

How Can Digital Storybooks Foster EAL Children's Reading Motivation: A Multiple  
Case Study

BY

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## **Abstract**

This paper explores the features of digital storybooks that can help foster English as an additional language (EAL) children's motivation in reading English as a second language (L2) or as an additional language. Prior research suggests digital storybooks are conducive to children's reading motivation in their first language (L1); however, research on the effectiveness of story apps fostering children's reading motivation in additional languages is relatively scarce. This research adopted a qualitative approach to investigate how storybook applications designed for English as a First Language (L1) and English as an Additional Language (EAL) differ and influence EAL children's reading motivation in L2, specifically, reading English as an additional language. This study explores the perspectives and voices of EAL children as well as their parents in relation to their experiences and attitudes toward the use of digital storybook apps to foster their L2 reading motivation.

*Keywords:* digital storybooks, story apps, EAL children, reading motivation

## 1. Introduction

Reading competence is a fundamental skill for learners and a strong predictor for later literacy and academic success (Ciampa, 2012; Kirchner & Mostert, 2017). As schools embrace diversity in the classroom, it presents a real challenge for teachers to teach students with varied cultures, languages, backgrounds, and mixed levels of reading progress. According to International Literacy Association (ILA 2020), surveying 1,443 education professionals, literacy experts, and school administrators from 65 countries, 66% of educational professionals surveyed responded that exploring effective instructional strategies that allow struggling readers to catch up with their peers should be of paramount concern (International Literacy Association, 2020). Takacs, Swart, and Bus (2015) identified that children who may run a higher risk of lagging behind in language and literacy development are those from immigrant, bilingual families, low socioeconomic status (SES) families, and children with reading difficulty. Nonetheless, Gambrell (2011) pointed out entirely relying on instruction that emphasizes the importance of phonological decoding skills and comprehension strategies cannot help school-age children to reach their full literacy potential if they do not actively engage in reading or choose to read. This is in alignment with what Krashen has advanced, “reading what you want to read is responsible for most of our literacy development” (Krashen, 2020, para. 1). There is also a substantial and growing body of research that indicates fostering students’ reading motivation enables them to become strong readers (Applegate & Applegate, 2010; Becker, McElvany & Kortenbruck, 2010; Castle, 2015; Edmunds & Bauserman, 2006; Gambrell, 1996, 2011; Ülper, 2011). Gambrell (1996) long advocated that fostering reading motivation and reading development hinges on the accessibility to a wide range of reading materials. When children are immersed in a book-rich

environment, they are more motivated to read. This is congruent with what Edmunds and Bauserman (2006) concluded in their qualitative study that “access to books affected positively on students’ reading motivation” (p. 422). However, equipping a library with a wide selection of books for readers of varied interests and mixed reading levels can be daunting and challenging, and demands resources and money. Thanks to technology, digital storybook applications seem to provide an affordable alternative for schools and parents.

There are also other benefits of digital storybooks. Based on prior research, the multi-sensory features of digital storybooks such as animated illustrations and sound effects, seem to intrigue children and spark their interest in interacting with the written texts. A digital reading environment provides a learning platform that reflects the cultural diversity and may generate children’s interest and motivation in reading and accordingly lead to better academic performance (Ciampa, 2010). While there is a growing body of literature on how story apps designed for English literacy development can enhance the reading motivation of children whose first language is English (Ciampa, 2010, 2012; Oakley & Jay, 2008; Takacs, Swart & Bus, 2015; Richter & Courage, 2017), there is relatively scarce research that examines if and how these readily available resources can be exploited to improve the reading motivation of children for whom English is an additional language (EAL). This qualitative study explored four seven-year-old EAL immigrant children’s experiences in using two categories of story applications (Kucirkova, Littleton & Cremin, 2016); namely, English literacy apps and English language learning apps, whether the affordances of digital storybooks (known as storybook applications, story apps, electronic books and eBooks, used interchangeably by various researchers) increased their motivation in reading, and how EAL children and their parents perceived storybook applications. The purpose of this study was to provide some insights into the affordances of the



story apps designed for English as a first language (L1) and as a second or an additional language to stimulate the curiosity of EAL children and increase their reading motivation in L2. By gaining a better understanding of the differences between these two types of apps and EAL children's preferences in relation to the use of digital storybooks, it can help educators to select appropriate apps as additional support for building reading skills and foster their reading motivation, provide practical guidelines for application developers to design story apps that can sustain children's engagement in the reading process, and offer EAL parents an alternative to help their children's literacy development in EAL. This study attempts to answer the following research questions:

- What features of digital storybooks written in English contribute to EAL children's reading motivation?
- How do EAL children and their parents perceive the differences between the affordances of story apps designed for English as first language literacy and English as an additional language learning?
- What are the attitudes of EAL children and their parents toward storybook apps?

## **2. Theoretical Framework**

### **2.1 Intrinsic and Extrinsic Motivation**

According to Ryan and Deci (2000a), our action is driven by 'an abiding interest' or 'external coercion'. Humans have "the inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn (p. 70)." Self-determination theory (SDT) was postulated by Deci and Ryan (1985) to explain the motivation that underlies the choices people make and dominates an individual's behavior. SDT posits intrinsic motivation is our innate desire to do things for our own

sake and enjoyment. It comes from within. In contrast, extrinsic motivation is the drive to achieve something instigated by externally generated factors such as recognition, rewards, or incentives. The more self-determined an individual, the more he/she is propelled by his/her intrinsic orientation to learning. SDT suggests people can be more self-determined when three universal psychological needs—competence, autonomy, and relatedness, are fulfilled. That is, they are given the opportunity to demonstrate their ability to perform (competence), they can exert a level of control over actions (autonomy), and they gain a sense of belonging to other people (relatedness). Deci and Ryan observed people with intrinsic motivation differ from those who are externally propelled. They concluded people with intrinsic motivation exude confidence, seek challenges, and are often more curious and engaged in the activities.

In addition, Deci and Ryan (1985) examined the factors that may facilitate or undermine intrinsic motivation and proposed a sub-theory under the self-determination theory—cognitive evaluation theory (CET). CET proposes that intrinsic motivation will be catalyzed and flourish when an individual's fundamental psychological needs for competence and autonomy are met. It argues social-contextual events such as positive feedback or appropriate rewards that are conducive to feelings of competence can enhance intrinsic motivation. However, they must be underpinned and accompanied by a sense of autonomy. Therefore, providing choices and opportunities for self-direction can enhance intrinsic motivation because they foster a greater sense of autonomy. In addition, activities that hold the appeal of novelty, challenge, and aesthetic value can facilitate intrinsic motivation. In other words, people are less intrinsically motivated by activities lacking the elements of novelty, challenge, and aesthetic value. Furthermore, for intrinsic motivation to be more likely to flourish, the learning contexts should be fostered by a sense of security

and relatedness. It is suggested that students may experience a low level of intrinsic motivation when the learning environment lacks support and encouragement. For instance, students with an uncaring teacher may manifest lower motivation in learning (Ryan & Deci, 2000b). CET propounds social environments can foster or hamper intrinsic motivation by supporting or impeding people's universal needs for competence, autonomy, and relatedness.

## **2.2 Expectancy-Value Theory**

Derived from Atkinson's (1957) seminal work, expectancy-value theory (EVT) extended by Eccles et al. (1983) and now labeled as SEVT for Situated Expectancy-Value Theory (Eccles & Wigfield, 2020), has been one of the major theories on motivation in the educational field and has been widely applied to varied subject domains such as mathematics (Cleary & Chen, 2009; Weber, Lew & Mejía-Ramos, 2020), science (Zhi Hong, 2019), music (Uy, González-Moreno, Hendricks & Kos, 2018) and language learning (Loh, 2019; Mceown & Oga-Baldwin, 2019; Mori & Gobel, 2006). The model was developed to explain why some students are more motivated than others and can be used to predict students' task choices, learning persistence, and academic performance (Wigfield & Eccles, 2000). Motivation researchers who adopted this perspective contended individuals' expectancies for success, ability beliefs, and task value which encompasses attainment value (the importance of doing well on a task), intrinsic value (the enjoyment one gets during the task), utility value (usefulness of the task) and cost (efforts and sacrifices made to complete the task) are crucial determinants of their motivation (Eccles & Wigfield, 2020; Loh, 2019; Rosenzweig, Wigfield & Eccles, 2019; Wigfield & Eccles, 2000).

## **2.3 Putting Theories into Practice**

Building on the theoretical framework of self-determination theory, cognitive evaluation theory, and expectancy-value theory, features of four storybook apps (two

designed for English as L1 literacy development and two designed for English as L2 language learning) were assessed by whether the experiences of using those apps fulfill EAL children's needs for competence, autonomy, and relatedness. In addition, four EAL children's expectancies for success (in this case, to become fluent L2 readers like their peers) and the components of the task value were incorporated to examine whether the chosen apps provided the elements that facilitated the motivation of four EAL children to read English as a second language.

### **3. Review of the Literature**

#### **3.1 Motivation in Second Language Acquisition (SLA)**

In the field of SLA, 'motivation' has been recognized as a key determinant or variable for successful second language (L2) learning. There is a substantial body of theoretical and empirical literature on 'motivation' in second language acquisition and learning (Brown 2007; Masgoret & Gardner, 2003; Murray, Gao & Lamb, 2011; 1999; Ushioda, 2005, 2016; Ushioda & Dörnyei, 2017). As Gardner postulated in his socio-educational model of second language learning, be it instrumental, a desire to achieve some utilitarian goal, or integrated motivation, a desire to identify with and eventually become a member of L2 community, "motivation" is regarded as a critical variable that determines individuals' degree of success in L2 learning (Gardner, 2006, 2010). To reflect today's globalized context, which is no longer restricted to a certain community, Dörnyei reshaped Gardner's L2 motivation into a motivational system, a theory of self and identity that includes two constructs: an ideal L2 self and an ought-to L2 self. It is hypothesized that L2 learners would create two future self-images through the course of L2 learning—a personally desired L2 speaker and an ought-to self that is expected by others (Dörnyei & Schmidt, 2001; Dörnyei & Ushioda, 2009). Another motivation theory in second language acquisition is drawn from the self-

determination theory posited by Deci and Ryan with the two aspects of motivation: intrinsic motivation and extrinsic motivation (Ryan & Deci, 2000a, 2000b). According to Deci and Ryan, learners who are intrinsically motivated exhibit more confidence, persistence, and creativity than those who are extrinsically motivated. Noel et al. extended SDT to the investigation of motivation in second language (L2) learning and found motivational principles in other contexts may parallel some constructs in the domain of L2 learning (Noels, Pelletier, Clement & Vallerand, 2000).

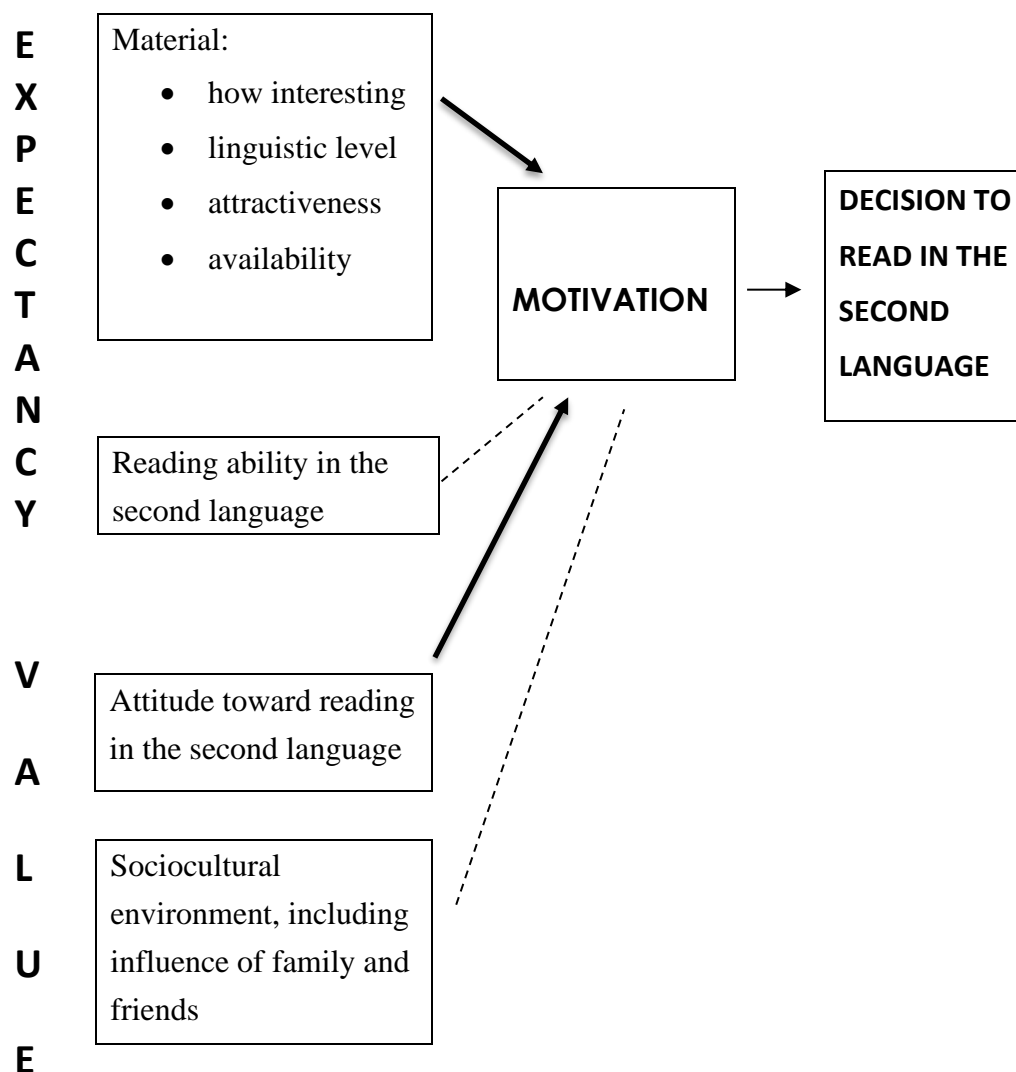
### **3.2 Motivation in L1 reading**

Wigfield and Guthrie perceived reading motivation as domain-specific and focused on two major constructs, self-efficacy and intrinsic motivation, in relation to fostering children's reading motivation (Guthrie, Wigfield, Metsala & Cox, 1999; Wigfield & Guthrie, 1997; Wigfield, Guthrie, Tonks & Perencevich, 2004). Wigfield and Guthrie (1997) first explored aspects of children's reading motivation and how their motivation predicted their reading amount and breadth. According to them, intrinsic motivation was a stronger predictor of reading amount and breadth than extrinsic motivation. Wigfield and Guthrie (2004) later revised their earlier motivation questionnaire (Motivation for Reading Questionnaire, MRQ) and found three aspects—reading curiosity, involvement, and preference for challenges are associated with intrinsic motivation whereas extrinsic motivation is represented by five aspects—recognition, grades, social reasons, competition, and compliance. Based on the findings of Wigfield and Guthrie, children are more likely to engage in reading both in and out of school and devote more time and energy to reading when they are intrinsically motivated to read. They suggested ways to support children's intrinsic motivation in the domain of reading are (a) to develop their curiosity, (b) to foster a sense of autonomy over their learning, and (c) to connect their interest to a wide selection of interesting books. Also, Grabe (2009) stated that in the L1 reading

classroom, students with intrinsic motivation are more engaged readers. They are curious and involved in their reading. They devise reading strategies, prefer challenges, and demonstrate greater confidence and autonomy in their reading (p.185).

### **3.3 Motivation in L2 Reading**

Many SLA scholars and researchers on motivation were not domain-specific or treated motivation as an overarching construct in learning L2 as a whole, namely, the language itself (Gardner, 2010; Isabelli-García, 2006; Ushida, 2005, 2016; Ushioda, & Dörnyei, 2017). Research into reading motivation in L2 is relatively lacking and underexplored (Cho, Xu & Rhodes, 2010; Huang, 2013; Komiyama & McMorris, 2017; Kondo-Brown, 2006; Morri, 2002). As Komiyama and McMorris (2017) stated, L2 reading motivation is multidimensional, and L2 readers are driven by varied factors of motivation. It is not surprising an L2 individual may possess more than one type of motivation. Morri (2002) drew upon Wigfield and Guthrie's (1997) L1 reading motivation questionnaire, investigating whether there were similar constructs in L2 reading motivation. She surveyed 447 college students in Japan, and her finding suggested that L2 reading motivation closely resembles the components of motivation in the expectancy-value theory. In a similar vein, Day and Bamford (1998) applied expectancy-value theory to the domain of L2 reading and postulated that four major variables play a crucial role in facilitating motivation to read a second language (as shown in figure 1) —materials, reading ability, attitudes, and sociocultural environment. Day and Bamford (1998) suggested an extensive reading approach to L2 reading can influence the four variables in the model.

**Figure 1.***Model of Major Variables Motivating the Decision to read in a Second Language*

*Note.* Reprinted from “Extensive Reading in the Second Language Classroom”, by Day, R. R. & Bamford, J., 1998, p. 28, Cambridge, United Kingdom: Cambridge University Press.

*Note.* A solid line indicates a stronger influence than a broken line.

### 3.4 A Powerful Supplementary Tool for L2 Reading: Storybook apps

As teachers embrace diversity in the classroom, they experience a pedagogical challenge to teach students with mixed levels of reading progress. One way to address this pedagogical predicament is to take advantage of technological advances that may

help increase students' motivation to read. Research suggests that digital storybooks are conducive to increasing children's reading motivation in both L1 and L2 (Cahill & McGill-Franzen, 2013; Ciampa, 2012, 2016; Hsiao, Chang, Lin & Hsu, 2015; Huang, 2013; Kucirkova, Littleton & Cremin, 2016; Oakley & Jay, 2008; Picton, 2014; Richter & Courage, 2017; Takacs, Swart & Bus, 2015). Ciampa (2012) suggested features of digital storybooks such as word-by-word matching and 3-D animation can help attract beginner learners' interest and can be utilized as an incentive to foster their reading motivation. Ciampa (2016) also found using mobile devices for eBook reading fostered Grade 1 children's reading motivation in terms of three aspects of intrinsic motivation—curiosity, choice, and challenge. Oakley and Jay (2008) stressed that the interactivity and agency (the degree of user control) of digital storybooks aroused children's interest in reading. Huang (2013) conducted a study investigating how reading English storybooks online would affect EAL learners' reading motivation and concluded that the use of digital storybooks appears to have a positive effect on college students' reading motivation in L2. Kucirkova, Littleton, and Cremin (2016) found stories that trigger children's empathy—ffective engagement, can help strengthen and sustain children's intrinsic motivation to read, and the sensory and kinesthetic affordances of digital storybooks are conducive to children's affective engagement. It seems there is sufficient evidence to suggest that digital storybooks can foster children's reading motivation.

Nonetheless, research on story apps designed for English as first language literacy development mostly discusses their effectiveness in improving reading comprehension (Danaei, Jamali, Mansourian & Rastegarpour, 2020; Grimshaw, Dungworth, Mcknight & Morris, 2007; Parish-Morris, Mahajan, Hirsh-Pasek, Golinkoff & Collins, 2013; Son, Butcher & Liang, 2020; Wright, Fugett & Caputa, 2013; Zipke, 2017) whereas apps designed for EAL children predominantly address

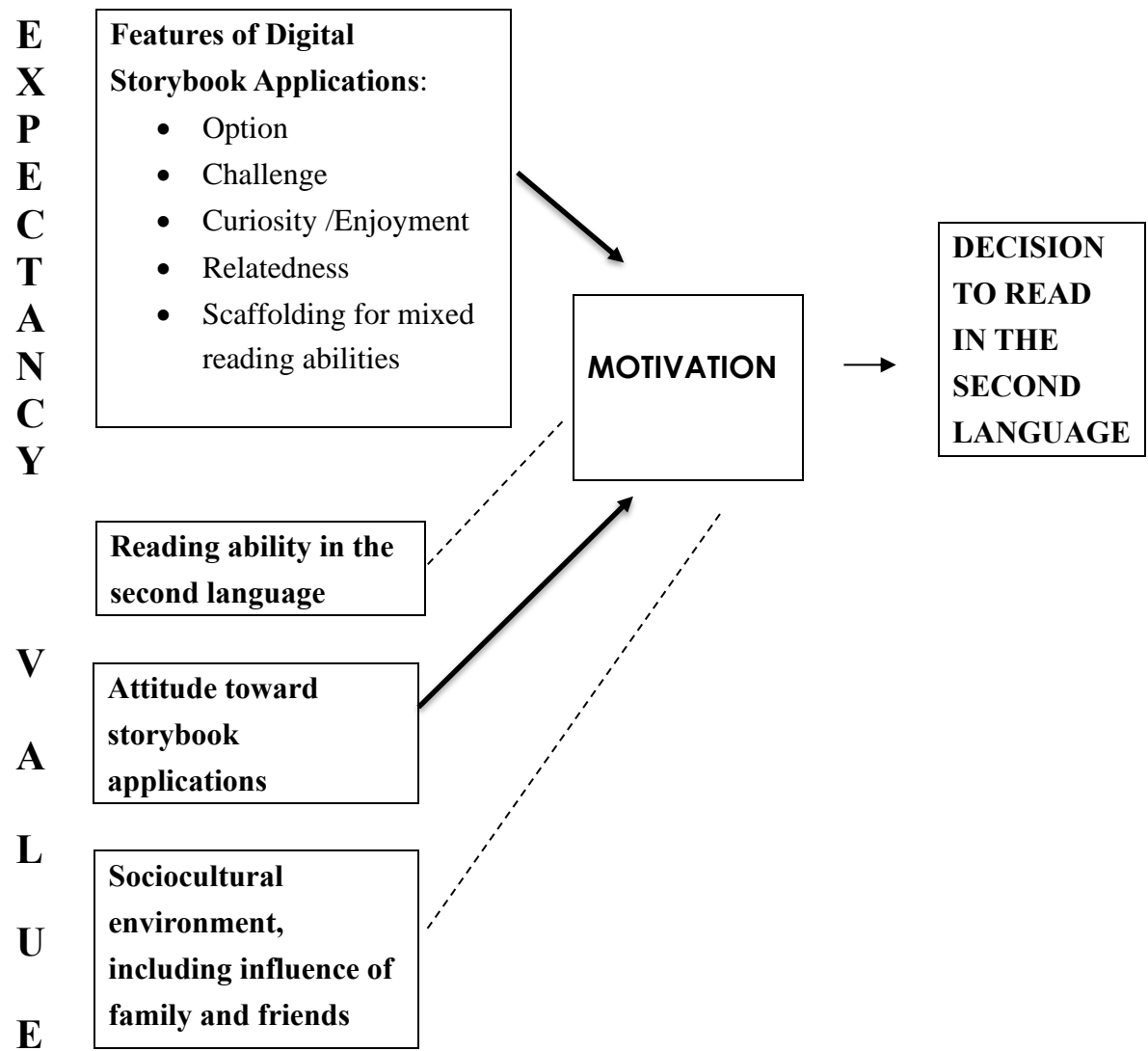


the development of four language skills in the format of games (Butler, Someya & Fukuhara, 2014; Hsu, 2019; Pan, 2017; Sundqvist & Sylvén, 2014) with some in the format of simplified stories such as picture description and digital storytelling (Hwang, Shadiev, Hsu, Huang, Hsu, & Lin, 2016; Liaw, 2014; Liu, Tai & Liu, 2018).

### **3.5 Where Features of Storybook Apps Fit in L2 Reading Model**

Based on the investigation of literature, digital storybooks or storybook apps seem to hold the promise of helping EAL in terms of their motivation to read. By comparing story apps designed for English as a first language and those designed for English as an additional language, it can provide new insights into the effectiveness of digital storybooks on fostering EAL children's reading motivation. Drawing on Day and Bamford's (1998) L2 reading motivation model (see Figure 1 above), the current study explored (a) story apps—whether the features of story apps provide elements such as option and challenges that cater to EAL children's varied interests and needs, (b) L2 reading ability—how EAL children's reading ability impacts their choices and preferences of choosing the storybook apps, (c) attitude—how the attitudes of EAL children and their parents toward L2 reading and the use of storybook apps affect their experiences in using the storybook apps, and (d) the social-cultural environment—how the background and culture of the EAL families and the parent-child interaction influence play a part in their use of storybook apps in relation to L2 reading motivation. This research builds on Day and Bamford's work, replacing “material” with “story apps”, and investigating a total of 4 factors to see how those variables influence their experiences of using digital storybook apps and how they may facilitate or thwart EAL children's L2 reading motivation. Figure 2 demonstrates a revised L2 reading model exploring factors that influence EAL children's motivation to read in L2 when using story apps.

**Figure 2.**  
Factors Influencing EAL Children’s Reading Motivation in L2 When Using Digital Storybook Applications



*Note.* A solid line indicates a stronger influence than a broken line.

## **4. Methodology**

### **4.1 Research Paradigm**

The present study employed a qualitative research design of case studies to provide an in-depth understanding of the experiences and attitudes of EAL children and their parents toward the use of digital storybook applications. According to Strauss and Corbin (1998), qualitative methods allow researchers to obtain details with regard to individual experiences and perceptions, which are often difficult to extract through other methods. Creswell (2017) suggested, “Studying multiple cases allowed us to see processes and outcomes across all cases and enabled a deeper understanding through more powerful descriptions and explanations” (p. 68). Hence, four case studies were undertaken in this research to shed light on what features of digital storybook applications show potential for fostering EAL children’s L2 reading motivation, what their experiences and attitudes are toward using two types of storybook applications—storybook apps designed for English as L1 literacy apps and English as L2 language learning apps.

### **4.2 Ethical Considerations**

This study complies with the VUW Human Ethics Committee code. Participants in this research were not coerced or threatened to participate in the study and were given the freedom to withdraw their participation at any stage of the research. Informed consent forms (see Appendix A) explaining the aim and purpose of the research were given to the parent participants and the child participants were also given assent forms (see Appendix B) to ensure their willingness to participate in this research. Pseudonyms were used to protect the confidentiality and anonymity of the participant families in this project. (Johnson & Christensen, 2012).

### 4.3 Participants

The participants of this study included four EAL immigrant families with children, aged 7, who attended Year 3 in a primary school in New Zealand and were bilingual families using both English and their heritage language (Tamil, Hindi, Spanish and Japanese) at home. The participants were purposively selected because they fit the EAL context, had proficient English to navigate daily activities, and had no difficulty communicating their likes and dislikes. The potential participant families were approached directly because our children attended the same local primary school. When approached, they were given a recruitment sheet explaining what would be involved in the research (See Appendix C). The child participants in these four case studies were at or above the expected reading level for Year 3 in New Zealand. According to the color wheel (see Figure 3), when students attend Year 3, they are expected to complete purple and be reading gold. At the time of data collection, all four child participants were in the second term of Year 3 and were at the reading level of gold. They were not L1-literate but were learning to read or write simple words or characters in their heritage language.

**Figure 3.***The Reading Color Wheel*

*Note: The reading color wheel at EDUCATION.govt.nz. Retrieved from <https://parents.education.govt.nz/primary-school/learning-at-school/the-reading-colour-wheel/>*

#### **4.3.1 Participant Family 1**

Hiroki (all names are pseudonyms) was born and raised in New Zealand and came from a bilingual family where the father is English and mother, Japanese. Both English and Japanese were spoken at home. He could understand Japanese perfectly but chose to communicate and respond mainly in English. His mother avoided reading to him in English because she was concerned that her pronunciation in English might affect Hiroki's. She paid great attention to Hiroki's literacy development in English because Hiroki would most likely continue his education in New Zealand until university. She recounted Hiroki showed great interest in stories when he was as little as one year old. She described him as an inquisitive and eager reader. At the age of one or two, Hiroki even took an interest in reading the Yellow Pages because there were only two books available in the household at that time. When he turned three, his mother read bedtime stories in Japanese and he often asked repeatedly to listen to the

same storybooks. Now, in Year 3, although he had grown out of listening to stories in Japanese, he still took great interest in reading. He enjoyed reading with his class reading group at school and felt proud that he could read as well as his classmates. There was not a particular reading routine in the household. Class assignments and two books from the school library every week were the main reading activities for Hiroki. When Hiroki encountered a word that he felt curious about its meaning, he would google and consult a dictionary or ask his father when he got home from work. However, he seldom sought help from his mother if the pronunciation of the word was his main interest.

#### **4.3.2 Participant family 2**

David arrived with his family in New Zealand when he was five and started Year 1 in a local primary school. His father worked for the Spanish government and was on a 3-year stint in New Zealand. Before David came to New Zealand, he entered kindergarten in Spain when he was six months old and had stories read to him five days a week. Spanish was the main language spoken in the home. David's mother was fluent in English and worked as a librarian in his primary school. On weekends, she would let David pick a book in English that he liked, and they would spend some time reading together if there were no other activities planned for that weekend. Reading was treated as family time together and reading for fun was emphasized. David was a confident reader and enjoyed reading on his own. He wanted to go to the highest level in the reading color wheel. He described reading an interesting book with the right amount of challenge would keep him "calm" and would most likely get him through the book without feeling agitated. While waiting for his mother to get off from work, he would not mind reading a little to make himself feel "calm," a word that he used to describe how he felt when he enjoyed reading something. At the time of data collection, David had been in New Zealand for less than two years. His mother

observed that David often alternated between Spanish and English without realizing that he was recounting events using both languages.

### **4.3.3 Participant family 3**

Tamil was Diya's heritage language and was mainly used in the household with intermittent short phrases in English mixed in their daily conversation. Diya had been in New Zealand with her family for two years at the time of data collection. She was a highly motivated English learner and would like to speak as well as her elder sister who picked up English very quickly and spoke with a Kiwi accent. Diya idolized her sister greatly. She desired to read as well as her classmates and be recognized as an equal. She wanted to speak English like a native speaker and able to communicate with others freely. She expressed that sometimes people could be mean, but if she could read well in English, she could prove to others that she was as good as them. Diya's mother started to read her bedtime stories in Tamil when she was five and still tried to read her a story whenever she was available. She did not have a reading routine with Diya but often encouraged her to read whatever she liked. She often told Diya if she knew a lot of words in English, she could understand what people were saying, and to achieve that, she needed to read as often as possible. Diya's main access to reading materials were school library books and class reading assignments. Her mother sometimes took her to public libraries for extra reading materials. Diya had a reading preference for non-fiction books because she thought this genre of books provided a larger vocabulary that could help her learn the knowledge of the world.

### **4.3.4 Participant family 4**

Abdul came to New Zealand with his family when he was only ten months old. Telugu was Abdul's heritage language and was predominantly spoken in the household. Because his parents mainly used Telugu to communicate at home, when

Abdul participated in their conversation, he would substitute words he did not know in Telugu with English. His first contact with storybooks started in kindergarten when he was three years old. His mother recounted when Abdul was in kindergarten, he would browse the pages and tried to identify the pictures with simple words in English such as bird, apple, car. During this period of time, he had not known the alphabet or learned letter-sound correspondence yet. His parents used to read him stories daily. Now they tried to let him read on his own and occasionally read stories in Telugu whenever they could find time to do so. Once a month, they would check out 5-6 books at the city library per visit. Although Abdul read both fiction and non-fiction, he was more into reading fiction stories than non-fiction ones. His mother said Abdul was intrigued by the Indian god stories that she read to him, which might influence Abdul's reading preference. When Abdul expressed himself, his logic and reasoning skills were noticeably embedded in the way he conveyed his ideas. He believed the more books he read, the bigger vocabulary he would be able to obtain, and the stronger reader he would become. He gave an example of how he could read as well as the rest of his peers. He said if he invested his time in reading four books a week, he would stand a good chance of achieving his reading goal and become a competitive reader in English.

#### **4.4 Storybook Applications**

Due to the fact that this research was self-funded, the selection of the four digital storybook applications was limited to whether the child participants could have free access to the apps or whether the apps provided free trials. A total of four applications, two literacy apps designed for English as a first language (L1), and two language learning apps designed for English as an additional language or second language (L2) were selected based on their story features, accessibility, popularity, and reputation. Given a plethora of apps designed for English as L1 that were available, the literacy



apps in this project, Epic and Sunshine Online, were selected because of the wide popularity they received as well as the free access provided by the child participants' school account during the COVID-19 pandemic. On the other hand, due to the predicament that apps designed for English as an additional language were mostly game-based or de-contextualized, the criteria for the language learning apps designed for EAL hinged on a) whether they featured stories and b) whether they were designed by reliable language learning developers. Accordingly, two language learning storybook apps were chosen because of the reputation of the app developers, Khan Academy and the British Council. In addition, Khan Academy allowed free access to their language learning app, and Learn English Kids Playtime by the British Council offered a 2-week free trial before subscription, so parent participants were asked to register for a week's trial and cancel their subscription after the trial period.

#### **4.4.1 Storybook App 1: Epic!**

Epic provides a huge collection of 40,000 popular children's books and covers a broad range of genres that spark the curiosity and interests of children with mixed reading abilities and ages. The app offers a wide selection of storybooks, comic books, chapter books, audiobooks, and learning videos of varied topics. Read-to-me, an essential feature of most storybook apps, is included with the text highlighted as the words are spoken. Once readers set their reading preferences, age, and reading levels, the app makes recommendations accordingly. The layout of the app provides the title and cover of each book so readers can easily decide whether they find the book interesting. The app simulates a virtual classroom with avatars representing students in the class. Students are awarded medals and decorations as they move up their levels. The more books they read, the higher level they go. As they reach a higher level, they unlock more books to read. The game-featured activities such as vocabulary or comprehension exercises are not offered in this app. A summary of the

features that are incorporated into this app is shown in figure 4.

**Figure 4.***Features of Epic!*Features

- **Book Collection:** There is a total of 40,000 books of varied genres, leveled books to choose from. Some fonts of the books are not clearly
- **Read-To-Me:** Not all books provide the feature. Texts are highlighted as words are read.
- **Illustration:** Illustrations are diversified ranging from fairy tale to comic book style.
- **Activities:** There are no activities following the completion of reading a book.
- **Videos:** There is a video section for varied themes and topics, including teaching videos.
- **Audiobooks:** The audiobook section provides an alternative for screen-off reading.
- **Reward System:** Readers are awarded points to level up and rewarded with medals and decorations for advancing to the next reading level.
- **Avatar:** In the virtual classroom, readers can see the avatars representing others and themselves. They get to decorate their avatar more as they level up.
- **User-friendly Layout:** The interface of book options is user-friendly. After readers set their reading interests, preferences and age, the app suggests books to read providing the title and cover of the book.

#### 4.4.2 Storybook App 2: Sunshine Online

Sunshine Online is a popular digital literacy program widely used in Australian schools and available free to all New Zealand schools. A total of 650 eBooks are grouped into three reading levels: **emergent level** supports alphabet recognition, corresponding sounds, and high-frequency words with simple and repetitive texts, **early level** focuses on phonics, word families, and comprehension with an array of fiction and nonfiction digital books to choose from, and **fluent level** switches to spelling, grammar, writing, comprehension of short stories and chapter books. Readers can go to the category that best fits their current literacy level from the main page. All the eBooks provide the read-to-me feature and the interactive feature is extensively employed in the emergent level eBooks. Another key feature is that following each story, three game-like activities related to the story just being read are given to familiarize the readers with the vocabulary and test their comprehension of the story. Interactive reading and game-like activities are the two major features of this literacy app. Figure 5 summarizes the features that are incorporated into the app.

**Figure 5.***Features of Sunshine Online*Features

- **Book Collection:** Over 650 eBooks are curated in this literacy app and grouped into three literacy levels. Readers can choose both fiction and non-fiction books at their level. Some books are interactive, and texts are presented in clearly legible fonts.
- **Read-To-Me:** All books provide the Read-to-Me feature but read-along with highlighted words are only provided in low and some intermediate levels.
- **Illustration:** Illustrations are not as interesting as most popular storybooks but still provide background clues for each story.
- **Activities:** The story follow-up activities incorporate the fun element of games and center on reinforcing the vocabulary, grammar, and comprehension of each story. There are often 3 activities following each story.
- **Videos:** Videos are embedded in the eBooks to provide background knowledge or additional information for books being read.
- **User-friendly Layout:** On the main page, readers can go to their level accordingly and read the books in sequential order. Readers select books based on the given titles without book covers or illustrations.

#### **4.4.3 Storybook App 3: Khan Academy Kids**

Khan Academy Kids is a free learning app for children between the ages of two to seven that encompasses early literacy, reading, language, and math. The app provides original fiction and non-fiction interactive eBooks that are grouped into different themes and categories such as books about feelings, or animals, as well as books for early readers or first graders. The eBooks in the library are presented with titles and covers for readers to choose from according to their interests and preferences. All the drawings in the fiction series are illustrated by the same illustrator, so they all share the same style of illustration whereas the non-fiction books are illustrated with colorful, real-life photos. There are no story-related activities but there are a good number of general literacy activities that incorporate video teaching and interactive feature for learners to interact with. The activities mainly provide the letter-sound correspondence drills and the introduction of grammatical terms. There is also a separate section for videos that mostly focus on teaching phonics and grammar. In addition, the app creates animated characters acting as an instructor guiding children through the stories and activities and encouraging them to try again if they fail. After completing each activity, children can choose one of the three prizes that they want to dress up the animated characters. A summary of the features that Khan Academy Kids provides is shown in figure 6.

Figure 6.

*Features of Khan Academy Kids*Features

- **Book Collection:** There are approximately two hundred books grouped into themes and categories in the app with titles and covers for readers to choose from.
- **Read-To-Me:** All the curated books in the collection provide the option of Read-To-Me or Read-By-Myself on the cover page. Texts are highlighted as words are read. The reading speed is at a slower pace compared with other apps.
- **Illustration:** The fiction collection is consistently illustrated with the same style of artwork whereas the non-fiction collection is illustrated by diverse, colorful, real-life pictures.
- **Activities:** The activities are interactive with an animated character guiding the readers through them. The content centers on phonics and grammar drills. There are no follow-up activities after each story.
- **Videos:** The video section provides teaching videos on phonics and grammar.
- **Reward System:** Readers are presented with three gift options that they want to give to the animated character after completing each activity and then go to that character's home to play with the toy collection.
- **User-friendly Layout:** The books are categorized into fiction and non-fiction with titles and covers provided.

#### **4.4.4 Storybook App 4: Learn English Kids Playtime**

Learn English Kids Playtime is a paid subscription app designed by the British Council's language learning experts for EAL learners aged 6-11. There are over a hundred stories and songs curated in this app. The app does not provide eBooks for screen reading and only covers one genre of reading, mainly comprised of fairy tales, fables, and adapted classic plays of Shakespeare. Stories in this app are all animated, presented as approximately 4-minute-long animations with one sentence shown at the bottom of the screen. The animations adapted from popular fairy tales, fables, and classic Shakespearean plays are fun, interesting, and of high quality. A main feature of the app is that it incorporates sound recognition technology into its story follow-up activities for vocabulary pronunciation practice, and there are also activities designed to reinforce vocabulary spelling. In addition, fun videos using a combination of stories, chants, and songs to teach grammar concepts are provided in the app. The app also employs a reward system to encourage learners to actively involve themselves in doing the activities. When learners complete an activity, they will be rewarded with points. When they accumulate enough points, they will receive a bonus item. Figure 7 outlines the features that this language learning story app provides.



Figure 7.

*Features of Learn English Kids Playtime*Features

- **Book Collection:** There are no eBooks provided in this app. The app curates high-quality, animated stories adapting from fairy tales and classic Shakespearean plays.
- **Read-To-Me:** The animated stories provide one-sentence-long subtitles for learners to read along.
- **Activities:** The story follow-up activities center on the pronunciation and spelling of the vocabulary and are interspersed with some simple comprehension questions.
- **Videos:** In addition to stories, there are videos centering around grammar teaching by using a combination of stories, songs, and chants.
- **Reward System:** After completing each activity, the learners are given points and rewarded with bonus items.
- **User-friendly** The layout of the app is presented as a fun map with each category disguised as a destination.

**Layout:**

## **4.5 Data Collection Methods and Tools**

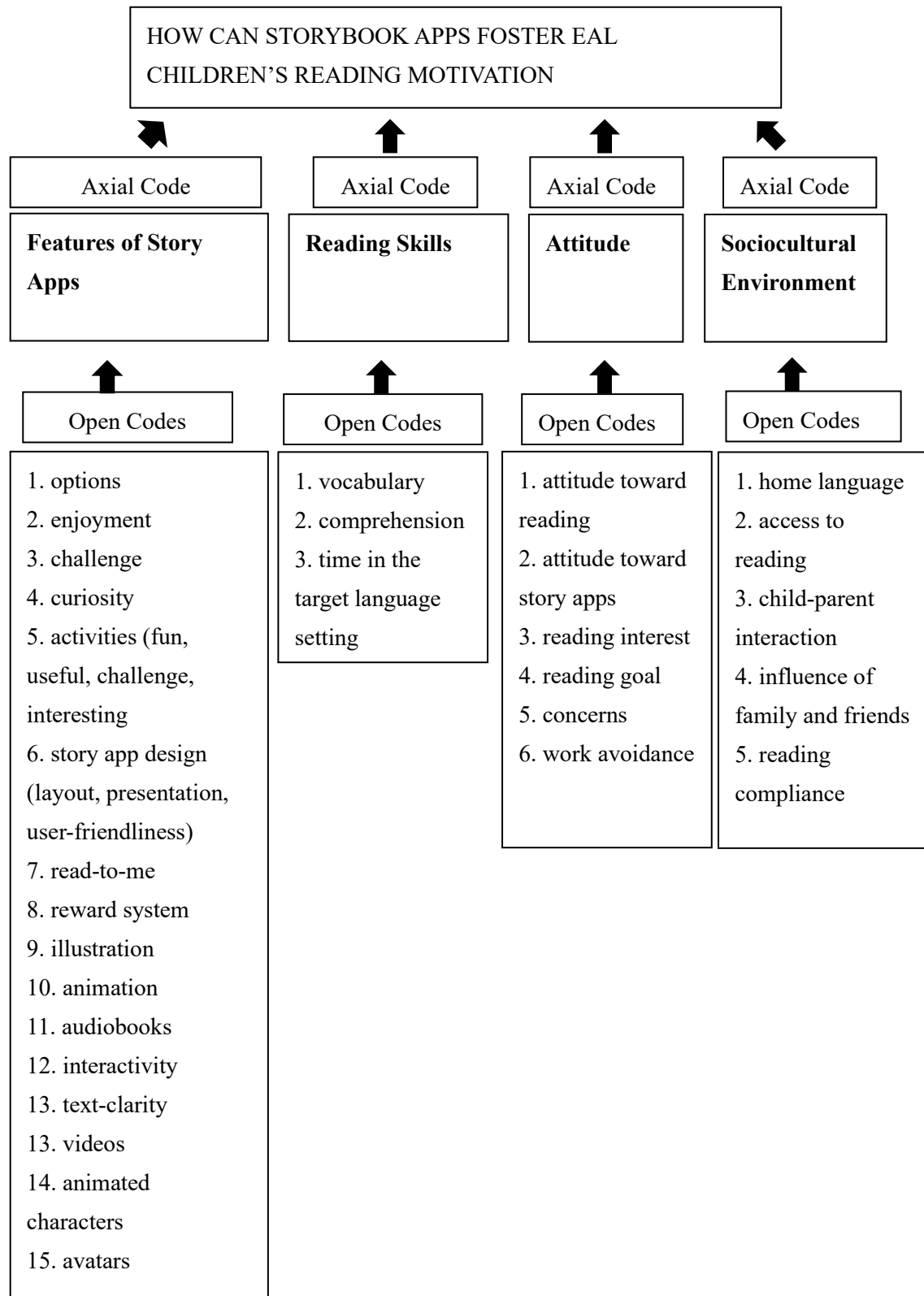
### **4.5.1 Data Collection Tool**

Qualitative data collected in this study included semi-structured interviews over Zoom and records of how frequently participants used the story applications. These were employed to ensure that the information derived from the collected data accurately reflects the truth about the phenomenon being explored. Due to the practice of Alert 4 lockdown at the time of data collection, the triangulation of the present research data was made challenging. It was not possible to include field observation notes on how participant families utilize the story apps in their home environment, or how the parents interacted with the child participant during their use of the story apps. To solve this predicament, participant families were asked to keep a record of how often they used each story app during the trial period (see Appendix D for the recording sheet). In addition, a total of four ZOOM interviews were conducted with each of the parent and child participants (see Appendix E for the interview questions). Each interview lasted approximately 50 minutes and was recorded on Zoom with the permission of the participants.

### **4.5.2 Data Analysis Methods**

This study employed thematic analysis to identify and analyze themes recurring within the research data (see Appendix F), and describe the data set in detail (Braun & Clarke, 2006). Records of the number of times child participants used the story apps and verbatim transcription of the participant interviews were compared and analyzed by using axial coding (Creswell, 2017). The qualitative data were organized into categories and subcategories and how the codes were related to each other was explored. Figure 8 lists the open codes and axial codes uncovered during the process of comparing and analyzing the research data collected in this project.

Figure 8.

*Open Codes and Axial Codes Derived from Interview Transcriptions*

### 4.5.3 Procedure

The 4-week project was launched during the period when social distancing was practiced so each week participant families were notified of the trial app for the week via emails and texts. The participant families were encouraged to try out the app up to five times a week and were asked to let the child participant have free rein to the use of the story apps so that features of story apps that motivated EAL children could be explored without the child participants feeling forced or coerced to use the apps in a particular way. While trying out the app for the week, the child participants with the assistance of their parents kept a recording of the number of times they used the story app and what they thought of the story app in general by rating each story app on a scale of 1 to 5 hearts, one indicating lowest and five indicating highest. Following the trial week of the app, an approximately 50-minute-long, semi-structured interview was held to inquire about both the child and parent participants' perceptions of the features of the story app. For example, what captivated their interests and what bored them very quickly. Each interview began with the child participant and was followed by the parent participant to avoid anxiety or boredom triggered by waiting. The 50-minute interview time was aimed to be equally allotted to the child and parent participant, 25 minutes each. The interview questions were shown on the screen via the share-screen function of a web conferencing software, Zoom. To simulate a face-to-face interview, the participants were encouraged to have their webcam on, particularly with the child participants in order to keep their attention and capture the nuances of their facial expressions. Interviews with child and parent participants were recorded via Zoom to avoid running the risk of having a loss of important information and valuable details. All four interview recordings of the family participants were transcribed verbatim. According to Halcomb and Davidson (2006), "a verbatim record of the interview is clearly beneficial in facilitating data analysis by bringing

researchers closer to their data (p. 40)”. Also, an audit trail (see Appendix G) was created for each participant to record dates and transcriptions of the interviews to establish evidence for the transferability of the study results.

## 5. Findings

### 5.1 Features of Storybook Apps That May Enhance EAL Children's Motivation

In this qualitative research, I had the opportunity to explore the experiences of four EAL children in how the use of storybook applications influenced their motivation in L2 reading, how they perceived the differences between literacy and language learning apps, and how their sociocultural environment played a role in their attitudes toward the story apps. In addition, taking account of the voices of EAL parents allowed a more balanced perspective in this qualitative investigation. Based on the findings, it was evident that there was a plethora of features offered by storybook applications that could appeal to EAL children and increase their willingness to use the app more frequently, in consequence, enhancing their motivation to read in English.

#### 5.1.1 Book Collection

The book collection was the determining factor or at least, played a significant role in the frequency of app usage and the child participant's reading interest in L2.

Components that define a good book collection such as options, interest and curiosity, illustration, challenge, and text clarity are discussed below:

**Options.** Both parent and child participants overwhelmingly agreed that the number of books the story app could provide was a major factor that influenced their interest in using the app. David's mother commented:

I think the wide collection of books will be one of the main things I would pay attention to. The wider the collection, it would be more probable he would find books that he would enjoy.

David gave his main reason why he enjoyed using the storybook app, Epic. He said, “[because] it has a lot of stories to choose.” Diya commented if a storybook app could provide more book options for her to choose from, it would help her to become a good reader.

*Interviewer:* Do you think this story [Epic] app can help you with your reading skills and why?

*Diya:* Yes, because they have a large collection of books. They can help me read better.

Diya also mentioned that she would use the app more if there were more books curated in the app.

*Interviewer:* Which story apps make you want to use them more, literacy apps or language learning apps?

*Diya:* Uh-mm, literacy apps.

*Interviewer:* Because?

*Diya:* Because they have many collections of books.

Having a large book collection seemed to be a prerequisite for an app to provide reading options for children and to be favored by the parents. This is also in alignment with extensive reading advocates who suggest that when a wider selection of books is available, the case of self-selected reading for pleasure grows (Day & Bamford, 1998; 2002) However, the quality of the book collection was what sparks readers' interest and curiosity and makes the reading experience enjoyable.

**Interest and Curiosity.** According to Guthrie, Wigfield, Metsala, and Cox (1999), “Intrinsic motivation refers to an emphasis on curiosity and interest in the

activity one is doing.” (p. 234). Based on the participants’ statements, it was essential to provide books on varied topics and genres that piqued their interest and curiosity. David stated that he enjoyed using the story app, Epic, because “it has a lot of stories to choose” and it made him want to read more because the app had “good stories.” He said, “I like the fiction ones because there are some fun stories, like there’s some little problem but they can solve it themselves.” Hiroki said he enjoyed reading books on story apps that made him “curious” and allowed him to learn “wonderful animals and things” and things that he had no knowledge of. Diya expressed books that presented “a problem and a solution” interested her the most. She added,

I liked many stories on this app because their plot was interesting. You know, some stories end with a good ending and some ended with a bad one. I like how the stories surprised me in the end.

In a similar vein, Abdul replied that he would use the story app more if there were more interesting stories on the app. An elaborately curated library that offers fun and interesting books would make him want to read more. He said, “I just want to have some fun and learning stuff. Sometimes I go to the non-fiction and see what else is there.” His mother also commented on how Abdul picked the books he wanted to read. She said, “if he has [an] interest [in that book], he will choose[it]. [Even] if it’s difficult, he will still choose it. Whatever he likes, he chooses.”

Ciampa, Guthrie, Wigfield, and other motivational researchers suggested students’ intrinsic motivation in reading would be fostered if a wide selection of “interesting” texts were accessible. So, this leads to the question, “What makes books interesting to children in addition to the story itself?”

**Illustration.** Besides intriguing stories, the illustration feature that made books more fun and interesting to children was brought to the fore. As Hiroki’s mother pointed out, storybooks with dull and boring illustrations may be less exciting and

appealing to children. She described that

...[in] small homework books, pictures is [are] not good. It's okay but not cute so that's why it is [they are] not interesting. Hiroki loves Scaredy Monster. [With] cute pictures, children will read more. They read and re-read again... [If] pictures are interesting, I want to read more; I want to try. But if the pictures are boring, I will try to get another story, maybe.

Hiroki also stated that what made him like using a story app was pictures that made him laugh. Abdul's mother described when she observed Abdul, she noticed that whenever Abdul got a chance, he would browse and search for pictures of funny, hilarious characters in the book selection first. Diya commented that she would read and re-read books with interesting illustrations. David's mother also stressed the necessity of providing an illustration to help children comprehend the text more fully. She said,

As a parent, but I've seen the pictures help them a lot, sometimes help them find out the word that they are struggling with. So, now, at this level, I think the pictures are also important. They [The pictures] help them.

It was evident that in this study, both the child and parent participants had a positive attitude toward the sense of enjoyment and motivation brought by the illustration feature. From what the participants recounted their experiences of using the story apps, it can be concluded that children gain a greater sense of enjoyment when exposed to a wide range of book options that provide fun and interesting illustrations.

**Challenge.** According to Ciampa (2016), besides providing choice and curiosity in the reading material, children would be more intrinsically motivated and enjoy the reading process all the more when the element of challenge was present. Adding the element of “challenge” could equally spice up the “options” of the story apps. In one



of the interviews, Diya talked about how she felt when she encountered challenges while reading. She said,

Umm...if I failed the challenges, it would make me feel very sad. If I could [meet the challenges], [like reading] a book that was so hard and I did it by myself. I would be proud of myself... The books make it challenging because the books have a lot of hard words. I like books that are challenging for me.

Diya's mother agreed that it would motivate Diya a lot more if she felt "challenged." The desire of demonstrating one's competence in being a strong reader was seen in all four child participants. Hiroki mentioned he would prefer reading something with longer passages and commented that "because I like doing the reading, I don't want actually to do [something] a bit easy. I want [it] to be challenging." David also indicated that he preferred reading longer sentences and shared what he thought of having something challenging in reading. He commented, "for me, to be[become] a strong reader faster, because a strong reader needs to know how to read long, long...L-O-N-G sentences." Responding to the same question, Abdul gave a simple and practical reply why he wanted to read passages interspersed with difficult words or "tricky" words as he called them, he said, "To learn, to learn." The child participants' need of feeling challenged was consistent with what Deci and Ryan posited that to foster intrinsic motivation, the psychological need of competence needs to be fulfilled. When presented with "a challenge", children have the opportunity to prove their capabilities, and a sense of competence is fortified. This sense of competence seemed to be a decisive factor that made the child participants overwhelmingly choose the literacy apps over the language learning apps.

**Text clarity.** The text clarity—whether the text is printed in a readable font and with a good word size, was also addressed. Hiroki said he would still read the book if

he found the pictures in the book really interesting, he wouldn't mind the word size or funny font. David also replied that he wouldn't bother by the small font, either.

David's mother shared her opinion on the important role of illustration and text clarity. She commented,

For them, they can be very helpful to make out words that they find difficult to read so a balance between both will be ideal so not just the illustration or the text clarity. Both things should be there helping because some kids, I believe, will be paying more attention to the illustration and others will be really focused on trying to make it out. So, both have to be there.

Diya and Abdul talked about if options allowed, they would prefer books printed with a font size that is easily legible. Diya said, "if I read the words clearly, sometimes it interests me more. I can't read very well if the words are too small or tiny. I like big clarity." Abdul also said, "I don't like funny writings." Drawn on the user experience of the participants, it can be concluded that although some participants expressed that they would not mind reading books printed with a smaller font size if the stories were interesting enough, however, it would be best that app developers could take account of making reading texts legible to reduce the children's risk of digital eye strain since screen time appears inevitable in today's digital world. With respect to the story collection feature, it can be suggested that a story collection that featured options, interesting stories, fun illustrations, and text clarity seemed to appeal to most of the participants in this study.

### **5.1.2 Read-along**

It is no exaggeration to say that the feature of read-along or read-to-me is an essential affordance that every story app should have. This feature, where words are highlighted as they are being read, and when clicked, where words can be repeatedly read, provides some degree of "scaffolding" that many EAL children are in need of as

many of them may have parents with limited English proficiency (Magnuson, Lahaie, & Waldfogel, 2006). A number of empirical studies also back up this feature with evidence that this scaffolding mechanism can assist children in learning to read, increase their attention, and significantly improve their vocabulary and word recognition (De Jong, 2003; Korat, 2010). Abdul shared his experience in using the affordance and said,

I used READ-TO-ME most often. I clicked a word or a sentence and it could repeat the word. For example, if I didn't know how to pronounce a tricky word, like 'animation', I clicked the word, and it would say the word for me.

Hiroki said he enjoyed using the read-to-me feature of the story apps because

I actually don't know words in some books... sometimes they are super long that my brain can't do all of the words... it [using read-to-me] actually helps me with tricky words. I could actually kind of learn more when I get stuck."

Hiroki's mother thought of this feature as a useful tool that could help Hiroki to read well in English. She said, "they speak in English, explain in English. At home, I don't speak English to children, always [in] Japanese...I can't read in English, so, [the read-to-me feature is] good for me...helping me." She shared her opinion that read-to-me is an excellent feature that interests EAL children in using story apps. She said,

He [Hiroki] loves books... If he doesn't know the words, he can use read-to-me. Then he can listen, he can learn more words. He likes learning. So, [with] new words, he can hear [the pronunciation by using read-to-me].

That's why I think he is interested more in using the apps.

However, David and Diya had a different opinion in terms of the affordance of read-to-me. David said the content of most books with the read-to-me feature were too easy

and he would prefer to read by himself so he could focus more on reading. Diya commented although she liked the feature, sometimes she avoided using it. She explained, “um...they just...I don't like to listen [to the stories]. Uh-mm...They kind of chat. I don't like to listen. I like to read preferably.” She also mentioned the reading speed of read-to-me in some of the story apps was too slow.

*Interviewer:* Did you use the READ-TO-ME feature? Did you like the reading speed?

*Diya:* Yes, it goes fast. I like how it goes fast because I just want it to read fast. In EPIC some books read like DAD-SAW-A-BALL, which is too slow.

Based on the responses of the participants, the affordance of read-to-me served as scaffolding or a ‘crutch’ for some child participants who were still building on their vocabulary in L2. For others who had reached a certain reading level preferred to read on their own without placing any reliance on the feature.

### **5.1.3 Activities (enjoyment, usefulness, challenge)**

**Enjoyment.** Game-featured activities are one of the main attractions that draw many children to try their hand at multifarious applications. Some of the participants in this project were no exception. Activities that featured games seemed to give them enjoyment, provide opportunities for useful exercises and opportunities to demonstrate their competence. When explaining why he enjoyed some apps over the others, Hiroki said, “Because they are more fun, a little bit easy and a little bit hard.” Abdul responded, “Okay. So, like I just wanna a learning break for myself. So I can do some learning and have some fun. That makes me happy.” Diya talked about one particular activity with a clock ticking to time the participants. She described the excitement she felt from doing the activity. “[It made me] excited because I'm learning English and I wanted to do it fast. So, I feel excited about it.” However, not everyone was a fan of game-featured activities. David addressed the same activity as a

nerve-wracking one that he did not enjoy doing it at all. He said, "...The games are just too easy, and the time limit put [makes] me nervous because I am a nervous guy with time."

**Usefulness.** In terms of usefulness, based on prior research, the repetition mechanism in the activities can be beneficial and may provide positive effects on L2 learning (Azkarai & García, 2017; Cabrera & Martinez, 2001; Hidalgo & García, 2019). According to Cabrera and Martinez, repetitions were conducive to the level of comprehension in EAL primary classrooms whereas Hidalgo & García (2019) suggested repetitions would promote learners' attention to form. When asked about whether she found the activities useful, Diya said,

It matters if it has activities because activities are good. It makes me remember the story again and again. I like activities...if there's [are] no activities, it doesn't help me remember the story. Sometimes I can remember the story because of the activities. If it doesn't have activities, I can't remember the story a lot.

Diya's mother also agreed that activities were advantageous to Diya's learning and reading in English. "Through doing the activities, she could learn how the words are used... I like that they have a lot of activities, vocabulary games, and grammar. Through that [activities], she can happily use the app." Abdul gave an account of why he enjoyed the activities in one story app. He said,

So that I can be in a reader game, challenge myself, and gain more points, like that. They are useful so that I can read by myself properly. I like challenging and new stuff. I just love new, useful stuff.

It is interesting to note that some participants were motivated intrinsically because of the desire to learn whereas others were driven extrinsically simply because of the points they could get to level up. Irrespective of their orientation, to some extent, the

activities provided in the story apps increased or improved their knowledge of the language itself.

**Challenge.** The challenge provided in the game-featured activities can enhance learners' motivation (Butler, 2014). Some child participants opted for the activities that were a bit more challenging. I found there was an adverse side of rendering the activities challenging when other factors such as personality that came into play. Some child participants got intimidated or affectively impacted by the level of challenge. When addressing the level of challenge in the activities, Diya commented,

...the activities are something that can challenge my brain...when I use the activities, I just go, 'Oh, this is easy for me. I like this activity because it's just easy...some of the parts are hard and some of the parts are easy. I like how it is mixed with two things [easy and hard]. The activities, I like how they are mixed together with different orders...

When asked to compare the activities of one literacy app with those of another language learning app, Diya pointed out that it was important for her to do activities that were less challenging so it could boost her confidence. She detailed,

Well, so Sunshine Online, the activities just gave me the words that I can know but on Khan Academy, it gave me confidence that I knew this already and some of them don't know that. Like the big ones from year 7 or 8 don't know what this is or what that was. I just feel proud...I don't know the words on Sunshine Online sometimes, so I don't feel proud of myself... I like to go a little bit by a little bit.

Hiroki commented that when he completed an activity successfully, he felt "happy." Abdul was also fond of having activities in the story app and said the activities could provide practices and fun for him. He indicated although he enjoyed doing some easy activities, they were less interesting. David said that in general, he did not enjoy doing

the activities and avoided doing them. He often went straight to the reading because he enjoyed reading the books more. He expressed his frustration and gave an example of why he did not like the activities in some story apps. He said,

it [the activity] doesn't give a lot of time, but you need to make as much [many] words as you can. And you need to think words fast because they can beat you. They want to know how many words you can write in those seconds... if I think so fast, it gets me so nervous that I might explode.

David did not think highly of most activities in the story apps because he had negative experiences in using them. "Some make me nervous and some make me bored... They are too easy." Judging from what the participants described, besides adding fun to learning, for some, activities providing mixed levels of challenge fulfilled the needs of feeling competent while for others, "work avoidance" crept in and they circumvented the activities because they simply took interest in reading itself.

#### **5.1.4 Competition and Rewards**

Among the four trial story apps, Epic, one of the literacy apps, created a virtual classroom allowing all the students in the real-world classroom to exist in the form of an avatar representing each individual. The child participant was allowed to see the reading level of their peers. This feature worked for some participants but did not overwhelmingly win them over. When asked about having any concerns regarding the likelihood of the app instigating competition among peers, Abdul's mother expressed that she did not have any reservations about the feature because she thought "good competition" could motivate children to set reading goals for themselves and should be considered as a positive element because they end up reading more books. She detailed,

...slowly he's increasing his level. He would see other friends' levels. He can see [their levels], right? His classmates also doing Epic. He wants to

read more. He wants to increase his level...It is a good option [feature] that seeing the kids—how many they read... In the end, he will read more.

Similarly, Diya's mother commented on Diya's eagerness to move up the levels. She said, "...after she goes to the third level, she's happy." She thought highly of the feature and considered it provided a certain level of encouragement for Diya. On the other hand, David's mother observed whether the feature triggered David's motivation to read more books. She explained,

I think the reading progress for David worked but in a very short term. He was already in the app and said, "Oh, look, someone's got more. I'm going to read a couple of them more." But he was losing interest. He had some interest but not much.

Khan Academy Kids, one of the language learning apps, adopted a reward system to award children virtual prizes after they completed the activities. This reward system gained favor with some child participants. Hiroki's mother described Hiroki's reaction when he learned his three-year-old sister was getting prizes after completing the activities in the app. Hiroki was completely drawn to the feature and wanted to do the activities. His mother added, "He loves to choose which present he wants." Abdul also shared how much he enjoyed this feature. "I like [the fact that] in the activities, when you finish them, they give you a toy, that kind of surprise...I like getting prizes. When I finished an activity, I got to choose one prize. I like it a lot." Abdul's mother also confirmed from her observation that Abdul was very interested in getting prizes. She commented, "They are kids. They always need encouragement so they will be more interested to do."

Besides receiving prizes after completing the activities successfully, child participants also addressed simple guidance and words of encouragement they received from the animated characters. Hiroki expressed that having animated



characters acting like a virtual teacher guiding him through the activities and giving him encouragement made him feel “good.” His mother commented that the feature was helpful and provided an element of fun. Abdul explained why he liked the feature and said, “Because they give me surprises and good learning experience and encouragement, don’t give up.” David said, “if I didn’t have characters, it would be too difficult cuz I don’t know what to do.” David’s mother expressed her bewilderment, “He liked watching them. He didn’t get to talk to them, but he liked them. I didn’t get to know why but he liked them.” Diya explained why she enjoyed the feature.

Because when I do something, they give me challenges and I do that, they give me...uh...it’s like some star go up and also, they appreciate me, like when I am doing ‘create’, it tells me that “thank you for showing me your drawing”. It go [goes], “I like your drawing.” Thinks like that make me feel proud of myself that someone is appreciating me.

Based on the replies of the participants, their responses were congruent with what CET suggests that when social environments provide positive feedback or encouragement, a higher level of intrinsic motivation would result.

### **5.1.5 Avatar**

The feature of the avatar received positive feedback from both parent and child participants. Hiroki said he wanted to read more books and level up so he could “get more cool dudes.” His mother described his enthusiasm for using the story app. Although it was the week for trying out the second literacy app, Hiroki was still asking to use Epic. She commented that this feature allowing children to change their appearance was interesting and “cute”. David’s mother also reported that the feature of avatar kindled David’s interest and he enjoyed the feature allowing him to change his avatar periodically. David explained why the feature made him want to use the app

more.

because there are some cool, funny faces, like [faces with] scars, it makes me excited and if I level up, maybe I can get more avatar stickers [decorating items] and that makes me feel good. If I like it, maybe I can change it.

Diya described her excitement when she leveled up and was awarded decorating items or avatar options. She said,

I went to my profile and checked out if I was in level six and moved up to level seven. I could say that it made me, like, WOW, I've got a new sticker for my profile. I could change my avatar.

Diya's mother said the avatar feature motivated Diya to "automatically" use the app and eager to read more because she wanted to level up and got more avatar options and decorating items. Abdul also commented that having an avatar representing him in the virtual classroom made him want to use the app more.

It can be presumed that the feature of the avatar provided some degree of relatedness to others in the virtual classroom and allowed children a level of agency to decide how they wanted their avatars to represent themselves. Butler (2017) suggested children appreciate games more when they are allowed a greater level of agency.

#### **5.1.6 Interactivity**

The feature of interactivity, clicking the picture to see it move or hear fun sound effects, which intensifies readers' sensory experiences, seems popular among young children and is irresistible for some (Butler, Someya & Fukuhara, 2014; Butler, 2017). It has a mixed response in the literature. For example, Kao, Tsai, Liu, and Yang (2017) reported that high-interactive eBooks were conducive to enhancing fourth-grade students' reading motivation because they provided guidance, prompt and feedback whereas Takacs, Swart, and Bus (2015) concluded that "interactive features are

possible distractors from the story, whether they are relevant to the story and developing literacy skills or not.” (p. 729).

In this project, participants voiced their varied opinions on the interactive feature. Hiroki said the interactivity made him interested in the story. His mother expressed her concern that the content of books incorporated with this feature had a propensity to be easier and did not match Hiroki's reading level. She also pointed out a common technical problem when trying to play this feature. She gave an example of a book that Hiroki was interested in the interactivity feature, but it took them ages to open that book. They ended up giving up.

David talked about his experience in playing this feature. He said the interactivity feature did not make him interested in re-reading a story just to play the feature again. He explained, “Because I just pressed it one time and I just forgot and I didn't do it.” The interactivity did not interest him that much. David's mother shared her perspective on the feature and said “I suppose they can be interesting for some kids so it's good that...I think it's one thing that an app can differentiate itself from the traditional books. Some kids like it [the interactivity].”

Abdul was one of the children that were drawn to the feature. He found it fascinating and was interested to repeat the same story, just to see the interactivity again. His mother expressed her opinion that “now they are growing big, so for them, it is not necessary. If they are five or six-year-old kids, that [the interactivity feature] is good. But now they are big, it is not necessary.” She also expressed her concern that Abdul might end up spending time playing the feature instead of reading the books. She commented,

...if we give a limit time, they will see the picture more time and they will read less. [Given a certain amount of screen time, if they spend more time on the feature, they spend less time on the reading.]

Diya's mother held a slightly different view on the feature. She said, "Actually, I think it is interesting because if they continuously read, they can easily get bored. Having some interactivity means she is using the story app happily. [She can enjoy the app more.]" Diya shared her experience of playing the feature and said,

If I press it, it makes me interested in how they move and I go to other stories; I read the words and I press it, then I can have a little fun by seeing how it moves again and again.

It is interesting to note that the opinions of the child and parent participants split over the feature of interactivity. This feature was found to attract some participants and not others, which could be due to the children's maturity levels and parents' attitude toward the feature.

#### **5.1.7 Bells and Whistles**

The bells and whistles each app developer comes up with are expensive. They help their app to stand out from the many and various apps available on the market. In this project, there were features that sparked the interest of some participants. First, the layout, how the library was presented, was brought up by some participants. Hiroki said he decided whether he was interested in reading the book by browsing the pictures first. Hiroki's mother also commented that books on Epic and Khan Academy Kids provide titles with covers to help children determine whether the books interest them or not. She said,

...the way the story collection is displayed with the cover and the pictures. I think it helped. If Sunshine Online had that, maybe he would be more interested in listening to it. Because once he started to listen to the story, he liked the stories, but he was not so fond of getting to read the story.

She also added,

Sunshine Online says which level. [It's] easier to get Hiroki's level of books

and that's why I like Sunshine Online. For Hiroki, Sunshine Online books are not so much fun but for me, I want him to do Sunshine Online because he can choose his level but [with] Epic, Khan Academy and Learn English Kids, he chooses easy things.

David's mother also shared the same view. She commented,

I like that there are levels with the stories so it's easy to choose books that are the same level he is reading. So, once which one is his level, you know that books are going to be interesting and the right level for him.

Another feature worth noticing was all the four storybook apps provided a video section but with a different focus. The videos on the two literacy apps were theme-focused and served as supplementary information to build on readers' background knowledge whereas the ones on the language learning apps were vocabulary-and-grammar oriented. The participants expressed varied opinions on the feature of the videos. Hiroki's mother commented, "If Hiroki can concentrate, he can learn more. If he is not interested, within a very short time, he stops [using the app] but videos are fun, more interesting and can keep him concentrated learning more and more." Diya explained why she liked the videos on the language learning apps. She said,

Because they teach me things, like nouns, letters, words, things like that...It [They] can help me with my reading. In the videos, if I came across the words in the videos, and I didn't know that word...I can know the word, I know how it's spelled and how it sounds like...

Diya's mother also viewed the videos in a positive light. She said, "if she watches the videos, it means she easily understands, grasping the words...sometimes she gets bored; she watches the videos." However, Abdul and David held a different opinion regarding the videos on the language learning apps. Abdul commented, "They are not useful for me because they are like too easy, too easy for me." David said, "They tell

me things that I already know.” That’s why he was not interested in the videos.

David’s mother commented, “He wasn’t very interested in the videos. I think they might work for other kids. For him, it may be better to go from the book to the activities.”

There is a plethora of affordances or features that story apps provide to attract children’s interest in using the apps more often. In this study, some features were conducive to enhancing EAL children’s reading motivation while others served as distractions from their reading if not used appropriately. There were also differences in individual preferences for different features. Critical scrutiny of those features is included in the discussion section of the paper.

## **5.2 How EAL Children and Parents Perceive Differences between Storybook Apps designed for L1 and L2**

To investigate the major distinctions that differentiate literacy apps from language learning apps, I selected two literacy apps and two language learning apps that feature children’s stories. Three main differences that stood out and differentiated literacy apps from language learning apps were the book collection, reading challenge, and activities. The voices from the participants provided some insights into how they perceived the differences between these two categories of story apps.

### **5.2.1 Book Collection**

When participants were asked their opinion about the book collection provided in the two types of storybook apps, they all agreed that literacy apps offered them more book options. Although the book collection in the literacy apps did not appeal to all the child participants, the parent participants overwhelmingly favored this feature on literacy apps.

**Participant Family 1.** Hiroki commented that, overall, literacy apps provided

more book options but with Khan Academy Kids, although it was a language learning app with a collection of approximately 200 books, he considered the app also provided the right kind of book options because the app curated both fiction and nonfiction books that aroused his curiosity.

Hiroki's mother believed books curated on the literacy apps could provide Hiroki more book options but expressed her concern that with one of the literacy apps, although there was a collection of 40,000 books, Hiroki chose books that were at his four-year-old sister's level. She said the layout of the other literacy app was more user-friendly and Hiroki could just click a reading stage out of the total three. It was a lot easier to decide which level of books suited him best.

**Participant Family 2.** David and Hiroki shared the same opinion that literacy apps had a much bigger collection of books and the books curated on the literacy apps made him more interested in reading. He regarded books in the literacy apps as more useful. He described,

It is [They are] most useful because there are some books that are super long. I normally don't read long, long books but now I do. I read one of the critter ones but then suddenly that I didn't know that my body wants to read chapter books.

However, he also commented that he enjoyed the book collection provided by Khan Academy Kids because the curated collection was "fun" enough. He said, "...the books are fun enough to make me feel fun [interested]."

David's mother commented that David liked the book collection in Khan Academy Kids, the only app that received his five-star rating because it had a good number of books that matched his reading interests. However, she expressed,

they would need to have higher-level books if I was to subscribe to the app in the future. Otherwise, I think it would be easy for him so not challenging

enough for him to use it in the future. It's very good for just starting but once you've already got a certain level [of English proficiency], I think you need a bit more.

David's mother added,

I like Sunshine Online but he didn't enjoy as much as Epic and it was more difficult for him to get him to read... It is difficult for him with Sunshine Online because he was not so much interested in the app. We asked him if...okay, it's time for reading, do you want to...and he would say, "No, can we do it tomorrow?" It was more difficult to get him reading. [chuckles]  
They can be very resourceful in that area, you know.

**Participant Family 3.** Diya said that the book collection in the literacy apps made her want to use the apps more because it could help her with her English, but she also commented the book collection curated by the language learning apps made her interested to read more books. She explained,

it [The language learning app] gives me, like [as] I said, it goes step by step...Epic has a lot of collection and it's hard for me to just read them on forever. The books have a long text, long pages, things like that. I don't like them on Epic.

Diya's mother really liked the wide selection provided by the literacy apps because it would make it possible to have Diya read a book a day. The wider the selection, the better.

**Participant Family 4.** Abdul also said the book collection on the literacy apps could help him learn more stuff, but he enjoyed the book collection in both literacy apps and language learning apps because both types of apps provided fun pictures and interesting stories. When asked why he enjoyed the book collection in one language learning app, he replied, "Because it's like funny for kids. It's not real, right? Kids



love real or not real stuff.” Abdul’s mother thought the wider selection could meet Abdul’s reading needs. He liked books on varied topics and of varied genres. She said, “He finds many kinds of books because of the book collection. He likes to read more.”

By and large, the big book collection in the literacy apps offered the child participants more options with books at their reading level than those in the language learning apps. Both child and parent participants agreed that in the long run, the book collection in the literacy apps would be more useful in terms of the number of books and options. According to Day and Bamford (2002), reading material on a wide range of topics plays a critical role in influencing individuals’ motivation to read in L2 and should be readily available to readers. In addition, “For extensive reading to be possible and for it to have the desired results, texts must be well within the learners’ reading competence in the foreign language.” (p.137).

### **5.2.2 Reading Challenge**

The second major distinction between the two types of apps was the level of reading challenge provided in the apps. Both the child and parent participants unanimously agreed that literacy apps were more challenging than the language learning apps.

**Participant Family 1.** When participants were questioned which type of app provided them more reading challenge, they all agreed unanimously that they felt more challenged when reading books on the literacy apps. Hiroki said that he felt more challenged because books on the literacy apps had more difficult words and fewer pictures. He enjoyed reading texts that were interesting and easy but interspersed with some difficult words. He also did not mind reading paragraphs with more sentences. Hiroki’s mother also commented that Hiroki should use story apps

with books that give him the right amount of challenge at his level and should not read books that are too easy for him.

**Participant Family 2.** David commented that the literacy apps provided more challenging books that would help him with his English and reading. He described how he felt when involving himself in reading something that contains difficult words and longer paragraphs. He said,

because it makes me read more and makes me, like, more calm [calmer].

Like, my mother is busy at work and I need to settle also. I need to read

longer paragraphs and the schoolwork can make me know all the words. I

can chop...first I see it, and then I can go challenge it. First, I didn't know it

but then I know what it is. Then I go higher and [commit it] to memory.

David's mother acknowledged the importance of providing a certain level of challenge in David's reading and thought it could motivate him to work harder toward his reading goal. She shared the same opinion in her reply to the interview question,

*Interviewer:* Do you think providing challenges in reading can motivate

David to read more and why?

*David's mother:* I think so because they see how they've progressed and

leveled up and that makes them want to work harder.

**Participant Family 3.** Diya agreed that books on the literacy apps were more challenging because there were more difficult words involved in the reading. She liked books that were challenging but she did not like reading books with long texts such as chapter books.

*Interviewer:* Why do you prefer short paragraphs?

*Diya:* [chuckles]. Like I said, sometimes maybe the story may not make

sense and I just read it in the morning, till the afternoon or till the evening.

Diya added that literacy apps would be more useful for her and said, "...uh-hum, the

language learning app is kind of easy for me and the literacy app is perfect. The words are just right for me.” Diya’s mother believed literacy apps better suited Diya’s reading level and kept her interested if she felt challenged. She said, “Compared to Kahan Academy Kids and Learn English Kids, I think beginners can easily understand [those apps]. When they go to a higher grade in primary school, literacy apps are more interesting.”

**Participant Family 4.** Abdul said he liked reading both short and long paragraphs. In an interview, Abdul talked about what kind of reading challenge he often enjoyed.

*Interviewer:* So, tell me again when you read, do you prefer something easy or something difficult?

*Abdul:* I want both easy ones and hard ones.

*Interviewer:* Why do you sometimes want the difficult words, the hard words?

*Abdul:* To learn. To learn.

Abdul also commented “Epic and Sunshine Online are greater [more challenging] because ~~they are~~ [I am] learning, learning so many things [from these apps]. I love them.” The universal need of the child participants wanting challenges echoed what parent participants perceived as the importance of providing books with different levels of challenges.

Abdul’s mother said both language learning apps did not provide enough reading challenge for Abdul although he enjoyed some features in those apps. She commented that Abdul had come to an age that he needed to read books that contain longer passages and include more difficult vocabulary. She said,

...now he is growing up. It means they [children at his age] can read the big [harder] books... [With books that provide reading challenges,] they can

learn the meaning of the words and how they can use the words.

The desire to seek out challenges and prove one's competency is inherent and what motivates us intrinsically (Ryan & Deci, 2000). Although some child participants were interested in one of the language learning apps because the story collection was interesting enough, they admitted that they did not feel challenged and concluded literacy apps would be more useful for them in the long term.

### 5.2.3 Activities

The activity feature also distinguished the literacy apps from the language learning apps in this study. The literacy apps centered on vocabulary and comprehension while the language learning apps focused on phonics, spelling, and grammar. However, the game element was incorporated and emphasized in the activities of all the apps except one literacy app, Epic.

**Participant Family 1.** When Hiroki was asked about his opinion on the activities of both types of apps, he said that he enjoyed the activities on both types of apps but favored the ones on literacy apps more. He had fun doing the activities on the language learning apps but did not think they were challenging enough. “[I liked the activities on Khan] [but] I actually like the activities on Sunshine Online more because they are more challenging than Khan Academy Kids.”

Hiroki's mother believed activities allowed Hiroki to learn through something fun and were good for him; however, she thought the activities on the language learning apps did not provide instruction or challenge for Hiroki, so they did not help him much. She said, “I think Hiroki has learned almost all things [the app provides].”

**Participant Family 2.** David overall did not like the activities on either type of app.

*Interviewer:* Let's talk about the activities. Were they new, novel means 'new', interesting, fun, or challenging or you think they were useful to you

and why?

*David:* [Shaking his head] I don't want to say because I don't like it [them].

I don't think it helps [they help] me with anything.

Although David got really interested in doing one activity in a language learning app, it was not related to reading or English learning at all.

*Interviewer:* What did you like about Khan Academy Kids story app and why? ... Do you like the books or the activities?

*David:* The activities.

*Interviewer:* The activities. Can you tell me why?

*David:* Because I actually love to color in one of the activities. The activities are right over here. [Pointing to the screen]

*Interviewer:* Do the coloring activities make you want to read the stories or make up your own stories or just for fun?

*David:* Just for fun.

David's mother commented that since David found no enjoyment in the activities on both apps, she reckoned that it would be best for David to spend time reading the books and not worry about doing the activities.

**Participant Family 3.** Diya, on the other hand, enjoyed all the activities on both apps.

*Interviewer:* Oh, some apps provide activities, and some don't. So, to you, does it matter if the apps provide activities.

*Diya:* It matters if it has activities because activities are good. It makes [They make] me remember the story again and again. I like activities.

When she was asked to compare the activities on both types of apps, she commented the activities on the literacy apps provided words that she could learn and found them more useful whereas the activities on the language learning apps were easy but built

her confidence and gave her some fun. In a similar vein, Diya's mother commented that the activities in the literacy apps could help Diya to comprehend the stories she read and improve her reading ability; yet, the activities in the language learning apps could strengthen Diya's grammar concepts and help her English.

**Participant Family 4.** Abdul also enjoyed the activities on both apps because they provided him more practice and some fun.

*Interviewer:* Can you give me a reason why you think activities can help you read better?

*Abdul:* Because they are fun for children and learning, too. I like all of them [activities]. That's my answer.

He thought the activities could help him with his reading skills and become a good reader. In another interview, he talked about the activities on a language learning app, "I liked the activities because they give me more practices and some fun, all that stuff, for my mind." He also commented that activities on a literacy app might be more likely to help him more. "I like the activities on Sunshine Online because there was different knowledge, things to learn, to create my knowledge and stuff." Abdul's mother believed the activities in both apps were beneficial. She expressed that the activities in the literacy apps would make Abdul learn and have fun at the same time whereas the activities in the language learning apps could help Abdul's vocabulary spelling and grammar. She said, "...at school, he didn't learn proper grammar. With this app, he can learn it easily. That's why I like this app [Khan Academy Kids]."

In the findings of Gibbon, Duffield, Hoffman, and Wageman (2017), they suggested games provide a way to keep students engaged, increase their attention and motivation through active engagement and participation. They found games as interventions helped the sight word learning of first-grade students who were below benchmark and grade level expectancies on early reading skills. Also,

Hawlitsek and Joeckel (2017) postulated that playing just for fun would enhance learning outcomes whereas learning instruction would decrease it. However, Butler (1994) warned that although games provided learners with cognitive challenges, generated curiosity, allowed control, and had multiple player options, they were not necessarily conducive to their learning. Based on the responses of the participants, the game element in the activities attracted some child participants' interest and may even enhance their learning outcome, but for some, it triggered negative affective responses or did not contribute to their learning at all.

### **5.3 The Attitudes of EAL Children and Their Parents toward Storybook Apps**

#### **5.3.1 From Child Participant's Perspective**

In general, child participants showed great interest in many features of storybook apps such as illustrations and game-like activities. Their attitude toward them was mostly positive, mainly because the features of storybook apps gave them enjoyment, arouse their curiosity, made them feel challenged, and helped them become great readers in English. In the after-trial interviews, when child participants were asked what would make them continue using the app or consider a subscription, one consistent answer was having more interesting stories, followed by having more game-like activities.

Hiroki said he liked stories with lots of funny pictures and he also wanted to have many games in the app. Based on Hiroki's app usage record sheet, he spent almost double the time using the language learning apps compared to the literacy apps, which was due to the fact that the language learning apps provided a lot of game-featured activities. On the contrary, David did not like doing the activities but enjoyed reading books that were interesting and challenging. He concluded that literacy apps were more challenging and useful to him because he did not think he

was learning much from the language learning apps. However, he did not rate the two literacy apps the same score. As a matter of fact, Sunshine Online only received a one-heart rating because he found the book collection not as interesting as the one on the other literacy app, which he rated four hearts. On his record sheet, he gave one language learning app a perfect five-heart rating because the book collection with interesting stories just won him over despite the fact that the content was easy. Diya also gave the same language learning app a five-heart rating because she considered language learning apps were more interesting, while literacy apps were challenging but useful for improving her reading. Compared with other child participants, Abdul spent a much longer time on the apps and gave both literacy apps a five-heart rating. He said, "Epic and Sunshine Online are greater [more challenging] because they are [I am] learning, learning so many things." On average, he spent more time on the literacy apps than on the language learning apps. He enjoyed reading both easy and challenging texts and liked having some fun while reading on the apps.

Finally, all the child participants placed much emphasis on their level of control over the use of the storybook apps. Their attitude toward the level of control or agency was adamant. They all expressed that they would enjoy a book more or an app more if they got to choose or decide what they want to do based on their likings and preferences. When Hiroki was asked if it was okay for his mother to choose or tell him what to do with the story apps, he shook his head violently and widened his eyes. David explained he did not like reading in class because he could not choose books he wanted to read, like what he could do with Epic. Abdul addressed the idea of having the options and being given the chance to choose what he liked. He pointed out all the books on the language learning app, Khan Academy Kids, gave the options of using or skipping the read-to-me feature right on the first page of each book. He could choose whether he wanted to use read-to-me or not. Also, he liked the feature where



he was given the opportunity to choose from one of the three prizes when he completed an activity. Diya also stressed it was important for her that her mother let her choose what she wanted to do with the app. She said,

If she chose a book that is too long, I had to start in the morning and I would end up reading the book in the evening and until the next time [day]. I would choose a book that is more [suitable] and nice for me.

To sum up, child participants kept a positive attitude toward a story app when it provided enjoyment, challenge, usefulness, and agency.

### 5.3.2 From Parent Participant's Perspective

Parent participants felt storybook apps could supplement the lack of books available in the home environment, give their children wider reading options, provide them with ample opportunities to build their vocabulary, enhance their grammar and accordingly help their reading skills. Hiroki's mother commented that the read-to-me feature helped Hiroki with vocabulary pronunciation a lot. She did not like Hiroki playing games and wanted him to read more.

*Interviewer:* What feature of Sunshine Online did you wish Hiroki could use more?

*Hiroki's mother:* Reading stories.

*Interviewer:* Do you want him to do more activities or do you want him to read more stories?

*Hiroki's mother:* More stories.

*Interviewer:* You wish he could read more stories? Why?

*Hiroki's mother:* I think reading is very important and good for him, not games. [chuckles]

*Interviewer:* [chuckles] Why not?

*Hiroki's mother:* Games might be good if [they are] learning something. If

he reads a story, he can learn more vocabulary, words, and sentences. I think it's good for him. If it's a good story, he can learn more things.

*Interviewer:* Do you ask him to do certain activities or do you just let him choose?

*Hiroki's mother:* He chooses. I always say, "Read something first", and then, after that, he can choose whatever he wants. So, he reads first, and then he does the activities.

Contrary to Hiroki's mother's opinion of the activities, Diya's mother thought highly of them in both literacy and language learning apps. She considered them a nice break from reading and would prevent Diya from getting bored using the apps and could enhance her reading motivation. She said, "because, through the story app, she can practice her vocabulary skills more and more, day by day, improve her vocabulary." She also talked about what kind of activity she preferred Diya to try more.

*Diya's mother:* I actually liked the grammar, but she used little grammar [activities].

*Interviewer:* Tell me, why did you want her to use more of the grammar activities?

*Diya's mother:* Because if she knows grammar, she can read easily. That's what I have thought.

*Interviewer:* Okay. So, you think the grammar activities can help her with her reading?

*Diya's mother:* Yes.

Abdul's mother, another proponent of having activities in the apps, commented this feature provided Abdul with the opportunities to improve his vocabulary, grammar, and comprehension. She liked apps that gave Abdul motive or incentives to read the books such as accumulating points to level up or giving him prizes or words of

encouragement. On the other hand, David's mother considered storybook applications an alternative to printed books. She emphasized that the main thing with the storybook apps was whether David enjoyed reading the books on them. She said, "I don't need him to do more activities. He enjoys reading the books. I find that he's going to learn through the books."

The attitude of the parent participants toward the story apps was positive in that they provided a more affordable alternative of a home library as well as a kind of private tutor.

## **6. Discussion**

Self-determination theory postulates there are two types of motivation, one built on an intrinsic interest in the activity itself purely for the sense of enjoyment and the other based on the extrinsic rewards from doing the activity. As Noels, Pelletier, Clement, and Vallerand (2000) described, "these types of motivation are not categorically different, however, but rather lie along a continuum of self-determination." (p. 38). It is possible that intrinsic and extrinsic motivation may coexist and complement one another in real-world situations (Lepper & Henderlong, 2000). In the domain of reading research, Guthrie, Wigfield, Metsala, and Cox (1999) addressed that reading motivation was domain-specific and a multidimensional construct, and intrinsic and extrinsic reading motivation is one of the most popular theories within the field. This study sought to explore the features of storybook apps that would provide both intrinsic and extrinsic motivation for EAL children to read English as an additional language. The features of storybook apps that may provide intrinsic motivation are first discussed, and then the focus shifts to the features of storybook apps that may enhance the extrinsic motivation of EAL children in using the apps and as a result, foster their interest to read in L2. Other factors such as

attitude and sociocultural environment are also addressed.

### 6.1 Intrinsic Motivation

Since the 1950s, four types of intrinsic motivation have remained of interest and have been identified as the 4'Cs—curiosity, challenge, control, and context (Lepper & Henderlong, 2000). In alignment with what motivational researchers foreground, in this section I discuss the features of the story apps that correspond to the major determinants influencing children's intrinsic motivation to read—curiosity/ enjoyment, competence/ challenge, autonomy/ agency/ control, and relatedness.

**Curiosity/ Enjoyment.** The most prominent feature of a storybook app is its storybook collection and whether the books generate curiosity and provide enjoyment for the readers. The first thing that immediately attracts children's attention and makes them curious about a book is the illustration or the pictures. According to Brookshire, Scharff, and Moses (2002), the illustration style affects the likelihood that children self-select a particular book. Having pictures in the stories is beneficial in that it entices the child readers to interact with the text, stimulates their creativity, and provides mental scaffolds for them to facilitate their understanding of the written text (Fang, 1996). Takacs and Bus (2018) found that children's story comprehension was enhanced or facilitated when the illustrations were closely matched to the narration. However, prior research also suggested picture-dependent stories distract low ability readers and those who are at the emergent level (Elster & Simons, 1985). As Schickedanz and Collins (2012) pointed out, preschoolers might not develop the ability to interpret the pictures correctly, hence, the illustrations might pose as a distractor from learning to read instead of a facilitator. A well-curated book collection should provide books with different illustration options that match the mixed reading abilities of the readers. "Better readers might show less reliance on illustrations than do poor readers, and they might find different illustrations more effective or

distracting.” (Brookshire, Scharff & Moses, 2002, p. 337).

Based on the responses of the child participants, they were first drawn to fun and interesting illustrations, but individual preferences contributed to certain styles of illustrations that were preferred. Hiroki commented that the illustrations in one literacy app, Sunshine Online, were not as interesting as those in the other literacy app, Epic. As a result, he enjoyed books in Epic more because the illustrations were more interesting. David's reading interest dominated his illustration preference. He said the illustrations in the fiction collection were not “realistic,” so he preferred Khan Academy Kids, one of the language learning apps, because it provided a good collection of non-fiction books with “realistic” illustrations. Abdul commented kids liked “real” and “unreal” things. He liked any “fun” illustrations in either fiction or nonfiction. However, when the child participants were asked about the key feature that would make them subscribe to or use a story app, “good stories” were placed at a higher priority than interesting illustrations.

As Guthrie, Coddington, and Wigfield (2009) defined, “intrinsically motivated reading consists of text interaction for enjoyment, to satisfy curiosity and to gain the rewards of vicarious adventure or gaining new knowledge that may be challenging.” (p.322). The child participants in this study indicated whether a story app had “interesting” or “good” stories was a major determinant of whether they enjoyed the app. Abdul commented he enjoyed a story collection when he had fun reading and was learning stuff. Hiroki expressed he enjoyed reading books that made him curious and learning wonderful things. David took great interest in reading books that made him feel “fun”. Diya mentioned that she enjoyed reading books that intrigued her by presenting a problem and dissecting how it was solved. These findings are in accordance with what Kirchner and Mostert (2017) posited that reading for pleasure and motivation is highly correlated and this correlation suggests a good story may

have a strong impact on one's reading motivation. However, Kirchner and Mostert proposed reading fiction stimulates intrinsic reasons for reading, whereas in this study, child participants did not indicate a strong reading preference that was limited to only the fiction genre. In fact, quite the contrary, both David and Diya enjoyed more non-fiction than the fiction story collection but for different reasons. David was very interested in topics about animals and preferred to read books that had "realistic" pictures. Diya preferred non-fiction books because she thought she could learn more vocabulary and gain more knowledge about the world. Based on this finding, it is justifiable to say that children's reading motivation drives their reading choices (McGeown, Osborne, Warhurst, Norgate & Duncan, 2016). This assertion is in line with what McGeown, Bonsall, Andries, Howarth, and Wilkinson (2020) proposed that those who were motivated to read out of the curiosity to learn were more likely to take interest in reading nonfiction while those who read to become immersed in books preferred reading more fiction. What can be concluded is that providing access to reading materials with a wide range of topics of interest enables children to read for enjoyment and stimulate their intrinsic motivation. (Ciampa, 2016; Day & Bamford, 2002; Protacio, 2012; Worthy, Moorman, & Turner, 1999).

**Competence/ Challenge.** According to Deci (1975), people seek challenges because the potential intrinsic reward—feelings of competence is greater than the challenge itself. Three constructs are used to explain why children choose to read and are intrinsically motivated. One is to satisfy the curiosity to learn more about a topic, another is to gain enjoyment from reading a topic of interest, and the other is the desire to master or conquer challenging texts. (Ciampa, 2016; Wang & Guthrie, 2004). The interview results of this study confirmed the assertion that intrinsically motivated children had preferences for challenges. All the child participants expressed that they gained enjoyment from reading books, chose to read, and were willing to invest time

and energy in reading. They wanted to read challenging texts because of feelings of competence that resulted. This might be an underlying reason why the child participants all perceived books in the literacy apps were more useful to them because the reading texts were more challenging.

Eccles et al. (1983) posited that task motivation is composed of four basic constructs: intrinsic value (personal enjoyment or interest), attainment value (the importance of performing well on the task), utility value (usefulness), and cost (effort or sacrifice). It was evident that all the child participants seemed to have high expectations of becoming strong readers in L2 and valued L2 reading positively. Hence, they exhibited an eagerness to make efforts to accomplish their goal. Diya described the words that appeared in the literacy apps were “right” for her because they were more challenging and useful. Hiroki said that he did not want to just choose something easy to read and preferred longer paragraphs. David commented that being a strong reader meant being able to read longer texts. By the same token, when Abdul was asked why he wanted to read more challenging books, his response implied how he perceived the efforts or sacrifice required to become a great reader. All the child participants shared the same idea that when the books as well as the activities in the literacy apps were more challenging, they were more useful to them. Despite the fact that they also gained enjoyment from reading the books or having fun doing the activities in the language learning apps, they perceived these as less challenging and less useful.

It is also interesting to note that parent participants were of the same mind that their child should be reading challenging texts instead of easy ones. Hiroki's mother expressed that she had expectations that Hiroki should be reading something longer and harder, not reading texts that are designed for four-year-olds. David's mother said that David would lose interest very soon if the texts were not challenging enough.

Diya's mother had the idea that Diya would most likely stay motivated if she felt challenged. Abdul's mother commented that longer texts might be a better fit for Abdul because of his age. Judging from the responses of the parent participants, it underscores the importance of having a book collection with books that are well within the reading competence of the children. A marked distinction between the literacy apps and the language learning apps in this study was stories curated in the language learning apps were not leveled. This practice or feature perhaps contradicts what Day and Bamford (1998) stressed that it is essential to provide children with books at their reading level. According to Day and Bamford (2002), reading texts must be "well within the learners' reading competence in the foreign language." (p. 137). Similarly, Nation (2015) suggested that ideally, readers should be reading books of their own interest and choice as well as at the right competence level so that they can gain enjoyment from reading them. He advised that "graded readers" should be provided to low and intermediate proficiency learners so that they could select texts that are well within their comfort zone.

Nation's advice is congruent with the expectations that some parent participants had in relation to the story apps. Both Hiroki's and Abdul's mothers said the layout of Sunshine online was so user-friendly that their child could just conveniently go to the section of their reading level and select something to read. David's mother also commented that although David was very interested in the nonfiction collection in Khan Academy Kids, the app developer should level up the reading content. Otherwise, children would lose interest very quickly and their motivation to read would decrease. She was concerned that the app would not be as useful as other literacy apps in the long run. In short, a book collection with leveled books that enables children to read at their reading level motivates EAL children to read English.

**Autonomy/ Agency.** In the top ten principles for teaching extensive reading,



“freedom of choice” is accentuated (Day & Bamford, 2002). L2 learners should be given the freedom to select texts as they do in L1—texts that are at their competency level, provide enjoyment, and to learn from. It is a crucial step to entrust the autonomy (Deci & Ryan, 2000)—freedom to choose one’s own books—to the learners, which signifies that they are taking responsibility for their learning (Day & Bamford, 2002). The assertion of Day and Bamford (2002) is in line with Swartz and Hendricks (2000) who suggest that choice is a strong motivator and allows students to take ownership and responsibility for their learning. Ciampa (2016) pointed out that it is impossible to pinpoint the reasons that motivate children to read because they choose to read for varied reasons. However, one way to increase their desire to read is to allow them to choose their own books. She explained that “children who prefer to choose their own books see such choices as a way for them to express their autonomy and ownership over their own reading.” (Ciampa, 2016, p. 686).

It is interesting to note that some responses gathered from the child participants seemed to reflect their need for autonomy. Hiroki shook his head violently and made a grimace when asked about the possibility of having his mother choose or determine what he should do with the apps rather than having him decide. David commented that he did not enjoy the class reading that much because he rarely got to choose what he wanted to read. He preferred to choose his own books, as did Abdul, who said he liked to have a little bit of fun reading and playing games (referring to the game-featured activities). Parent participants seemed to support choice, saying that they allowed their children free rein to use the story apps as they wished and only reminded or prompted them to read something before playing games or watching videos.

It is undeniable that “agency”—where children are in control of the task, plays a key role in children’s digital learning in terms of increasing their motivation to use the

story apps. According to Pinter (2019), when children were handed over the agency, the language task worked better, and they were more motivated and engaged in the task and had a stronger performance. This is consistent with Brunsmeier and Kolb's (2017) study results that when child learners were able to take control of their reading process, they became more actively involved in the story. Butler (2017) also suggests that instructional materials that allow individualized learning and encourage autonomy could foster learners' intrinsic motivation. She commented that children were more engaged in the game task when they were allowed to choose the words and the level of challenge for their own learning.

Nonetheless, as the findings of Zhang's (2013) qualitative inquiry into learner agency and self-regulated learning cautioned us, "not every student is ready for the autonomy and flexibility that computer-mediated learning provides...They want to take greater responsibility for their learning, but they may not be able to function well as autonomous and self-regulated learners." (Zhang, 2013, p. 74). Similarly, Jones, Llacer-Arrastia, and Newbill (2009) propounded that autonomy is not "permissiveness run amuck" (Reeve, 1996 as cited in Jones, Llacer-Arrastia, & Newbill, 2009, p. 176). Hiroki's mother was concerned that Hiroki was choosing books that were not for his reading level and was taking interest in some activities designed for preschoolers in the language learning apps. Abdul admitted that sometimes he spent more time on the game-featured activities rather than on the books. Diya chose books with short stories and avoided reading chapter books. On the other hand, David showed great autonomy in reading and went straight to the book collection looking for an interesting book to read every time he used the story apps.

It is important to acknowledge that before rendering "autonomy" to the children, child characteristics such as age, maturity, and personality need to be taken into consideration. In this study, parent participants mentioned that they did not interfere

with what the child participant wanted to do with the story apps. This practice seems to correspond to what motivational theories postulate that when parents allow children to make their own choices, they support their need for autonomy and therefore enhance their intrinsic motivation (Deci & Ryan, 1985). However, Barber, Stolz, and Olsen (2005) suggested that children not only have a need for autonomy but also a need to be “controlled”. They stressed that children need regulation that parents provide by laying down consistent rules and setting boundaries on children’s behavior. Their assertion aligns with what Grolnick and Pomerantz (2009) advocated that parents should support children’s autonomy as well as provide them with “structure”. Parents’ involvement in children’s learning is critical and is most likely to yield positive outcomes if “structure” is given and accompanied by the support of children’s autonomy (Cheung & Pomerantz, 2011).

**Relatedness.** Equally important is the “relatedness” that children need in an environment that motivates and encourages them (Deci & Ryan, 1985). According to Deci and Ryan, “relatedness” is one of the innate needs that need to be satisfied if intrinsic motivation is to be fostered. When one feels secure and develops a trusting relationship with others, he or she is more likely to be intrinsically motivated. Jones, Llacer-Arrastia, and Newbill (2009) suggested when students learn about their peers’ interests and hobbies, it can bring their relationship to a personal level. Relatedness symbolizes the emotional and personal bonds with others, reflecting our desire for contact and support (Ryan & Powelson, 1991). Prior research suggests that children’s interpersonal involvement with others could have an impact on children’s motivation (Guay, Stupnisky, Boivin, Japel & Dionne, 2019; Kowalski & Froiland, 2020). This sense of relatedness can be fulfilled through their relationships with their peers, parents, and teachers and is vital in the development of their motivation (Furrer & Skinner, 2003). As we move toward a digital world, children’s need for relatedness

seems to be easily made light of. The present study sought to investigate how the use of story apps can motivate EAL children's L2 reading. Features of the story apps that fulfil children's needs for relatedness were looked into. Among the four storybook apps, only one app—Epic addressed the issue of “peer relatedness” (Cooc & Kim, 2017; Furrer & Skinner, 2003; Schmidt, Dirk & Schmiedek, 2019). Schmidt, Dirk, and Schmiedek (2019) found that peer relatedness facilitated children's positive emotions, and improving children's peer relatedness could lead to academic success.

In Epic, the feature of being able to see the reading progress and the avatar choice of their classmates seemed to intrigue the child participants and provided some degree of peer relatedness. Hiroki shared how proud he was because he had leveled up to a higher level and some classmates still stayed at the same level. David commented that he was surprised to see the reading progress of someone he played with at school. Diya said the feature motivated her to read more books because she wanted to be at or above the level of her classmates. Abdul mentioned that the feature gave him the feeling that he was in a virtual classroom, attending a reading class with his friends. This feature was well thought of by all the child participants. It is advisable that app developers could consider incorporating children's psychological need for relatedness in the story apps such as dedicating a teacher-student feedback platform or a peer communication column.

In addition, parental involvement of the child participants also reflected children's need for relatedness to their parents. In fact, according to King (2015), parental relatedness may be more influential than teacher and peer relatedness. In the child's reading background interview, the responses from the parent participants demonstrated that there was some level of parental involvement in the cultivation of their child's reading habits. It was evident that the four parent participants attached great importance to the development of their child's reading skills in either the child

participant's first language or second language. They mentioned that they used to read bedtime stories to their child and still made efforts to do so occasionally. Although the number of books checked out or the frequency of visits to the library varied, they did their best to let their child keep a good reading habit. It is possible that the level of involvement in cultivating their child's reading habit might contribute to why the child participants were able to meet the expected reading level in New Zealand since it has been established that parental involvement could have positive effects on children's motivation and academic success (Gonida & Cortina, 2014; King, 2015; Lerner & Grolnick, 2020; Pomerantz, Moorman & Litwack, 2007; Sénéchal & Lefevre, 2002).

## **6.2 Extrinsic Motivation**

While children are motivated to read for various reasons, both intrinsic and extrinsic (Park, 2011; McGeown, 2013), many motivational researchers and theorists argued that intrinsic reading motivation was more conducive to children's reading development (Becker, McElvany & Kortenbruck, 2010; Wang & Guthrie, 2004; Wigfield & Guthrie, 1997). As the role of intrinsic reading motivation in developing children's reading skills has been relatively well established, the role of extrinsic motivation remained inconclusive. It should be noted that there is some conflicting evidence to suggest that extrinsic motivators are not necessarily detrimental to children's reading development (Cameron, 2001; Hidi & Harackiewicz, 2000; Lepper, & Henderlong, 2000; Marinak & Gambrell, 2008; Mcgeown, Norgate & Warhurst, 2012; Park, 2011). Hidi (2000) argued that it may be impetuous to presume that external interventions such as rewards and competition had deleterious effects on intrinsic motivation as Deci, Koestner, and Ryan (1999) claimed. The complexity of the activities and the length of involvement should be taken into account. Surprisingly, "extrinsic rewards may be especially important when individuals have

no initial interest in tasks” (Zimmerman, 1985 as cited in Hidi & Harackiewicz, 2000, p. 159). This aligns with earlier research conducted by Mcloyd (1979) that “highly valued rewards may enhance subsequent interest in a relatively uninteresting activity.” (p. 1017). That is, if an extrinsic reward is given to a child for engaging in a low-interest activity and perceived as high value by the child, the reward is not superfluous and may be beneficial for subsequent interest. Furthermore, Lepper and Henderlong (2000) noted that the effects of external rewards could be beneficial if a reward increases one’s perceptions of personal competence. Namely, if a given reward leads to changes in the quality or the amount of task engagement that could improve one’s task-related skill or knowledge, such advancement in one’s competence, in the long term, would foster later motivation, both intrinsic and extrinsic.

In the domain of reading motivation, McGeown, Norgate, and Warhurst (2012) found that extrinsic reading motivation may be advantageous to children with a high level of reading skill. They discovered that children with higher reading skills may become more extrinsically driven by factors such as getting higher grades and outperforming their peers. Their finding is in line with what Park (2011) discovered that students who had some level of intrinsic motivation in reading could be benefited from some extrinsic motivators while those with a low level of intrinsic motivation would be discouraged by extrinsic motivators. Similarly, McGeown, Osborne, Warhurst, Norgate, and Duncan (2016) stated that while intrinsically motivated students were more engaged in reading, some aspects of extrinsic reading motivation may have the potential to foster engagement in digital reading activities. In short, as Lepper and Henderlong summarized, extrinsic motivation may have its own merit.

The effects of rewards on subsequent motivation are neither all positive nor all negative; detrimental effects are neither “ubiquitous” nor “mythical.”

Instead, the effects depend on the particulars of the situation. For example,

the nature of the activity and its initial value to the individual; the timing, informativeness, controllingness, and salience of the reward; the precise contingency between the activity and the reward; and often the larger context in which the reward is provided. (Lepper & Henderlong, 2000, p. 298).

It is not uncommon to see children so engrossed in games and need to be pulled away from them. Gamification of digital materials promotes learning in a fun atmosphere and presents challenges that are in the players' competency zone and increases difficulty as their skills improve. Ronimus, Kujala, Tolvanen, and Lyytinen (2014) stated that interactive elements, rewards and incentives, and increasing levels of challenge in digital games are key contributors to enjoyment and satisfaction. Providing choice within a digital game is also said to increase players' autonomy and competence satisfactions (Ryan, Rigby & Przybylski, 2006). Sandberg, Maris, and Hoogendoorn (2014) outlined that game characteristics such as fantasy, rules and goals, sensory stimuli, challenge, control, mystery, rewards, and competition would engage learners' interest in playing the games. Some theorists believe that gameplay provides children with extrinsic motivation if they are drawn to the play because of the reward it presents whereas some argue gameplay can be intrinsic if children are drawn to it out of their own curiosity and interest. (Sardone, Devlin-Scherer, 2010).

Based on the gathered qualitative data, there was not enough evidence to indicate whether some child participants were drawn to the game-featured activities out of intrinsic interest in the games, driven by the reward, or a mix of both. However, it was evident that the incorporation of game-featured activities was favored by some child and parent participants due to the potential benefits concluded by past empirical studies that repetition (Andreani & Ying, 2019) and individualized learning (Chen, Chen & Yang, 2019; Hwang, Shadiey, Hsu, Huang, Hsu & Lin, 2016) could enhance

learners' skills, knowledge, and motivation. For example, Aamri, Greuter, and Walz (2016) found that playful reading applications had some impact on 4<sup>th</sup> graders' intrinsic reading motivation. Chen, Chen, and Yang (2019) concluded that the feature of self-regulated learning of a learning app improved fifth graders' performance in terms of vocabulary retention and motivation.

In this study, some parent participants believed that the affordances of repetition and individualized learning in the game-featured activities could reinforce the language skills that their child lacked such as spelling and grammar. Except for David's mother, the other three parent participants praised the game-feature activities highly. Most child participants (exclusive of David) reported that they had fun getting virtual prizes, earning points, and leveling up after completing the activities. Hiroki commented that he wanted to collect points to level up so he could gather more cool duds (refer to the decoration medals) while Abdul said that he enjoyed the surprises and prize choice given by Khan Academy Kids when he completed the activities. In addition, a feature that was favored by all the child participants was to unlock more books to read once they were moved up to the next level. This reward system incorporated in Epic rewarded the child participants with "reading points" after they completed reading a book. When they gathered enough points and advanced to the next level, more book series would be unlocked and accessible to the readers. This practice is congruent with what Gambrell (1996) put forth: "the closer the reward to the desired behavior, the greater the likelihood that intrinsic motivation will increase (p.23)"; that is, if the desired behavior is to engage a child in reading, according to the reward proximity hypothesis, rewarding the child with a book would foster his or her motivation to read (Marinak & Gambrell, 2008). In this present study, the child participants showed interest in this unlocking book series feature; however, it was out



of the scope of this research to follow up on to what extent it motivated them to read more books.

### **6.3 Encouraging Reluctant Readers**

Under the presumption that EAL children often have a higher risk of falling behind their peers in the L2 literacy development (Arzubiaga, Rueda & Monzó, 2002; Lesaux, 2012), frequent reading practice is particularly vital for those who might need additional opportunity to build strong reading skills. This study sought to explore whether the features of story apps could facilitate EAL children's reading motivation in L2. Based on the responses of the participants, the story collection and game-featured activities seemed to provide additional reading practice for them. Frequent reading practice is of vital importance for struggling readers in that they could enhance their vocabulary, reading comprehension, and general knowledge, which leads them to become fluent readers (Guthrie & Cox, 2001; Vanderheyden, Burns & Bonifay, 2018). It was interesting to note that the reading ability of the child participants might potentially influence their story app preferences. Diya viewed the literacy apps would be more useful to her, but she admitted that some reading texts and activities on the literacy apps were too challenging for her, so she had more fun and felt more confident in using the language learning apps because the reading texts were overall easy and occasionally interspersed with a few difficult words. This finding is congruent with what previous research suggests that reading material should be "easy". Day and Bamford (2002) advised that

for extensive reading to be possible and for it to have the desired results, texts must be well within the learners' reading competence in the foreign language. In helping beginning readers select texts that are well within their reading comfort zone, more than one or two unknown words per page might make the text too difficult for overall understanding. (p. 137).

Their assertion is in line with Nation's (2015) recommendation:

In a well-designed extensive reading course around two-thirds of this time should be spent on reading material which contains a small proportion of unknown words (around 2% of the running words). Around one-third of the time should be spent reading very easy material containing little or no unknown words with a focus on reading for fluency. (p. 139).

Although all the child participants were placed at the expected reading level, Diya's slight preference for the language learning apps possibly sheds light on what can be sometimes dismissed by parents that children might need "easy reading material" to build up their reading confidence and reading skills before being hurried to the reading level that is out of their competency level and far away from their reading comfort zone.

On the other hand, Hiroki and Abdul were more interested in using the literacy apps because they said that those apps provided the right amount of challenge and fun for them. Their preference for literacy apps might be that the reading material was within their reading competency, their psychological need for challenge prompted them to choose those apps, they associated competence with being able to read challenging texts, or their parents' expectations drove them to have such preferences. The aforementioned plausible assumptions might be worth for future research to explore or investigate whether EAL children, in general, prefer reading books curated by literacy apps over those from the language learning apps and what prompts them to have such preferences.

#### **6.4 Attitude**

The degree to which affective factors such as reading attitude relates to reading performance has drawn the interest of some researchers. Empirical studies suggest that reading attitude and reading behavior are positively correlated (Kush, Watkins &

Brookhart, 2005; Martínez, Aricak & Jewell, 2008; Van Schooten, de Glopper & Stoel, 2004; Yoon, 2002). It is generally known that good readers often possess more positive attitudes toward reading whereas those with poor reading skills perceive reading in a negative light (Guthrie, Alao, Rinehart & Guthrie, 1997). Reading attitudes are often formed or developed through repeated success or failure in reading-related activities (Kush et al., 2005). According to Baker and Wigfield (1999), children with more positive attitudes are more motivated to read and more engage in reading. Those whose reading level falls behind may come from households where reading is not highly valued or may have parents or guardians who play down the value of reading. Hence, it is important for children to have a clear understanding of the value of becoming a better reader. According to Eccles et al. (1983), children's goals for success mediate their motivation and how they value the task. The extent to which a task is valued plays a critical role in an individual's choice, persistence, and performance (Wigfield & Eccles, 2000). In this study, the four EAL child participants shared similar reading goals—to become a fluent reader in English, be able to communicate with others, and read as well as or their peers at school.

Under the influence of family attitude toward reading and parental encouragement, the attitude of child participants toward L2 reading was overall positive. It is well established that parents' attitudes toward reading are of great importance in children's literacy development and profoundly influence children's attitude toward reading (Anderson, 2000; Farkas & Beron, 2004; Park, 2008; Takase, 2007; Swalander & Taube, 2007). To illustrate, Park (2008) concluded that parental attitudes toward reading and the number of books accessible at home had a significant impact on children's reading performance across 25 countries. In addition, past research reveals that reading attitude toward L1 would transfer to L2 reading as well (Day & Bamford, 1998; Yamashita, 2004).

In this study, it was not clear whether the attitude of the participants toward L1 reading was positive or not. There was not sufficient evidence suggesting that the child participants had a positive attitude toward L1 reading. Notwithstanding the unclearness of the attitudes toward L1 reading, it was evident that parent participants underscored the importance of being L2 literate on the grounds of academic expectations and communication purpose. Based on the interview responses, David's mother considered the fact that English is an essential language tool in today's globalized world and being able to read in English is one of the basic language skills that David needs to continue learning when they return to Spain next year whereas Abdul's, Diya's and Hiroki's parents expected them to continue their education in New Zealand, so it was viewed as an essential skill to read well for future academic excellence. It is interesting to note that parent participants attitude toward how L2 reading skills should be acquired and enhanced was reflected across the child participants' responses. Hiroki, Diya, and Abdul assumed doing the activities could help build vocabulary, improve their reading comprehension and reading skills whereas David presumed that his L2 reading ability would be developed by an extensive reading approach. This corresponds to what Day and Bamford (1998) suggested that the attitudes of parents and children toward L2 reading may have a stronger link to children's motivation to read L2 compared with other factors such as reading ability.

### **6.5 Socio-cultural Environment**

The present study sought to explore features of story apps that would serve as motivators to engage EAL children's interest in reading L2 in the home environment. To optimize the use of story apps to foster L2 reading motivation, as Day and Bamford (1998) postulated, the sociocultural environment may affect children's motivation to read. The cultural and social environment in which children grow up

plays an important part in the internalization of language and cognitive development. Hamilton, Hayiou-Thomas, Hulme, and Snowling (2016) broadly defined home literacy environment (HLE) as any “literacy-related interactions, resources, and attitudes that children experience at home.” (p. 401). It is apparent that the home environment is where children have their first literacy experiences and first contact with reading resources and modeled reading behaviors (Malhi, Bharti & Sidhu, 2017). Burgess, Hecht, and Lonigan (2002) underscored that HLE is not a single construct but is comprised of varied aspects including attitudes, resources, and activities that are interrelated. A growing body of empirical research suggests that the home literacy environment may contribute to children's literacy skills and language development (Barnes & Puccioni, 2017; Bitetti & Hammer, 2016; Meng, 2015; Levy, Gong, Hessels, Evans & Jared; 2006; Sénéchal & Lefevre, 2002; 2014; Wing-Yin Chow & McBride-Chang, 2003) and influences their attitudes toward reading (Hansen, 1969; Kotaman, 2008; 2013). In spite of contradictory support of informal literacy experiences, parent-child joint book reading still remains an important home literacy activity to promote children's language and reading skills during the preschool and early primary years. Research on shared reading has signified the importance of parent-child interactions around reading activities (Barnes & Puccioni, 2017; Fletcher & Reese, 2005). It is assumed that these positive parent-child interactions could facilitate children's reading engagement and motivate them to read. Sonnenschein and Munsterman (2002) stated that the affective quality of parent-child reading interactions was a powerful predictor of children's motivation for reading. Along the same line, Wigfield and Asher (1984) addressed that when parents involve in literacy-related activities with their children in the home environment, it fosters children's cognitive and literacy skills development and at the same time, it communicates that reading is an enjoyable activity and provides an opportunity for parents and children

to interact with one another. It is assumed that this type of positive interaction increases children's interest and willingness to engage in reading-related activities.

Notwithstanding the overwhelming evidence suggesting that parent-child shared reading is critical as the reading landscape shifts from print to digital books (Bus, Neuman & Roskos, 2020; Ciampa, 2016; Kucirkova, 2019). Due to the fact that digital reading or using story apps to engage in reading-related activities does not require or can be independent of adult support in the home environment (Ciampa, 2106), it is likely that story apps can be abused as a digital nanny for parents to buy some "quiet" time or to supersede parent-child shared reading time. These misleading practices are built under the false assumptions that autonomy support is to leave children alone with their devices or the affordances of story apps will righteously lead to children's literacy development (Kucirkova & Littleton, 2016). In the present study, it was surprising to learn that all the parent participants reported that they did not participate or had little interaction during their child's use of the story apps. This finding may reflect the fact that there is a big majority of parents who might not be ready (Bus, Neuman & Roskos, 2020) or do not know "strategies" to maximize the benefits of digital reading and struggle with "structuring" parental involvement with regard to the use of story apps (Griffith & Arnold, 2019; Kucirkova, 2019; Morgan, 2013). This practice of leaving children alone with educational learning apps calls for further investigation into strategies that parents should best employ and what they can do to "structure" their children's use of story apps to facilitate their motivation to read. Korat and Shneor (2019) suggested that reading an eBook with a dictionary during parent-child shared reading can support parents' mediation of receptive and expressive word learning. As the future generation is exposed to more technology-enhanced reading experiences, it does not mean that the parent-child interaction around reading will be superseded by technology. On the contrary, it is of great importance that

parents get involved in their children's use of educational applications and their affective support such as playfulness and warmth is critical during the joint app use interactions (Griffith & Arnold, 2019).

In addition, it should be pointed out that cultural factors seemed to play a part and influence the attitude of the child participants' toward L2 reading and toward the use of story apps. To illustrate, David came from a western culture where reading for pleasure is accentuated to a greater degree; therefore, he viewed story apps as a reading platform that could offer him a wide selection of interesting books. In contrast, notwithstanding the fact that Hiroki came from a bilingual family, he and the other two participants, Diya and Abdul, came from a culture in which reading provides knowledge and "practice" is placed a high priority. Therefore, they considered story apps as a learning platform that could provide them with training, exercises, and drills. It could be assumed that "practice makes progress" might be a cultural value that was instilled into those child participants. This finding is in line with the assumption of McKenna, Kear, and Ellsworth (1995) that "if a child's cultural environment encourages, models, and reinforces reading, more positive attitudes should result." (p. 941).

## **7. Conclusion**

With storybook applications readily accessible and relatively affordable via handheld devices such as mobile phones and tablets, this qualitative investigation set out to explore features of story apps that hold promise to foster EAL children's reading motivation in the home environment, how EAL children and their parents perceive the differences between literacy and language learning apps, and their general attitudes toward those story apps. To begin with, for children to be intrinsically motivated to read, they should be provided with access to books that

stimulate their curiosity and provide them with enjoyment and options. The design of story apps should feature affordances that meet at least three aspects of intrinsic motivation—curiosity, choice, and challenge (Ciampa, 2012; 2016). The most essential feature of story apps of quality is its story collection. Books curated in a story app should be of varied genres and topics so that readers can choose what interests them the most. In addition, they also need to be leveled so that readers can select those that nestle within their comfort zone and according to their reading ability (Nation, 2015). Another essential affordance of story apps for EAL children is the read-along feature with text highlighted when read. This feature can provide some explicit scaffolding of reading fluency elements such as accuracy and prosody to supplement what the home literacy environment of EAL children lacks—the support of language modeling (Thoermer & Williams, 2012). The added benefits of story apps are features such as the reward system and game-featured activities which provide the extrinsic motivation that may have positive effects on those who might have a low level of reading interest (Zimmerman, 1985 ) or who may be with a high level of reading skills (Mcgeown, Norgate & Warhurst, 2012). As it is known that children read for both intrinsic and extrinsic reasons, the affordances of story apps seem to provide both causes.

Additionally, based upon the findings, the child and parent participants, on the whole, agreed that literacy apps seem to provide more book options and challenge than language learning apps; however, child participants commented that they also found enjoyment in some features of the language learning apps. Future research on which type of story app better suits EAL children is advised. In terms of the general perceptions of the child and parent participants had toward story apps, it can be concluded that they held an overall positive attitude toward the use of story apps to enhance their reading skills and reading motivation. The existing literature provides



sufficient evidence to suggest that reading attitude and reading motivation are positively correlated; that is, children with positive attitudes toward reading are more motivated to read and vice versa (Baker & Wigfield, 1999). It was not clear whether the child and parent participants hold a positive attitude toward L1 reading but it was evident that parents' positive attitude toward L2 reading affected the attitude of the child participants (Park, 2008; Takase, 2007). In addition, the participants in this study also held a positive attitude toward the use of story apps. Future investigations into whether this positivity toward story apps impacts children's engagement, motivation, and performance in reading are recommended. Under the theoretical framework of Day and Bamford (2002) in relation to L2 reading motivation, replacing reading material in print with story apps, the other three factors (i.e. reading ability, attitude, and socio-cultural environment) that influence readers to engage themselves in L2 reading were also explored. An overarching message based upon the findings of the present study is that story apps could provide children with access to books of their choice and at their competency level. However, some affordances of story apps serve as facilitators to foster their motivation to read whereas some distract them from their reading. Due to the cognitive development and psychological needs of children, it is of paramount importance that parents strategize their autonomous support, create a reading climate that is enjoyable, and regard parent-child joint eBook reading as an opportunity to facilitate children's literacy development.

## **8. Limitations and Suggestions for Future Research**

There are a number of limitations to the current study. First and foremost, the selected story apps representing the two types of educational apps, literacy apps and language learning apps, were not the researcher's first choice despite the fact that those chosen were of good quality and reputation. Due to the fact that this qualitative

investigation is self-funded, the reality of financial constraints has led to the selection of the 4 story apps on an unequal footing. The participants might be more familiar with the two literacy apps selected for this study in that one was incorporated into the school literacy curriculum of the child participants and the other was introduced and offered free access by the school during the COVID-19 pandemic. However, the child participants had no prior experience in using the two language apps. The main concern at the time of the project was whether participants could gain free access to the trial apps, so one language learning app originally selected was eliminated because a free trial period was not provided. The second constraint is the original plan for triangulating the qualitative data was abandoned due to social distancing so observing the interactions between the child and parent participants during the use of the story apps in the home environment was made impossible. The third obstacle the researcher encountered is the time constraint for the project to be completed. The final hurdle is the limited interview time. Only 25-35 minutes was allotted to each participant and the maximum time for each participant family was confined to one hour. For future research, equal prior experience, longer trial time and interviews are advised so more details could be extracted.

Based upon the findings of this present study, a few suggestions need to be made. First, for parents who regard story apps as a potential tool to enhance their children's reading skills and reading motivation, it is essential that they provide autonomous support with "structure". Future research should explore strategies that parents could employ to optimize the affordances of story apps and mediate distractors that might hamper children's motivation to read. Second, for educators and teachers who incorporate e-reading technology into classrooms, choosing evidence-based tools requires thorough consideration, and cultivating readers' autonomy needs to be underpinned by supporting their needs for relatedness to the teacher and their

peers. Classroom experiences of success and failures should be capitalized on for future investigation. Last but not least, for app developers who aim to design apps of high educational value, collaborating with educators and teachers to devise story apps of quality that satisfy children's curiosity, provide enjoyment, choice, and challenge should be on top priority. The main affordance of story apps should feature a wide selection of eBooks of interesting topics, illustration, and good text clarity. Discretion is warranted when integrating gamification into story apps to provide fun and practice.

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## Appendix A: Informed Consent Form

***How Digital Storybooks Foster EAL Children's Reading Motivation*****INFORMATION SHEET FOR PARENTS**

You are invited to take part in this research. Please read this information before deciding whether or not to take part. If you decide to participate, thank you. If you decide not to participate, thank you for considering this request.

**Who am I?**

My name is *Jui-Fang Kuo* and I am a master's student in *Master of Education* at Victoria University of Wellington. This research project is work towards my thesis.

**What is the aim of the project?**

This project *is about how digital storybooks can foster EAL (English as an Additional Language) children's reading motivation*. The aim of the study is to explore EAL children's experiences and perceptions of four story apps in relation to their reading motivation. This research has been approved by the Victoria University of Wellington Human Ethics Committee #0000028468.

**How can you help?**

You have been invited to participate because *your child speaks a heritage language other than English and learns English as an additional language*. If you agree to take part, I will:

- ask your child to try out a story app each week with a total of FOUR story apps—two apps designed for literacy development and two apps designed for EAL (English as an additional language) language learning.

Week 1: <b>epic!</b>	You can access to this story app via your child's school free account.
Week 2: <b>Sunshine Online</b>	You can access to this story app via your child's school free account.
Week 3: <b>Khan Academy Kids</b>	This is a free app. You only need to provide your e-mail address.
Week 4: <b>Learn English Kids: Playtime</b>	This app provides a 2-week free trial. I will notify you of cancellation after our 1-week trial.

- interview you each week regarding your child's interaction with the story app and your opinions of the story app.

- also ask you questions about your child's reading habits and general interest in reading in our first interview, and if there are motivational changes in your child's reading behavior in our last interview.
- need you to assist your child to keep a record of the number of times they use each story app.
- interview your child for about 20-25 minutes regarding his/her perceptions of the story app.
- record the interviews via ZOOM with your permission. You can decide to have your web cam on or off during the interviews.

**If you accept this invitation, what are your rights as a research participant?**

You do not have to accept this invitation if you do not want to. If you do decide to participate, you have the right to:

- choose not to answer every question;
- ask for the recorder to be turned off at any time during the interview;
- withdraw from the study at any stage;
- ask any questions about the study at any time;
- obtain a copy of any information or reports regarding you by asking the researcher.

**If you have any questions or problems, who can you contact?**

If you have any questions, either now or in the future, please feel free to contact me or my supervisor:

**Student:**

Name: Jui-Fang Kuo

University email address:

kuojui@myvuw.ac.nz

**Supervisor:**

Name: Dr. Jae Major

Role: Advisor

School: School of Education

Phone: (04) 463 9508

*jae.major@vuw.ac.nz*

**Human Ethics Committee information**

If you have any concerns about the ethical conduct of the research you may contact the Victoria University of Wellington HEC Convenor: Associate Professor Judith Loveridge. Email [hec@vuw.ac.nz](mailto:hec@vuw.ac.nz) or telephone +64-4-463 6028.



## ***How Can Digital Storybooks Foster EAL Children's Reading Motivation***

### **CONSENT TO INTERVIEW**

This consent form will be held for *five* years.

Researcher: *Jui-Fang Kuo, School of Education, Victoria University of Wellington.*

- I have read the Information Sheet and the project has been explained to me. I understand that I can ask further questions at any time.
- I agree to take part in the recorded interviews via ZOOM and can decide whether to have the web cam on or off during the interviews.

I understand that:

- I may withdraw from this study at any point and any information that I have provided will be deleted.
- The identifiable information I have provided will be destroyed on *1 March 2021*.
- Any information I provide will be kept confidential to the researcher and her supervisor.
- I understand that the findings may be used for a Master's thesis.
- I understand that the recordings will be kept confidential to the researcher and the supervisor.
- My name will not be used in reports and utmost care will be taken not to disclose any information that would identify me.

Signature of participant: \_\_\_\_\_

Name of participant: \_\_\_\_\_

Date: \_\_\_\_\_

Contact details: \_\_\_\_\_

Appendix B: Assent Form



**CHILD PARTICIPANT ASSENT FORM**

I am happy for *Jui-Fang Kuo* to participate in her research on how digital storybooks can foster EAL Children's reading motivation and record some of it.

Child's name: \_\_\_\_\_

(Circle/colour appropriate face)



## Appendix C: Recruitment Sheet

**RECRUMENT SHEET**

Below is an outline of what the research project is about and what equipment is required in this research, when the project will commence, how long it will last, and three major concerns you need to take account of:

- (a) I will NOT visit and interview you and your child in your home. All interviews will be conducted remotely over ZOOM;
- (b) your child will try out a story application each week, with a total of 4 story applications.
- (c) You will need to assist your child to keep a record of the number of times he uses the story app during the week.

NOTE. This form only serves to inform you what has changed since our last communication. You will be provided with a more detailed information sheet and a consent form prior to the commencement of the research.

1. Does your child have access to the Internet?
2. Does your child have access to a PC, an i-Pad or a mobile phone?
3. Are you willing to participate in this four-week-long research project starting in June? (We will be starting the trial Monday, June 1, 2020 and our first interview will start in the following week June 8-14.)

4. Are you willing to let your child try out the four story apps appointed by the researcher?
5. Do you allow me to interview you for approximately 25 minutes and your child for approximately 20 minutes via Zoom?
6. When is a convenient time for you?

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

7. To compensate for your time and cooperation, I will give you a grocery voucher of NZ\$80 at the end of the project. Do you prefer NEW WORLD/PAK n SAVE/COUNT DOWN?
8. Can I brief you on the following four apps?

Week 1: <b>epic!</b>	You can access to this story app via your child's school free account.
Week 2: <b>Sunshine Online</b>	You can access to this story app via your child's school free account.
Week 3: <b>Khan Academy Kids</b>	This is a free app. You only need to provide your e-mail address.
Week 4: <b>Learn English Kids: Playtime</b>	This app provides a 2-week free trial. I will notify you of cancellation after our 1-week trial.

### 1. Applications designed for literacy development:

(1) Epic!



#### Epic! - Kids' Books and Videos

Welcome to Epic! - the leading digital library for kids, where kids can explore their interests and learn with instant, unlimited access to 35,000 high-quality ebooks, audiobooks, learning videos, and quizzes for kids 12 and under.

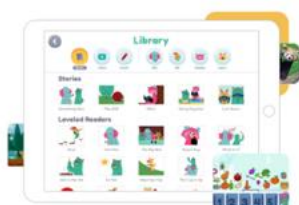
## (2) Sunshine Online

The website features: **Sunshine Online**

Over 650 levelled e-books and 1000 interactive activities and games that focus on phonics, comprehension, fluency, spelling and writing. Maths stories and activities to help children learn essential early maths concepts and skills. Start using Sunshine Online today. Sign up for your 2-week FREE TRIAL now!

**2. Applications designed for English language learning:**

## (1) Khan Academic Kids

**Khan Academy Kids**

Kids can learn independently in the Khan Academy Kids Library—a curated collection of activities, books, videos, and coloring pages. Our book reader allows students to follow along with recorded audio narration or read on their own across our fiction, non-fiction

## (2) Learn English Kids: Playtime

Primary

**LearnEnglish Kids: Playtime**











LearnEnglish Kids: Playtime helps your child build confidence in English speaking and improve listening skills. Listen to over 100 quality animated songs and stories grouped into themes like Fairy Tales and classic Children's Songs.













## Appendix D: App Usage Record Sheet



## APP USAGE RECORD SHEET

Name of Participant: _____								
Name of the Story App: <b>(1) Epic!</b>								
Total Number of Usage: _____								
Date								
Duration								
I will rate this app: <input type="radio"/>  <input type="radio"/>  <input type="radio"/>  <input type="radio"/>  <input type="radio"/> 								
Name of the Story App: <b>(2) Sunshine Online</b>								
Total Number of Usage: _____								
Date								
Duration								
I will rate this app: <input type="radio"/>  <input type="radio"/>  <input type="radio"/>  <input type="radio"/>  <input type="radio"/> 								

Name of the Story App: <b>(3) Khan Academy Kids</b> Total Number of Usage: _____								
Date								
Duration								
I will rate this app: <input type="radio"/>  <input type="radio"/>  <input type="radio"/>  <input type="radio"/>  <input type="radio"/> 								
Name of the Story App: <b>(4) Learn English Kids: Playtime</b> Total Number of Usage: _____								
Date								
Duration								
I will rate this app: <input type="radio"/>  <input type="radio"/>  <input type="radio"/>  <input type="radio"/>  <input type="radio"/> 								

## Appendix E: Interview Questions

**CHILD PARTICIPANT BACKGROUND**

The following questions were asked to collect data regarding the child participant's reading background, reading habit, reading interest, reading motivation and his general perceptions of story apps.

1. What color of reading wheel are you? Do you have a reading goal? What is it (e.g. to read more difficult books or to be a great reader)?
2. Do you want to read well in English? Why?
3. Do you think you can become a strong reader in English if you really try? Why?
4. Do you like reading in class? Why or why not?
5. What do you do when you read a story you really like (e.g. talk about it with your family/friends, draw pictures)?
6. What do you like to read?  
non-fiction/ fiction (fantasy, adventure, mystery, etc.)



7. What do you like about story apps (e.g. read-to-me text, interesting illustrations, cool sound effects, fun activities, vocabulary practice, language focus)?
8. Do you like stories read by your parents or by the story app? Why?
9. What makes you want to use the story app (e.g. good stories, fun games, useful activities)?
10. What would make you want to read a story?  
(e.g. interesting illustration, good story plot, cool sound effects, fun interactivity, etc.)



### INTERVIEW QUESTIONS WITH CHILD PARTICIPANT

The following questions were used in the semi-structured interview to explore the perceptions of EAL children with regard to their use of story app Epic.

1. What did you like about the story app? Why?
  - (a) animation                      (b) illustration                      (c) sound effects
  - (d) read-to-me                      (e) comprehension activities      (f) story collection
  - (g) audiobooks                      (h) videos
2. How did you feel (e.g. interested, excited, confident) when you used this app? Why?
3. What features did you use most often (e.g. stories, audiobooks, videos, read-to-me text)?
4. Did the stories in **Epic** make you want to read more? What stories made you feel curious, interested or excited?
5. Did you choose what you wanted to read and do with this story app? How did it make you feel?
6. What did you skip or avoid in this story app? Why?
7. What features of this story do you think can help you with your reading skills?
8. Are you willing to use this story app in the future? Why or why not?
9. What will make you use this story app in the future?
  - (a) more interesting stories                      (b) more challenging games
  - (c) my mom's order                      (d) if it can help me with my English



### FIRST INTERVIEW QUESTIONS WITH PARENT PARTICIPANT

The following questions were used in a semi-structured interview with the parent participant at the outset of the project to gain a better understanding of the parent participant's attitude towards their child's reading, their reading interaction, and the general reading interest and reading habits of the child participant.

1. How many years does your child receive education in New Zealand?  
(a) 2 year (b) 3 years (c) 4 years (d) \_\_\_\_\_ years
2. What language(s) is (are) mainly spoken at home?  
(a) L1 (Teluga, Tamil, Japanese, Spanish) (b) L2 (English) (c) Both L1 and L2
3. Do you think it is important for your child to read well in English? Why?
4. At what age did your child have contact with storybooks? Do you have a reading schedule for your child? What kind of schedule is it (e.g. bedtime story, read a story a day)? Do you reward your child if he/she finishes reading something (e.g. praise)?
5. What kind of access does your child have to storybooks (e.g. library books, story apps)?
6. How would you rate your child's reading interest, on a scale of 1 to 5 (1 indicates little interest, 5 indicates very interested)? Why?
7. What do you think of storybook apps in general?
8. Do you think story apps can help your child with his/her literacy skills (ability to read and write)? Why or why not?



### INTERVIEW QUESTIONS WITH PARENT PARTICIPANT

The following questions were used in a semi-structured interview with the parent participant after the trial of the story app Epic.

1. How did you interact with your child while he/she used this story app?
2. Did you ask your child to read or do certain activities with this story app? Why?
3. Did you limit your child on the time of using this story app? What was the time limit? Why did you limit or didn't limit the amount of time?
4. What do you like about this story app? Why?
  - (a) animation                      (b) illustration                      (c) sound effects
  - (d) interactivity                      (e) read-to-me                      (f) encouragement
  - (g) language focus (punctuation, grammar) activities
  - (h) vocabulary activities (i) comprehension activities
  - (j) story collection (adventure, mystery, art, travel, etc.)
  - (k) interesting story plot                      (l) audiobooks
5. What feature of this story app did your child use most often (e.g. story itself, games or activities, videos, audiobooks)?
6. How did you rate your child's level of engagement with this story app on a scale of 1 to 5 (1      2      3      4      5)? Why?
7. What features of this app will make you consider subscribing in the future? Why?
  - (a) animation      (b) illustration                      (c) sound effects                      (d) read to me
  - (e) activity games (f) interactive feature (g) comprehension activities
8. Do you have any concern regarding this app? If yes, what is it?



### INTERVIEW QUESTIONS WITH CHILD PARTICIPANT

The following questions were used in the semi-structured interview to explore the perceptions of EAL children with regard to the use of the story app SUNSHINE ONLINE.

1. What did you like about SUNSHINE ONLINE? Why?
  - (a) animation                      (b) illustration                      (c) sound effects
  - (d) interactivity                      (e) read-to-me
  - (f) activities (vocabulary, grammar, comprehension)
  - (g) story collection                      (h) videos                      (i) text print clarity

14 • Are We There Yet? • Activities	15 • Bushfire! • A
• Fruit Salad Makes Me Laugh • Activities	• Mrs Muddle Mud-Puddle • A
• Grandma's Birds • Activities	• Sam's Mother Comes to School • A

2. There is a lot of interactivity feature with SUNSHINE ONLINE books. Did the interactivity make you want to re-read the story?



The little yellow chicken thought he'd have a party. He said to his friends, "Will you help me do the shopping?"





3. Did you like the stories on SUNSHINE ONLINE? Whose stories did you enjoy more, Epic or Sunshine Online? Why?

## SUNSHINE ONLINE

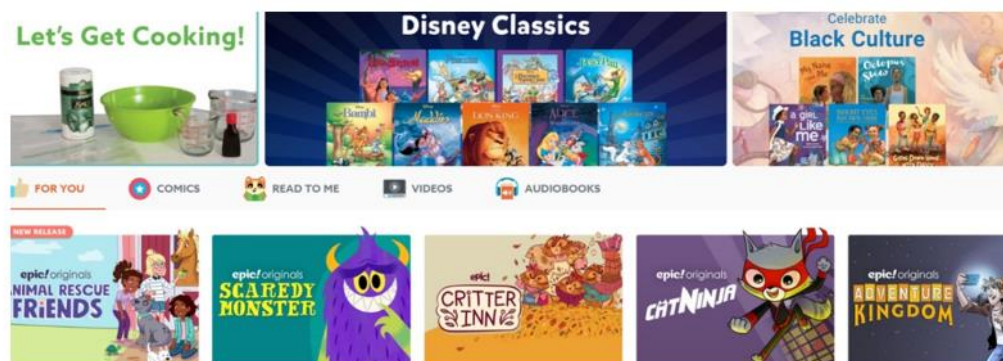
### Fiction



### Non-fiction



## EPIC!



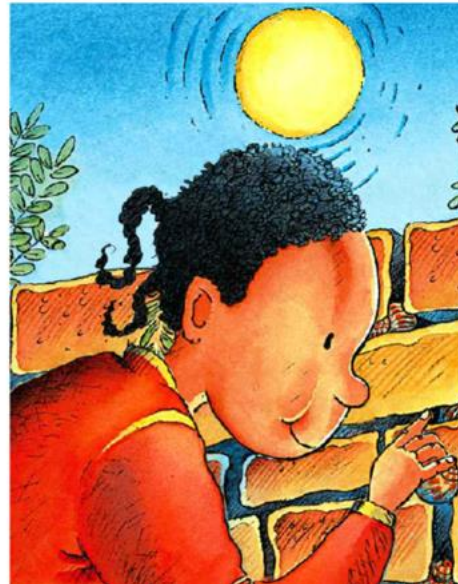
4. Which makes you more interested in reading, fun illustrations or text clarity?

### SUNSHINE ONLINE

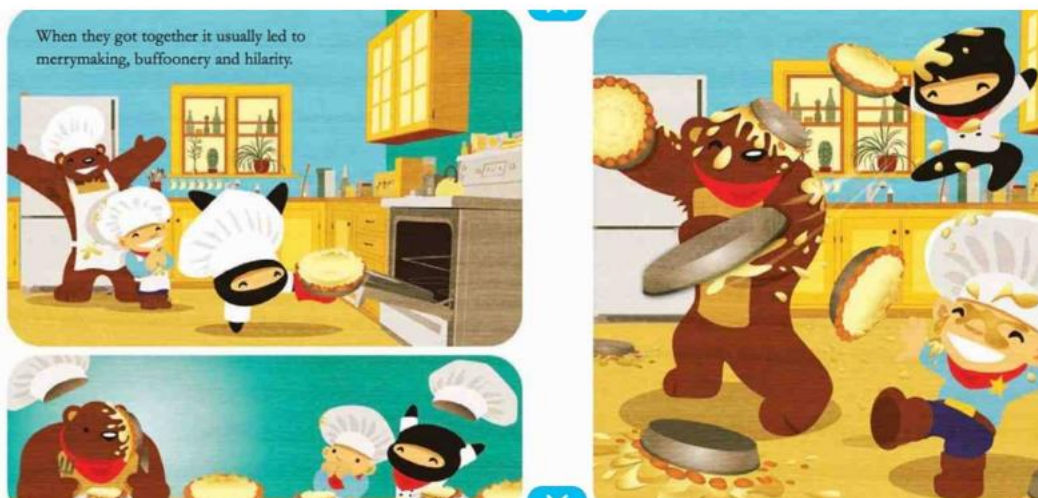
"There's a very small snail on the path," said Beth. "It looks like a baby snail."

"There are lots of snails in the wall," said Mum. "I see their silver trails on the path each morning."

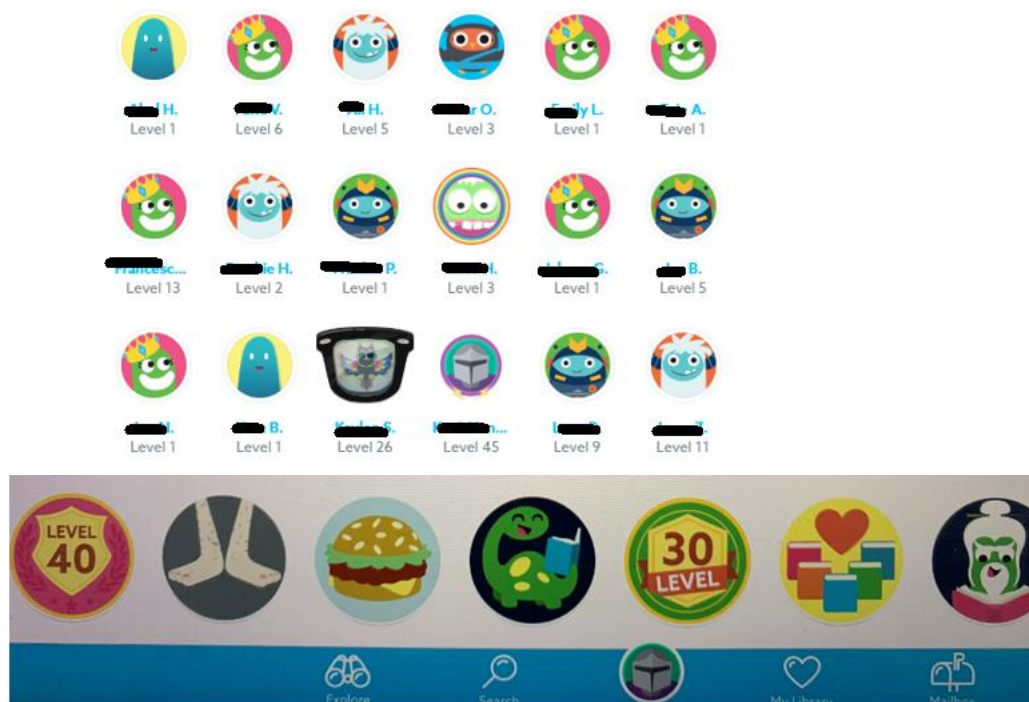
Beth picked up the little snail. She looked at the wall. There were lots of small holes where big snails were hiding. She put the baby snail in with them.



### EPIC!



5. Compared with SUNSHINE ONLINE, did the class reading progress or the medal decorations on EPIC make you want to read more books?



6. Did you like the activities on SUNSHINE ONLINE? Why or why not?



Lettergetter



Word Train



Word Slurper



Whizzy Quiz



Mighty Writer



Comprehension



Silly Story Maker

7. Did you like **Epic** less because there were almost no games or activities?

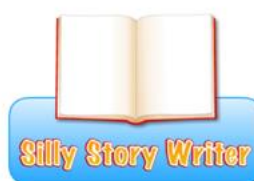
8. What was your favorite activity on SUNSHINE ONLINE? Why?

## Activities

Comprehension

Words

Writing



9. What will make you use SUNSHINE in the future?

(a) more interesting stories

(b) more challenging games/activities

(c) my mom's order

(d) if it can help me with my English





INTERVIEW QUESTIONS WITH PARENT PARTICIPANT

The following questions were used in the semi-structured interview with the parent participant after the trial of SUNSHINE ONLINE.

1. What did you like about SUNSHINE ONLINE? Why?
- (a) animation
  - (b) illustration
  - (c) sound effects
  - (d) interactivity
  - (e) read-to-me
  - (f) activities (vocabulary, grammar, comprehension)
  - (g) story collection
  - (h) videos
  - (i) text print clarity

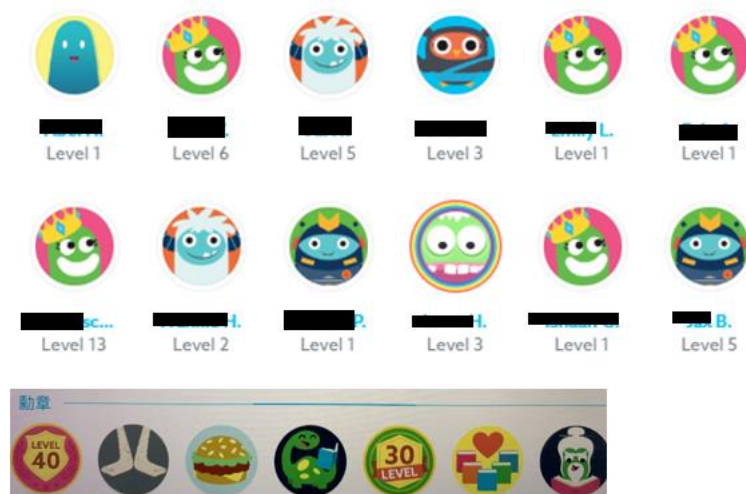
14	• Are We There Yet?	• Activities	15	• Bushfire!	• Activ
	• Fruit Salad Makes Me Laugh	• Activities		• Mrs Muddle Mud-Puddle	• Activ
	• Grandma’s Birds	• Activities		• Sam’s Mother Comes to School	• Activ
	• My Animal Report (NF)			• Silver Footprints	• Activ

2. What features of SUNSHINE ONLINE did you wish your child could use more and why?
3. What do you think of the interactivity feature with SUNSHINE ONLINE?



The little yellow chicken thought he’d have a party. He said to his friends, “Will you help me do the shopping?”

4. How did you rate your child's level of engagement with this story app on a scale of 1 to 5 (1 2 3 4 5)? Why?
5. Compared with SUNSHINE ONLINE, what do you think of the class reading progress or the medal decorations on EPIC?



6. Which do you think is more important, fun illustrations or text clarity? Why?

### SUNSHINE ONLINE

"There's a very small snail on the path," said Beth. "It looks like a baby snail."

"There are lots of snails in the wall," said Mum. "I see their silver trails on the path each morning."

Beth picked up the little snail. She looked at the wall. There were lots of small holes where big snails were hiding. She put the baby snail in with them.



## EPIC!



7. What do you think of the activities on SUNSHINE ONLINE?



Lettergetter



Word Train



Word Slurper



Whizzy Quiz



Mighty Writer



Comprehension



Silly Story Maker

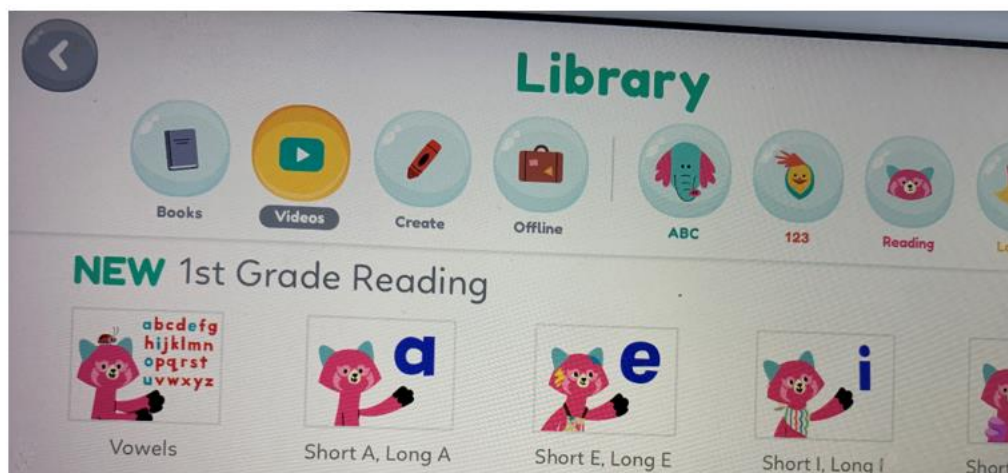
8. Did you like **Epic** less because there were almost no games or activities and why?
9. What features of this app will make you consider subscribing in the future? Why?



### INTERVIEW QUESTIONS WITH CHILD PARTICIPANT

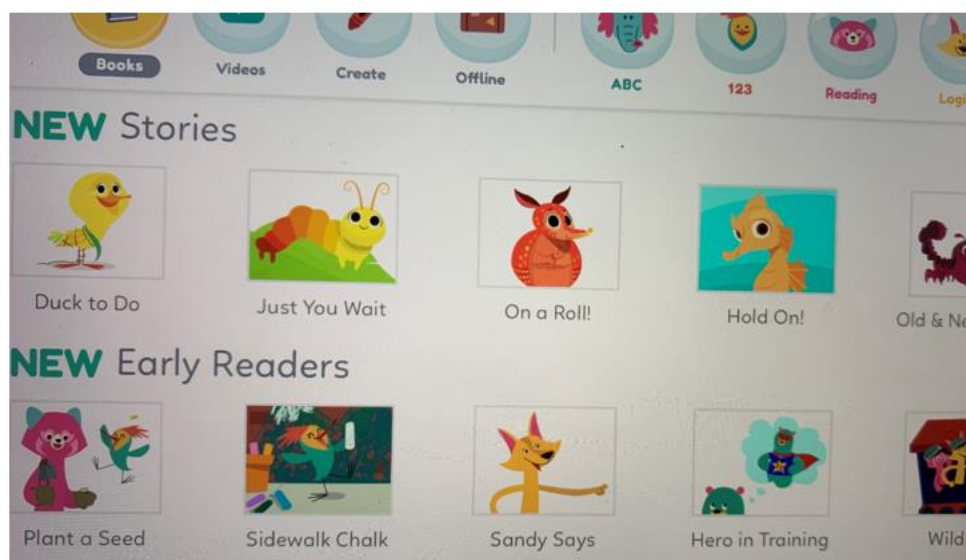
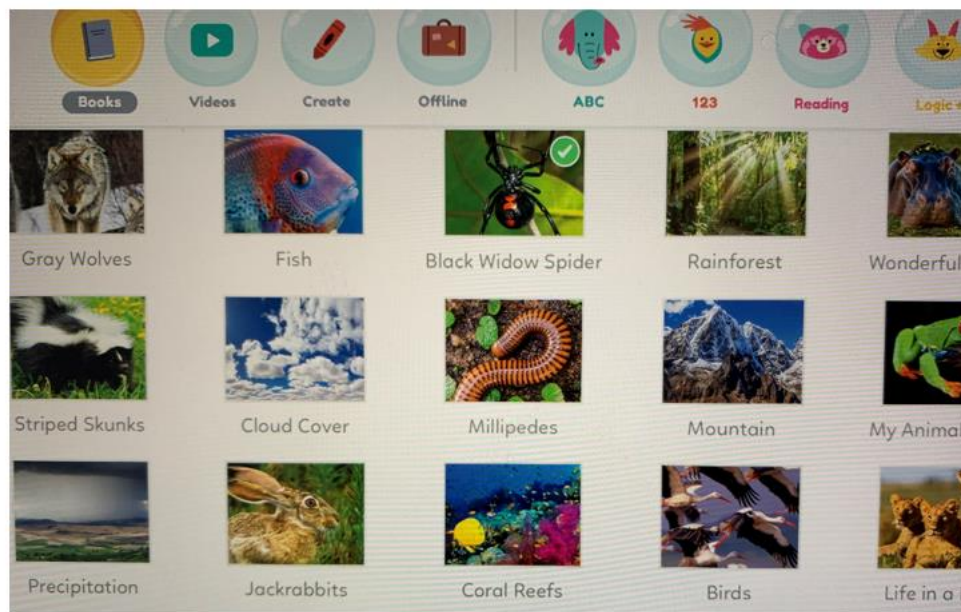
The following questions were used in the semi-structured interview to explore the perceptions of EAL children with regard to the use of the story app KHAN ACADEMY KIDS.

1. What did you like about KHAN ACADEY KIDS story app and WHY?
  - (a) animation                      (b) illustration                      (c) sound effects
  - (d) interactivity                      (e) read-to-me
  - (f) activities (phonics, reading skills)
  - (g) story collection                      (h) videos                      (i) text print clarity





2. Did you enjoy reading books on Khan Academy Kids? What did you LIKE about the books and what did you NOT like about them?



**Epic!**

## MAKING SNACKS SUPER GROSS

### Nasty Names

One trick to making snacks seem gross is to give them nasty names. A sick-sounding title can turn an everyday **edible** into something downright disgusting. Once dishes are given nauseating names, it's hard to imagine them as anything else! Breadsticks become bony fingers. Syrup turns into slime. And kale is crusty skin!

Examine your ingredients as you make your snacks. Do any inspire you to give them nasty names? Make sure to share the terrible title of each dish you serve with your snackers. Their looks of horror are part of the fun!

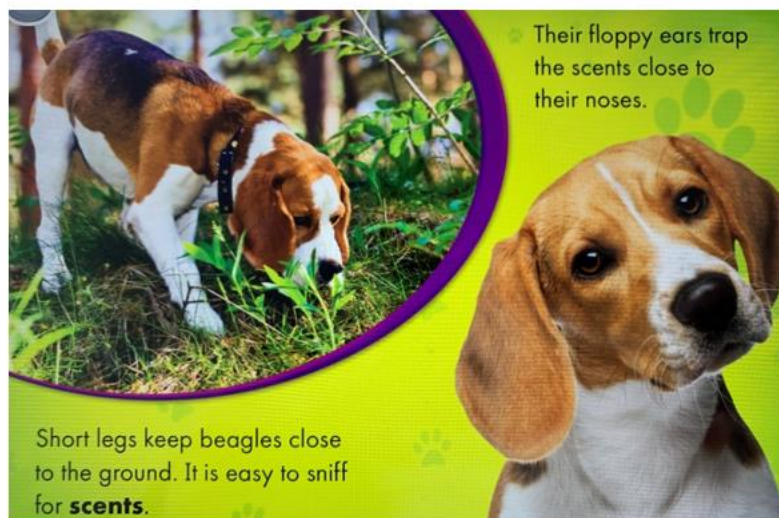
### Sick Snack Setups

Giving food gross names is only part of what makes snacks scary. The way you serve them is important. Decorate your dishes with fun props to make them seem even more gross. A box of facial tissues alongside booger pop-it bandages can also grossify your dishes. Make sure to **sanitize** props before using them. And remove the props from the food before serving it to your guests. Keep things fun and delicious without putting your diners in danger.

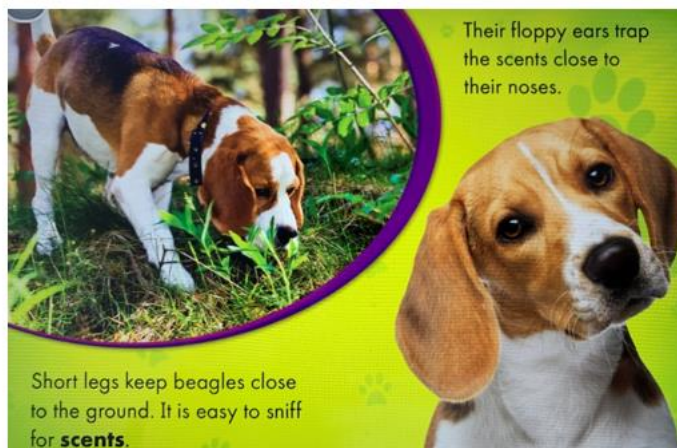


3. What do you think of the level of reading challenge with Khan Academy Kids books?

### Khan Academy Kids



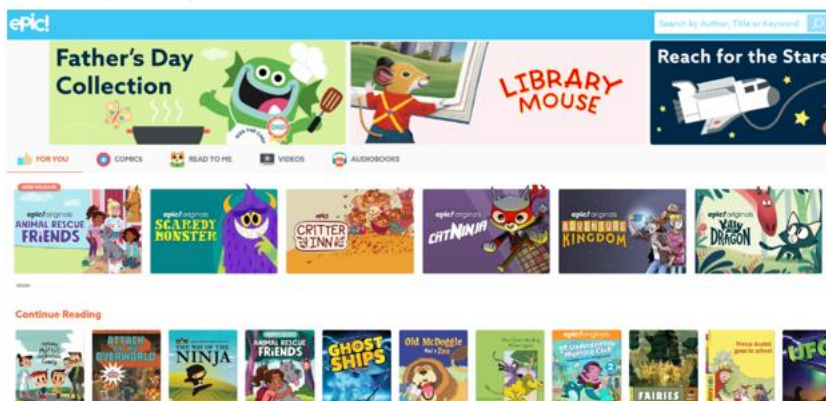
4. Did the books make you feel \_\_\_\_\_ and why?  
 (a) interested (b) challenged



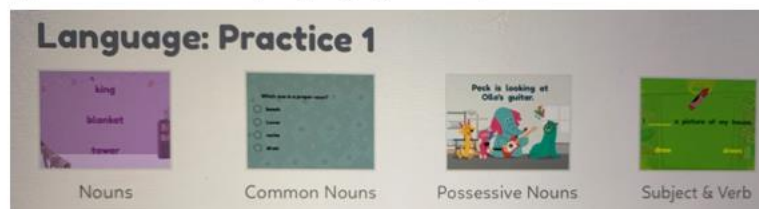


5. Compared with the **diversity** of the story app Epic, which would make you want to read more and why?

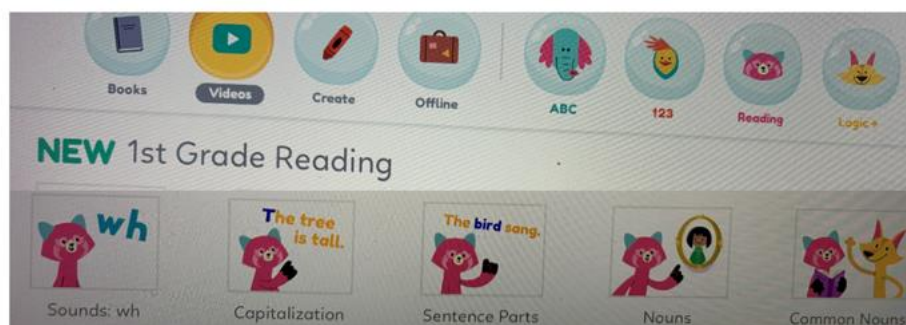
**(a) a large story collection**



**(b) useful activities (language practice)**

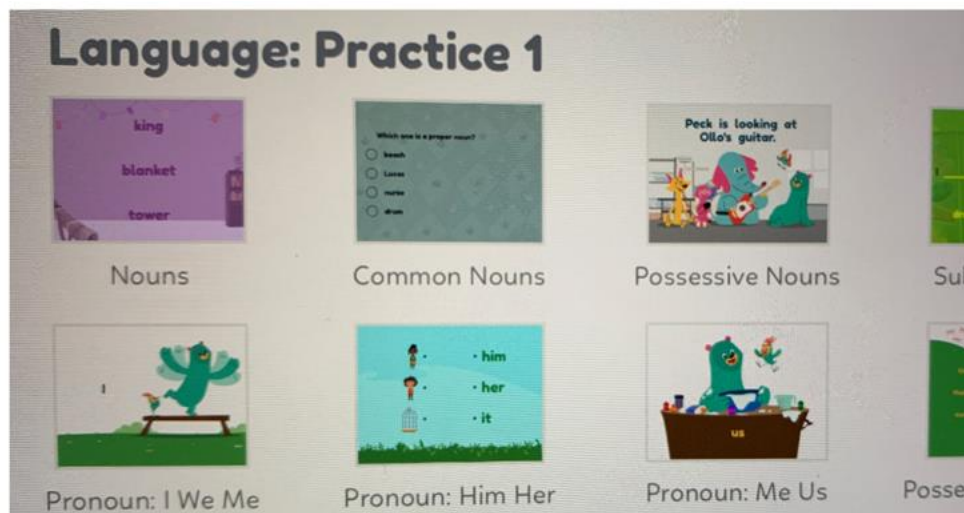


**(c) videos (phonics, grammar)**



6. (a) Do you think the language activities on Khan Academy Kids help you read better and why?
- (b) Were the activities novel, challenging or useful to you and why?
- (c) Did you enjoy doing the activities and why?





7. (a) What do you think of the activities on SUNSHINE ONLINE and Khan Academy Kids?
- (b) Do the activities provide the right amount of **challenges**, **fun** and **language instruction** and why?
- (c) Which app was more fun, interesting, challenging and useful to you?
- (d) Which app did you like more and why?



Lettergetter



Word Train



Word Slurper



Whizzy Quiz



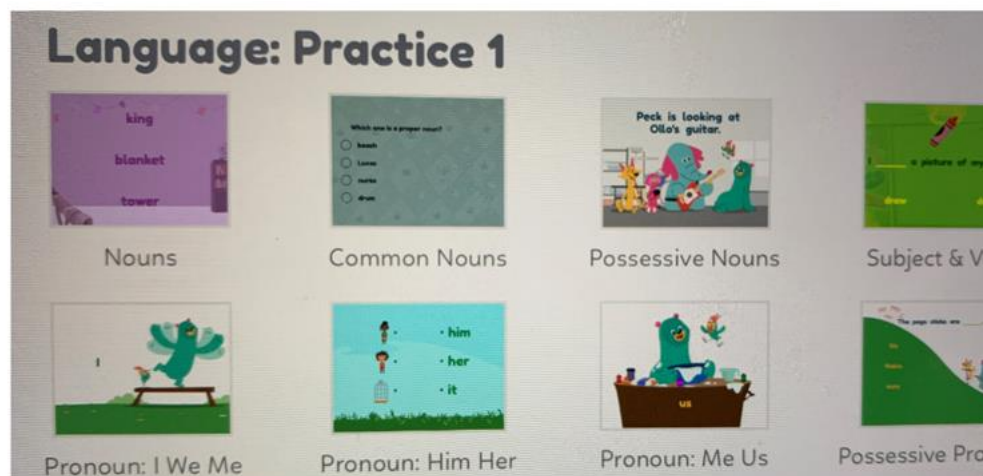
Mighty Writer



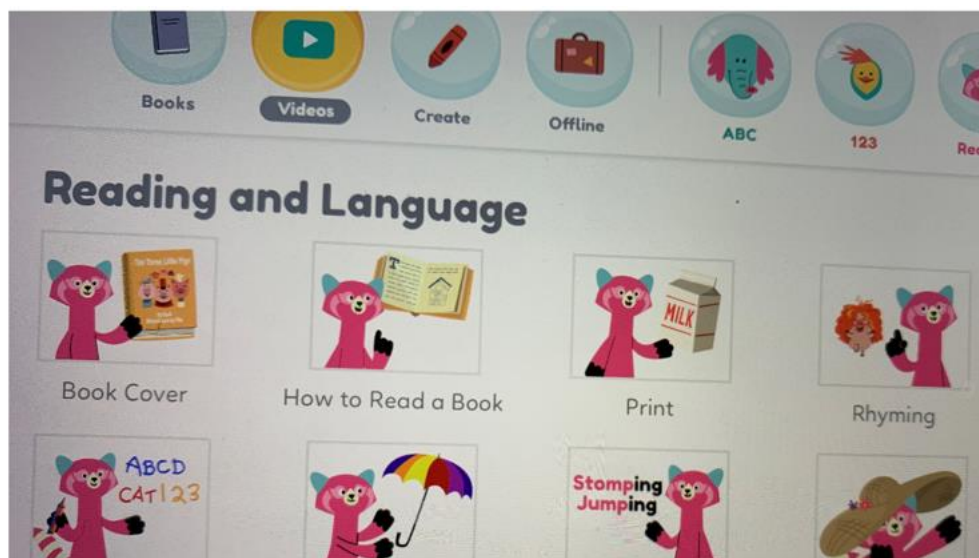
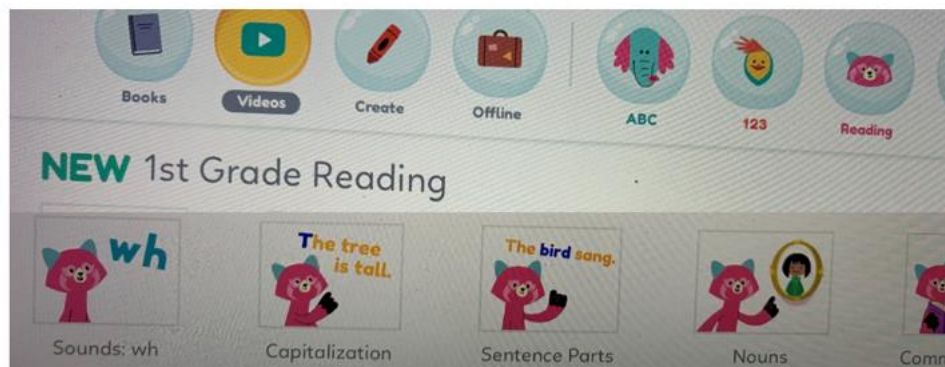
Comprehension



Silly Story Maker

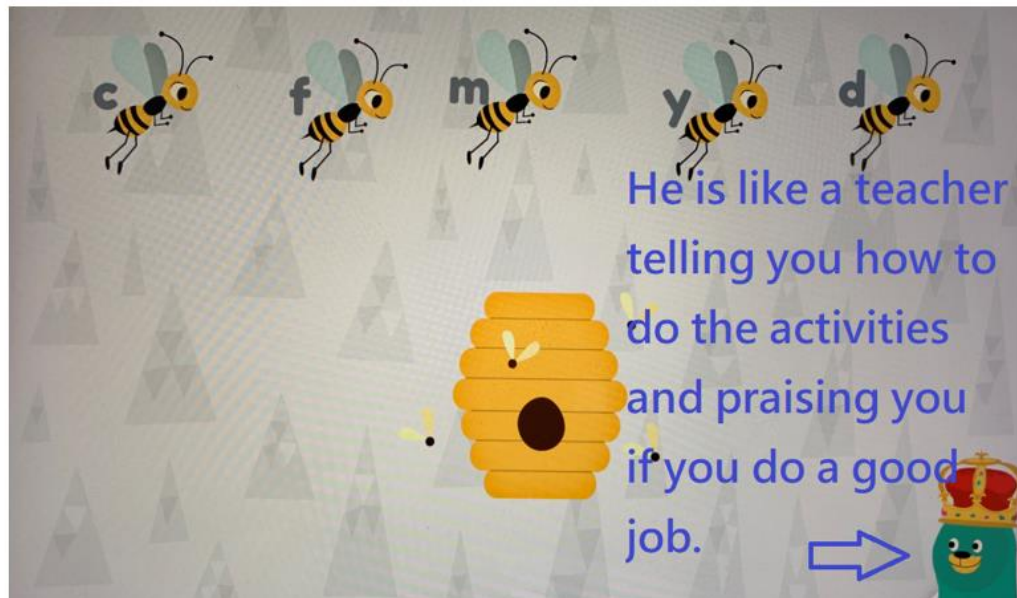


8. (a) Did you like the videos (phonics, grammar) on Khan Academy Kids? Why or why not?  
 (b) Were the videos interesting, challenging or useful?





9. Did you like the feature of having an animated character acting as a teacher guiding you through the activities and telling you whether you do a good job? Why or why not?



10. What will make you use Khan Academy Kids in the future?
- |                              |                                       |
|------------------------------|---------------------------------------|
| (a) more interesting stories | (b) more challenging games/activities |
| (c) my mom's order           | (d) if it can help me with my English |

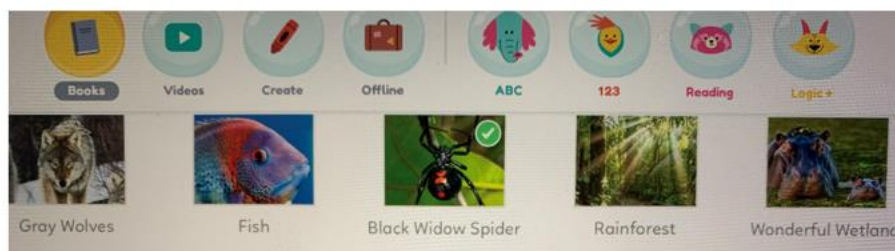
Thank you for letting me interview you. You are a STAR!



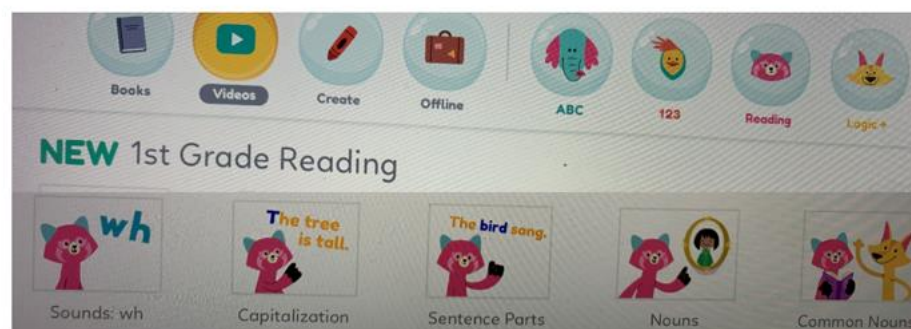
### INTERVIEW QUESTIONS WITH PARENT PARTICIPANT

The following questions were used in the semi-structured interview with the parent participant after the trial of Khan Academy Kids.

1. What did you like about Khan Academy Kids? Why?
  - (a) animation                      (b) illustration                      (c) sound effects
  - (d) interactivity                      (e) read-to-me
  - (f) activities (vocabulary, grammar, comprehension)
  - (g) story collection                      (h) videos                      (i) text print clarity

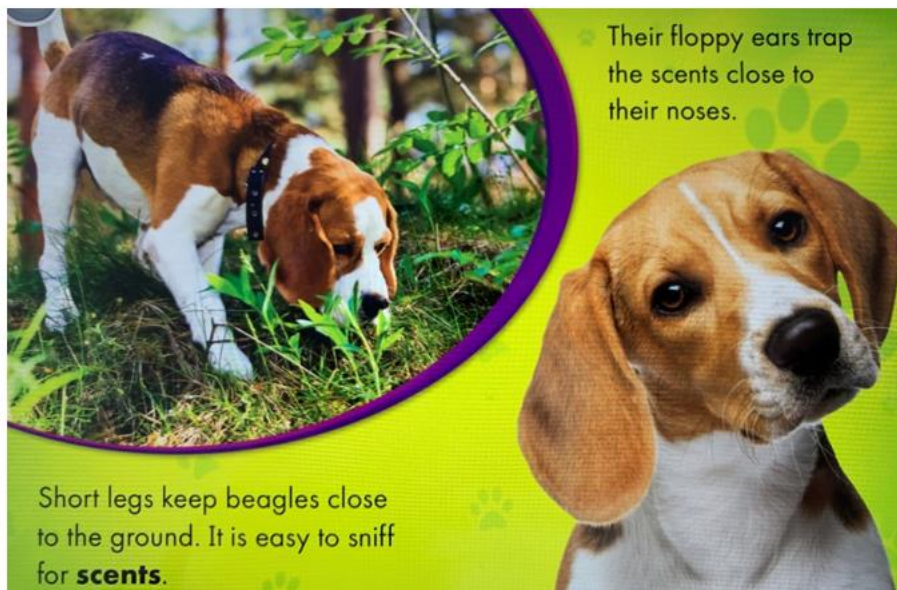


2. What features of Khan Academy Kids did you wish your child could use more and why?



3. What do you think of the level of reading challenge with Khan Academy Kids books?

### Khan Academy Kids



### Epic!

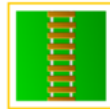




4. How did you rate your child's level of engagement with this story app on a scale of 1 to 5 (1      2      3      4      5)? Why?
5. What do you think of the activities on SUNSHINE ONLINE and Khan Academy Kids? Do the activities provide the right amount of **challenges**, **fun** and **language instruction** and why?



Lettergetter



Word Train



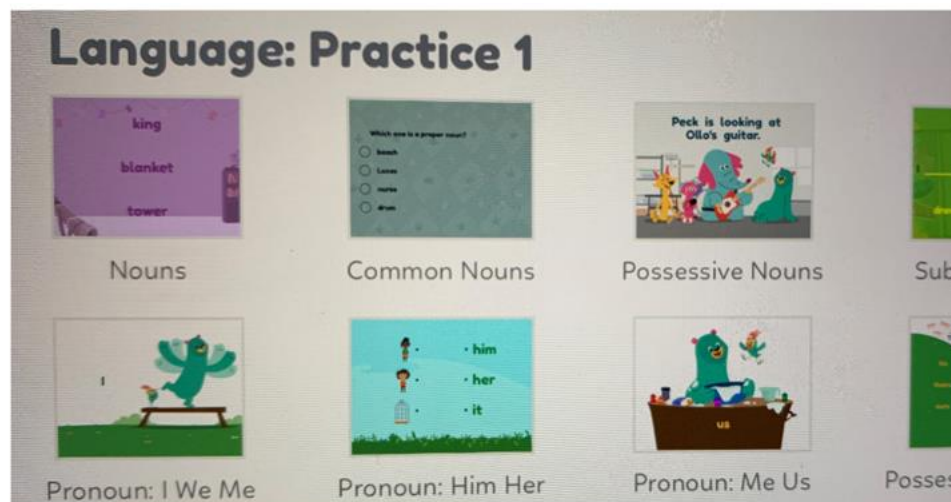
Word Slurper



Whizzy Quiz



Mighty Writer



6. What features of this app will make you consider subscribing in the future? Why?
- (a) animation      (b) illustration      (c) sound effects      (d) read to me  
 (e) activities (vocabulary, grammar, comprehension)      (f) interactivity  
 (g) story collection      (h) videos (phonics, grammar, animated stories)

This is the end of the interview. Thank you for your time.



### INTERVIEW QUESTIONS WITH CHILD PARTICIPANT

The following questions were used in the semi-structured interview to explore the perceptions of EAL children with regard to the use of the story app LEARN ENGLISH KIDS PLAYTIME.

1. What did you like about LEARN ENGLISH KIDS PLAYTIME story app and WHY?
  - (a) animation
  - (b) illustration
  - (c) sound effects
  - (d) interactivity
  - (e) read-to-me
  - (f) activities (phonics, reading skills)
  - (g) story collection
  - (h) videos
  - (i) text print clarity



2. Did you like the animated stories on LEARN ENGLISH KIDS PLAYTIME?  
Would it make you want to read the storybook version?



3. Do you prefer to read storybooks on your own, use READ TO ME or watch animated stories and why?
4. (a) What do you think of the stories on LEARN ENGLISH KIDS PLAYTIME?  
(b) Were the stories interesting?  
(c) Were they difficult, a bit easy or just right for you?





5. Do you like the storybook collection and why?



6. (a) Do you think the language activities on LEARN ENGLISH KIDS PLAYTIME help you read better and why?  
 (b) Were the activities novel, challenging or useful to you and why?  
 (c) Did you enjoy doing the activities and why?



7. What will make you use LEARN ENGLISH KIDS PLAYTIME in the future?  
 (a) more interesting stories  
 (b) more challenging games/activities  
 (c) my mom's order  
 (d) if it can help me with my English

Thank you for letting me interview you. You are a STAR!

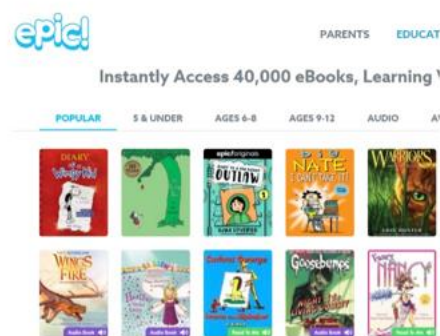


### INTERVIEW QUESTIONS WITH CHILD PARTICIPANT

The following questions were used in the semi-structured interview to explore how child participants perceive the difference between literacy apps and language learning apps and how they affect their reading interest.

1. After trying out the 4 story apps, did they make you more interested in reading and WHY?

(a) **EPIC!**



**(b) SUNSHINE ONLINE**



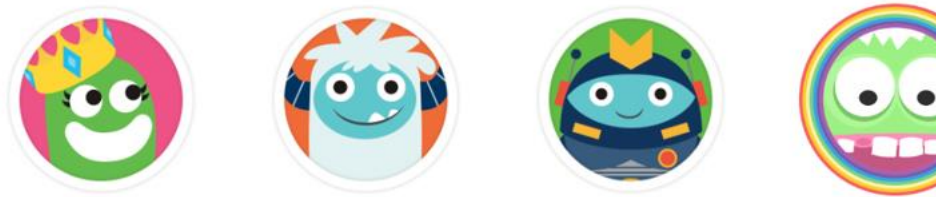
(c) KHAN ACADEMY KIDS (d) LEARN ENGLISH KIDS PLAYTIME



2. Is it important for you that you can **choose** what you want to do with the story apps and why?
3. What feature or features of the story apps do you think can help you read well in English?
  - (a) a large story collection      (b) read to me      (c) activities
  - (d) others (interactive games, videos, animated stories, level-up rewarding system)
4. What do you think of books on literacy apps (EPIC and SUNSHINE ONLINE) and books on language learning apps (KHAN ACADEMY KIDS and LEARN ENGLISH KIDS PLAYTIME)?
  - (a) book options      (b) level of reading difficulty
  - (c) level of interest      (d) level of usefulness
5. Do story apps with the **reward system** (e.g. to level up and enjoy more locked stories ) make you want to read more and why?



6. Do story apps with **an avatar representing you and allowing you to decorate it if you level up with your reading** make you want to use the app more and why?



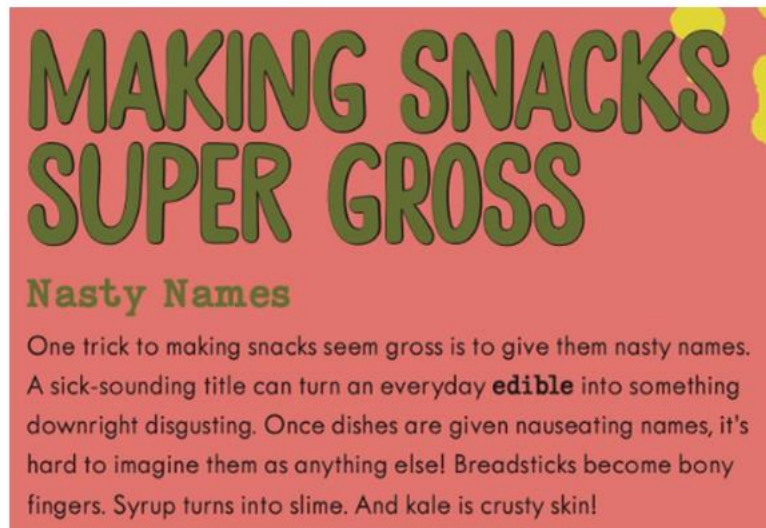
7. Do story apps with **an animated character** simulating as a classroom teacher make you want to use the app more and why?



8. Which story apps make you more **interested** in reading, literacy apps (Epics, Sunshine Online) or language learning apps (Khan Academy Kids, Learn English Kids Playtime) and why?



9. (1) Which story apps make you feel more **challenged** in reading, literacy apps (Epics, Sunshine Online) or language learning apps (Khan Academy Kids, Learn English Kids Playtime) and why?  
 (2) Do you like challenges in reading stories and why? (e.g. **difficult** words, longer **paragraphs**)



10. Which story apps make you want to **use** them more, literacy apps (Epics, Sunshine Online) or language learning apps (Khan Academy Kids, Learn English Kids Playtime) and why?

This is the end of our interview. Thank you for being a trouper!





## INTERVIEW QUESTIONS WITH PARENT PARTICIPANT

The following questions were used in the semi-structured interview with the parent participant after the trial of Learn English Kids Playtime.

1. What did you like about LEARN ENGLISH KIDS PLAYTIME story app and WHY?

- (a) animation                      (b) illustration                      (c) sound effects
- (d) interactivity                      (e) read-to-me
- (f) activities (phonics, reading skills)
- (g) story collection                      (h) videos                      (i) text print clarity



2. Do you think the animated stories on LEARN ENGLISH KIDS PLAYTIME can motivate your kid to read and why?



3. What features of Learn English Kids Playtime did you wish your child could use more and why?
4. Did you want your child to do more language activities on Learn English Kids Playtime and why?



5. How did you rate your child's level of engagement with this story app on a scale of 1 to 5 (1      2      3      4      5)? Why?
6. What features of this app will make you consider subscribing in the future? Why?
  - (a) animation   (b) illustration      (c) sound effects      (d) read to me
  - (e) activities (vocabulary, grammar, comprehension)
  - (f) interactivity
  - (g) story collection      (h) videos (phonics, grammar, animated stories)

This is the end of the interview. Thank you for your time.

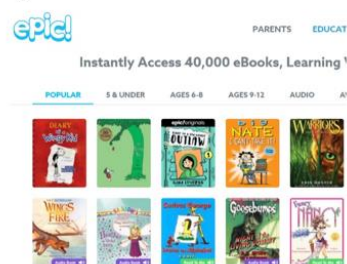


### INTERVIEW QUESTIONS WITH PARENT PARTICIPANT

The following questions were used in the semi-structured interview to explore how parent participants perceive the difference between literacy apps and language learning apps and what they think the influence of the story apps on their kid's reading motivation.

1. After trying out the 4 story apps, do you think the story apps make your child more interested in reading and WHY?

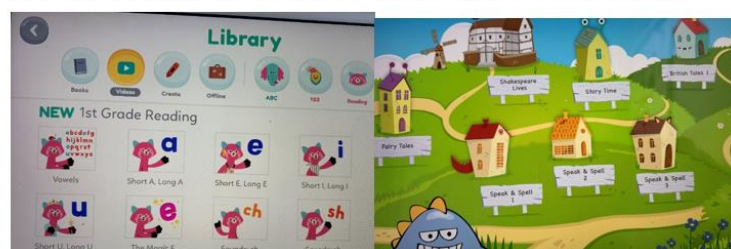
(a) EPIC!



(b) SUNSHINE ONLINE



(c) KHAN ACADEMY KIDS (d) LEARN ENGLISH KIDS PLAYTIME



2. Do you wish your child could do more activities (phonics, spelling, grammar) on language learning apps and why?
3. What feature or features of the story apps do you think can help your child to read well in English?
  - (a) a large story collection      (b) read to me
  - (c) activities
  - (d) others (interactive games, videos, animated stories, etc.)
4. What do you think of books on literacy apps (EPIC and SUNSHINE ONLINE) and books on language learning apps (KHAN ACADEMY KIDS and LEARN ENGLISH KIDS PLAYTIME)?
  - (a) book options                      (b) level of reading difficulty
  - (c) level of interest                  (d) level of usefulness
5. What do you think of the **reward system** (e.g. to level up and enjoy more locked stories ) on the story apps?



6. What do you think of the **avatar** of the story apps (representing your child in the virtual world and allowing him/her to decorate it if he/she levels up with more reading)?



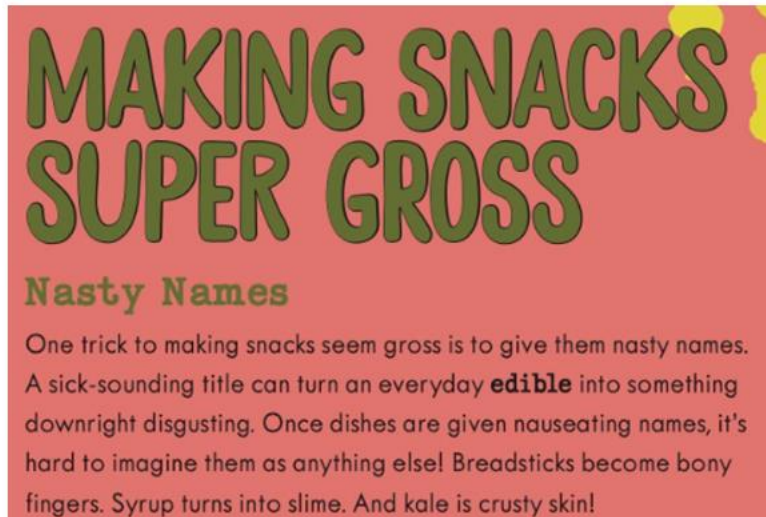
7. What do you think of the story apps with **an animated character**? Did you observe more interactions your child had with the story apps?



8. What story apps make your child more **interested** in reading, literacy apps (Epics, Sunshine Online) or language learning apps (Khan Academy Kids, Learn English Kids Playtime) and why?



9. (1) Which do you think provide more **challenges** in reading, literacy apps (Epics, Sunshine Online) or language learning apps (Khan Academy Kids, Learn English Kids Playtime) and why?
- (2) Do you think providing challenges (e.g. **difficult** words, longer **paragraphs**) in reading can motivate your child to read more and why?



10. What story apps would you let your kid **use** them more, literacy apps (Epics, Sunshine Online) or language learning apps (Khan Academy Kids, Learn English Kids Playtime) and why?

This is the end of the interview. Thank you for your time.

## Appendix F: Coding Process

Themes	Child: in blue / Parent in black
material-options/ large story collection	<p>Interviewer: What about... do you like the story collection of Epic? Do you think they have many good storybooks you like?</p> <p>Interviewee: Yes. #1</p> <p>Interviewer: What will make you use this story app in the future?</p> <p>Interviewee: More interesting stories.</p> <p>Interviewer: What about mom's order? [chuckle]</p> <p>Interviewee: [Shaking his head violently]</p> <p>Interviewer: Does it affect you?</p> <p>Interviewee: Yeah.</p> <p>Interviewer: But you want more interesting stories.</p> <p>Interviewee: Yeah.#1</p> <p>Interviewer: [chuckles] Okay, all right. So, you like this particular book, huh? Good, let's talk about something more general.</p>
Interest	<p>Interviewee: So I can actually learn more of very...wonderful animals and things.</p> <p>Interviewer: Okay. I see. And then, is there anything you don't like about the books? Like, they are less interesting or they do</p> <p>Interviewee: I do actually like [their]books. #1</p> <p>Interviewer: You do like books on Khan Academy?</p> <p>Interviewee: Yes.</p> <p>Interviewer: Why? Give me a reason or two [chuckles].</p>
Overview	Attitude   collection   Interest   activities   reading challenge   layout   videos   animated characters   avatar   Interactivity   rew. ... (+)
design-layout (levelled books)	<p>Interviewee: As a parent, do you want that [having activities] or you think, "just let him enjoy reading". What's your point of view? #1</p> <p>Interviewee: I want him to improve vocabulary, English level, reading level [can go up]. SUNSHINE ONLINE has good stories to read but not 'fun', 'fun'. How can I say? Epic is more for children, interesting and fun. I think SUNSHINE ONLINE stories, high, good level for Kaylen, good storiesbut he likes Epic.</p> <p>Interviewee: He is the one choosing the books so what I see most of the books he read in Epic were very easy. #2</p> <p>He was choosing just by the cover. Once he chose one and that one was way too difficult.</p> <p>So he was choosing the books not matching his level. He judged by the cover so he would get them [the books from] any level.</p> <p>Interviewer: Let's talk about the reading difficulty. #2</p> <p>Interviewee: I like the literacy apps. Sunshine Online, for me, it was easier for me to know where I was [from the last reading] and find books that are of similar</p>
Story App Features Feature-READ-TO-ME	<p>Interviewer: What did you like about the story app? So, with Epic, they have animation, illustration, sound effects, they have the read-to-me function....</p> <p>Interviewee: Read-to-me.</p> <p>Interviewer: Why do you like to read-to-me?</p> <p>Interviewee: Like, ... I actually don't know words in some books.#1</p> <p>Interviewer: Do you like stories read by your parent or by the story apps?</p> <p>Interviewee: By the story app.</p> <p>Interviewer: Why do you prefer to have the stories read by the story app?</p> <p>Interviewee: Because sometimes they are super long that my brain can't do all of the words.</p> <p>Interviewer: And you can ask the story app to repeat some or certain pages?</p> <p>Interviewee: [Nodding his head]#1</p> <p>Interviewer: What did you like about SUNSHINE ONLINE? #1</p> <p>Interviewee: Videos, and read-to-me.</p> <p>Interviewer: Why do you like these two features?</p>

## ①-1-CHILD-PARTICIPANT-BACKGROUND¶

The following questions were asked to collect data regarding the child participant's reading background, reading habit, reading interest, reading motivation and his general perceptions of story apps.

1. What color of reading-wheel are you? Do you have a reading goal? What is it?

Interviewer: First of all, you need to tell me your reading level.





Interviewee: Actually I don't know.

Interviewer: So when you are reading the reader, there is a sticker either on the front or at the back. It would say what reading level you are. Do you know the color of your reader? I think you are probably in gold.

Interviewee: (Parent) Actually, [redacted] and [redacted] are both in the same group in English reading. (Child) If she is in "gold", I think I'm in "gold", I think.



## Appendix G: Audit Trail

Name	Status	Date modified	Type	Size
 Transcription_08172020	✓	8/17/2020 5:01 PM	Microsoft Word Doc...	15,150 KB
 Transcription_10082020	✓	10/8/2020 1:59 PM	Microsoft Word Doc...	15,148 KB
 Transcription_09252020	✓	9/25/2020 2:41 PM	Microsoft Word Doc...	15,136 KB
 Transcription_09072020	✓	9/7/2020 12:51 PM	Microsoft Word Doc...	16,758 KB

### Date of Interview (1): 9 June 2020

#### ①-1 CHILD PARTICIPANT BACKGROUND

The following questions were asked to collect data regarding the child participant's reading background, reading habit, reading interest, reading motivation and his general perceptions of story apps.

1. What color of reading wheel are you? Do you have a reading goal? What is it?

**Interviewer:** I'd like you to tell me what color of reading wheel you are.

**Interviewee:** GOL-DA.

**Interviewer:** Very good. Tell me about your reading goal. Do you have a reading goal?

What is it?

**Interviewee:** A reading group.

#### ①-2 FIRST INTERVIEW QUESTIONS WITH CHILD PARTICIPANT

The following questions were used in the semi-structured interview to explore the perceptions of EAL children with regard to their use of story app Epic.

1. What did you like about the story app? Why?

- (a) animation                      (b) illustration                      (c) sound effects
- (d) read-to-me                      (e) comprehension activities      (f) story collection
- (g) audiobooks                      (h) videos

**Interviewer:** Which parts of the story app did you like? You like the animation? Or you like the illustration? Do you understand the difference between the animation and illustration?



### ①-3 FIRST INTERVIEW QUESTIONS WITH PARENT PARTICIPANT

The following questions were used in a semi-structured interview with the parent participant at the outset of the project to gain a better understanding of the parent participant's attitude towards their child's reading, their reading interaction, and the general reading interest and reading habits of the child participant.

1. How many years does your child receive education in New Zealand?

(a) 2 years      (b) 3 years      (c) 4 years      (d) \_\_\_\_\_ years

**Interviewer:** I'd like to know that...how many years does [REDACTED] has received education in New Zealand?

### ①-4 INTERVIEW QUESTIONS WITH PARENT PARTICIPANT

The following questions were used in a semi-structured interview with the parent participant after the trial of the story app Epic.

1. How did you interact with your child while he/she used this story app?

**Interviewer:** While [REDACTED] started to use the app, did you sit with him or did you let him use the app by himself?

**Interviewee:** I sat with him the first day so he would get familiar with how it worked, where to find books so he could see how, when there were audiobooks because he doesn't like them much, how to tell apart the other books from those books so where he could find books that may be more appealing to him. Once he knew how to use the app, I let him