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Cartoon Video-Assisted Learning: An Investigation into the Acquisition of EFL Children's Incidental Vocabulary

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Abstract

Although many previous studies have addressed vital issues on vocabulary learning within formal instruction settings, relatively few studies have examined the effectiveness of using cartoon videos in EFL home settings where neither the parents nor the children have any English background. This study aims at examining the effectiveness of children's at-home incidental vocabulary learning using cartoon videos with and without captions, and explaining children's responses to the implementation of the two different combinations. An at-home experimental study was designed for 30 EFL children (14 male and 16 female) who had no English background. A vocabulary knowledge scale (VKS) was administered to assess their incidental vocabulary enhancement. The results of the study indicate that children who learned incidental vocabulary using short cartoon videos with captions at-home for thirty minutes learned more effectively than those children who learned the same vocabulary targets using cartoon videos without captions. Furthermore, EFL children in both groups who did not have an English background also responded positively towards the implementation of the two different treatments. Curricular merits, study limitations, and suggestions for further research are also offered through the study.

Keywords: cartoon videos assisted learning, EFL children, incidental vocabulary learning

Introduction

Cartoon videos are a popular form of visual entertainment for children to watch during their leisure time. A major American survey of 1,000 parents in the United States reports that their children under the age of 6 spend at least two hours per day watching cartoon videos on television (Rideout, Vandewater, & Wartella, 2003; Marsh, 2006). Similarly, a recent study in the Calgary area also reports that Canadian children regularly watch cartoon videos 2-5 times per week between 3:30 and 6:30 PM, after school (Fouts, Callan, Piasentin, & Lawson, 2006). Cartoon videos are audio-visual materials that provide real context images through audio and visual media. These two modalities can aid the understanding of the content of the story (Plass & Jones, 2005). Additionally, previous researchers have acknowledged the impact of this kind of audio-visual stories on knowledge sharing between parents and children in learning different aspects of language (Wohlwend, 2009; Mara & Laidlaw, 2011; Karakas & Saricoban, 2012; Kucirkova, Sheehy, & Messer, 2015). Thus it is increasingly important for language learning researchers to investigate how these platforms may potentially affect children's

language development, and enhance language learning (Flewitt, 2008; Kucirkova et al., 2015; Bakla, 2018).

However, the effectiveness of animated cartoon videos, stories, and other similar platforms has remained unclear. Some studies have reported positive effects related to the use of cartoon videos or similar platforms on learners' language learning such as scaffolding, vocabulary, listening, motivation, learning attitude, and comprehension (Karakas & Saricoban, 2012; Hsu, Hwang, Chang, & Chang, 2013; Kucirkova, Messer, Critten, & Harwood, 2014), but others have not (Chiong, Ree, Takeuchi, & Erickson, 2012; Perez, Peters, & Desmet, 2014). Other platforms such as using iPad story sharing have been less extensively researched (Kucirkova et al., 2015). It is also inconclusive as to what extent i-story sharing enhances different aspects of language learning, especially in EFL settings where parent-child collaboration cannot be conducted due to a lack of English-language proficiency. Several methodological shortcomings have also been found such as the short duration of videos under classroom instruction, the low frequency of exposure during the experiment, and the classroom instructional setting which provides less frequent exposures than out-of-class learning. It has also established that more frequent exposure to vocabulary learning contributes to successful learning (Mccafferty, Roebuck, & Wayland, 2001; Karakas & Saricoban, 2012; Rott, 1999).

To date, there has been very little documentation of parent-child collaboration supported by audio-visual media such as cartoon videos within the EFL/ESL home setting. This paper aims at gaining insight into the educational potential of parent-child collaboration with specific cartoon-videos within the EFL context and probes how vocabulary learning occurs as parents and children watch cartoon videos in home settings.

Literature Review

Cartoon videos as language materials

In elaborating on the potential language learning theory, the Marxist psychologist Lev Vygotsky's theory of learning has dominated the theoretical framework for studying literacy interaction during story sharing with books, iPads, and other media (Kerawalla et al., 2008; Kucirkova et al., 2014). Vygotsky perceived that language learning occurs when learners interact with other people and media (e.g., cartoons). Although Vygotsky's learning theory comprises three different concepts such as ZPD, dual representation, and double stimulation, the most commonly used Vygotsky's learning concept in exploring parent-child interactions is the scaffolding theory (Kucirkova, Sheehy, et al., 2014; Holdsworth & Morgan, 2005). This study tries to explore the potential learning theory and explain the patterns of interaction from a parent-child talk during cartoon videos session.

Numerous researchers have investigated the use of cartoon videos for various EFL/ESL teaching and learning objectives. The pros and cons of the implementation of cartoon videos in FL/ESL teaching and learning have also emerged. Danan (2019) asserted that audio-visual materials such as cartoon videos may function as fruitful education tools in foreign or second language learning because they can improve learners' listening skills, provide real context, and increase comprehension.

However, the negative impacts of implementing cartoon videos on EFL/ESL teaching and learning also have been echoed by different scholars. Taylor (2005) for example, claims that cartoon videos with captions could distract learners' attention and hinder learners' active learning as they tend to learn from the caption.

Many studies that focus on the effects of cartoon videos on reading comprehension, listening, grammar, vocabulary learning, punctuation, positive learning attitude, and motivation have been conducted. These studies aim to investigate whether cartoon videos, audio-visuals materials, and TV programs with captions are more effective than those without them (Bakla, 2018; Danan, 2004; Jylha-Laide, 2006; Karakas & Saricoban, 2012; Perez et al., 2014; Prosic-santovac, 2016; Yaman et al., 2010). The general findings of these studies reveal that cartoon videos, TV programs, with and without captions are fruitful instructional media when it comes to learning different aspects of language such as punctuation, vocabulary, listening, comprehension, attitude, and motivation.

However, most of the aforementioned studies employed experimental designs that aim to examine the effectiveness of the instructional media in language learning and teaching. Moreover, all experiments were conducted within the classroom contexts with a limited frequency of exposure. Regarding this, previous researchers also asserted that the frequency of reading and types of exposure significantly affects learners' vocabulary acquisition (Rott, 1999; Teng, 2019; Richards & Rodgers, 2014). Therefore, these findings cannot be generalized due to insufficient evidence required for investigating the impact of cartoons during out of class sessions such as at-home settings. Meanwhile, some EFL learners mostly watch cartoon series in a home setting. Next, a qualitative study has been conducted, (Kucirkova et al., 2015) within the first language setting where both parents and children come from an English-speaking country which makes it easy for them to share a story in English, but this does not apply to young EFL learners where neither parents nor children speak English. Moreover, other previous studies only discussed the use of caption and non-caption cartoons and videos but they failed to shed light on the experiment in the EFL home context.

Incidental vocabulary learning research

Incidental vocabulary learning occurs when learners acquire new words from a certain context without intending to do so while watching cartoon videos, free reading, or other similar activities (Barcroft, 2009; Loewen, 2015). This differs from an intentional vocabulary learning model where learners learn their vocabulary by intending to do so using different types of learning techniques such as studying the list of target words or completing an activity derived from reading or vocabulary books.

Many scholars have also acknowledged that vocabulary is one of the vital elements in learning a second/foreign language learning. Therefore, second /foreign language learners cannot acquire this overnight but it only through a time-consuming, extensive learning process and development (Karakas & Saricoban, 2012). To make them familiar with various types of vocabulary, learners need to interact frequently with different forms of exposure and context (Karakas & Saricoban, 2012; Schmidt, 2001; Sun & Dong, 2004). Incidental vocabulary learning research in the field of EFL/ESL language teaching and learning has verified the assumption that audio-visual materials, captioned videos, cartoon videos and reading texts can contribute to learners' second and first-language

incidental vocabulary development (Karakas & Saricoban, 2012; Newton, 1995; Pavia, Webb, & Faez, 2019; Teng, 2019).

To explain the impact of watching subtitled cartoons on EFL students' incidental vocabulary, (Karakas and Saricoban, (2012) investigated 42 first-grade students at the University of Mehmet Akif Ersoy, Turkey. In their experiment, the authors managed the two cohorts with different treatments. In the experimental group, the learners were taught by using caption cartoons, whereas, in the control group, the learners were taught using cartoons without captions. A five-level vocabulary scale (VKS) with 18 target words was used to collect incidental vocabulary development. The findings show that the t-test results did not significantly differ in terms of their vocabulary mastery between the groups who were taught using caption and non-caption cartoons. The positive results illustrate that the two different cohorts' incidental vocabulary development significantly increased.

Next, Teng (2019) measured the effect of various video caption conditions and the frequency of word exposure on primary learners' incidental vocabulary development. He examined various types of caption condition (full, keyword, and no captions) with two different numbers of word encounters (one and three) were exploited. The research subjects consisted of 131 boys and 126 girls in Grade 6 from six primary schools in Hong Kong. The results reveal that the learners' incidental vocabulary taught using full caption video instructions performed better than those taught using keywords and without captions. Repeated word encounters with the targeted vocabulary also led to better learning results.

Another study implementing different media for measuring learners' incidental vocabulary was introduced by Pavia et al. (2019). The study aimed at investigating Grade 5 students' incidental vocabulary knowledge dimensions (oral, semantic, and collocation recognition) through listening to two songs. The experiment was conducted involving 300 students from Grade 5 who had reached similar English proficiency levels. In the experiment, the authors also examined the effect of repeated listening (one, three, or five times) to a single song and its relationship between exposure frequency and vocabulary learning gain using a vocabulary test level (VTL) instrument. The findings illustrate that listening to songs contributes to learners' vocabulary learning. Repeated listening and exposure frequency also affected their incidental vocabulary gain.

However, since the current research on incidental vocabulary learning was conducted in the classroom instruction with a very short duration of time, it is hard to draw a valid conclusion. Moreover, most of the researchers employed a quantitative method using experimental design. As a result, it is quite unclear how incidental vocabulary learning b without specific direct classroom instruction could be acquired by learners who have no English background. This is why this study attempts to explore how the potential vocabulary learning results from watching cartoon videos within the EFL home setting.

Research Question

This study focuses on the following two questions:

1. Will there be any significant difference in the ability of EFL children's incidental vocabulary mastery after watching cartoon videos with captions compared to their mastery achieved without captions?
2. What are children's responses to the implementation of cartoon videos watched in a home setting for learning incidental vocabulary?

The Study

Design and Procedure

An experimental design has been applied to compare EFL children's incidental vocabulary learning between two different group frameworks. In group A (the subtitled cohort), children watch cartoon videos with the English captions provided, and in group B (the unsubtitled cohort), children watch cartoon videos without captions. Both cohorts were administered the same pre-and post-tests. Table 1 describes the design of the study.

Table 1
Research design

Pre-test	At-home treatment	Post-test
VKS for both cohorts	Group A (Cartoons with Captions) Group B (Cartoons without Captions)	VKS for both cohorts

The administration of the pre-and post-tests was conducted at school but the treatments were carried out at home. Each week, a short duration of the *Timmy Time* cartoon video (with a duration ranging from 2 to 6 minutes) was sent to parents' mobile phones amounting to a total of fourteen series. This very well-known BBC English learning series cartoon video was selected as the learning aid for this research. It is a very famous cartoon series all over the world because it reaches a wide audience. Fourteen episodes (Appendix 1) were selected since they were considered suitable for the grade of elementary learners before they started learning English at their school in the fourth grade. The experiment was conducted for 14 weeks, from September to November 2019. Thirty target words from these fourteen episodes were selected based on their proficiency level. All these targeted words tested belonged to the same category of nouns. The test was piloted to similar children from a different school to define the suitability of the targeted words. Based on the results of the pilot test, five out of thirty-five targeted words were eliminated from the scale. Thirty target words that are less frequently used remained on the scale. The obtained Cronbach's Alpha value was .824.

The five-point~~s~~ self-report of the Vocabulary Knowledge Scale (VKS) initiated by Paribakht & Wesche (1996) and validated by Karakas & Saricoban (2012) was adapted to assess the children's vocabulary development and to determine how well they know those target words or vocabulary items. It was then translated into the national language, *Bahasa Indonesia*. This VKS consists of five levels (Appendix 2).

Setting and participants

The experiment was conducted in the EFL learners' home setting. In this case, the researcher as the consultant of the school worked collaboratively with a famous private elementary school MI Al-Falah Plus in Kanigoro. Blitar, East Java, Indonesia. The school curriculum offers the English subject in Grade Four. Therefore, the researcher examined Grade Three as none of the learners had experienced any interference from any foreign language instruction before. The participants consisted of 30 children (14 male and 16 female). A classroom meeting with parents was conducted in the half-semester program. In the meeting, a research plan was offered, and all parents agreed to enroll in these at-home cartoon experiments. The parents also agreed to the terms and conditions proposed by the researcher. All volunteering parents were given a questionnaire to convince the researcher that their children had never taken any English course previously. They also agreed to receive cartoon videos on their mobile phones and letting their children watch the video from their mobile phones every week for around thirty minutes during their playtime to learn from the cartoons at home. During the cartoon sessions, parents were not allowed to help their children understand the video. Therefore the children learned from the cartoon videos autonomously.

Data Analysis

The children's answers to the target vocabulary test were simply coded based on the VKS level where they put a tick mark for every word through synonym/translation and sentence they wrote (Karakas & Saricoban, 2012; Paribakht & Wesche, 1996). VKS levels 3, 4, and 5 indicated word knowledge comprehension. The actual accuracy of their answers was subsequently analyzed to know whether their answers were true or false. If the children answered target words incorrectly, the score level was downgraded by one level. If the children ticked the VKS level 2 but their vocabulary answer was false, then the score level would be downgraded as well.

Descriptive statistics were employed to see the distribution of the data and the average scores. The one-sample t-test was employed to see each group's vocabulary acquisition knowledge development. Finally, to draw a comparison between the performance level of the experimental group and the control group, an independent sample t-test was utilized as well. Meanwhile, an attitude survey questionnaire adapted from Decoursey (2012) was distributed to the children's parents to draw the parents' response to the reception of at-home cartoons for vocabulary learning. This five-scale survey was translated into *Bahasa Indonesia* as none of the respondents could speak English. The obtained Alpha value was .864.

Results

Before addressing the research question, normality and homogeneity tests were applied using a Shapiro-Wilk test because the samples of the research amounted to only 30 participants. This Shapiro-Wilk test is a specific test for normality and it yields impressive results in analyzing a number of samples smaller than 50 participants.

Table 2 illustrates the statistical calculation of normality groups between children who were learning incidental vocabulary via cartoons with and without captions. The

results illustrate that the data from the two cohorts were normally distributed since the significance values were .286 and .179, above the alpha value of .05.

Table 2
Normality tests

Group	Shapiro-Wilk		
	Statistic	Df	Sig.
At-home cartoons with captions	.754	15	.286
At-home cartoon without captions	.769	15	.179

*Significant at $p < .05$.

Table 3 shows the statistical calculation of the homogeneity of the two cohorts. The statistical value indicates that the result of the homogeneity test amounts to .159 which is also above the alpha's value. Therefore, the homogeneity of the two groups has been achieved as well.

Table 3
Homogeneity test

Levene's Statistics	df1	df2	Sig.
2.172	1	.97	.159

*Significant at $p < .05$.

Research Question 1 (RQ1): Will there be any significant difference in the ability of EFL children's incidental vocabulary mastery after watching at-home cartoon videos with captions compared to the ones without captions?

Table 4 compares the mean scores of the two different groups. The mean gain of the two different groups is described below:

Table 4
Incidental vocabulary mean scores of the two groups

Group	N	Pre-test Mean	Post-test Mean	Change	Std. Deviation	
					Pre-test	Post-test
At-home cartoons with a caption	15	41.83	66.25	24.42	5.41	10.89
At-home cartoon without captions	15	39.66	51.29	11.63	7.68	12.89
Difference	0	1.17	15.06	+12.79		

It was found that the learners who learned incidental vocabulary using cartoons with captions or subtitles delivered to their parents' mobile phone and learn at-home cartoons from their parents' mobile phone for thirty minutes reached a mean score of 41.83 in the pre-test with standard deviation or SD = 5.41, while their post-test mean score was 66.25 with SD = 10.89. Conversely, the learners who learned incidental vocabulary with the same duration, at-home setting, and media (with and without captions) attained a mean score of 39.66 with SD = 7.68, while their post-test mean scores were 51.29 with SD = 12.89.

Meanwhile, table 5 depicts the results of an independent sample t-test of the two groups. The results are shown below:

Table 5
Independent t-test results

	Levene's test					
	F	Sig	T	Sig. (2-tailed)	Mean Score	Mean Difference
Equal variances assumed	2.157	.146	5.028	.000	66.25	15.04
Equal variances not assumed			5.049	.000	51.29	15.04

From the above table, it can be seen clearly that the significance level (sig. 2-tailed) .000 < 0.05. As a result, it provides convincing proof that H_0 was rejected and H_a was accepted. This could be explained by the fact that there was a significant difference between the children's incidental vocabulary scores based on the two different treatments. The statistics show that children who learned incidental vocabulary from at-home cartoon videos with captions sent to their parents' mobile phones weekly achieved higher scores than those children who learned incidental vocabulary from at-home cartoons without captions with the same duration and media.

Research Question 2 (RQ2): What are children's responses to the implementation of at-home cartoon videos for learning incidental vocabulary?

A five-point scale questionnaire was distributed to the children's parents who participated in the at-home experiments to draw the parents' responses to the implementation of at-home incidental vocabulary learning from their mobile phone for 30 minutes each week. A ten-item question containing the elements of enjoyment (5 items) and difficulty (5 items) was filled out.

Table 6 reveals the result of the questionnaire explaining how parents responded to their children's at-home incidental learning activity using their mobile phones. The results are explained below:

Table 6
Children's opinions about the reception of at-home cartoon videos

Attitude Category	Captioned	Without Captions
Enjoyment		
1. Children enjoy learning incidental vocabulary using cartoon videos	4.5	4.2
2. Children are motivated to learn incidental vocabulary using cartoon videos	4.6	4.5
3. Children can learn incidental vocabulary using cartoon videos	4.5	4.5
4. Children would benefit from using cartoons as a medium to learn incidental vocabulary	4.5	4.5
5. Children learned incidental vocabulary from cartoon videos with captions	4.6	4.5
Mean of means	4.5	4.4
Difficulty		
6. Children are bored with learning incidental vocabulary using cartoon videos	1.7	1.8
	1.7	1.7
7. Children experience stress having to learn incidental vocabulary using cartoon videos	1.8	1.8
	1.7	1.7

8. Children find it hard to learn incidental vocabulary using cartoon videos	1.8	1.8
9. Children gain nothing from the cartoon videos	1.7	1.7
10. Children are unable to learn incidental vocabulary from the cartoon videos with captions		
Mean of means		

The mean results of the questionnaire reveal that both children who learned incidental vocabulary at home from cartoon videos with and without captions through their parents' mobile phones responded positively. Children who learned incidental vocabulary from cartoon videos with captions had a similar mean score to those children who learned incidental vocabulary from cartoon videos without captions. The mean score of the first group comes to 4.5 and of the second group to 4.4. Therefore, it is safe to conclude that cartoon videos with or without captions offered the same enjoyment for them.

Besides, the mean scores of the respondents on the aspect of difficulty using captioned and uncaptioned cartoons videos in learning incidental vocabulary also show similar results (cartoon videos with captions 1.7 and without captions 1.7). Both groups agreed that learning incidental vocabulary from cartoon videos (captioned and uncaptioned) was not difficult for them.

Discussion

The present study has explored children's incidental vocabulary learning in situations using two different treatments of cartoon videos with and without captions learned at the children's home setting (the children ~~t~~ had not taken any English lessons before and parents were reported as unable to speak English). At the end of the experiment, a questionnaire was given to children to draw their responses. The post-test analyzed the children's Vocabulary Knowledge Scale (VKS).

The findings demonstrate that, when provided with at-home cartoon videos for thirty minutes through their parents' mobile phone with English captions, children showed improved incidental vocabulary to a greater extent when they were exposed to cartoon videos with English captions than to ones without captions. In line with research by Teng (2019), cartoon videos with English captions yielded better incidental vocabulary learning gain than those without captions. This result supports other previous research findings regarding the merits of cartoon videos with English captions for children's incidental vocabulary learning (Perez et al., 2014; Teng, 2019). As a result, enhanced incidental vocabulary learning via English caption cartoon videos watched at home seems a plausible alternative for children to autonomously learn English incidental vocabulary. If the aforementioned studies deal mostly with incidental vocabulary learning conducted in a formal setting (classroom, English teacher, and curriculum), this study provides a new horizon where children and parents with no English background can learn vocabulary through cartoon videos with English captions. Cartoon videos with English captions, through combinations of audio, real context images, and English texts help children learn incidental vocabulary more easily than without captions (Bakla, 2018). Most of the previous studies claimed that learning English vocabulary through cartoon videos with captions could happen because the teaching-learning process occurred under specific classroom instruction. Learning English vocabulary in the classroom setting was

considered very different from that process in the home setting. In the classroom instructional setting, the teacher plays his role in facilitating his/her learners to learn English vocabulary. In this case, learners got such exposures not only from the video but from the teachers, classroom, peers, and perhaps from their home or environment that directly or indirectly support their vocabulary enhancement. Conversely, learning vocabulary from captioned videos in a home setting in this study offers a different paradigm where both learners and parents do not have any English background and no additional exposure to learn English, but watching a cartoon video with English captions shown regularly to the learners could enhance their vocabulary.

Another finding shows that children's mean scores for the cartoon videos without captions were lower than their scores for cartoon movies with English captions. This result is similar to previous studies (Bakla, 2018; Perez et al., 2014; Teng, 2019; Winke et al., 2013), where children learned incidental vocabulary through cartoon videos without captions could not obtain comprehensive information to process the inherent vocabulary message. This result also corroborated Teng (2019), whose study asserts that a small percentage of a script (17.45) may not provide enough information on incidental vocabulary learning. That is why no caption cartoon videos in this study echoed a similar result. (Winke et al., 2013) emphasizes the vital role of captions in a cartoon video. This study argues that when captions appear in the cartoon videos, they may draw the children's' attention and the unfamiliar vocabulary items become clear. Conversely, comprehending meaning from the unknown scripts requires more prior knowledge. Therefore, it is very challenging for children who did not have any English vocabulary background (Gass et al., 1998; Winke et al., 2013).

Also, a short duration of cartoon videos (two to five minutes) with captions studied by the children at home for thirty minutes indicated better vocabulary learning than using cartoon videos without captions. This finding echoes a new paradigm that learning foreign (English) vocabulary through cartoon videos with captions provides better vocabulary gain. One of the possible causes is that children have a very short duration of concentration span. This is why they need to be facilitated with short duration cartoon videos. This point has not been addressed by previous studies (Bakla, 2018; Kucirkova et al., 2015; Perez et al., 2014; Winke et al., 2013).

Whereas the previous study conducted by (Kucirkova et al., (2014) examined the potential scaffolding theory through child-parent interaction using i-pad story sharing between children and parents from an English speaking country where no English communication barriers exist, this particular study provides different insights wherein the EFL context, children could learn English incidental vocabulary through cartoon videos with English captions although neither parents nor children had any English background. They learned English autonomously from the cartoon videos (two to five minutes) with captions sent to their parents' mobile phones and the children learned English incidental vocabulary from the cartoon videos.

The second finding of this study indicates that children who learn incidental vocabulary from cartoon videos with captions (two to five minutes) from their parents' mobile phones responded positively to the implementation of cartoon videos as a medium for them to learn incidental vocabulary at home. Two findings are divided into two categories of responses, namely enjoyment, and difficulty. In the enjoyment category, both groups of children who had learned incidental vocabulary from cartoon videos (with and without captions, lasting from two to five minutes) responded positively. In the

difficulty category, neither of the groups showed any difficulty in learning the incidental vocabulary from both cartoon videos with and without captions, although the uncaptioned videos reached a little bit lower mean than those shown with captions. This also indicates that captions attract children's attention to learning incidental vocabulary. Cartoon video images, sounds, and English vocabulary scripts became joyful learning experiences. These findings are similar to previous studies (Perez et al., 2014; Teng, 2019; Winke et al., 2013). They claimed that multimodalities (image, context, sounds, and captions) could enhance children's vocabulary learning and these made them more familiar with the unknown meaning of the vocabulary through these multi-modalities.

Limitations of the study

Some limitations of this research should be considered. First, there were only fourteen cartoon videos (with captions and without) with a very short duration of the video (between 2 to 5 minutes) implemented in this research, with thirty minutes allotted learning time, and the findings indicate different incidental vocabulary learning gains between the cartoon videos. Thus, it would be worth pursuing further research with different types of cartoon, different time allotments, and types of captions to facilitate vocabulary learning.

Second, in this study, the children had a very limited vocabulary size because of the limited cartoon video duration in the children's home setting. Thus, it is suggested that further research examine children's incidental vocabulary learning through various cartoon videos that contain different vocabulary sizes.

Third, the at-home questionnaire session proved a little bit difficult for the children due to their academic language and content. Therefore, the parents are likely to have helped their children fill out the responses. The questionnaire results may have a little bit of intervention from the parents so that their children's responses to the at-home cartoon video learning might not reflect the real children's responses. Therefore, further research needs to consider this particular issue.

Conclusion

The present study offers in-depth empirical support for the potential of incidental vocabulary learning for children through watching cartoon videos. These research findings also have curricular merits. If cartoon videos with captions do contribute to EF/ESL children’s incidental vocabulary acquisition from outside of the classroom (at-home setting), parents and EFL/ESL teachers can use cartoon videos as a source of L2 exposure or input to increase the vocabulary mastery of their children and students. Short cartoon videos also provide enjoyment for children to learn incidental vocabulary at home. The captioning of cartoon videos may also make them relatively effective types of L2 input for incidental vocabulary learning. Moreover, the very short duration of cartoon videos with captions may help children use out class-based (at-home) incidental vocabulary learning with ease. Thus, it is necessary for parents and EFL/ESL teachers to

provide a short duration of video for their children to learn their incidental vocabulary more effectively.

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Appendix 1

Lists of cartoon videos

Week	Cartoon video title	URL
1.	Meet Mittens	https://www.youtube.com/watch?v=EcQbHtq4QFg
2.	Meet Kid	https://www.youtube.com/watch?v=gefdtlrFPyI
3.	Meet Finlay	https://www.youtube.com/watch?v=HFlaBdZdoq0
4.	Meet Otus	https://www.youtube.com/watch?v=nyl5Lx0tujU
5.	Meet the Class	https://www.youtube.com/watch?v=79jsptFNU4M
6.	Meet Bumpy	https://www.youtube.com/watch?v=C636VobLU2s
7.	Meet Timmy	https://www.youtube.com/watch?v=A6g152nu-2w&list=PLDowt1bzYqPc8TP9SOSQ5Jn8lpQToeu2e
8.	Meet Ruffy	https://www.youtube.com/watch?v=qhzY13lfAAY
9.	What's in the tent	https://www.youtube.com/watch?v=QazUuc2ZX08
10.	Healthy Snack	https://www.youtube.com/watch?v=vEPCd3ar8U0
11.	Meet Harriet	https://www.youtube.com/watch?v=wgo7-wWRaQw
12.	Meet Apricot	https://www.youtube.com/watch?v=BNYZltNObHI
13.	Obstacle course	https://www.youtube.com/watch?v=UrKg4ZYU-ec
14.	Counting Flags	https://www.youtube.com/watch?v=ZQy0uJv4aAs

Appendix 2

Vocabulary Knowledge Scale (VKS)

Noun	Levels				
	1	2	3	4	5
1. Tent					
2. Snacks					
3. Goat					
4. Heron					
5. Fox					
6. Owl					
7. Caterpillar					
8. Sheep					
9. Hedgehog					
10. Toys					
11. Mittens					
12. Cookies					
13. Carrots					
14. Rubbish					

Notes: Mark (V) the appropriate column for each word and provide an answer, if necessary
You can write synonyms, translations, and sentences in *Bahasa Indonesia*,

1: I don't remember coming across this word before
2: I have seen this word before but I don't know what it means
3: I have seen this word before and I think it means _____ (synonym or translation)
4: I know this word. It means _____ (synonym or translation)
5: I can use this word in a sentence. e.g.: _____(if you do this section, please also do section