Rain's thirst for knowledge, group discussions with heterogeneous members were highly recommended to be incorporated to stimulate the interaction among all students. This recommendation reinforces Rain's belief in the primacy of peer collaboration in reading. Concerning private sharing with Prince, Rain mentioned that he had more social interaction with Prince in the second class. In both shared-reading and extensive-reading sessions, he still took the lead to speak and asked Prince questions. He stressed that but for Prince's help, he would not recall the memory of the first class and would have no idea that the second book was read by a storyteller. As Rain noted,

> At first sight of the book [*Harry, the Dirty Dog*] on the website, I thought it was the author of the book until Prince told me that was not the author but the storyteller…Whenever I had no idea about the pronunciation and the meanings in the book, I would turn to ask Prince. He would always teach me. I liked to chat with others, so having someone to discuss with was much better than reading by myself. Reading alone was tedious since there was no one to share with.

According to the excerpt above, it was clear that, student-student interaction in class

took place spontaneously, naturally, and randomly in reading electronic picture books. Also, Rain benefited a lot from his interaction with Prince not only by inquiring questions but also by sharing his ideas. As a self-perceived low achiever, Rain depended much on Prince and got much support from him.

Interaction with Reading Materials and Assessment

Rain noted that he guessed from the title of the second book, *Harry, the Dirty Dog*, to predict what the story was about and discussed with Prince as usual. After that, he had the habit to have dialogues with himself, in other words, to think first on his own. During the self-dialogue, he tried to associate the story with his previous learning experiences through predicting possible plots and eliminating those that did not correspond to the story after he read the story. In particular, the plot of the story was coincidentally similar to one incident in Rain's life. As he explained,

> I kept a dog as a pet which was like Harry in the story. It went out to play and came back with its body dirty from top to bottom. Every time, I was just like the boy [in the story] to take him to have a shower eventually. Sometimes, it happened once in two or three days. Quite often. So [the plot] made me naturally associate with what had happened before.

The story in the second class appeared to be déjà vu for Rain. His remarks reflect that meaningful plotlines are those resonate with readers.

With the aid of animations and auditory features, the story which came out alive also gave him much more enjoyment. He said that,

> There were differences between the first [reading material] and the second [one]. The story read by the storyteller was very important. Of course, the more [features we had], the more convenient and efficient we comprehend. When I first read this book, there were many words I did not know. However, after reading it for the second time with animations, auditory effects, and the storyteller, I could guess what it was.

Hence, it proved that animated pictures along with the native-speaker tone in the second book were taken as beneficial factors in the English reading comprehension from Rain's perspective. As Rain explained,

> Since I was little, I have been fond of thinking without boundary before, during, and after reading the book. So any cues may give rise to many possibilities… In addition to asking Prince questions, I googled by myself for information.

In this respect, Rain had the ability to detect problems and find solutions to fix them by himself. He also mentioned that searching information on the Net was helpful in the completion of the worksheet. Using this method not only helped him resolve his doubts from the stories, especially in the extensive-reading session, but also gave him another opportunity to know more about English.

Rain's second experience of reading digitalized picture books appeared to broaden his cognition, which was perceived by himself as an opportunity not only for English learning but also for knowledge building. As he explained,

> There were variations [between the first and the second class in this study]. In the second class, because I had time, I read more books, using different angles to read the stories. Also, I made associations and inferences [from the stories]…[Thus,] I felt it was not bad to use electronic picture books in learning English.

Reading digitalized English storybook made Rain concentrate on the plots rather than discrete elements, i.e., words and grammar, which made him read from a global perspective. In so doing, it appeared that English learning was not learning the language but using the language to learn.

In the extensive-reading session, from the class observations, Rain chose the book more efficiently than in the first class so that he spent more time reading while searching. There were two reasons confirmed in the second interview to explain this phenomenon. First, since the previous class was his first experience of digitalized

English reading, he was not used to the digital interface, which took him a great amount of time to look for the book. Under the pressure of time, he abandoned the longer book he was interested in and chose another one whose story was shorter to finish the worksheet hastily. Second, the story in the second class was well-arranged in alphabetical order so that it was user-friendly for Rain to browse and do the searching process. Rain made good use of his ample time to survey the website, discovering that it consisted of multiple stories which also accorded with his interest. In fact, the exposure to different books enabled him to "use different angles to read the stories" as if he were the characters in the stories he had surveyed, which was perceived by him as a learning chance. Thus, he gained much achievement and enjoyment in the second class.

Summary

In sum, unlike the reading experience at the first class, this time, the instructor's intervention was less, whereas Rain's interaction with reading materials and assessment and with peers (in both public and private sharings) were more. To be more specific, Rain's interaction with the instructor was declining when he spent more time on the stories and peers probably because the animated and auditory features were beneficial for independent reading; the more Rain engaged into the texts, the more interaction he had with peers. In this sense, the book used in the second class was not only supportive because of animations, auditory features, and well-organized format, but also meaningful due to its content related to Rain's real life. The decrease of interaction with the instructor did not impede Rain's reading; instead, Rain's language learning was fostered through interaction with peers, reading materials and assessment. Thus, each interaction still functioned reciprocally at the second class.

In the Third Class

Interaction with the Instructor

As what Rain did in the previous two classes, while the instructor was prompting guiding questions before, during, and after the reading, Rain was following the questions, taking them as clues to probe into the story. The instructor's scaffolding helped him to think what the new story was mainly about. As Rain explained,

> Although I had never read the book, I tried imagining the story on my own. Like some words the teacher put stress on would make me think further. After the class reading, I was used to quickly going through the story in my mind in case that I was required to make an outline of the story.

With the familiarity in the learning context, it seemed natural for Rain to have connection with the teacher. Namely, he took teacher-activated questions and scaffolding as beneficial factors in his language learning process.

However, the instructor made some adjustments on time arrangement; that is, she shortened 'Teacher Time' to lecture so as to leave more time for learners to do independent reading. Therefore, Rain had less interaction with the instructor. With more engagement in the third digitalized picture book, his ideas along with questions came out one after another like bubbles or a mobile bicycle chain. As Rain noted that,

> [After reading the book], how come it was not like what I had heard about. Where was the fairy? [The story] sounded awkward as it did not comply with the reality. Besides, I would read it again and again for fear that I may miss some detailed parts. [When asked the interaction with the instructor, the interaction] this time was less than it used to be.

It was observed by the researcher and confirmed in the subsequent stimulated recall and semi-structured interview that Rain focused more on the plot of the third electronic picture book because the instructor gave him the chance in class. In the extensive-reading session at the third class, since Rain was already familiar with the

procedure of the class constructed by the instructor, he dedicated himself to the exploration of surveying. Rain thought doing extensive reading in the third class was much easier, especially compared to his first experience. He even emphasized that although the instructor did not get involved in his independent reading directly, he knew the instructor supervising all students' learning around was willing to render him assistance whenever he needed.

<div align="center">Interaction with Peers</div>

Although Rain was compelled by self-perceived peer pressure to respond to the instructor's questions in public sharing, the density of the interaction with Prince remained higher than that with other classmates. The finding was supported by three reasons: the arrangement of seats in the language laboratory, Prince's acceptability, and the plot of the reading material.

First, due to the arrangement of seats, Prince was the only audience to inquisitive Rain, who was enthusiastic about conveying thoughts and asking for consultation. Second, Rain-style interaction was more acceptable for Prince in this class than the first one, which would be illustrated specifically in the description of Prince's case in the next chapter. Therefore, Rain, who was used to being the starter of the conversations in the previous two classes, gained more feedback from Prince, who used to be passive and reluctant in being the respondent. Third, topics for conversations occurred due to the plot of the third digitalized picture books, which would be elaborated in the subsequent session concerning the interaction between Rain and the reading materials and assessment. As Rain explained,

> [In the story,] the teeth witch scattered teeth from the moon, which was different from what I had expected. I said to Prince, "Look, the witch dropped the teeth which she had gathered from the moon." He replied to me, "Didn't she worry that the people under the moon might get hurt?"… I also asked Prince why [the character in the book] collected teeth. Much to our astonishment, the white moon

turned to be yellow after the teeth witch touched it. Then, we discussed if there was any symbolic meaning behind the change of the color of the moon. Those illogical parts in the story pushed us to discuss, so we continued talking.

From the excerpt above, Rain and Prince's conversations were not confined to word meanings but also included some events from the story. For example, they talked about the gesture of scattering, what the main character needed to do as a teeth witch, and another bag of teeth thrown after the first one, which might hurt a great number of people. Their conversations occurred when either Rain or Prince noticed something irrational, showing that the participants shared some common ground in the shared-reading session and that their private sharing took place with frequency. Prince started to take more turns and shared the responsibility in the peer interaction with Rain than before.

Nevertheless, in the third interview, Rain stated that their interaction decreased in the extensive-reading session because accidentally, Prince forgot to bring his personal earphone, so he was unable to listen while surveying and doing independent reading. Thus, Rain, who was ardent and helpful, lent his earphone after finishing reading his selective book. Then, Prince made good use of the rest of his time to finish his book reading in class. Unlike what had occurred in the shared-reading session, their concentration on their own reading shortened their time for conversations. As Rain explained,

> At that time, I was busy with searching and reading. After noticing that Prince didn't bring his earphone, I lent him mine when I finished my book. In addition to not interrupting his reading, I was not confronted with difficulties [of vocabulary or reading comprehension], so I didn't talk with him that often.

Although their interaction in the extensive-reading session was interfered with an accidental event, from the affective perspective, their well-coordinated relationships

still benefited their language learning. Besides, thanks to this accident, both of them focused on reading individually, thereby improving their independent reading.

Interaction with Reading Materials and Assessment

The theme of the third digitalized storybook, tooth witches, evoked Rain's previous knowledge about the myth of teeth, which nevertheless was different from the plot of the storybook. Instead of becoming the barrier for Rain's reading comprehension, the cognitive differences created learning chances for Rain. Out of his curiosity, he focused on nothing but the flow of the story. As Rain noted that,

> The first time I read this book, it occurred to me that I used to hear about tooth fairies, not tooth witches. Besides, I remembered that my family told me to throw my fallen old tooth upward the roof or to hide underneath the pillow. But the story was different. Additionally, there were unreasonable plots. For example, how come the tooth witch could sit on the moon which was hung in the sky but appeared flat? …[When watching the tooth witch scatter bags of teeth], I was wondering that its causalities had taken a large proportion thanks to the acceleration of gravity learned from the science class. But I thought the awkward parts made the story interesting to me and caught my more attention.

The excerpt revealed that Rain, who had anticipated elaborative explanations of unknown words and grammar in class, transferred his focus from discrete elements to the storyline. In this manner, digitalized storybooks with plots contrary to learners' cognition could be introduced to students to stimulate their ideas and widen their reading experiences.

In the extensive-reading session, the book which Rain chose was similar to his past experience of going fishing while taking a boat. Therefore, he remained habitual to choose the book as a consequence of self-interest. In addition to self-interest, the similarity between the plot of the book and his previous experience was another factor for him to make the final decision. As Rain explained,

> I found it interesting [when reading this book] because I had gone fishing with

my father and my dog… Also, the homepage [of the website] was user-friendly. And the animations and sounds helped me to understand the story. Mostly, I would choose the book which was similar to my experiences.

In general, topics relevant to Rain's experience usually drew his attention. Although those "unreasonable plots" provided him with learning opportunities by making comparisons with his own experiences and by discussing with Prince, he still had the preference to choose the books whose topics he was familiar with. It was because Rain gained more confidence and security when reading new books in English.

In addition to the content, the reader-oriented design of the website where the books used in the second class were stored was also praised by Rain because it was easy for Rain to search what he wanted, thereby saving him quite an amount of time. Hence, he spent more time reading, and his reading pace and comprehension were facilitated accordingly. As Rain noted that,

What impressed me [at the third class] was that the website was better than the previous one. I had no difficulty searching for the books because it was designed in the order of initials, topics, and authors. [Because of this], I did not spend much time surveying. Then I finished my worksheet and student written feedback with efficiency in class.

It appeared that Rain had more self-control over his learning through digitalized reading. Without the teacher's direct intervention, Rain developed his reading through the exposure to the well-designed website and reading materials. Due to the supportive electronic reading materials, Rain seemed to be a fast English reader and learner, which may benefit his future English learning from a long-term perspective.

Summary

In summary, Rain's reading experience at the third class was similar to the experience at the second class. That is, the interaction with the instructor was still few

because Rain spent more time reading the third digitalized storybook, thereby increasing more topics for peer interaction. After Rain was engaged into the learning context and English electronic picture book, his initiative inquisitiveness and active learning attitude were facilitated to act naturally. The instructor's explicit guidance and explanations were not regarded as the only way to help Rain's English. He perceived that he gained much knowledge and information from self-exploration of the book and from the peers as well. Thus, in the circular reading/learning process, whenever one interaction was declining, another interaction seemed to be enhanced to support Rain to maintain the mobile mode of English learning.

In the Fourth Class

Interaction with the Instructor

In the fourth class of guided reading, in spite of the fact that he was encouraged by plucking up courage to guess the meaning of the word he had no idea, the interaction with the instructor appeared to be much less than the previous three experiences. There were three reasons for this phenomenon. One reason was that the teacher paused the story to explain some episodes or related words, leaving no requirements for Rain to inquire. Another reason was that Rain still felt uncertain about raising hands to ask questions. According to his experience of being ignored in the elementary school, he was reluctant to elicit questions to receive responses from the teacher. As Rain noted that,

> Because the teacher would pause and explain, there was no need to raise questions. Due to the bad experience in my elementary school, I preferred to discussing with Prince or solving the problems on my own rather than asking the teacher questions in public. [At that time], the teacher sometimes commented that my voice volume was so small that she could not recognize. At times, she didn't notice my hand gesture [for inquiry]. Still sometimes, the [same] question was asked by another classmate in advance. Then I thought I would not be the

one to raise up my hand for questions. It was a learning chance for me to train myself to be capable of tackling my own things. This time, the teacher seemed to ask fewer questions in the first session to instruct the lesson. But there were still some unknown words so that I didn't understand the joke which made by the teacher [in the story]. With the teacher's explanation of some words and the abstract storyline, I was able to grasp eighty to ninety percent of the story.

Therefore, it was revealed that the frequency of the interaction between Rain and his teacher still relied on the teacher. From this stance, the teacher still had the dominant power to speed up or slow down the learning rate.

Still another reason was that he relied much on other agents, such as the classmate next to him, and the electronic English picture books. For an inquisitive leaner, like Rain, he would find another way to construct and reconstruct his cognition by skimming and scanning by himself, conveying his ideas and gaining feedback from Prince. In the dynamic process of learning, if Rain gained less from one agent, he autonomously found his way to learn from other agents; that is, when Rain interacted less with the teacher, he could make good use of the time either to read the text or to converse with Prince, both of which might take place simultaneously. Thus, learning was thought of as an organic mechanism where multiple agents functioned with complexity and continuity.

Interaction with Peers

Speaking of the interaction with peers in the fourth class, Rain said that he still got involved in public sharing and that he had tacit agreement with Prince, which gave him quite a help and pleasure in class, although the interaction with Prince was not increasing dramatically. As Rain noted,

We were commenting on the awkward parts in the story with a sarcastic tone. Both of us had a lot in common. For example, how come circles [which was the only topic] could be the topic of an exhibition of paintings?...Prince would ask me to share my opinions first. Then I would roughly describe the story. After

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that, Prince would say okay as agreement and end up the conversation. So our conversation sometimes was short. Mostly, I initiated the questions; compared to me, he seldom asked questions. I thought it was because his English ability was better than mine…The times of our [private] talks were less [in the fourth class] than before; in fact, I thought we had better and intimate relationships [during the class].

The quote showed that Rain remained more aggressive with regard to peer interaction than Prince for two reasons. First, this pattern of interaction was already established in the beginning and gradually accepted by both of them. Rain did not change his passion about sharing his ideas and conversing with Prince; Prince got accustomed to the interaction triggered by Rain. Although the interaction was with pauses in between, the mutual interaction was constructed continually to confirm Rain's ideas and dispel his doubts. Second, Rain thought Prince had better English ability than he and thus it was supposed that Prince had good understanding of the storybook and generate fewer questions than Rain. Accordingly, it seemed to be the norm that Rain was the one that often asked questions. Rain even stated that if Prince's English had been inferior to his, he would have imitated conversations and discussions to express his own opinions.

Interaction with Reading Materials and Assessment

Rain would be an active learner when he had an interest in the topics or subjects. From the collected data, it seemed that utilizing electronic English picture books to learn English gave him a joyful experience of acquiring English. In the first session of the fourth class, in addition to the intriguing content of the story, its website provided users with well-designed icons. As for the second session, he still chose the book in relation with his prior experiences. As Rain explained,

[The classes] were interesting. I thought they were fun. [They] were not like [the daily English courses] which were confined to those for examinations. So I felt electronic picture books [used in the four classes] more interesting…[Among all

of the classes], the fourth was the most convenient because it offered more functions to make it much easier to choose from different types…In the period of the class, I chose one book with the first impression of its lovely topic. The poetic description was similar to my life before elementary school.

Therefore, Rain said that the fourth class was the coziest and best of all of the experiences in the research probably because he earned experiences in the previous three classes and the digitalized books were introduced in an ascending order which meant they were organized by the instructor from non-animated version in the first class to animated one with multiple devices in the fourth class. With the elaborate plan, Rain used to have no idea about English digitalized books would like to take reading them as another resource of learning the language.

Moreover, Rain even stressed that he still remembered the word which he made a correct guess in response to the teacher. The incident in the fourth class left such an impressive memory that he could not forget the word which he had known nothing about. As Rain noted,

After seeing the subtitle which said 'make a jab' and the [animated] picture, I guessed the Chinese translation of the word, 'jab'. I plucked up my courage to speak it out. Out of my expectations, it was right. Then I realized the word which had been meaningless to me. And I had confidence that I could recognize the sound when it was pronounced sometime.

From the quote above, it revealed that unknown words in the story which Rain had been concerned most before the employment of electronic English picture books were seen as learning chances for Rain to immerse in the story.

Furthermore, in order to finish the student written feedback—the only evaluation method in this study, Rain had the tendency to read the story more than one time so as to remember the content of the story. Accordingly, he was able to summarize the story and give his comments on it in Chinese. In particular, some words and grammar were

kept in his mind and were used to complete worksheet and student written feedback. In other words, Rain not only demonstrated his basic reading ability (grasping the main idea of the story) but also showed that he noticed the details, including vocabulary and grammar.

However, Rain wrote the worksheet and student written feedback in Chinese thanks to his concern about his language fluency. He was afraid that he was incapable of conveying his ideas completely and thoroughly. As Rain noted,

> I would like to think the whole story again to make sure that I was able to summarize the story and clarify the reason why I liked the work. And then I would finish the worksheet and student written feedback in class as fast as I could…I used Chinese to finish them because I couldn't express myself well in English. However, I hope someday I can make my English progress to finish all of them in English like Prince and Sam [, another high-achiever in English].

Through writing feedback, Rain had the chances to apply what he had comprehended. Although he noticed that he might have worse English ability in reading and writing than his classmates, he was still motivated to learn from the high-achievers and hence it was hoped that he was able to finish writing the feedback in English in the near future. From this perspective, the design of student written feedback could be considered not only as an assessment tool but also a learning opportunity and direct practice for Rain.

Summary

In sum, in the last class, the interaction with peers and with the reading material and assessment accounted for a large proportion of the dynamic learning, whereas the interaction with the instructor received less attention by Rain. It was because reading English electronic picture books provided Rain with potential affordances. Rain knew exactly what he needed to understand the reading; therefore, he made use of the relationships within the learning context to create learning chances. That is, learning

did not stop no matter what happened during the process of language acquisition. Also, what he gained from interaction with the instructor, with peers, and with reading materials and assessment benefited Rain's investment on English learning.

CHAPTER 5

FINDINGS (CASE TWO: PRINCE)

This section will present the second case, i.e., Prince's background information, interaction with the instructor, interaction with peers, interaction with the reading materials and assessment in the four classes.

Prince's Background Information

Prince is a ninth grader who had learned English since he was a first-grade student in elementary school, in both regular school and cram school. There were two kinds of English lessons in the regualr school in his fifth grade, that is, English and English Conversation. Each of them was conducted by different teachers and with distinct reading materials. In the former one, imported textbooks designed for learners to develop their four skills in sequence were taken by NNS English teachers as the teaching materials. In the latter one, picture books were utilized by NS English teachers. Besides ordinary paper books, electronic English picture books were introduced by the foreign teacher to Prince. It was in his sixth grade in elementary school that his confidence on English learning was built up. From then on, he remained confident of his English proficiency. That is, he considered, and was considered, as a high-achiever in English classes.

To have an in-depth understanding of the changes of Prince in the process of this research, the collected data were analyzed and three themes emerged, that is, interaction with the instructor, interaction with peers, interaction with reading materials and assessment.

Interaction with the Instructor

Prince's English learning experiences could be categorized into five parts; that is, English in regular school, the first English cram school he attended when he was the

first grader, English Conversation in his fifth and sixth grade in day school, the other cram school which he enrolled as he was in the sixth grade, and English courses in junior high school.

In the regular elementary school, Prince had little interaction with the instructors due to the teacher-dominant teaching method. Specifically, the instructors lectured in English classes where Prince was inclined to listen passively, which made him feel bored. As Prince explained,

> The teachers [in my English Class in elementary school] taught in the way which was like that used by my English teacher in junior high school. In other words, they would like to teach vocabulary and grammar by talking and explaining. In addition to the difficult textbooks, the way the teachers used was boring.

The finding above showed that traditional lectures might decrease student-teacher interaction. In consequence, activity-oriented approaches seemed to be attractive to Prince when English storybooks were introduced and brought into learning English in English Conversation which was integrated into the curriculum when Prince was a fifth grader.

The teacher in Prince's first cram school constructed more English activities than the instructor in regular school. For example, the former played games with balls and taught English through English songs with balls. The student had to throw a sticky ball to hit the correct word written in the column on the whiteboard which was in response to the questions elicited by the teacher. If the answer was accurate, the group which the student belonged to got credits. As Prince noted,

> I had a happy learning experience because the teacher taught English by playing games. He wrote some words in the nine blanks on the whiteboard. The words were related to the content of the textbook [which I was using]. He would ask one question, and if you knew the answer, just throw the ball at the word. I remembered that the class was full of fun. We often talked and laughed in class. Frankly speaking, English was difficult for me in the beginning because it was

my first experience to get in touch with [English] words.

The descriptive statement showed that the instructor facilitated students' English learning in an interactive manner. By making good use of the nature of games, the instructor made students be stimulated by the teacher, classmates, and the learning context.

In this cram school, singing English songs along with passing a ball was one method used to decide who answered the question in the learning process. After the students in the class made a circle, they sang an English song while passing a ball. The progressive pattern would stop without precaution. When the song stopped, the student holding the ball was expected to be responsible for answering the question. As Prince explained,

> The teacher would ask questions related to the textbook. For example, the question might be what he did. Or what did John [the character in the textbook] like? Such easy questions. In the beginning, the teacher would use Chinese to ask questions. Later, he spoke English completely. But we may use Chinese when we did not know how to answer the questions in English. So I felt it fun and easy [to learn English].

After the exciting warm-up activity to choose the respondent, the instructor in Prince's first cram school prompted easy questions to help learners comprehend the textbook. The teacher allowed learners to use both L1 and L2. It seemed that Prince had a nice interaction with the instructor, thereby enjoying learning English.

During the period, Prince discovered that learning English was fun but hard. It was because he was novel in learning English then; consequently, the lack of English vocabulary was perceived by Prince as the preliminary factor for his deficiency of English proficiency then. Thus, English vocabulary became the main objective of learning the language for Prince since his first grade in elementary school.

However, what Prince learned in the cram school did not meet his requirements

needed in regular school and so he quit going to the cram school when he was nine years old. Compared to his interaction with the instructor in the cram school, the interactive actions in regular school were less. As he noted,

> We used a textbook which was all in English, the grammar of which was like what I learned [in junior high school]. Super difficult. The teacher lectured and explained words and grammatical rules. In my first five years in elementary school, my English was poor. Therefore, I seldom talked to the teachers or asked questions.

Prince hardly had interaction with the teacher in English class in regular school. This could be explained in three dimensions. First, the English textbook did not meet Prince's English level at that time. Without familiarity of English, Prince felt it difficult. Second, he was afraid to practice English in front of the instructor because other classmates' English ability surpassed his. In this respect, Prince hardly reacted to the teacher lest he make mistakes. Last but not least, the teacher who dominated the class did not give ample chances and time for student-teacher interaction.

In the English Conversation in Prince's fifth grade, Prince was first introduced electronic English picture books by a native-speaking teacher. As he noted,

> Two books were introduced in one semester. Before reading the content, the teacher would play the film adapted from the book and asked us to consult our unknown words before the class. In class, after projecting the content on the big screen hanging in front of the classroom, the teacher explained some new or difficult words [from the story], and then took the lead to introduce the first and second paragraphs of the storybooks. After that, she guided us who had been divided into seven small groups to race for the honor to be the champion among the forty-two students. At times, the teacher spoke easy Chinese to help us. Besides, she would pronounce the words, asking us to repeat after her demonstration.

In the first semi-structured interview, Prince depicted how his teacher conducted the English Conversation with digitalized storybooks. The vivid descriptions may prove

that Prince engaged in the activity and that the teacher-student interaction in his fifth grade seemed to be teacher-oriented. In other words, Prince did not activate their interaction but followed it. Additionally, in Prince's English Conversation Class, vocabulary appeared to be emphasized in the class. The instructor taught not only meanings but also phonics to enhance students' vocabulary. As Prince added,

> The teacher would teach vocabulary first and sometimes she would write kk next to the word. If I knew the answer to the question the teacher had asked, I would raise up my hand [to answer the meaning of the word]. However, as for me who was unable to identify the symbols, kk was not a help for me. Therefore, I used to pay attention to the teacher. I followed how the teacher pronounced the word. By imitating the sounds, I found it difficult for me to memorize words because it was easy on the ear but forgettable. Forgetting vocabulary impeded my realization of my English [text]books.

From the excerpt, Prince benefited from the teacher-activated instruction and verbal demonstration, especially the lexical pronunciation. In order to remember the words, Prince wanted to imitate the sounds to strengthen his memory, enhance his ability to learn new information, and increase his cognitive capabilities needed to read the storybooks.

Besides teaching vocabulary, the teacher would underline the sentences from the story with an interactive pen which was digitalized connected with the big screen. She would offer the opportunities for learners to race for scores by translating one English sentence into appropriate Chinese. If there was no answer from learners, the teacher would take the responsibility to solve the problem. As Prince explained,

> The teacher would ask if anyone could translate the sentence [which had been underlined by the teacher]. The team which got the most scores would get the candies as awards. I would raise my hands not only to answer but also to ask questions of the teacher. The game-like activity added to the gaiety of the class. Additionally, the teacher would extend some questions which were related to our lives. Most of the time, the teacher spoke English; she would spoke little Chinese when there was no response from us.

Compared to the one-directed learning environment in English Class Prince had, the instructor in English Conversation employed interactive projective screen along with an interactive pen. In this respect, the interaction with the NS teacher was more frequent and better than that with the NNS teacher. The NS instructor brought some welcome comic relief to a static reading process.

After learning English in his second cram school in sixth grade, Prince was transformed from an unconfident English learner into an assertive one because the instructor designed the curriculum based on learners' English levels. The NS teaching assistants as well as the NS teacher supervised Prince's learning with quizzes in oral and written forms before and during the class. The most important event in the second cram school was that Prince learned phonics which was called "kk" by many Taiwanese learners. It was crucial for him to acquire this capability. As Prince explained,

> "Kk" [Phonics] was important for me. The teacher taught me "kk" in my sixth grade. From then on, I was able to consult traditional dictionary when I did not know the pronunciation [of one unknown word]. With the help of the teacher, I learned "kk" successfully so that I could remember words more efficiently and have longer memory.

Prince was grateful that the teacher taught him useful learning methods so that he could become an independent learner. He was also aware that his phonological awareness, word development, and reading comprehension were benefited from the teacher. As Prince noted,

> The teacher taught me "kk" and grammar, which gave me a great help. For example, I could recognize the sounds which were composed of vowels and consonants, and write the combination [of the sounds] down to create the word. I was also able to decode the syllables of the words. What she had taught me was useful and made my English much better. To learn more, I studied harder in her class and asked questions of the teacher or the teaching assistants.

Despite the fact that there were no attractive activities like his experiences in the first cram school or interesting interactive digitalized storybooks in the English Conversation in regular school, Prince got stimulated to acquire English and so gained self-assurance. As such, learning English was not a difficult task for Prince anymore. In addition, he developed better interaction with not only the teacher but also the teaching assistants, both of whom were resources for him to search for supportive English information.

After getting into junior high school, Prince still learned English in the same cram school where he established his confidence and improved his English abilities. However, Prince put the least focus on the English class in regular school. Namely, he had little interaction with his English teacher in the first and second year in junior high school. As Prince explained,

Mostly, I was doing nothing but being in a daze [in English class]. [The main reason was] because I had learned the content of the [English] class [in my cram school] before. Besides, the teacher did most of the talking in class, which made me feel bored as well.

Prince was distracted in English class in regular class. He did not get involved in the learning environment, not to mention the interaction with the instructor who was lecturing the same content as what he had learned in the cram school.

Interaction with Peers

In regular elementary school, Prince perceived himself inferior to others in English. When he had difficulties doing his exercises, he would ask those who had better English performance than he. As Prince noted,

Some of my classmates were excellent at English because they went to cram schools in which they had learned English before our normal class. Sometimes, if I had problems with my exercises, I would ask them.

Prince evaluated himself as a low-achiever in English learning and once in a while

turned to his classmates for help. Due to his deficiency of English, he only kept his scores on average. His parents and surrounding high-achievers made him keep the concept that learning English was of importance. Thus, although he did not do well in his first five years of learning English in elementary school, he was not defeated; instead, his hope to have good English remained.

In his fifth and sixth year in elementary school, the whole students in the English Conversation Class were divided into two groups for competitions. During the competitive learning activities, Prince, who had no faith in his English capability, depended much on his classmates who shared answers with him so that he was able to be the one answering the teachers' questions with accuracy. With the exciting atmosphere of learning context, Prince started to have discussions with his team members and respond to the teacher. As Prince explained,

> The teacher [in English Conversation] would give my team scores, so I would raise my hand more frequently if I knew the answers. If I had no idea, my team members would support me with possibly correct answers. Besides, I joined the discussions about the story as well as consulted with the outstanding classmates.

Prince's interaction with peers was developed by being involved in group discussions. With the support and dependable information from his team members, Prince not only learned English but also changed his English learning attitude. That is, he cognitively and affectively benefited from English Conversation through student-student interaction.

In Prince's first and second grades, he was immersed into the joyful learning context in his first cram school where he got involvement in group discussions and competitions. Meanwhile, Prince had chances to talk about the content and vocabulary from the textbooks with classmates and volunteered to answer for his team to win the game. Under such a competitive atmosphere, the accumulation of peer

collaboration naturally worked in Prince's English learning. That is, he had more relationships with his classmates in the cram school than those in English Class.

With three-year suspension, Prince went to the second cram school when he was a sixth grader. After his self-assurance in English learning increased, he perceived himself as a capable English learner. Then, he started to teach others instead of being taught by his classmates; that is, he changed from a passive learner to a dependable helper. In so doing, he gained much respect and admiration from his classmates not only in the cram school but also in the regular one.

However, when he was in junior high school, peer interaction became a hindrance for his English learning in regular school. As Prince explained,

In my first and second year of junior high school, the classmates did not concentrate on the class. Some monkeyed around, making trouble. Others did something irrelevant to the [English] class, such as reading novels, drawing on the margin of textbooks. Still others listened to the teacher, but few.

The learning context in Prince's past two years in junior high school failed to create an ideal place for Prince to replicate his interactive experiences in his last two years in elementary school. Prince admitted that he did not have good interaction with his classmates from the perspective of English learning and so his interaction with peers did not facilitate his English learning at that time.

Interaction with Reading Materials and Assessment

When Prince was a first grader in elementary school, he went to a cram school where he used the textbook designed for young learners with few words and big illustrations. Prince's responses and engagement in the learning context were evaluated by the instructor. In addition, he was required to complete simple written quizzes by spelling words derived from the textbook or matching them to the corresponding pictures.

In his first four years of elementary school, the textbooks NNS English teacher used in English Class were designed for ESL learners, including vocabulary, dialogues, and grammar. For a student who had no exposure to English, everything in the textbook was hard for Prince. As Prince noted,

> There was no Chinese explanation on the margin of the book. All of the pictures were foreigners. Some of the grammatical rules were like what I learned in junior high school, such as [the conjunctions] either or and neither nor. Every semester, I had two examinations consisted of spelling and multiple choice. English was so difficult that I did not do well on them.

The excerpt showed that the reading materials were above Prince's level. He did not fully understand his textbooks, which were obstacles for his English learning at that time.

When he was a fifth grader, movies and picture books were implemented in English learning in English Conversation. The NS English teacher played the movie before introducing the book and Prince was assigned to preview vocabulary for preparation. As Prince explained,

> Before reading the book, we watched the movie first. The speaking rate in the movie was fast. However, I could understand from the interaction among the characters and the Chinese subtitles. Besides, [I found] there was linking sound but no special visual or aural effects…After watching it, I had a rough understanding of the story…We had competitions with an interactive pen during reading the projected book.

Prince used to read electronic English picture books with background knowledge from watching the film based on the book of the same name. With the integration of visual and auditory stimulus from the movie watching, he was able to get involved in the story.

The interaction with the reading materials was reinforced by using the interactive

pen. As Prince said,

> The teacher had a pen, an interactive pen. It was cool and advanced. We would use the pen in turn to answer the teacher's questions…Because my word quantity was small, I kept looking for words in the dictionary to figure them out.

Despite the static form of the digitalized picture books, the interactive pen created more chances for Prince to have more interaction with the books instead of reading only.

Also, Prince stated that he enjoyed reading picture books. As such, he would browse the book upon receiving the book. As Prince mentioned,

> I couldn't help reading the book as soon as it was handed. I liked reading picture books because I felt interested [in reading them]. When I was a fifth grader, I would consult [new words in the] electronic dictionary, and then read the story again. Because I did not learn "kk" at that time, I guessed the meaning through context and pictures. The pictures helped me to understand the general story before reading sentences [in detail].

In order to realize the content of the story and to take part in the group discussions and competitions, Prince previewed the unknown words before the class, which meant that he could solve the hindrance through independent reading. While he was reading the story, his memory of those words was reinforced. After reading, he needed to take quizzes. As Prince added,

> The small quiz consisted of the sentences from the picture book. One person from groups took turn coming up to fill in the blank with a suitable word. Because [there was] interaction, [I felt] it was interesting.

The reading material Prince read in his fifth grade was supplemented with interactive device, an interactive pen. With it, learners could have a chance to demonstrate what they learned from the picture book, not just reading passively. After reading the book, Prince's reading comprehension and vocabulary accumulated at the same time. As Prince said,

At that time, I memorized a lot of words. The teacher would deliver handouts consisted of the well-organized vocabulary related to the content of the book. Every time before the class, I had to pass the oral test constructed by the teacher or the teaching assistant. Also, I also had written quiz in class. I would ask questions [of the teacher] and study harder for fear that I might be left behind. Now, I did well on my English. My English was excellent.

Rain appeared to be well-prepared to be engaged in the learning materials. Not only written tests but also oral quizzes were conducted to keep track of Prince's English learning. Instantaneous feedback and suggestion were given to facilitate Prince's English learning. Prince was conscious of the fact that had made a great progress in English learning and also applied his success to other learning context regarding English. As Prince explained,

With the help of "kk," I looked up words in the dictionary and read the picture book more efficiently. Because I was regulated to use paper dictionary in school, "kk" helped me a lot to know the word and sentences [in the picture books]. I would turn to dictionaries to look up the words I did not know how to read, which helped my memory.

The excerpt showed that "kk" was important and helpful to Prince and that his application of the kk to reading picture books was beneficial to his lexical development and reading comprehension. He did not have to merely rely on the instructor's oral demonstration and explanations; instead, he was able to search and explore independently in the process of English learning rather than waited for others' assistance.

Speaking of his interaction with reading materials in junior high school, Prince mentioned that he seldom made good use of them, including official textbooks and such supplementary teaching materials as English magazines and instructor-designed handouts. As Prince explained,

Because I had learned everything in my cram school, I did not study hard in

[junior high] school. I did not take notes on textbooks or magazines. What I only did was to read them just when the monthly tests approached.

Prince took reading materials in junior high so lightly that he did not have much interaction with them unless they were linked to examinations. He was not interested in English extensive reading promoted in his school, so he rarely read at his leisure time and did not change his attitude towards reading. Electronic devices such as tablets, smartphones were the main sources for information, not reading.

Prince also mentioned that he felt digitalized English books were like traditional paper storybooks since he thought the contents were the same; what made them different were the distinct presented forms. Moreover, using digitalized books lost the feeling of writing which he hoped in the learning process. Although he enjoyed reading digitalized picture books, he did not keep digitalized reading as a habit because he was a passive reader. As Prince explained,

> Because of my laziness, I did not read picture books after getting into junior high school. I was lazy to find something to read. In fact, I was not active to learn. I got accustomed to accept passively…As for my expectations for electronic picture books, I worried about my vocabulary. So I hoped the teacher could provide with wordlists like my first experience in the fifth grade. With a scope of vocabulary, I felt much secured. Otherwise, reading stories in a direct way sounded challenging for me.

As such, Prince preferred to learn English with the bottom-up strategy and that vocabulary was expected to be demonstrated before reading by him. He believed that the recognition of words may boost reading comprehension and make him less stressful when he encountered the text.

An Overview of the Patterns Emerging from the Four Courses

Table 2 summarizes the scenarios in Prince's reading process when electronic

English picture books were incorporated in the four classes in three themes: interaction with the instructor, interaction with peers (public sharing and private sharing), and interaction with reading materials and assessment. The three themes and their relationships will be explained in a chronological order, that is, from the first to the last course. Similar to Rain's findings, the three themes seemed to be intricately related in every class. However, Prince had different interpretations of the three themes and related events.

Table 2: Prince's Interactive Changes in the Four Classes

| | Interaction with the Instructor | Interaction with Peers | | Interaction with | |
		Public Sharing	Private sharing	Reading Materials	Assessment
The 1st Class	Listen passively to the instructor's explanations which were perceived as a barrier to some extent	Listening and thinking silently	Annoyance resulted from Rain's aggressive inquisitiveness	Little interaction with the static illustrations and text	Write in English with spontaneity
The 2nd Class	The interaction was increasing by sharing ideas in response to the instructor.	Express viewpoints more passionately	Conversations were perceived as supportive learning chances	More engagement with the text read by the storyreader	Write in English and make use of what was learned
The 3rd Class	The interaction with the instructor was decreasing.	Less eagerness to share ideas	Take Rain's initiations for granted and more topics for private sharing	Gain topics from the story for private sharing	Still present in English
The 4th Class	The interaction remained less.	No sharing ideas in the perceived spiritless context	Private sharing with Rain was on the decline.	Be capable of reading independently	Change to write in Chinese

In the First Class

Interaction with the Instructor

Prince had few interactions with the instructor at the first class; his passivity was

revealed. Although Prince would ask the teacher questions in his previous experience,

he felt no need to answer the instructor's guiding questions in the first class. He stated

that the instruction given by the teacher was clear enough that he could understand

without questions. In addition, he thought because this was the first class, the teacher

expected to explain more explicitly, trying to make every student in the class fully

understand regardless of whether they had experiences of reading electronic English

picture books. Accordingly, Prince did not address questions. As Prince explained,

> In the beginning, in addition to writing down the name of the book, I wrote
> down "lily pad" after hearing from the teacher's explanation. I heard the sound
> and directly spelled the word on my worksheet. The habit was made when I
> learned "kk" from my English teacher [in the cram school] in my sixth grade. I
> wrote the term down because that was something I did not know. Besides, I
> thought it might be used later while I was completing the worksheet.
> If the words I knew, I would not copy them down. This time, I preferred to listen
> [to the teacher]. Also, the teacher would talk about life-related topics derived
> from the storybook. It was fun.

In the first class, Prince chose to sit back reading while listening to the teacher's

guided questions and explanations. Although he did not ask the teacher questions, he

transcribed some words after hearing them pronounced by the teacher so as to use

them on the feedback. It suggested that Prince was able to comprehend most of the

story with pictures so that he not only had a comprehensive knowledge but also read

consciously to obtain every possible element for completing the subsequent

assessment.

In general, the interaction with the instructor was teacher-activated. Although the

teacher used verbal cues to prompt student answers and to facilitate learners'

participation, the teacher did the talking all the time so Prince felt "impatient". As Prince explained,

> What the teacher said was clear for me. Thanks to the teacher's instruction to lead me to read the storybook, I could understand most of the content. When the teacher began to give more explanations for the second time, I was kind of impatient and thought that the teacher should stop talking because she had mentioned before. Just play it!

The instructor's guidance was direct and helpful to some degree, which scaffolded Prince to brainstorm for rough understanding about the book he had never read before and to ask questions while reading to encourage deeper exploration of the content. However, in Prince's opinion, the teacher's lectures seemed to be excessive. Overly lecturing was viewed by Prince as a hindrance to stop the reading pace. According to his learning experience, he could not resist the temptation to read the story if the presented book might be interesting to him.

Interaction with Peers

Similar to the interaction with the instructor, Prince did not have much interaction with peers at the first class. He even felt uncomfortable and disturbed in private sharing. In the initial stage of the first class, public sharing was constructed as a warm-up activity to activate students' prior knowledge. By listening to other students' responses, Prince tended to rethink their concepts behind their remarks and expressive manners instead of raising hands to share what came up in his mind. It was because he was in the agreement with his classmates' answers; therefore, there was no need for him to be the one who delivered the same speech. As Prince explained,

> For example, when the teacher asked what the lily pad was for, one of my classmates answered. His answer was exactly the same as mine, so [I would] let him speak. Thus, I did not have to share my answer. If I had different point of view, I might express mine. However, it did not happen this time.

Prince did not want to be the first one that answered the questions prompted by the instructor. He tended to wait for others' responses before he gave his judgment. In the first class, he did not exchange his opinions publicly.

As for private sharing, Prince had more interaction with the classmate who was sitting on his right side instead of the one on his left side. As Prince explained,

> Rain who was on my right side would share everything related to the book to me. He would ask me questions as well, especially some words he did not know. When it comes to my classmate sitting on my left side, most of the time, he was talking with the one sitting on his left. Therefore, I had less interaction with him.

The finding showed that Prince had more interaction with Rain who sat on Prince's right side instead of the one sitting on Prince's left hand because Rain was initiating and leading the conversation. Although Rain's inquisitiveness and enthusiasm elicited Prince's responses and interactions, Prince was annoyed by Rain repetitive murmur and non-stop sharing in the process of the first class. As Prince explained,

> He [Rain] was always hyper and kept on mumbling while reading the story [in the first session of the class]. I would ignore his impenitent behaviors. [In extensive reading], he said to me that the same book which we chose respectively by coincidence contained a lot of words. He continued talking to me. Some other time, he shared with me that the story could be magnified. Shortly after saying that, he talked to me that he was unaware of the words above. He was noisy. He shared every detail in the process of the class, which was too trivial for me to listen to him. If asked his unknown words, I would tell him Chinese translation. But I would neglect his other behaviors. I hated the person who would call others whenever he or she did something.

The two participants' different personalities led to unbalanced interaction. Prince who was used to passive learning by following the teacher's instructions was contradictory to Rain who was used to active learning by his creativity to associate what he read to what he had experienced. On account of different learning styles, Rain's passionate

sharing was perceived as unpleasant annoyance by Prince. Thus, Prince took a passive attitude to tolerate Rain's behavior.

During the break, other classmate, called Bear (pseudonym), came to Prince to share the book he had surveyed. Bear's descriptions of the story stimulated Prince's interest in the book; however, Prince did not read it by himself. Instead, Prince merely copied what Bear had described and wrote on worksheet and student written feedback because there was no enough time left.

In general, Prince remained passive to interact with peers not only in public sharing but also in private sharing. He preferred to be the one listening more and talking less during the peer interaction. In particular to the interaction with Rain, he expressed strong dislike.

Interaction with Reading Materials and Assessment

Still, Prince had little interaction with the reading material utilized at the first class. However, he chose English to finish all of the assessment spontaneously. Among the forty-six students participating in the class, Prince was the only one to write in English. In the following section, the data would be elaborated to investigate how Prince thought of the reading materials used in the first class and how he treated the subsequent assessment in this research. Because Prince had the experience of reading digitalized English picture books, the similarities and differences between his previous learning history and his present experiences were presented.

Speaking of Prince's first impression of the book employed in the first class, it was the picture on the cover that drew Prince's attention at his first sight. After that, the title with the word "adventure" gave Prince a clear image of an exciting exploration. As Prince noted,

During the reading, besides listening to the teacher's explanations, I tried guessing from the supplementary pictures. For example, the word "pad" made

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me connect it with the illustration above which were two lily leaves. I also felt the picture was related to the word because it said Sniffy and Fluffy were sitting "on" them. Judging from the preposition "on," my prediction was supported.

In the first class, pictures had supplementary functions for Prince to get a better understanding of the story. With illustrations, Prince perceived some cues from the text, thereby making predictions of the storyline. Prince associated the experience of reading *Sniffy and Fluffy* with that of reading other digitalized English picture books in his elementary school because the format was similar to those he had read; that is, the book was presented digitally on the screen without other extra features. Therefore, reading the book was an easy and ordinary task for him.

However, Prince with the anticipation of an extremely tense and exciting adventure felt unsatisfactory with the story after reading it. He stated that the author did not provide adequate information of the adventurous process, which did not meet his expectations. Furthermore, the ending of the story was not solid or impressive. As Prince explained,

Since the word "adventure" was used for the title, it made me excited to enjoy such an exciting story. To my disappointment, the story was too short to provide readers with dramatic ups and downs. For instance, the author described both of them swam in the quest of the flower. The simple sentence, "they swim", were replicated twice. Furthermore, it came to a quick conclusion.

Prince anticipated more information from the book to make the adventure more fascinating, suggesting that the lack of information book stimulated Prince to read more from the text.

Prince who used to consult unknown words in the dictionary before the class did not have time for previewing the content or looking up the words he did not understand. Nonetheless, he did not get into trouble comprehending the story because there were not so many unknown words in the book. During the process of reading,

Prince had a tendency to take notes whenever he heard some words which were perceived useful. As Prince explained,

> I jotted down [the new words] on the back of my worksheet during the class because I thought probably I would make use of them on my written feedback. I did use them [on the worksheet and student written feedback] indeed. I learned those words by writing them down because they left an impressive image in my mind.

During the reading, Prince, who seemed to be passive in reading, had the ability to detect and search for certain terms which were applied to the completion of assessment. He directly made use of what he had learned from the reading, which fostered his language learning.

Summary

In sum, Prince seemed to learn English through reading English digitalized picture books in an implicit way. Although he remained passive in three kinds of interaction, his English benefited from the exposure to the learning context; that is, he did not do anything irrelevant in reading sessions. He learned not simply from the instructor but also from his classmates. While he was listening silently, he was also thinking synchronously. In this manner, he was active in mind not verbally. The fact that he could complete worksheet and student written feedback in well-organized English showed that English learning did happen to Prince at the first class.

In the Second Class

The data concerning the second class was presented in the same three aforementioned themes in the first class. By making comparison to the first class, the researcher hoped to investigate if there were any changes in the learning context after utilizing the electronic English picture books with animations and auditory features supplied.

Interaction with the Instructor

At the second class, Prince's interaction with the instructor was increasing. The instructor introduced the website, from which she chose one digitalized English picture book as the reading material called *Harry, the Dirty Dog*. The instructor did not explain explicitly in the process of reading; on the contrary, she played the story twice. The first time, she played the story in a direct way without pauses. After she prompted some questions, guiding the students to make comparisons with the predictions for what they had expected would occur in a story, she played the second time. For the second time, the story was supplemented with English subtitles. Prince suggested that he preferred the second electronic picture books due to animated features and the function of storyteller. As Prince explained,

> Compared to the first experience, I preferred this book, [*Harry, the Dirty Dog*]. Because there were animations along with the lady as the storyteller. The intonations helped me to comprehend the story, so it wouldn't be a big problem that there were some words I did not know. As a result, that the teacher did not make additional explanations did not matter.

Prince who used to consult new words in the dictionary or learn key vocabulary before reading texts seemed to less dependent on lexicon. He focused on the comprehensive knowledge rather than fragmental components like words. Additionally, he did not rely on the teacher's demonstration of word pronunciation. In the process of reading the book in the second class, he not only read but also listened. Through listening to a meaningful series of words, he understood the main idea of the story. As such, the story became comprehensible for him even though the instructor did not explain much about it.

Additionally, Prince began to respond to the instructor in the period of public sharing where opportunities to talk about their reading and thinking were given.

Despite the fact that the digitalized picture book used in the first class was in a simple format and model, Prince was unfamiliar with teaching procedures and learning context. Nevertheless, with the experiences of the first class, Prince gained confidence in engaging in public sharing. As Prince explained,

> I did answer the teacher's question. Although I did not remember what my question was, I had a strong feeling that I was more willing to share. I felt not familiar with the method in which the teacher used the [electronic] picture book at the first class. The method was different from that in regular [English] classes [recently]. Therefore, after getting used to it, it was time to interact with [the learning activities].

Prince who did not participate in public sharing in the first class began involving in exchanging ideas publicly. His motivation to share was activated dramatically in the second class. How he behaved differently in the second class was because his familiarity with the teaching process and learning context increased learners' participation in learning activities.

Interaction with Peers

Facilitated by the interaction with the instructor, Prince's interaction with peers in public sharing was fostered. Instead of listening to others' sharing passively and showing agreement privately, Prince enthusiastically expressed his opinions. It appeared that Prince's active interaction with the teacher may link to his interaction with peers in public sharing.

In terms of peer interaction in private sharing, Prince remained indifferent to the classmate on his left side because none of them tended to initiate conversations; that is, there was no interactive relationship between both of them. Nevertheless, Prince's interaction with Rain made some changes at the second class. Rain's inquisitiveness was perceived as supportive learning chances rather than annoyance anymore. Even so, he did not have much time to have complete conversations with Rain. As Prince

explained,

> I focused much on the story and had less interaction with Rain. Because the book
> [in the first class] had fewer [unknown] words and it [the book used at the first
> class] needed turning to the next page. However, [at the first class] we had more
> time talking during the discussions from one page after another slowly.

The first book with no multimedia features provided either Rain or Prince with more

time to interact with because they read each page slowly while turning every page

manually. They could have small talks during the intervals. Yet, at the second class,

the animated features were automatically functioned in the process of reading the text.

Reading the second book was similar to watching movies. Therefore, nonstop scenes

in the story of the second digitalized book did not support the two participants

sufficient time for discussions.

In addition to the different paces of the representation of stories, he paid much

attention to the story in the second class because there was a storyteller introducing

the story, briefly summarizing, and reading it loud with lively intonation. As Prince

noted,

> The story was read by a storyteller. The lady changed her sound by producing the
> rise and fall of her voice. Her voice made the story vivid and interesting. The
> book was not so much a story as a video. In order not to get lost in the video, I
> paid much focus on it.

Animated features with the supplementary storyteller attracted most of Prince's

attention. Because attention span was limited, Prince was busy on watching the

context instead of having discussions with Rain. As such, the interaction with Rain

was not that much in terms of frequency.

Despite little interaction with Rain, Prince mentioned that he changed his attitude

towards Rain. As Prince explained,

> Rain was very noisy [when I first sat next to him in the first class]. But [in the
> second class], I found what he said was somehow meaningful, not something

boring. He usually activated conversations and I would respond to him, even with an interjection answering his questions. [When asked if I liked this kind of interaction], I would say it was great.

The excerpt showed that Rain's inquisitive trait was not referred to as a distractive factor to interrupt Prince's reading process and train of thought. Prince discovered in the second class that Rain-activated interaction was meaningful and beneficial to comprehending the content of the story. As Prince emphasized,

Even though sometimes we had divergence of views, he made me realize what I was thinking was wrong and my answers were not always correct. So we learned interactively.

It was apparent that Prince who disliked his interaction with Rain in the first class began to enjoy their interactive relationship. Instead of being ignorant of Rain's remarks or making superficial effort without much care or enthusiasm, Prince appreciated Rain's contribution to their discussions and considered it an opportunity for both of them to learn from each other. Whether they agreed or disagreed with each other, their accidental and continual interactive actions that occurred between dyads was a dynamic and beneficial changing sequence. Therefore, Prince made some modifications of his reactions due to the responses by his interaction partner, Rain. Furthermore, face-to-face conversations not only made Prince improve his reading comprehension but also rectified his errors. The interaction with peers, especially during private sharing, could be perceived positive towards English learning in this research.

In Prince's case, interaction was also in dual directions. The more exposure afforded by interacting with others it was, the more likely Prince could engage into mutual relationships. Furthermore, interaction within the learning context was associated with one another. That is, Prince's perception of interaction with people,

including the instructor and peers, changed. Accordingly, he made himself get more involved into discussions, which excited sparkles among the instructor, Rain, and himself.

Interaction with Reading Materials and Assessment

Different from the reading experience at the first class, Prince autonomously engaged more into reading the second digitalized storybook. In other words, he had more interaction with reading materials and assessment. To be more specific, in the following section, the interaction with reading materials and assessment would be analyzed in terms of contents, animated features, subtitles, and reading strategies.

At the first glace of the book, Prince was misled and thought that there were two individual dogs when he saw the cover of the book. As Prince noted,

There were two dogs with different colors. And I had read *Fluffy and Sniffy* which was describing the adventure with good friends. So I thought   they were the same [also good friends]. However, after reading for the first time, I found that it was only one dog which became dirty outside of its house…So I paid more attention to the story.

Prince activated his prior knowledge which was gained from the first experiences and made predictions of the story read in the second class. While reading, Prince's predictions were proved and modified in the process of constructing his comprehension. If there was something against his original expected results, his cognition would have changes. The unexpected outcomes occurred during the struggling process were perceived by Prince as learning chances to improve his reading comprehension.

Additionally, the electronic English picture book in the second class was equipped with multimedia features, such as animations, auditory effects, and storyteller. The combination of these multimedia features created a more vivid virtual

reading world. As Prince noted,

It sounded when I moved the cursor across the book cover. The sound indicated who would read the story…In addition to watching the story, the storyteller spoke at a slow pace with rising and falling voice when encountered different contents. Thus, I felt reading this book [, *Harry, the Dirty Dog,*] more interesting than the first book [, *Sniffy and Fluffy*].

At the second class, not only visual effects but also auditory features caught Prince's attention. Moreover, the function of storyteller increased Prince's learning interest. Prince's cognitive and affective abilities benefited from visual and auditory effects in the second reading experience. However, the English subtitles were not congruent with the content of the story. As Prince explained,

I relied much on my listening for the first time [of the reading]. The second time, I was listening while reading the [English] subtitles. Roughly, I could comprehend. But some sentences [of the English subtitles] were kind of weird. But it gave me help sometimes. So [I thought] it would be better with the [English] subtitles.

With English subtitles supplemented, Prince's comprehension of the story was reinforced. Even though some mistakes occurred in the English subtitles, the mistakes were not regarded as barriers in the reading process. The reason may be that Prince's reading comprehension of the electronic storybook did not only come from reading English subtitles but also stimulants such as illustrations, animations, and narrations produced by the storyteller. All of them helped to develop Prince's cognition in English learning.

Compared to Prince's reading experiences in the first class, Prince relied on the teacher's guidance along with static illustrations to get main idea of the story when first introduced the storyline because there were no sound effects supplemented. His comprehension was facilitated through the teacher's scaffolding of modeling the

thought process. Concerning the second class in this study, the story was under the guidance of the storyteller. In this manner, Prince's interest was activated and he was capable of realizing the content with some unknown words. As Prince explained,

> The second story was more fun for me because the storyteller narrated the story with the aid of animations. The first story [used in the first class] was more ordinary. Moreover, if there were words I did not know [while reading], roughly, I could understand what the story was about.

Sound added interest in using the website for reading in the second class. Prince noticed that there would be sound to indicate who the storyteller was, especially the storyteller which was a new device for him. The sound on the video made by the storyteller synchronized with the plots of the story. Thus, the narration from the storyteller made it possible that there was no teacher's guidance for the content of the story. Additionally, animations were of great importance. As Prince explained,

> I thought animations were necessary in the reading process. They could not only suffice the lack of [my] vocabulary but also improve [my] comprehension of the content of the story.

Unknown words did not dominate reading comprehension anymore. In other words, Prince who used to consult or learn key vocabulary terms before reading assimilated new information with the aid of animations. The vocabulary barrier did not limit his capacity to employ the language to comprehend. Moreover, Prince was not distracted by animations while reading. As Prince suggested,

> Animations in the story were interesting, which caught my attention. I felt that watching the story with animations was special. It was not reading. Instead, it was like watching movies.

Therefore, the idea of reading electronic picture books with animations was supported by Prince. He suggested that distraction did not take place while he was following the pace of the story. On the contrary, he even concentrated on those animations for fear

that he might miss some significant scenes.

With familiarity of the procedures and reading strategies, the function of storyteller, and supplementary animations, Prince concluded that there was no need for others' reading guidance. That is, as long as electronic English picture books were well-designed for learners, teachers' invention was not a requirement for language learning.

Regarding the second session of the second class, extensive reading, Prince did select one picture book on his own. The reason why he picked up the book was that the cover stimulated his interest. As Prince explained,

> By chance, I chose the book whose cover was interesting. After clicking, I felt the story was fun and extraordinary. Sleeping with a monster accompanying was so strange that it caught my attention. The boy's thoughts were different from those in ordinary people's mind. Besides, the storyteller used different intonations to summarize the story, explain why he liked the book, and share his private affairs which were derived from the book.

In the first class, Prince had neither feeling for nor interest in searching on his own. However, in the second class, it was Prince's interest that pushed him to search for himself instead of copying his classmates' sharing for finishing the assessment. The possible stimulations of his interest in the second class were supportive digitalized features built-in the second digitalized picture book. Animations fostered his willing to use electronic English picture books. Additionally, the variation of spoken pitch generated by the storyteller made Prince pay his attention on important elements of the story. The pitch variation highlighted expressive emotions for readers to perceive easily. It seemed that Prince was intensely absorbed in class after engaging more in the story. As such, his thoughts towards the story and subsequent comprehension were increased.

Summary

Prince's interaction with the instructor, with peers, and with reading materials and assessment were all on the increase at the second class. Prince's willingness to engage in the learning activity was increased and thereby he spent more time on interactive relationship. Most importantly, his perception of Rain's remarks was different from how he had treated them at the first class. Thus, his English learning benefited from acting differently and positively on interaction with Rain in private sharing. Prince also made good use of what he had learned from the class through the combination of the three interactions on the assessment in English. In sum, Prince's interactive action was fostered during the second reading process.

In the Third Class

Interaction with the Instructor

Unlike the reading experience in the previous class, Prince's interaction with the instructor was decreasing at the third class. As usual, the instructor prompted some questions to activate students' prior knowledge and association with the topic with the demonstration of the cover of the book. Before the entry of the story, Prince was thinking on his own while the instructor was leading the questions. As Prince explained,

> This time, I did not want to answer the questions. Because my other classmates answered the questions eagerly and fast, I decided to wait for their answers. Moreover, their answers were not wrong; therefore, I did not raise my hand [to share my opinions]. Even if their answers were wrong, [I knew] the teacher would help. Although this book had multimedia features, I still enjoyed the second one [with the storyteller].

The possible reasons for the decreasing interaction with the instructor were Prince's familiarity with the class, other classmates' engagement in the class, and additional

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featured embedded in the third book. First, Prince was familiar with the teaching procedures and tempo adopted by the instructor; therefore, he may have perceived that there was always someone who would answer the questions. If there was no one answering the question, the instructor would provide more information or even solve the problem herself. Therefore, responding to the teacher may not be considered a must for him. Second, other learners may get accustomed to the teaching steps so that they took the chance to share their opinions in a direct manner without being afraid of making mistakes. It was not until Prince's classmate gave a false answer or interpretation that Prince would be more willing to offer his. Moreover, providing inaccurate answers would not be blamed for. Instead, those false responses may be taken as exactly proper chances for the instructor to detect learners' misunderstanding which needed clarifying. Last but not the least, the digitalized features were less intriguing that they did not strike up his interest to get involved in the interaction with the instructor. Thus, he tended to remain passive within the learning context.

In comparison with the reading experience at the second class, Prince acted differently while interacting with the instructor. Prince's perception of familiarity with the learning context, referred to as a facilitator for engaging in sharing at the second class, was turned upside down to become the reason for eliminating his interaction with the instructor. Likewise, his interaction with peers in public sharing seemed to be less, which will be elaborated in the next section.

Interaction with Peers

Prince's interaction with peers in public sharing was decreasing, whereas his peer interaction in private sharing was increasing. For instance, during the public sharing, Prince did not show much eagerness to exchange his ideas. He only listened to the conversations between the instructor and those who were contributing their answers or experiences. As Prince explained,

[During public sharing], all of the answers were not wrong [to the questions]. Therefore, there was no need for me to share my answers with my hand raising.

Through the process, he also rechecked his ideas with care and found that there were a number of similarities between his opinions and his classmates'. In this respect, although he did not explicitly make a statement in public, he still actively used reflective thinking and reasoning skills in public sharing.

Concerning private sharing with Rain, Prince noted that initially he often neglected Rain's exaggerating reflex action in the process of reading because he thought it was natural for Rain to do so. In his mind, Rain was a classmate who would act or respond unexpectedly. However, their conversations took place when there were some plots which were considered illogical or unreasonable by either of them. As Prince explained,

He [Rain] would said to me that the [tooth]witch had only three hairs on the top of her head and asked some questions based on the story. For example, why the girl in the story could be assigned the [tooth]witch who took the responsibility of collecting children's teeth? Why she scattered the teeth collected by all of the [tooth]witch? Wouldn't be anybody under hurt because of the bag of the teeth falling down from the heaven? Sometimes, I told him something I read from the book. For instance, the [tooth]witch decorated the magic wand with the star which had been picked up.

Both of them had something in common with the topic. That is, they were inclined toward discussing those surrealistic episodes happening in the story. As such, the incongruous story which was comprised of fantasy events provided both of them with a range of opportunities to talk about. Thus, it seemed that Rain who expressed enthusiasm about idea-sharing was not regarded as an annoying interference for impeding Prince's reading process. In other words, Prince remained his positive attitude towards his interaction with Rain after the second class. It was noticeable

from the class observations that Prince had more natural and better interaction with Rain. Rain owned magnetic power to draw Prince's attention with continual inquiries and discussions. Interestingly, Prince seemed to enjoy the idea-expressing moment with Rain's initiations or responses, which was confirmed with Prince in the subsequent stimulated recall and interview. As for the interaction with the classmate sitting on Prince's left side, there seemed to be no mutual connection between both of them. One reason for this scenario was that the classmate on Prince's left hand did not initiate conversations to forge the relationship between Prince and himself. Another possible reason was that Prince was not the one who started conversations. None of them spoke first; as a result, they had no interaction.

Although Prince had less interaction with the instructor and with peers in public sharing, his interaction with Rain in private sharing was more than that at the previous two classes. Not only Rain's passion and inquisitiveness but also the content of the reading material used at the third class enhanced Prince's active interaction with Rain. Thus, interaction with peers in private sharing and with reading materials and assessment shared correlative property.

Interaction with Reading Materials and Assessment

As mentioned above, it was obvious that Prince's interaction with reading materials and assessment increased. The unbelievable plots excited Prince's curiosity, thereby fostering his eagerness to figure out what would be happening next. Therefore, through continual information-gaining process, Prince focused on the text itself instead of the discrete lexical or grammatical elements. However, he did not like the book from his point of view even though it was easy for him to understand. He further explained,

> The book was easy; however, it did not interest me at all. So if it had not been for the teacher, I would not have read the book. I would skip it directly. The story

was written for elementary school students. The story was too easy for me to read. I did not like it.

The excerpt showed that one book with easy descriptions was not the primary factor to appeal learners. In fact, the preliminary component should be learners' interest. That is, if the learner's interest was stimulated, no matter how complicated the story was or how difficult the words were, English reading could be viewed as an intriguing exploration rather than a boring suffering.

Prince found that this book used in the third class had two models for readers: automatic or manual. This reading experience was like watching a video clip for him. For example, the books would be magnified when he moved the cursor over. In addition to the visual effect, they also supplemented auditory effects which would read the title of the book on which the reader put the cursor. As Prince explained,

> When I moved my mouse and put the cursor on the book, the book became larger and it spoke. It would read the title [of the book] for me. But I liked the second class which had the storyteller more. I felt it was better, having the feeling of reading a book. By the way, the level of the book [in the second class] with the storyteller was higher [than the book used in the third class].

Although there were more unexpected plots with digitalized features in the third book used in this research, Prince still had the preference to the second electronic English picture book which read by a storyteller.

In the extensive-reading session, Prince maintained his criteria that the simplicity of the design of the cover would first catch his eyes. As Prince explained,

> On the homepage was the bar to select from the titles in ascendant or descendent order. At the sight of this book, the cover seemed simple and the title appeared easy as well. I clicked the icon and found its title was in accordance with its content. The main reason for me to keep reading this one was that the book was interesting to me. The girl in the story was like my younger sister with arbitrary character. She wanted everything to be hers. Therefore, I found interest in

reading the story.

Prince tended to choose the one which was below his English capacity in order to read the book and finish the worksheet and student written feedback with ease and efficiency. If needed, the instructor may introduce the book or books which were challenging for learners in the shared reading session to magnify their reading experiences and level up their language competence.

Summary

In sum, Prince's interaction with the instructor and with peers in public sharing was on the decrease, whereas his peer interaction with Rain and with the reading material and assessment was on the increase in the third class. Such change occurred because the instructor's teaching method remained unchanged. In terms of the book utilized in the third class, this fantasy created many chances for Prince to connect with Rain and the story itself. Therefore, the design and the employment of digitalized electronic picture books had intimate and complicated relationship with the role of the instructor and peers, which may facilitate language learning in a versatile fashion.

In the Fourth Class

Interaction with the Instructor

Similarly, Prince's interaction with the instructor appeared to be less at the last class. In the third semi-structured interview, the more illustrations, words, and auditory effected the digitalized book processed, the less interaction the instructor had with students. Therefore, Prince suggested that moderate competitions may be one alternative method to add some varieties to the learning process which may foster teacher-student interaction. As Prince explained,

After the instructor presented and guided the book in the first session, [I thought]

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group competitions could be carried out in the second session, if possible…I thought I could focus on reading one book the teacher provided. [I enjoyed reading] the book recommended by the instructor. Those books [the teacher chose] were great.

The excerpt above showed that Prince preferred reading books suggested by the instructor rather than choosing at his will. Compared to the extensive-reading session, Prince preferred to the shared-reading one, in which he found it interesting to read the assigned books. Additionally, Prince was used to being the follower instead of being the starter. That is, he tended to accept whatever his teacher advised or offered and relied on the instructor to some extent in this study.

Regarding the pedagogical approaches, Prince noted that there seemed to be no difference in the four classes and emphasized that he liked the teaching methods the instructor employed. Although he had suggested that there would be alternative teaching activities with competitions, he enjoyed the construction of shared reading in the research. As Prince explained,

The teaching steps [in the fourth class] were the same [as those in the former three classes]. Every time, [we would] read one book. Feedback would be needed after reading it. And then [we needed to] choose one [self-selective book]. After that, one more sheet of feedback [for the second session]. In comparison with my previous learning experiences which were full of noises when sharing our opinions, the methods the instructor used [in these four classes] were great. But I seldom answered the teacher's questions.

The quote above suggested that the instructor conducted the teaching in the same way; therefore, Prince got accustomed to the teaching pattern, being able to predict what the teacher was going to do next. As such, his eagerness to engage in the learning procedures by responding to the teacher or expressing his opinions in public sharing was fading. Instead, he just followed what his experiences from previous classes had taught him.

In addition, Prince also emphasized that the instructor should be aware of the order of the construction of competitive activities. Otherwise, it may waste considerable time to conduct a lesson without orderly class management and quiet environment, impeding students' learning. The maintenance of order was essential for Prince to prevent chaos or lawless confusion from ruling the whole discussion process. Although Prince remained passive in interaction with the instructor explicitly, he showed positive attitude towards the instructor's pedagogical methods implicitly.

Interaction with Peers

At the fourth class, interaction with peers both in public sharing and private sharing were less. To be more precise, Prince was following the process that the instructor prompted questions and the subsequent answers were offered by other classmates. In addition to the same patterns, the atmosphere in the fourth class was spiritless. As Prince explained,

> There was almost no interaction with others except Rain. And I felt those in the back of the class were deathly still. Because it [the class] was at the first class on Monday. None of the business of the [English] course.

The excerpt showed the massive sharing was considerably decreasing because the research was constructed at the first class on Monday when most of the students easily had Blue Monday Syndrome. This was the fourth time for the employment of digitalized English book, which could not withstand the most depressing day of one week.

Although the interaction was less frequent than that happened in previous classes, Prince had some small talks with Rain about their misunderstanding or ridiculous parts in the story. For example, Prince originally thought the main character in the story was eating an orange doughnut. After reading the story, it turned out to be an orange circle which was painted by the leading role. Prince even mistook the girl as a

boy because of his stereotype that boys had the tendency to express their anger in the way had presented in the story. He did not realize the character was a girl student until he heard the narration of the story with the word, she or her. Additionally, Prince still felt amazed at knowing that the girl's topic of her exhibition was only a dot. It seemed that the story was not that unrealistic than what they had read in the third class.

Prince also noticed that the interaction with Rain was on the decrease on the whole. The primary reason for the decline was that the frequency of initiation of conversation from Rain lessened. With decreasing interaction with Rain, Prince remained passive to respond instead of initiating the idea-sharing. If there was no interaction between them, he focused on his independent reading and searching. As Prince explained,

> We talked less this time. Probably it was because Rain did not talk to me that often. Sometimes, when I had nothing to say or did not know what I should say in reply to his request, I would give a short response, such as um, okay, right. I found Rain did not stop speaking to me due to my short feedback.

The excerpt suggested that Prince enjoyed the interaction with Rain when Rain began the conversation. He was used to the pattern of active sharing from Rain. In terms of Prince's responses, he said that he would reply to Rain's answers which could be taken as the indicator not only to end but also to initiate another turn of talking. In fact, Prince mentioned in the third interview that responses did not matter in the interaction with Rain. In other words, what Rain needed was to have the audience to share with. He did not really expect the feedback from Prince, the respondent. Still as the same reasons mentioned in the previous sections, there was no interaction with the other classmate sitting next to him.

In Prince's case, interaction with peers in public sharing was highly related to interaction with the instructor. That is, Prince's interaction with peers in public

sharing increased, while his interaction with the instructor increased; the former decreased, and so did the latter. In private sharing, Prince's interaction with Rain had a strong connection with Rain's initiation of conversations. Although their interaction was less at the last class, Prince felt it easy and natural to respond or not to respond to Rain. In other words, there was an invisible bond between both of them. When they needed to talk, they talked. When they did not converse with each other, either of them was occupied with other learning chances perceived and acted on by themselves.

Interaction with Reading Materials and Assessment

At the last class, Prince's interaction with the reading material was enhanced; however, he used Chinese rather than English in writing worksheet and student written feedback. In the shared-reading session of all of the fourth class, the simple design of the cover and title engaged his attention. As for the content of the story, Prince missed some details of the story initially when the story was presented without the subtitles. Nonetheless, Prince knew that the instructor would play the story second time. Thus, during the second reading, he would focus more on those parts which he had missed in his first reading. As Prince explained,

> At first, I would gain the main idea from listening to what the story was talking about. After missing something [from the first reading], I paid a full concentration on [the following] reading while listening to the story. [With the subtitles supplied], I was capable of having further reading. Despite the mistakes from the subtitles, the [English] words were helpful.

The excerpt showed that Prince realized what the story was about not only from visual stimulation from animations or subtitles but also from auditory functions. With auditory functions, learners could read and listen to the books independently without the guidance of the instructor. Therefore, electronic English picture books could be read outside of the classroom. As such, learning English with digitalized books would

increase learners' opportunities, facilitating autonomous language learners.

With the aid of English subtitles, Prince had more medium to depend on. He could not only listen to but read as well to have comprehensive understanding. He also stated that he was able to do multitasking by shifting his attention from acoustic ability to reading the words. The combination of sounds and subtitles was not new to Prince who often watched English movies. Although there were supplementary digitalized functions, Prince detected none of them because he paid undivided attention to the content. Thus, the instructor may give some reminders or instructions for learners' to use extra device.

In the extensive reading session, Prince who used to write in English in the past three classes used Chinese to finish the worksheet and student written feedback. Compared to his previous three classes, he had fewer notes during the reading process. As Prince explained,

> In the first three classes, I thought using English [to finish the student written feedback] was cool. However, this was the last time. And I was too lazy to write in English. Because I had to think how to develop English sentences to express my ideas. Using Chinese was much easier and faster. So I changed to use Chinese this time. It was okay that I had tried English before. And I had a sense of achievement after making good use of what I had learned on writing the worksheet and student written feedback.

Finishing worksheet and student written feedback was helpful for Prince to put into practice what he had read. As such, he had the purpose and outlines for reading the story, using his reading strategies to search main ideas and key elements.

Prince mentioned that completing worksheet and student written feedback did not have to rely on knowing every single word from the story. He noticed that he was capable of understanding the content and finishing the subsequent tasks by reading digitalized storybooks. In this way, Prince who tended to consult every word before

reading changed his habitual reading procedure to read the text with animated, auditory, and other interactive digitalized features first. And he also made used of what he had learned from the reading to conclude his ideas on worksheet and student written feedback. Additionally, the concept that not every word had the same value came up to him. What he needed in reading was some key words which could be distinguished from other less important words by reading to get the whole picture of the story. As Prince explained,

> I had learned to find meanings of unknown words before reading. Unlike my prior experiences, reading came before vocabulary. It did not matter that there were some words [which not that important in the story] I did not know. I could still understand the story…I found that I liked to read [the text] first and learned some [important] new words [from reading].

From the excerpt, Prince would like to adopt a new reading strategy. After gaining main idea from the story, he was able to make association with the words related to the topic. Therefore, Prince learned words through digitalized reading instead of consulting every word in the dictionary. His comprehension of words was reinforced after reading the story as a whole rather than memorizing them with the help of Chinese translations. Above all, learning English was considered a whole process not acquiring fragmental components only.

Additionally, Prince depicted that visual stimulations and auditory features were beneficial to reading. Specifically, he could gather information with the help of fragmental illustrations and auditory effects which read complete sentences. As Prince explained,

> I did receive great help from illustrations from the book with supplementary narrative sounds. I was listening and looking at the illustrations. I felt it would be better with both of the functions, [visual and auditory].

The excerpt concluded that Prince regarded more information resources as a benefit for reading comprehension. The notion that the more was the better was supported by Prince's experiences in these four classes in the research. Moreover, the learning experiences facilitated him to be more likely to read digitalized picture books because the books engaged his attention and interest. His reading attitude towards English reading was broadened, not being restricted to paper books.

With the pressure of assigned assessment and limited time, he had the tendency to choose easy books instead of selecting challenging books for himself in class. However, after the four classes, Prince, who was a passive reader, learned there were so ample virtual resources that he could search for what he was interested in at any time.

Summary

Reading electronic English picture books was more intriguing than what Prince had experienced before because he perceived that adopting electronic English picture books in English courses had the potential to be a useful teaching tool in English learning. Furthermore, English learning was constructed comprehensively through interaction with the instructor, with peers, and with reading materials and assessment. As such, the dynamic learning milieu afforded Prince numerous opportunities of uninterrupted language learning through reciprocal and interactive relationships.

CHAPTER 6

DISCUSSION AND CONCLUSION

This chapter will discuss the findings so as to answer the research question in

this study. Then, the pedagogical implications, the limitations of the present study, and

the suggestions for future research will be presented.

DISCUSSION

This section discusses the research question: what kinds of learning chances and

milieu perceived by learners are afforded in the process of implementing electronic

picture books in learning English and how did they change across time?

The whole learning process of the two participants suggests that language

learning is so complicated that it has been overly simplified to be viewed as a linear

relationship between comprehensive input and observable output in the previous

studies (Bus, Verhallen, & de Jong, 2009; Chang, 1998; Chen, 2002; Huang, 1996;

Huang, 1997; Labba & Kuhn, 2000; Lee, 2008; Lefever-Davis & Pearman, 2005; Lin,

2002; Tseng, 2003; Wu, 1999; Yang, 2010; Yokota & Teale, 2014). In my study,

although the two participants were given the same reading materials by the instructor,

they sometimes perceived, interpreted, and acted on affordances differently. To gain

knowledge from the instructor, Rain tended to prompt questions directly whereas

Prince listened to the teacher passively. Moreover, even the same participant showed

different attitude towards the same affordance. For instance, Rain who appreciated the

instructor's explicit explanations at the first class expected group-oriented discussions

with less teacher's lectures after the second class. Prince passively obtaining

information from the instructor thought too much teacher's intervention was an

obstacle for English learning in the shared-reading session after the instructor guided

the book at the first class.

With an eye to investigating the multiple factors which are taken as learning

opportunities by the two participants when reading digitalized storybooks, the investigator analyzed the qualitative data from three aspects: interaction with the instructor, interaction with peers, and interaction with reading materials and assessment. Among the three interactive relationships, the dynamic reading process will be categorized into nine aspects which were the categories suggested in the prior literature: phonological awareness, auditory impact, lexical development, reading comprehension, trans-literacies, interest, motivation, confidence, and autonomy. Not all of the nine categories will be discussed individually and all of them will not be analyzed separately. Instead, the discussions will only focus on the following three patterns emerging from the findings: the aspect from the nine categories perceived to be facilitated by both Rain and Prince, the aspect from the nine categories interpreted not to be enhanced by both of the two participants, the aspect from the nine categories acted upon differently by both of them.

Interaction with the Instructor

In terms of interaction with the instructor, the findings revealed that both Rain and Prince perceived that their reading comprehension was enhanced in all of the four classes, that auditory impact and trans-literacies were not improved at all, and that their confidence was not always fostered in the whole process. The subsequent section will elaborate how the two participants "perceive, interpret, and act upon" (van Lier, 2000, 2004a, 2004b, 2007, 2008b) teacher-student interaction in reading comprehension, auditory impact and trans-literacies, and confidence.

Interaction with the Instructor vs. Reading Comprehension

Both Rain's and Prince's reading comprehension was facilitated in all of the four classes. Both of them mentioned in the interviews that they could understand the storylines by getting the main ideas without any difficulties with the intervention of the instructor. For example, Rain said that the instructor would guide learners to

brainstorm by prompting questions, encourage student-readers to make predictions, and lead students to think further in shared reading. That is, teachers' scaffolding remarks, including questions, guidance, and explanations, may spur language learning through pedagogical activities. Like Rain, Prince also mentioned that the instructor would make explanations when there were some unknown words or learners had problems answering the instructor's questions correctly.

In addition, both of them appeared to "be active, then pick up language information that is useful" for themselves (van Lier, 2006, p.97) to make the stories comprehensible. For instance, at the first class, since there were no additional features of storybooks, the participants attempted to pay attention to everything the instructor explained. In the following three classes, even though they were not told to do so nor were they evaluated, they still wanted to gain information from the teacher to make sure if their predictions were correct and to know more about the stories. Their attention to the teacher and active interaction with the instructor by "getting information from the environment while doing something, in order to do something else" (van Lier, 2006, p.98) are crucial in reading comprehension. Therefore, the findings supported that learners' comprehensive competence benefited from reading electronic English picture books with every level of digitalization with the assistance of instructors in a continuous reading process.

Interaction with the Instructor vs. Auditory Impact and Trans-literacies

Different from reading comprehension aforementioned, it was noted that Rain and Prince did not think their auditory impact and trans-literacies were enhanced during the whole digitalized reading classes. It was because these two aspects were potential learning chances derived from reading electronic picture books; that is, they seemed not to have a close relationships with the instructor. According to the concept in van Lier's (2006) study that "linguistic affordances are specified in the linguistic

expression, and available to the active interlocutor (or addressee) who may pick up one more of those affordances as they are relevant at the moment" (p.95), auditory impact and trans-literacies were not needed for interacting with the instructor in the four classes. To be more precise, the two participants did not perceive there were 'pre-signs' (p.93) to fuel the enhancement of auditory impact and trans-literacies when interacting with the instructor in this study. In other words, both of these two categories were in relation with reading materials and assessment, not with the instructor.

Interaction with the Instructor vs. Confidence

Interestingly, both Rain's and Prince's confidence in language learning with interaction with the instructor was low at the first class; nonetheless, it was increasing at the second class. Unfortunately, the positive results did not last for the following two classes. That is, their state of self-confidence decreased after the third class. It still remained low at the last class in the research. Given the findings in the present research, confidence was not always enhanced in reading digitalized picture books.

In spite of their identical pattern of changes with regard to confidence, their reasons were not the same. For Rain, he did not show much confidence initially because his previous learning experiences had created his negative-oriented self-image about English learning. However, the teacher responded to Rain patiently in an encouraging tone. As a result, at the second class, Rain would have more confidence to express his thoughts rather than being scolded like how he had been treated before. Nevertheless, he was haunted by his bad memories of English learning, which made it easy for him to retreat from building inner power. Especially the previous two years in elementary school in which his English teacher gave Rain negative feedback were preoccupied in his mind. Since then, he had been afraid of making mistakes when asking questions or being asked questions by the teachers.

Even until the last class, the authority of instructors was still deeply rooted in his mind.

Unlike Rain, except for the second class, Prince did not gain confidence in the other classes. Generally speaking, he seldom had direct interaction with his teachers in his past learning years no matter how his instructors conducted learning activities or explained grammar in detail. However, at the second class, Prince was confident in getting involved in the teacher-initiated discussions in the sharing reading because he got familiar with the teaching procedures from his experience of the first class. His confidence along with motivation to interact with the instructor increased only at the second class.

In sum, distinctive participants perceived affordances differently with different reasons. Rain's previous learning experience was the main factor for him to interact the instructor in this research, whereas pedagogical methods in the present study accounted for Prince's interaction with the teacher. These two reasons made changes in accordance with time and different participants. Hence, such findings contradicted the notion in the previous studies that learners' confidence or motivation in reading digitalized English books changed because of one factor, that is, different multimedia features and hotpots (Bus, Verhallen & de Jong, 2009; de Jong & Bus, 2003; Lewin, 2000; Trushell et al., 2003). Also, the participants' awareness of increasing or decreasing confidence occurred continually in a direct and spontaneous manner. For example, both participants did not perceive that their confidence increased at the first, third, and fourth classes whereas they were aware that their confidence was enhanced at the second class only. Such results are in line with van Lier's proposition that "at several levels of intensity as well as in several different contextual forms, depending both on communicative purpose and developmental skill" (van Lier, 2006, p.102) and includes "repetitions – with – changes" (van Lier, 2007, p.55). Accordingly, in-depth

investigation of the interaction between the instructor and learners with specific focus on the change of confidence can be conducted in future research in order to improve English learning through reading electronic English picture books.

<center>*Interaction with Peers*</center>

Regarding peer interaction, the results showed that both Rain and Prince perceived that both of their reading comprehension was enhanced in preceding three classes, that phonological awareness, auditory Impact, trans-literacies, and confidence did not increase, and that Rain's changes of lexical development and autonomy were exactly the reverse of Prince's. The detailed information and possible reasons will be illustrated in the subsequent sessions.

Interaction with Peers vs. Reading Comprehension

Both participants' reading comprehension was enhanced due to peer interaction in the first three classes. In the last class, Rain's reading comprehension was improved, whereas Prince's was not considered improved by himself. Namely, Rain thought his reading comprehension was facilitated in interaction with peers in four classes. However, Prince did not feel the same in his last class.

In general, in the first three classes, both of their comprehension of the stories was constructed with the mediation of information in public sharing and in private sharing in both explicit and implicit manners. Exclusively, it was from the second class that Prince began considering Rain's inquisitive learning style helpful in reading electronic English picture books. Gradually, Prince unconsciously got more involvement in private sharings with Rain. They had the tendency to converse with each other naturally. They felt their relationships were getting closer despite the fact that the intimacy could not tell from superficial frequency of interaction. Furthermore, Prince's reading comprehension was being fostered as a result of less interaction with Rain. That is, Prince thought his reading comprehension was not fostered in the last

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class because he found that Rain-initiated conversation lessened. In short, Rain and Prince spent less time discussing with each other.

The learning process of the four classes indicated that reading comprehension had a close and reflexive relationship with peer interaction, especially in private sharing. Through interacting with peers, the participants' reading comprehension changed. They modified their predictions and clarified their ideas by sharing individual opinions, asking questions, giving direct responses to construct and reconstruct their ideas, which corresponded to van Lier's (2006) notion that "they each form and inform the others" (p.98). Even so, Prince's capacity of understanding the story was not hindered. Instead, he would achieve his goal of getting full realization of the story by other vehicles, such as interaction with the instructor and with reading materials and assessment.

Interaction with Peers vs. Phonological Awareness, Auditory Impact, Trans-literacies, and Confidence

Although reading comprehension was fostered in general, the enhancement of phonological awareness, auditory impact, trans-literacies, and confidence was not detected by both Rain and Prince during the four classes. The reasons were listed as follows. First, students spoke Chinese mostly to share their opinions either in public sharing or in private sharings. That is, they hardly practiced the target language in mutual responses when reading digitalized storybooks. Second, little attention was paid to auditory impact during their discussion openly or privately because learners were likely to learn as their instructors suggested or stressed. In view of this, it appeared that interaction with the instructor was in relation to peer interaction.

Third, learners did not have the habit of sharing their reading strategies and decoding skills with their peers. Instead, they often talked about vocabulary and content derived from the stories they had read in the four classes. Therefore, they did

not facilitate their strategies of trans-literacies in peer discussions. This was compatible to van Lier's perspective of language learning that "affordances arise out of participation and use, and learning opportunities arise as a consequence of participation and use" (2006, p.92). That is, none of these three aspects mentioned above was perceived by the two participants because both of them did not notice or not incorporate them into the interaction with peers. In fact, all of the three items by nature were in correlation with the features of English electronic picture books. Thus, none of them were fostered in the four classes.

Fourth, both of their confidence did not seem to be fostered for different reasons for Rain, the still thought his English was not good enough, although he engaged himself to public sharing and private sharings because of peer pressure and his inquisitiveness. For instance, he would be afraid of being teased for his error when he was answering the instructor's questions in public. Also, he thought students who had worse abilities would have more questions needed others' assistance. In consequence, he often initiated conversations in regards with words and plots so as to ask Prince to solve his puzzles during the reading. On the contrary, Prince's confidence stayed unchanged because he thought he had been good at English after his learning experiences at his sixth grade and so he did not consider it a must to increase confidence through interaction with peers.

Interaction with Peers vs. Lexical Development and Autonomy

Generally speaking, Rain's lexical development and autonomy was enhanced, whereas Prince's was not in all of the four classes. In terms of lexical development, Rain showed positive perception because he was aggressive in asking questions. Whenever he had something he felt confused, he would turn to Prince for help, who was his powerful source of information and knowledge. He even emphasized that he preferred to asking classmates for questions rather than consulting his instructor

because the deeply-rooted image of instructors' authority aforementioned. The findings can be explained by van Lier's (2006) notion that language learning occurs when learners "need access to the information in the environment… pick it up while being engaged in meaningful activities" (p.97). That is, Rain displayed his agency via interaction with peers. Whenever he needed to know the word, he could directly "pick it up" through peer interaction.

By contrast, Prince did not think his lexical development was enhanced during his interaction with peers in the reading process. There were three reasons for this. First, there were few words in the books used in the shared reading that he could not recognize. As such, he did not need to ask his classmates for help in answering his questions. Second, due to his passive attitude, he seldom proposed questions in private and public sharings. Third, with much lexical knowledge, Prince always taught Rain the meanings of the words instead of being the one taught by Rain or other classmates. Because Prince did not need to learn new words, he did not actively interact with Rain or he would solve his problem by using other methods, i.e., listening to the instructor, consulting dictionaries, and googling on the Internet.

Rain and Prince's interaction would be incomplete without taking the learning context into consideration. Since language and learning are referred to "as relationships among learners and between learners and the environment" (van Lier, 2000, p.258), different participants/agents may interpret and act upon differently on the affordances. Those affordances may remain in the learning context, but not everyone spotted and had interaction with them at the same time, which is evident in the fact that Rain was aware that his lexical development and autonomy benefited through student-student interaction whereas Prince did not. However, if the participant demanded something which was limited, he or she sought another method to make up the deficiency. For instance, what Prince often did when he had certain

unknown words was to wait for the instructor's explicit explanations or to google the answer by himself. That is, learners would actively perceived other affordances to maintain their language learning. Their perception and need of affordances varied all the time.

When it comes to autonomy, it was apparent that Rain was an autonomous reader in all of the four classes, whereas Prince did not show any autonomy at all. What gave them opposite directions would be elaborated as follows. First, their discrepancy of reading habits was the primary reason. Although they were reading electronic English picture books, their reading strategies were correlated to their traditional ones, such as predicting, modifying, making inferences, and extending their reasoning. To put it differently, they applied how they read paper books to read digitalized books. For example, Rain had had good reading habits since he was young (for further information, please see background information in Ch. 4). Contrarily, Prince seldom read, not to mention reading autonomously (see background information in Ch. 5). Second, their learning attitude was diverse. Although Prince had more confidence in English over Rain, it did not mean that Prince had more active learning attitude than Rain. What the findings showed was exactly the opposite. That is, Rain expressed passion and enthusiasm about learning English, whereas Prince uncovered his inactiveness in English learning in the implementation of electronic English picture books. These three reasons correspond to Shortter and Newson's (1982) assumption that language learning is "full of demands and requirements, opportunities and limitations, rejections and invitations, enablements and constraints – in short, affordances"(p.34).

Based on the findings concerning interaction with peers, English learning in the four classes is a process-oriented and complicated journey. Besides, the findings manifested that learners' prior learning history and distinctive personality could not be

ignored.

<center>*Interaction with Reading Materials and Assessment*</center>

Unlike the two interactive relationships mentioned above, there were only two patterns in interaction with reading materials and assessment. First, in the four classes, reading comprehension, motivation, and autonomy were on the increase. Second, Rain's interest was enhanced in all four classes, whereas Prince's was only advanced at the last three classes. The complexity of each category will be presented in the following.

Interaction with Reading Materials and Assessment vs. Reading Comprehension, Motivation , and Autonomy

Speaking of interaction with reading materials and assessment, the findings showed that both of Rain's and Prince's reading comprehension, motivation, and autonomy were on the increase in reading distinctive digitalization of picture books which were in different genres as well. The further and detailed illustrations will be elaborated as follows.

First, despite the fact that Rain had never read any digitalized English picture books, he found it easy to understand the story when exposed to electronic picture books initially. After the first class, the storybooks were equipped with more multimedia features, such as animated illustrations, storytellers and narrators, sound effects, interactive activities. Among those additional functions, Rain relied much on animations and storytellers and narrators to construct his psychological guessing game (Goodman, 1967) through the reading process.

As for Prince who had impressive digitalized English reading experiences in elementary school, the book utilized by the instructor at the first class was similar to those he had read before. Furthermore, more advanced visual and auditory features facilitated his reading comprehension. With the supplementary multimedia, he was

able to understand not only the stories chosen by the instructor but also read more e-books selected by himself. That is, without the instructor's mediation, he could build up his cognition in the process of reading with the help of animated features. None of the participants complained that their reading comprehension was hindered by additional digitalized functions.Such finding contradicted the notion in the prior studies that digitalized additions impeded language learning (Bus, Verhallen & de Jong, 2009; de Jong & Bus, 2003; Labbo, 2000; Lefever-Davis and Pearman, 2005; Lewin, 2000; Lin, 2002; Trushell et al., 2003).

Second, besides the enhancement of reading comprehension, the enhancement of the two participants' motivation was acknowledged by the present study in which both of them perceived that e-picture books advanced learners' reading motivation. Such finding is in line with the presumption that "young learners are motivated to read and their attitudes become more positive" (Lin & Lin, 2012, p. 59).

Finally, the findings also revealed that both of their autonomy was high consistently. To be more specific, both Rain and Prince remained autonomous in interaction with reading materials and assessment in the four classes. Their autonomy was not presented in one simple ascending direction; hence, my research suggests a dynamic interaction between autonomy and digitalized English storybook reading.

During the four classes, Rain's autonomy was advanced through reading electronic English picture books. After being confronted with self-perceived peer pressure, instead of retreating, he intended to understand not only words but also contents. After being exposed to the learning context, he made up his mind and plucked up his courage to answer the instructor's questions. Whenever he had any difficulties, he would ask Prince for solutions. For instance, after the four classes, he reread the books which he could not finish reading in class due to limited time at his leisure time. He even wanted to share what he had learned in the four classes with his

older sister, encouraging her to read electronic English storybooks. Such results are similar to Sun's (2003) argument that online reading advanced students' autonomy with which independent readers with long-term reading interest may come into existence.

On the other hand, the change of Prince's autonomy may be explained by the fact that he was viewed by himself as well as Rain as high-achievers in English learning. Out of superiority, Prince's autonomy enabled him to make every decision for himself, to read or not to read. Such finding corresponded to van Lier's notion of agency which refers to individual learner's ability for "self-awareness and self-determination: decision-making, ability to enact or resist change, and take responsibility for actions" (Carson, 2012, p.43). Despite his passive learning attitude and reading habit, in shared reading, he autonomously wrote down words for the purpose of using in the student written feedback at the end of each class. Namely, he did not merely follow what the instructor demanded. Instead, if the word detected by him was helpful in finishing reflections, he would not only pay attention to the pronunciation of words but also jot them down on the margin or the back of student written feedback. As for Rain, his active learning style may be the reason for his autonomy. Out of his autonomy, he decided to finish student written feedback in English in the first three classes and in Chinese in the last class. His reason for writing in English was that it was cool to do so. Indirectly, the above findings showed that reading electronic English picture books could make connections with English writing programs. Therefore, reading digitalized storybooks may assist the construction of traditional literacies, including listening, reading, and writing.

Interaction with Reading Materials and Assessment vs. Interest

The results also uncovered that Rain's interest kept intense in the four classes; however, except for the first class, Prince also showed interest in digitalized reading.

Why did both of them find themselves interested in reading electronic picture books in the second, third, and fourth class? The primary reasons were the well-designed digitalized English storybooks and the content of those books.

In terms of well-designed English e-storybooks, the function of storytellers narrating the stories and even sharing their real-life experiences not only was different from the first book without animated features but was the participants' reason why they enjoyed reading the books at the second class. Furthermore, all of the storytellers were native-speakers, and reading was constructed with both pleasant pronunciation and dramatic intonation. Although there were no storytellers embedded in the books at the third and the fourth classes, those books had more digitalized additions to support language learning, which facilitated learners' interest while reading.

In addition to the fact that the digitalized English storybooks were gradually advanced in the functions of digitalization; most significantly, Rain and Prince found that the websites of those digitalized books in the last three classes were user-friendly for learners to search the book they liked in extensive reading section. The findings were in relation to the notion that the pleasant experiences of reading electronic storybooks foster learners' interest and that learners' interest benefited from well-designed reading materials in the research. Such results verified the assumption in Lin & Lin's study (2012) that "participants' favorite e-books were those with interesting and impressive content or well-designed features" (p. 74). Overall, it was apparent that both Rain and Prince were interested in reading e-storybooks when exposed to different levels of supplementary functions and considerate designs.

Concerning the content of the books, all of the genres chosen in the research were based on the questionnaires. By doing so, the teacher-researcher attempted to provide learners with reading materials close to their genuine lives and reading preferences. For example, Rain had experiences of keeping a dog as a pet, which was

quite similar to the story of the second book. Even at the third and fourth classes, Rain naturally compared the story to his previous experiences. Likewise, Prince made predictions and inferences from his schemata as well as the cues from the books. Surprisingly, it was revealed from the findings that concepts contradictory to their authentic experiences or background knowledge also enhanced learners' interest. For instance, Rain and Prince felt interested in reading the third and fourth books where there were many plots beyond their original expectations. They were even given more chances of interaction with each other. Those unexpected or extraordinary plots provided both Rain and Prince frequent affordances to engage in negotiating meanings, which is essential to develop second language (Herazo & Donato, 2012). This study shows that not only those books related to learners' background knowledge but also those different from their original cognition could be regarded as facilitators for language learning as well as student-student interaction.

In sum, according to the discussion mentioned above, with agency, the two participants were sensitive and active to perceive and decide which affordance was useful and beneficial at that moment for their digitalized reading. Sometimes, their reading was enhanced by interaction with the instructor; sometimes, it might be fostered by interaction with peers or with reading materials. Still sometimes the combination of affordances might enhance their language learning. As the reading was in progress in the four classes, they acted differently due to their changing perception of affordance. Thus, the two participants' perception of affordance in this study was so complicated that it could not be explained with one simple reason or easy answer, which corresponded to that " the possibility for individual agency and the opportunity for choice are shaped by multiple forces on multiple layers" (Lyn, 2012, p.22). Accordingly, learners' learning process should be emphasized in the future class for the instructors and in the future study for the investigators to have an

in-depth understanding of language acquisition from a holistic perspective.
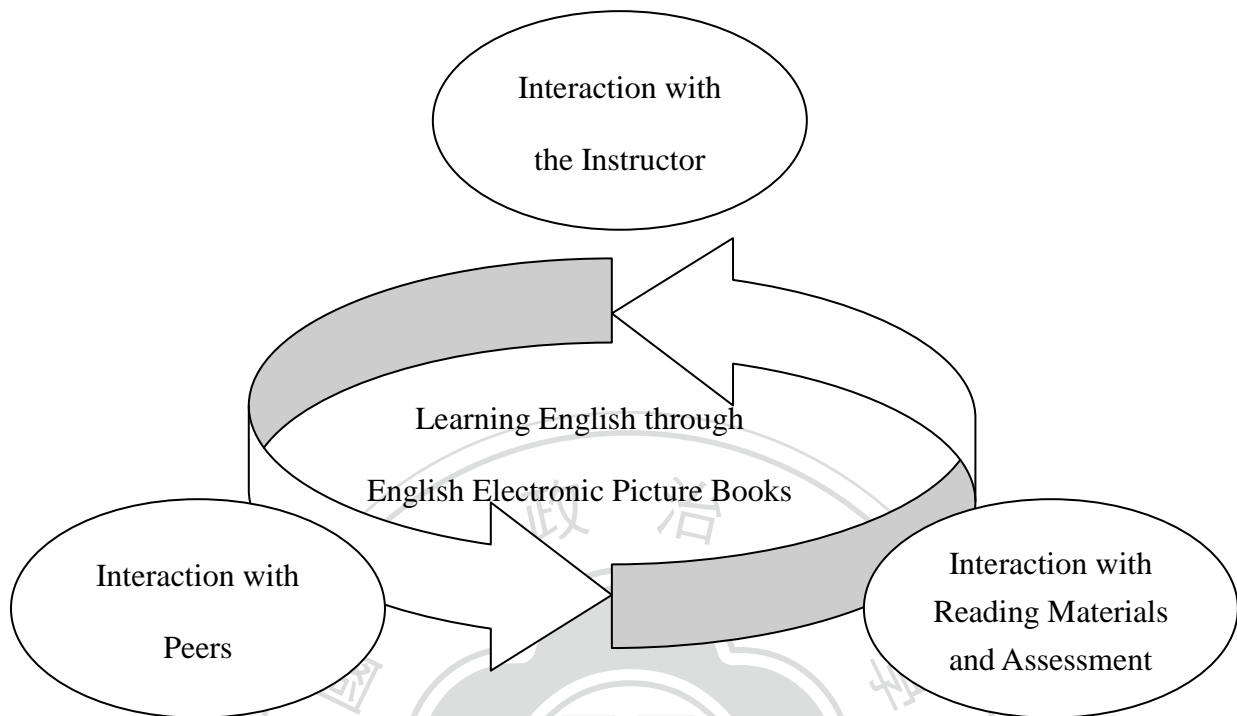
Figure 2: Dynamic Relationships of Learning English through English Electronic Picture Books

Figure 2 illustrates how the two participants reflected on learning English through English electronic picture books in this study. It is obvious that language learning "cannot be based on the establishment of causal (or correlational) links between something in the input and something in the output (van Lier, 1997, p.786). Rather, the relationships among the three interactions were reciprocal and dynamic in circulation. According to van Lier's (2006) assumption that "the affordance picked up serve the agent – depending on his or her abilities – to promote further action and lead to higher and more successful levels of interaction" (p.95); in this study, Rain and Prince did not always perceive the same affordance even though they were provided with the same digitalized storybooks within the same learning environment. Sometimes one participant's reading comprehension was facilitated by interaction with the instructor; sometimes his reading comprehension was enhanced due to

interaction with the peers. In my study, this unstable mobility of learning groups the three aspects of interaction together. This mode of dynamic interaction of reading electronic English picture books circles continually and benefits reciprocally. As such, multiple affordances exist and are being functioning interdependently within the learning environment of reading digitalized storybooks, which provide learners with opportunities to obtain "information from the active relation between the organism and a structured environment" (van Lier, 2000, p.257). Once it is perceived by learners, the circular learning will be spurred to move on and on.

<div align="center">Pedagogical Implications</div>

Given that both enhancement and impedance interdependently exist in the study, six suggestions are provided for instructors and designers of electronic English picture books to facilitate learners' English learning: (1) incorporating more electronic English picture books into English curriculum, (2) arranging seats according to learners' English proficiency and learning attitude, (3) switching the role of the instructor to a facilitator, (4) providing learners with more independent reading time, (5) broadening the selection of electronic English picture books with diversity, and (6) implementing versatile teaching activities in class.

Incorporating More Electronic English Picture Books into English Curriculum

Different from the traditional English reading materials or textbooks, electronic English picture books are beneficial in language learning with the supplementary digitalized features and create learning chances in the dynamic process. Therefore, more electronic English picture books are recommended to be incorporated into the English curriculum. The findings in the present study assert that more engagement in reading texts occurs when less the direct intervention from the instructor. Similarly, Arnold's (2009) claim that "extensive reading program for advanced learners not only successfully increased their motivation to read, but also enhanced their confidence

and ability in L2 reading" (Lin & Lin, 2012, p.61).Thus, more exposure to electronic English picture books encourages learners' linguistic and non-linguistic development.

To stimulate learners, like Rain and Prince in the research, to experience digitalized reading outside of the classroom and even to recommend and invite family members to join them, more electronic English picture books should be seriously incorporated in curriculum design to extend official textbooks (Costello & Kolodziej, 2006). With practical support, learners can have more time to make reading digitalized English books into practice without additional efforts. Given different electronic English picture books expose learners into distinctive reading context, they should be provided with more supportive materials.

First, choose well-designed and supportive digitalized storybooks. Learners can benefit from those digitalized additions in well-designed digitalized storybooks. What I mean by well-designed is that texts and animated features should assist reciprocally. To choose well-designed e-storybooks, the instructor was encouraged to survey a great number of English e-books and use the criteria for electronic picture books selection which was mentioned in Ch. 3 to evaluate the books. Provided with well-designed e-storybooks, learners facilitate their language learning by getting a sense of overall meaning after clarification and modification, reflecting upon information in the texts, and mostly important, extending their realization in critical and creative ways from reading electronic picture books. Besides, leaners' interest may be stimulated and remained, which may foster learners' independent reading after the class.

Second, provide more than one book or longer books in class. According to the findings in my study, the two participants thought some books were too short to read, expecting to read more. Thus, it is suggested that the instructor introduce several short books or one long book to make learners engage in reading. It is also noted that the

instructor can incorporate suitable digitalized books according to time, teaching purposes, and learners' levels. In this respect, taking these into consideration will make reading several books or long books in class successful.

Arranging Seats According to Learners' Language Proficiency and Learning Attitude

In the research, the arrangement of seats was for the convenience of class observations and video-taping. However, the findings showed that self-perceived lower-achievers and self-perceived higher-achievers could benefit reciprocally from the implementation of electronic English picture books. The arrangement of seats naturally created the environment and opportunity for both of them who had not been familiar with to interact and communicate with each other. van Lier (2006) advocated that " so long as there are sufficient examples of target language use (cues) in the environment, learners amongst themselves can orient to those (cues) and act upon them appropriately in interactions" (p.101). In order to facilitate language learning, learners should be arranged to have more chances for mutual interaction, thereby the need for meaning negotiation occurs. That is, low-achievers could be grouped with high-achievers to elicit meaning making. By doing so, high-achievers are seen as consultants. Simultaneously, self-perceived low-achievers could stimulate high-achievers to think about the questions they have not thought about, hence learning by answering and responding. In addition to English capacity, learners' learning attitude should also be considered for seat arrangements. If both of the learners are passive, they are less likely to get involved in English reading or the interactions with peers might turn into chatting and talking irrelevant to the storybooks. If either one of the two learners is aggressive, it is possible for one of them to connect the relationships with the passive one. As a result, learning chances may be afforded to foster language learning.

Switching the Role of the Instructor to a Facilitator

The findings in the research showed that the role of the instructor can be switched from the provider, the guidance to the facilitator. Previous research also cautions that the role of the instructor should be changed in different phases of reading process for distinctive pedagogical purposes. Schugar, Smith, and Schugar (2013) suggested that teachers were expected to provide guided instruction with interactive picture e-books through activating students' background knowledge before reading, promoting students to answer comprehension questions during reading, and helping students to extend their thinking about the text after reading (p.623). In this respect, the instructors are expected to introduce electronic English picture books to "create classroom context for languaging" (Martin-Beltrán, 2012, p.113) and afford learners with chances to interact with peers as well as reading materials and assessment. By doing so, instructors are trustworthy providers with abundant learning resources and chances for peer discussion. In the initial phrase of reading courses, the instructor can be the guidance of the books using thought-provoking inquiries and further probing strategies. After well-structured scaffolding, the scaffolding can be removed or demolished. With sensitive observation during the class, the instructors can offer more time for learners to read widely by themselves, that is, extensive reading programs without explicit teachers' explanations. By doing so, learners can explore and navigate in the boundless ocean of reading.

Providing Learners with More Independent Reading Time

In this study, the participants, with or without digitalized English reading experiences, were given four classes to get exposure to four different types of electronic picture books. In addition to the instructor's introduction and learner's adaptation of the new device, they needed extra time for searching the book they liked, rendering less time left to do independent reading. Hence, in the future, the instructor

may offer more time or more reading classes for learners to bathe in the ocean of the reading electronic English picture books.

Broadening the Selection of Electronic Picture Books with Diversity

The findings in my study showed that the two participants reflected differently on the reading materials in the four classes due to their respective learning background and individual reading preferences and that both of them benefited from those four books in different aspects, i.e., reading comprehension, interest, and autonomy. Therefore, it is essential to broaden the selection of electronic picture books with diversity. Although both of the two participants tended to choose books which were under their English capacity, some challenging reading materials were welcomed because they were able to obtain information by shifting one to another affordance autonomously. Thus, the instructor can offer reading materials with different levels, ranging from i-1 to i+1 (Chen et al., 2003; Lin & Lin, 2012; Yamashita, 2004). Learners can read for pleasure by reading easy books and sharpen their reading ability by reading books which are above their English competence. Last, books with diverse genres are required for learners to explore the texts through digital reading. The genres learners are not familiar with may create chances for learners to negotiate meaning.

Implementing Versatile Teaching Activities in Class

In terms of reading, effective learners tend to utilize different strategies to know what they are going to learn before reading, to search more information during reading, and to think forward and deeply after reading. Experienced instructors may make good use of their repertoire of pedagogical strategies and skills by constructing different supportive activities. The findings in the present study show that learners may lose their interest, motivation, and autonomy because of the single-pattern teaching procedure. So the employment of multiple teaching activities is of

importance. The two participants in my study advised the whole-class narration employed in the present study could be supplemented or replaced with small-group discussions and game-like competitions. In addition, role plays, reader circles, and dramas would be feasible based on students' level of language proficiency (cf. Livingstone, 1983). Therefore, a wider variety of arrangements in teaching procedures are expected be employed wisely and properly to enhance students learning.

Limitations of the Present Study

Several limitations of these findings exist in this research. First, the two participants were chosen according to their similar monthly scores. Therefore, the findings in the present research did not show if there were any differences between high-achievers and low-achievers. Second, in addition to distinctive English competence, both of the participants in this case study were male students. Third, the limitation resulted from the duration. Every lesson was constructed only once a month. Learners were only exposed to digitalized storybooks four times in the research where they did not have adequate time to immerse themselves in reading, thus, it did not reveal that the learning process based on gender discrepancy. Despite the fact that a variety of limitations have been noted, these results have implication for affordance of English electronic picture books for the ninth graders. A rich description of the dynamic mechanism in the process of implementing electronic picture books was systematically constructed to shed light on complicated phenomenon emerging in the research.

Suggestions for Future Research

As suggested above in the chapter of discussion and conclusion, more researchers can "document plausible or actual learning opportunities or occasions" (van Lier, 1997, p.786) to investigate the complexity of interactive processes by adopting qualitative methods. Additionally, future research could be conducted to

study how high-achievers and low-achievers will perceive learning affordance in the implementation of electronic English picture books. By comparing and contrasting their reading process, the similarities or differences across time can be illustrated for further discussion. Moreover, investigating how learners in Taiwan treated digitalized books of different genres also can be the topic of future research. Last but not least, investigators may expand the time of conducting the research. In other words, the research can last for more than four months to document learners' changes.

CONCLUSION

In the following, three aspects of conclusion deriving from the findings in my study will be presented as follows. First, the present study suggests that e-picture books are beneficial for junior high students, especially when learners are agents who perceive actively and act directly on the affordance and are provided with supportive learning context in which potential affordances remain all the time. Second, different from the previous quantitative studies, this study adopts qualitative methodology and uses van Lier's notion of affordance as a conceptual framework. In so doing, my research question can be answered in a detailed manner and from a global point of view to understand the subtle changes during the process of language learning. Last, I realize language learning is not static but changeable. It can be different in every minute due to multiple factors. Therefore, instructors should pay further attention to learners and investigate deeper to find the possible reasons so as to facilitate language learning.

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Questionnaire for Background Information

九年級生英文學習、課外閱讀與使用電子產品及多媒體問卷調查表

> 親愛的同學:
>
> 　　你好，本問卷主要目的為了解你過去在英文學習、課外閱讀與使用電子產品及多媒體相關經驗。你的填答將有助於本研究進行，問卷中所有個人資料僅供學術研究參考之用，將嚴格保密，且與學業成績無關，故請根據你真實情形來作答。希望能占用你幾分鐘時間填答本問卷，謝謝合作。敬祝　學業進步。
>
> 　　　　　　　　　　　　　　　　　政治大學英語教學碩士在職專班
>
> 　　　　　　　　　　　　　　　　　指導教授: 黃怡萍　博士
>
> 　　　　　　　　　　　　　　　　　研究生: 許瀞文
>
> 　　　　　　　　　　　　　　　　　民國 104 年 8 月

【第一部分　個人基本資料】

1. 班級:_____ 座號:_____ 姓名:_____
2. 父親職業: _____　母親職業: _____
3. 父親教育程度:
   □ 研究所(博士、碩士)　　□ 大學、專科　□ 高中、高職
   □ 國中　　　　　　　　　□ 小學畢業　　□ 其他(請說明)_____
4. 母親教育程度:
   □ 研究所(博士、碩士)　　□ 大學、專科　□ 高中、高職
   □ 國中　　　　　　　　　□ 小學畢業　　□ 其他(請說明)_____
5. 家中有無兄弟姊妹?　　□ 沒有　　　□ 有(若有，請回答第 6 題)
6. 請分別寫出兄弟姊妹年齡:_____

【第二部分　英文學習經驗】

1. 何時開始學習英文? □ 幼稚園　□ 國小 □ 國中
2. 學習英文至今時間幾年? _____年
3. 是否參加校外英文補習課程?　　□ 是　　□ 否 (若否，請跳至第 6 題)
4. 何時參加校外英文補習課程? (可複選)
   □ 幼稚園　　　　□ 國小低年級　□ 國小中年級　□ 國小高年級
   □ 七年級　　　　□ 八年級　　　□ 九年級
5. 參加校外英文補習原因:
   □ 對英文有興趣　□ 升學考量　　□ 父母要求　　□ 同儕影響
   □ 其他(請說明)_____
6. 是否通過英文能力檢定? □ 是　□ 否

7. 通過英文能力檢定類型:

　　□ 全民英檢 GEPT (□ 中高級，□中級，□ 初級)

　　□ 其他(請說明)＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

8. 對英文的看法(請說明)

＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

【第三部分　課外閱讀經驗】

1. 請問你有課外閱讀習慣嗎? □ 有(若有，請接續回答第 2 題)

　　　　　　　　　　　　　　□ 沒有(若沒有，請跳至第 6 題)

2. 請問你課外閱讀喜歡下列哪一或哪些類型?(可複選)

　　□ 漫畫　　　　□ 傳記　　　□小說　　　　　□其他(請說明)＿＿＿＿＿＿

　　□ 報紙(名稱:＿＿＿＿＿＿) □ 雜誌(名稱:＿＿＿＿＿＿＿＿＿)

3. 請問你課外閱讀喜歡下列哪一或哪些主題? (可複選)

　　□ 自然科普　□ 歷史地理　□ 科幻故事　□ 奇幻故事 □ 冒險偵探

　　□ 校園生活　□ 心理勵志　□ 溫馨親情　　□ 浪漫愛情 □ 藝文繪畫

　　□ 休閒旅遊　□ 運動　　　□ 動物寵物　　□ 其他(請寫出主題)＿＿＿＿

4. 你閱讀課外讀物的原因是: (可複選)

　　□ 父母要求　　　　□ 老師規定　□ 休閒娛樂　　□ 增進知識

　　□ 受家庭耳濡目染□ 同儕影響　□ 其他(請說明)＿＿＿＿＿＿＿＿＿＿＿

5. 下列哪些情況會導致你減少閱讀課外讀物?(可複選)

　　□ 功課負擔重沒時間　　　　□ 沒有興趣　　□ 父母要求

　　□ 老師規定　　　　　　　　□ 老師教學方式□ 同儕影響

　　□ 其他(請說明)＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

6. 請問你有上網閱讀的習慣嗎?　　□ 有　　　　□ 沒有(請跳至第 9 題)

7. 請問你上網閱讀喜歡的類型為何?(請說明)＿＿＿＿＿＿＿＿＿＿＿＿＿＿

8. 請問你上網閱讀喜歡的主題為何?(請說明)＿＿＿＿＿＿＿＿＿＿＿＿＿＿

9. 請問你有閱讀過故事繪本的經驗嗎? □ 有(請從第 11 題接續回答) □ 沒有

10. 沒有閱讀過故事繪本的原因是: (可複選)

　　□ 沒有興趣　　　□ 沒有接觸機會□ 其他(請說明)＿＿＿＿＿＿＿＿＿＿

11. 閱讀故事繪本的原因是: (可複選)

　　□ 父母陪伴閱讀　□ 兄弟姊妹影響 □ 同儕介紹或影響

　　□ 上課教材　　　□ 自我興趣　　□ 其他(請說明)＿＿＿＿＿＿＿＿＿

12. 閱讀過何種故事繪本種類? (可複選)

　　□ <u>**無文字紙本**</u>故事繪本　　　　□ <u>**無文字電子**</u>故事繪本

　　□ <u>**中文紙本**</u>故事繪本　　　　　□ <u>**英文紙本**</u>故事繪本

　　□ <u>**中文電子**</u>故事繪本　　　　　□ <u>**英文電子**</u>故事繪本

13. 何時有閱讀<u>**紙本**</u>故事繪本經驗? (可複選)

　　□ 學齡前　　　　□ 幼稚園　　□ 小學　　　　□ 國中

14. 何時有閱讀**電子**故事繪本經驗? (可複選)
　　☐ 學齡前　　　　☐ 幼稚園　　☐ 小學　　　　☐ 國中
15. 下列哪些情況會提高你嘗試或增加閱讀**英文紙本**故事繪本? (可複選)
　　☐ 父母陪伴閱讀　☐ 同儕共讀　☐ 老師課堂引導
　　☐ 封面圖片有趣　☐ 主題吸引人☐ 內容文字簡單
　　☐ 其他(請說明)＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
16. 下列哪些情況會提高你嘗試或增加閱讀**英文電子**故事繪本? (可複選)
　　☐ 父母陪伴閱讀　☐ 同儕共讀　　　　☐ 老師課堂引導
　　☐ 主題吸引人　　☐ 內容文字簡單　　☐ 動畫有趣
　　☐ 音效或配樂　　☐ 有互動延伸多媒體活動　☐ 過去使用有良好經驗
　　☐ 其他(請說明)＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

【第四部分　使用電子產品及多媒體經驗】

1. 一週使用電腦的時間:
　　☐ 每天(共約＿＿＿＿＿分鐘)　☐ 時間不定(共約＿＿＿＿＿＿分鐘)
　　☐ 固定週末或假日使用(共約＿＿＿＿＿＿分鐘)
　　☐ 其他(請說明)＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
2. 使用電腦的原因: (可複選)
　　☐ 寫功課或報告　☐ 看漫畫　☐聽音樂　☐ 看影片　　☐ 玩遊戲
　　☐ 設計程式　　　☐ 其他(請說明)＿＿＿＿＿＿＿＿＿＿＿＿＿＿
3. 是否擁有個人手機? ☐ 是　☐ 否 (直接跳至第 5 題)
4. 時常使用手機下列何種功能: (可複選)
　　☐ 看漫畫　　☐ 聽音樂　☐ 看影片　☐ 玩遊戲
　　☐ 其他(請說明)＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
5. 一週上網的時間:
　　☐ 每天(共約＿＿＿＿＿分鐘)　☐ 時間不定(共約＿＿＿＿＿分鐘)
　　☐ 固定週末或假日使用(共約＿＿＿＿＿＿分鐘)
　　☐ 其他(請說明)＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿
6. 使用電子產品上網的原因為何: (可複選)
　　☐ 課業需求　☐ 看漫畫　☐ 聽音樂　☐ 看影片　☐ 玩線上遊戲
　　☐ 聊天(臉書或 Line)　　　☐ 其他(請說明)＿＿＿＿＿＿＿＿＿＿＿
7. 父母親對你上網的要求與限制:
　　☐ 無特別規定　　☐ 只允許週末或假日使用　　☐ 禁止使用
　　☐ 其他(請說明)＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

　　　　　　　　　　　　　　　　　 ~ 最後，再次感謝你的填寫 ~

(Chen, 2001)

Consent Form

參與研究同意書

_____，您好：

　　我是政治大學英國語文學系英語教學碩士在職專班的研究生，為研究了解九年級生英文學習，我正著手進行一學期論文的研究。研究主題為「九年級生使用英語電子繪本之可供性探究」，以本校九年級生為研究對象，而主要目的探究學生透過老師鷹架教學以及學生廣泛閱讀，雙管齊下在運用英語電子繪本過程中的經驗與改變。希望您能提供個人的想法和經驗協助本研究進行，這將有助於多方面瞭解九年級對英語電子繪本使用歷程。

　　本研究採用質性研究方法，總共有 5 次上課、5 次回憶訪談法和 3 次訪談，每次約 15~30 分鐘(依狀況而彈性處理)。

　　此外，為了資料的整理與分析，希望您同意於上課中錄影以及訪談過程中錄音。錄影及錄音內容僅作為研究者分析資料、編碼及歸類統整之用。基於保護受訪者的義務，您的姓名及個人資料一律隱匿不公開，改以代號稱之。因此，希望您能提供真實的意見，以增加研究資料的正確性。

　　訪談資料不會影響學業成績，且參與研究訪談期間您有權利選擇退出。訪談過程中，您有權力決定回答問題的深度，面對不想回答的問題也能拒絕回答，亦有權力隨時終止錄音以及訪談。若您對本研究有任何意見，歡迎隨時提供。再次誠摯的歡迎您參與本研究。

同意受訪參與本研究

受訪者：_____ (請簽名)

家長簽名：_____（請簽名）

同意研究者使用訪談過程中的內容

受訪者：_____ (請簽名)

家長簽名：_____（請簽名）

研究者：_____(請簽名)

日期：　　年　　月　　日

Appendix C

Criteria for Electronic Picture Books Selection

1. Is the text appropriately presented in digital format?	
1.1	Is the text well-constructed with respect to the genre expectations?
1.2	Is the language of the text skillfully crafted?
1.3	Do the illustrations / visuals work well with the text to illuminate, extend and / or co-create the text as a whole?
1.4	Do the sound effects and music work well with the text to illuminate, extend and/ or co-create the text as a whole?
1.5	Do the size and shape of the illustrations fit the screen's proportions?
1.6	Do the interactions provide support that would help a reader make a text-based inference or understand difficult vocabulary?
2. Does the story take appropriate advantage of features the digital world allows beyond what is possible in print?	
2.1	How often are interactions used in the book?
2.2	Are there meaningful audio, animated, or interactive features that help children better understand the test?
2.3	Are there digital features that distract from the text?
2.4	Are there more supporting and extending interaction than distracting interactions?
2.5	Are the interactions strategically placed to enhance motivation without distracting the reader from the text?
2.6	Are the interactions time-consuming, or are they relatively brief in nature?
3. Do the interactive features within the text maintain the integrity of central meanings of the text?	
3.1	How does the reader participate in ways that focus on central events?
3.2	How does the reader participate in ways that divert attention to trivial details?
4. Do any supplementary features (add-ons to the text) align with central meanings of the text?	
4.1	Are there additional games, puzzles, etc. included in the e-book app?
4.2	Are the games, puzzles, etc. closely related to central meanings in the text?
4.3	Are links to these features embedded in the text in ways that might distract children from the reading, or do they operate as separate from the e-book reading?

Appendix D

The Chart of the Four Electronic Picture Books Based on the Four Categories

(1) Printed text presented visually on a screen
Title: Sniffy & Fluffy
Author: AIMEE BRUNEAU
Illustrator: AIMEE BRUNEAU
Type: Friendship
Source: Children's Storybooks Online
Link: http://www.sniffyandfluffy.com/?page=0
Words: 171
Sentences: 21
Readability: Passive Sentence 4%
Flesch-Kincaid Grade Level Score: 9.0
(2) Digitalized printed picture books with in-built digital features
Title: Harry the Dirty Dog
Author: Gene Zion
Illustrator: Margaret Bloy Graham
Type: Family
Source: Storyline Online
Link: http://www.storylineonline.net/harry-the-dirty-dog/
Words: 467
Sentences: 43
Readability: Passive Sentence 0%
Flesch-Kincaid Grade Level Score: 9.0
(3) Book-like configuration with multimedia enhancement
Title: Abra Cadabra and the Tooth Witch
Author: Nurit Karlin
Illustrator: Nurit Karlin
Type: Adventure
Source: Tumble Book Library
Link:
http://www.tumblebooklibrary.com/ViewOnline.aspx?Is5=false&ProductID=40
Word: 401
Sentence:53
Readability: Passive Sentence 1%
Flesch-Kincaid Grade Level Score: 9.0

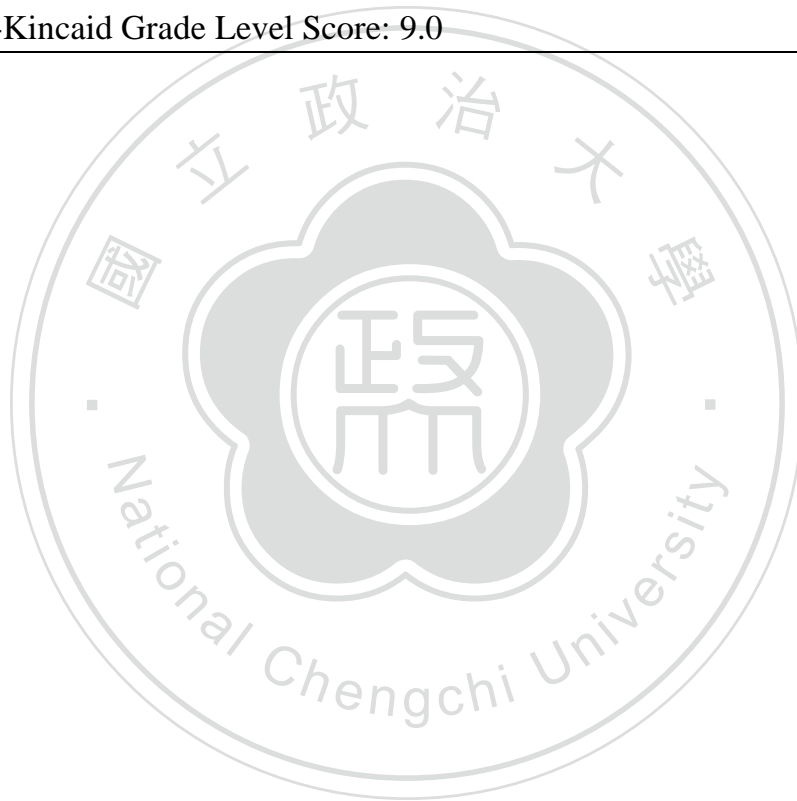| **(4) Specially made in the digital format** |
| :--- |
| Title: The Dot |
| Author: Reynolds, Peter |
| Illustrator: Reynolds, Peter |
| Type: Encouragement |
| Source: BookFlix |
| Link: http://bkflix.grolier.com.ezproxy.tphcc.gov.tw:2048/p/node-33985/bk0028pr |
| Word: 331 |
| Sentence: 46 |
| Readability: Passive Sentence 0% |
| Flesch-Kincaid Grade Level Score: 9.0 |

Appendix E

Lesson Plan for the First to the Fourth Lesson

Shared Reading (1st session)	
Warm-up (5 mins)	The teacher showed the illustration from the covers or the main page to activate students' awareness and interests. The researcher attempted to build up students' background knowledge as well as stimulated their curiosity and prediction for the story. Prompt questions and lesson observations were both needed to give comprehensible information and negotiate meaningful ideas. Worksheet and student written feedback were delivered before the reading session.
Guided Reading (25 mins)	In the first session of reading, the teacher explained and demonstrated explicitly some basic multimodal features for participants to get familiar with and encouraged them to practice those functions while reading in the second section, extensive reading. After the technical demonstrations, the teacher played the content automatically for students to skim the text and then asked one or two students what they realized. After that, the teacher shared the reading with participants by scaffolding the electronic picture books page by page, elaborating some significant details, and asking relevant questions to assure participants' comprehension without getting lost. During the process, the teacher asked some questions to elicit feedback from the students and turn off some distracting multimedia functions if they were not helpful in guided reading. After the teacher's explanation, the teacher played the electronic picture book one more time, or asked one student to help play the electronic picture book again.
Wrap-up (5 mins)	The teacher summarized the story of the English electronic picture books provided by the teacher in the beginning or asked some volunteers to orally make a brief summary. The teacher also reminded students to finish the worksheet and hand in the next lesson.
Self-report (10 mins)	The students were expected to express their ideas in the student written feedback.

Extensive Reading (2nd session)	
Warm-up (5mins)	According to today's category, the teacher provided some resources for the students to autonomously choose one English electronic picture book. Students were told that they would have to choose at least one digitalized picture book in English based on their interests and filled in another self-report after reading this book. Moreover, they would be needed to share one of the books with the whole class. Worksheet and self-report forms were delivered in advance.
Free Reading (30 mins)	In the second session of reading, participants were given free time for rereading the electronic picture books on their own by controlling the pace of the texts, utilizing the multimedia functions, and interacting with extra activities if provided. Otherwise, they were expected to do self-exploration so that they could choose English electronic books at their own options.
Wrap-up (10 mins)	The students were expected to express their ideas in the worksheet and student written feedback.
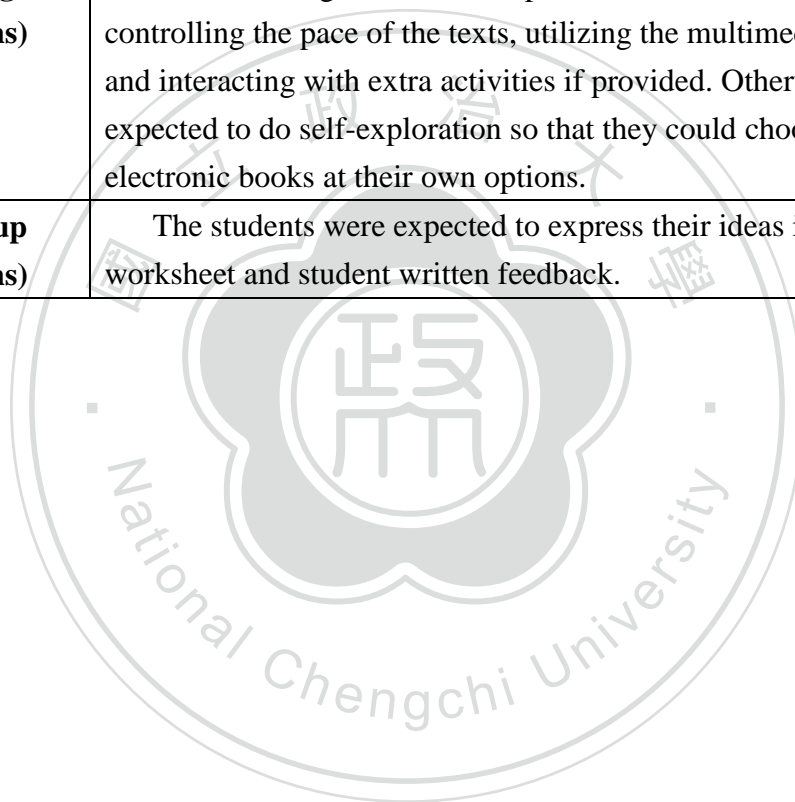
Worksheet for Shared Reading

Shared Reading			
座號:	姓名:		閱讀日期:
1	電子繪本書名:		
2	出版社名:		出版年份:
3	電子繪本作者名:		
4	電子繪本插畫家名:		
5	請用中文或英文寫下至少 **50** 字的故事內容。		
6	請用中文或英文寫下你對本電子繪本讀後感或建議。		

Extensive Reading			
座號:		姓名:	閱讀日期:
1	電子繪本書名:		
2	出版社名:		出版年份:
3	電子繪本作者名:		
4	電子繪本插畫家名:		
5	請用中文或英文寫下至少 **50** 字的故事內容。		
6	請用中文或英文寫下你為何自擇此本電子繪本閱讀的原因。		

Student Written Feedback for Shared Reading & Extensive Reading

1. 個人基本資料	
座號: _____ 姓名: _____ 填寫日期: _____	
2. 電子繪本相關內容	
2.1	電子繪本書名: _____
2.2	請問此電子繪本主題為何: ☐ 自然科普 ☐ 歷史地理　☐ 科幻故事 ☐ 奇幻故事 ☐ 冒險偵探 ☐ 校園生活 ☐ 心理勵志　☐ 溫馨親情 ☐ 浪漫愛情 ☐ 藝文繪畫 ☐ 休閒旅遊 ☐ 運動　　☐ 動物寵物 ☐ 其他(請寫出主題)_____
2.3	請問你喜歡此電子繪本的主題嗎? ☐ 喜歡,原因:_____ ☐ 不喜歡,原因:_____
2.4	請問此電子繪本有下列何種數位功能 (可複選): ☐ 內容真人發音 ☐ 字體反白 ☐ 動態圖像/動畫　☐ 音樂/音效 ☐ 互動式熱點　☐ 遊戲　　☐ 其他(請說明) _____
2.5	閱讀故事內容中,請問你喜歡此電子繪本提供的數位功能嗎? ☐ 喜歡,原因:_____ ☐ 不喜歡,原因:_____
3. 上課方式	
3.1	請問你是否喜歡今日學習方式? 請說明喜歡或不喜歡的原因。
4. 同學互動模式	
4.1	請問你在閱讀活動中跟同學有哪些互動?請問你喜歡這樣的互動模式嗎?
5. 閱讀環境	
5.1	請問你對閱讀電子繪本的電腦教室環境有何想法?
6. 挑戰困難	
6.1	請問你在閱讀過程中有遇到何種困難?而你如何解決?
備註: 請務必確認每個題目需填寫完整。	

1. 個人基本資料	
座號: _____ 姓名: _____ 填寫日期: _____	
2. 電子繪本相關內容	
2.1	電子繪本書名: _____
2.2	請問此電子繪本主題為何: ☐ 自然科普 ☐ 歷史地理　☐ 科幻故事 ☐ 奇幻故事 ☐ 冒險偵探 ☐ 校園生活 ☐ 心理勵志　☐ 溫馨親情 ☐ 浪漫愛情 ☐ 藝文繪畫 ☐ 休閒旅遊　☐ 運動　　☐ 動物寵物 ☐ 其他(請寫出主題)_____
2.3	請問你喜歡此電子繪本的主題嗎? ☐ 喜歡，原因:_____ ☐ 不喜歡，原因:_____
2.4	請問此電子繪本有下列何種數位功能 (可複選): ☐ 內容真人發音 ☐ 字體反白 ☐ 動態圖像/動畫　☐ 音樂/音效 ☐ 互動式熱點　　☐ 遊戲　　☐ 其他(請說明) _____
2.5	閱讀故事內容中，請問你喜歡此電子繪本提供的數位功能嗎? ☐ 喜歡，原因:_____ ☐ 不喜歡，原因:_____
3. 廣泛閱讀過程	
3.1	請簡述一下今日讀此本電子繪本的閱讀過程。
4. 同學互動模式	
4.1	請問你在挑選電子繪本或是廣泛閱讀中跟同學有哪些互動?請問你喜歡這樣的互動模式嗎？
5. 閱讀環境	
5.1	請問你對閱讀電子繪本的電腦教室環境有何想法？
6. 挑戰困難	
6.1	請問你在自選電子繪本廣泛閱讀中有遇到何種困難？而你如何解決？
備註: 請務必確認每個題目需填寫完整。	

Appendix H

The Protocol of Semi-Structured Interview Questions

1st Semi-Structured Interview Questions

【英語學習經驗與背景】

(1) 請你分享一下你學習英文的經驗和過程。從第一次接觸到英文開始

(2) 就以往學習英文的經驗有何特別印象深刻/很有收穫的部分？

(3) 在這過程中家長對你的英文要求和期許為何？有改變嗎？

【課外閱讀習慣、經驗、看法】

(1) 你最近一次課外閱讀的書籍書名是什麼？內容大概為何？

(2) 請問你為何選擇這本書閱讀？在什麼情況下選擇跟閱讀這本書? 有什麼困難嗎? 怎麼因應?

(3) 你最近一次課外閱讀的英文書籍書名是什麼？內容大概為何？

(4) 請問你為何選擇這本書閱讀？

(5) 這都是最近一次，你什麼時候開始有課外閱讀的習慣? 描述一下這些經驗(印象深刻/很有收穫) (頻率、書籍選擇、環境、參與人員、改變、困難、因應)

(6) 你什麼時候開始有英語課外閱讀的習慣? 描述一下這些經驗 (同上)

【英語閱讀習慣、經驗、看法】

(1) 何時開始接觸英文讀物？描述從那時候開始的英文閱讀習慣？

(2) 印象深刻的英語閱讀經驗？怎麼樣的經驗？（故事、頻率、書籍選擇、環境、參與人員）影響？

(3) 你在英文閱讀中有遭遇過什麼樣的困難? 而你如何因應它?

(4) 到目前為止，就你的英文閱讀經驗想法或是閱讀方法有那些改變?

(5) 何時開始接觸英語繪本？怎麼選？讀？麼樣的經驗？（故事）影響？

(6) 問卷上提到,你有電子繪本閱讀經驗,可以從第一次接觸開始談起嗎？經驗？感覺？想法？改變？

(7) 從問卷發現你從未使用過英文電子繪本閱讀的經驗，那你對英文電子繪本的想法為何？

(8) 請問你對於在英文課使用電子繪本學習英文的想法為何？

【使用電子產品及多媒體經驗】

(1) 可以請你說明一下平常日以及假日如何分配使用時間？

(2) 什麼原因讓你如此分配使用時間？

(3) 請問你對於使用電子多媒體功能方式閱讀有什麼想法？

♦ 2nd Semi-Structured Interview Questions

（Shared Reading）

【上課閱讀電子繪本經驗描述/看法】

(1) 請你分享一下這兩次上課的經驗。兩次經驗有何不同?改變?

(2) 請你分別就第一堂課和第二堂課，描述一下老師上課的方式。

(3) 請你分享一下你對老師上課方式的想法。

(4) 在老師帶領電子繪本閱讀過程中，還有沒有哪個印象深刻的地方？

(5) 請問你在閱讀電子繪本搭配真人發音有何看法？

(6) 根據這兩次上課經驗，你對電子繪本中多媒體有何想法？有何改變?

(7) 就你使用經驗中，有何多媒體設計時你認為可以再改善進步的建議？

【上課電子繪本閱讀困難與解決方式】

(1) 請問你在第一堂和第二堂課中，挑選電子繪本是否有遇到困難？

(2) 若有，請問你如何面對和解決？

(3) 在這兩次上課是否遇到閱讀的困難，可否說明一下是什麼困難？什麼時候/情況發生?

(4) 若有，請問你使用哪些解決方式？

【上課環境及互動模式】

(1) 請你描繪一下當時在電腦教室使用電子繪本上課互動的情形。

(2) 請問你上課會跟同學討論或課堂相關的互動嗎？請說明描述。（何時？跟誰？互動方式？喜歡嗎？收獲？建議？）

(Extensive Reading)

【上課閱讀電子繪本經驗描述】

(1) 請你分享與描述一下這兩次在廣泛閱讀中上課經驗。兩次經驗有何不同?改變?

(2) 在過程中有沒有哪些印象深刻的地方？

(3) 在廣泛閱讀單元，請問你在挑選電子繪本時會有什麼樣的想法和考量？

(4) 就你自己在課堂摸索中，請問你現在對此電子繪本所設計提供的多媒體功能的看法有何改變？

(5) 請問你上課會跟同學討論或課堂相關的互動嗎？請說明描述。(何時？跟誰？互動方式？喜歡嗎？收獲？建議？)

【學習單回家作業】

(1) 請問你大約花多久時間完成此份學習單？怎麼完成這份學習單? (時間 地點 參與人員及其互動 感覺想法)

(2) 回家完成學習單是否有跟同學討論交換意見呢？跟家長?兄弟姊妹?

(3) 回家完成學習單時，你有遇到什麼樣的困難嗎？而你又如何面對這些困難

【整體建議與想法】

(1) 有無任何建設性建議可提供給授課老師做參考？建議為何？

(2) 至今透過閱讀電子繪本你的英語學習有何改變？並請說明在哪些方面。

(3) 請問經過兩堂課程後，你對英文課使用電子繪本學習英文的想法為何？

回家後有自己看電子繪本嗎? (什麼情況下會看/不會看?)

♦ 3ʳᵈ Semi-Structured Interview Questions

（**Shared Reading**）

【上課閱讀電子繪本經驗描述】

(1) 請你分享一下這兩次上課的經驗。

(2) 請你分別就第三堂課和第四堂課，描述一下老師上課的方式。

(3) 在老師帶領電子繪本閱讀過程中，還有沒有哪個印象深刻的地方？

(4) 請問你在閱讀電子繪本搭配真人發音有何看法？

(5) 根據這兩次上課經驗，你對電子繪本中多媒體有何想法？

(6) 就你使用經驗中，有何多媒體設計時你認為可以再改善進步的建議？

【上課電子繪本閱讀困難與解決方式】

(1) 在這兩次上課是否遇到閱讀的困難，可否說明一下是什麼困難？

(2) 若有，請問你使用哪些解決方式？

【上課環境及互動模式】

(3) 請你描繪一下當時在電腦教室使用電子繪本上課互動的情形。

(4) 請問你上課會跟同學討論或課堂相關的互動嗎？請說明描述。（何時？跟誰？互動方式？喜歡嗎？收獲？建議？）

(Extensive Reading)

【上課閱讀電子繪本經驗描述】

(1) 請你分享與描述一下這兩次在廣泛閱讀中上課經驗。

(2) 在過程中有沒有哪些印象深刻的地方？

(3) 在廣泛閱讀單元，請問你在挑選電子繪本時會有什麼樣的想法和考量？

(4) 就你自己在課堂摸索中，請問你現在對此電子繪本所設計提供的多媒體功能的看法有何改變？

【上課電子繪本閱讀困難與解決方式】

(1) 請問你在第三堂和第四堂課中，挑選電子繪本是否有遇到困難？

(2) 若有，請問你如何面對和解決？

(3) 請問你在挑選電子繪本的標準有所改變嗎？若有請問改變為何？

(4) 就你使用經驗中，有何多媒體設計時你認為可以再改善進步的建議？

【學習單回家作業】

(1) 請問你大約花多久時間完成此份學習單？

(2)　回家完成學習單是否有跟同學討論交換意見呢？

(3)　回家完成學習單時，你有遇到什麼樣的困難嗎？而你又如何面對這些困難

<div align="right">(Kim & Kim, 2013)</div>

The Protocol of Stimulated Recall

Shared Reading

請你看一下當初教學錄影的畫面,如果你看到當初有印象深刻的閱讀經驗與想法,就停頓下來跟我分享

(1) 在一開始老師透過圖片讓全班聯想時,當時你在做什麼?想什麼?

(2) 當你看到圖片的時,有何什麼的預期想法?

(3) 當老師問 xx 問題時,當時你在做什麼?想什麼?

(4) 當 xx 同學分享他的答案和想法時,當時你在做什麼?想什麼?

(5) 請問當老師第一次撥放英文電子繪本時,你在做什麼?想什麼?

(6) 請問當老師在帶領全班同學閱讀電子繪本時,你在做什麼?想什麼?

(7) 請問當你聽到這個聲音特效時你有何種想法?

(8) 請問當你看到這個動畫出現時你的想法?

(9) 請問當老師或代表同學使用此延伸互動遊戲,你有何看法?

(10)就你上課經驗,請問你對此電子繪本所設計提供的多媒體功能的看法?

(11)在老師帶領電子繪本閱讀過程中,還有沒有哪個印象深刻的地方?

(12)在老師帶領電子繪本閱讀過程中,有跟同學互相交換意見嗎?

(13)可否請你分享一下跟同學互動的過程和談話的內容。

Extensive Reading

(1) 請問你選擇那些電子繪本?(包括書名,作者,插畫家,主題,內容)

(2) 請你分享一下你選擇此電子繪本的經驗與過程。

(3) 為何你會挑選此電子繪本,挑選電子繪本時你有什麼樣的考量和想法?

(4) 在電子繪本閱讀過程中,還有沒有哪個印象深刻的地方?

(5) 請你看一下當初錄影的畫面,如果你看到當初有印象深刻的繪本使用經驗與想法,就停頓下來跟我分享。

(6) 請問你如何去使用電子繪本介面上的多媒體功能？

(7) 在閱讀電子繪本當中你有遇到困難嗎？哪些困難？怎麼應對？

(8) 科技方面的困難？面對科技方面的困難你是如何應對的？請舉例。

(9) 請問你對此電子繪本所設計提供的多媒體功能的看法？

(10)在電子繪本閱讀過程中，有跟同學互相交換意見嗎？

(11)可否請你分享一下跟同學互動的過程和談話的內容。

(12)在閱讀電子繪本過程中，在腦海裡有特別的閱讀目標嗎？如果有，那些閱讀

目標是什麼？怎麼會有這樣的想法？

(Gass & Mackey, 2000, p.19)

Appendix J

The Protocol of Class observations

Date:		
	Shared Reading	Extensive Reading
Paying attention		
Giving spontaneous verbal feedback		
Answering T's questions		
Asking questions		
Interacting with classmates		
Engagement with the Learning		
Notes:		

Appendix K

The Process of the Research

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                                              ┌─────────────────────────┐
                                              │   Questionnaire for     │
                                              │ Background Information   │
                                              └───────────┬─────────────┘
                                                          │
                                              ┌───────────▼─────────────┐
                                              │  1st Semi-Structured     │
                                              │      Interview           │
                                              └───────────┬─────────────┘
                                                          │
┌─────────────────────────────┐              ┌───────────▼─────────────┐
│ Lesson 1: Shared Reading     │─────────────▶│ Student Written Feedback (1) │
│ Lesson 1: Extensive Reading  │              │  Stimulated Recall (1)   │
└──────────────┬──────────────┘              └───────────┬─────────────┘
               │                                          │
┌──────────────▼──────────────┐              ┌───────────▼─────────────┐
│ Lesson 2: Shared Reading     │─────────────▶│ Student Written Feedback (2) │
│ Lesson 2: Extensive Reading  │              │  Stimulated Recall (2)   │
└──────────────┬──────────────┘              └───────────┬─────────────┘
               │                                          │
               │                              ┌───────────▼─────────────┐
               │                              │  2nd Semi-Structured     │
               │                              │      Interview           │
               │                              └───────────┬─────────────┘
               │                                          │
┌──────────────▼──────────────┐              ┌───────────▼─────────────┐
│ Lesson 3: Shared Reading     │─────────────▶│ Student Written Feedback (3) │
│ Lesson 3: Extensive Reading  │              │  Stimulated Recall (3)   │
└──────────────┬──────────────┘              └───────────┬─────────────┘
               │                                          │
┌──────────────▼──────────────┐              ┌───────────▼─────────────┐
│ Lesson 4: Shared Reading     │─────────────▶│ Student Written Feedback (4) │
│ Lesson 4: Extensive Reading  │              │  Stimulated Recall (4)   │
└─────────────────────────────┘              └───────────┬─────────────┘
                                                          │
                                              ┌───────────▼─────────────┐
                                              │  3rd Semi-Structured     │
                                              │      Interview           │
                                              └─────────────────────────┘
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Appendix L

Coding Scheme for Data Analysis of Three Different Interactions

	Interaction with the Instructor		Interaction with Peers		Interaction with Reading Materials and Assessment	
	Rain	Prince	Rain	Prince	Rain	Prince
The 1st Class						
The 2nd Class						
The 3rd Class						
The 4th Class						

Appendix M

Coding Scheme for Data Analysis of Nine Categories

Coding Categories		Interaction with the instructor	Interaction with Peers	Interaction with Reading Materials and Assessment
PA	phonological awareness			
AI	auditory impact			
LD	lexical development			
RC	reading comprehension			
TL	trans-literacies			
In	interest			
MO	motivation			
CON	confidence			
AUT	autonomy			