

STORYTELLING SUPPORTED BY TECHNOLOGY: AN ALTERNATIVE FOR EFL CHILDREN WITH LEARNING DIFFICULTIES

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ABSTRACT

This action research aims to investigate how technology improves the conditions of storytelling to help enhance the learning attitude and motivation of EFL children with learning difficulty using power point designs and an online recording system—VoiceThread (http://voicethread.com/). The use of power point designs is to assure children of clear illustrations and print during storytelling. VoiceThread is used to present the story with audio and visual aids to help children review keywords and read aloud simple summarizing sentences. By online practicing, children were more involved in the storytelling and language acquisition process, chances rarely available in the regular class. Twenty Taiwanese EFL children determined learning-at-risk took part in this one-year project; survey questionnaires, storytellers' ethnographic notes, and teacher interviews were collected to examine the progress in terms of their changes in attitude, motivation, and responsiveness to storytelling and English learning. Results showed that the improvement in the task of reading aloud was of small magnitude; their attitude and motivation, however, did improve noticeably in their more active responses to the stories presented using technology and more cooperative behavior in related activities.

INTRODUCTION

This paper describes a one-year remedial storytelling program supported by technology to help enhance the learning attitude and motivation of EFL children with learning difficulty. These children are usually labeled as "underachievers" due to reasons so varied that general remedial interventions are often unsuccessful. Low motivation is the usual explanation for children's lack of success in school, but it is more likely the lack of appropriate methodology and materials that can help motivate their learning interest is to blame. Researchers have argued that learners acquire language by obtaining quantity and quality comprehensible input (Krashen, 1985), and that young children, especially, are not "taught" language in any formal sense along the stages of language development, but acquire it naturally (Chomsky, 1972). Chomsky suggests that adults should encourage children to read and provide them with rich language exposures in "interesting and stimulating situations" (p. 33). Storytelling by adults is considered one crucial step that makes input comprehensible and interesting (Smith, 1988). Therefore, the first question of this study was whether storytelling could serve as a better alternative to help disadvantageous children acquire English.

Instructional technologies involving multimedia tools have been widely used in second language classrooms (Heath, 1990; Meskill, 2005). There also have been trials to use computer for at-risk children who do not seem to be motivated by school based materials and activities (Burns, Griffin, & Snow, 1999; Heath, 1990; Meskill, 2005). Research has found that computer technologies help teachers create a context to "capture and maintain learner attention in ways unlikely to occur offline" (Meskill, 2005, p. 55). The present study, secondly, took the merits of computer technologies to fortify the effects of storytelling for children of similar characteristics in the hope of inciting children's positive change in attitude, motivation and behavior toward learning EFL.

Storytelling and Language Acquisition

Why storytelling? Studies have shown that successful approaches to storytelling, approaches that make the story comprehensible and absorbing, vary according to children's needs, and are tailored to the child's reaction and to the interactional situation between the child and the storyteller. In the studies examining mother-infant dyads, mothers used a variety of elicitation formats during joint picture-book reading with children, e.g. labeling, imitating, expanding, and pointing. These alternatives explain why story reading helps children develop their expressive language, syntactic and vocabulary knowledge (Ninio, 1983; Whitehurst, Falco, Lonigan, Fischel, DeBaryshe, Valdez-Menchaca, & Caulfield, 1988). It has also been found that a picture book reading intervention using these approaches is beneficial to children with low SES background (Akhtar, Jipson, & Callanen, 2001; Lonigan & Whitehurst, 1998).

Regardless of the plethora of studies advocating the benefits of storytelling in L1, research of this sort with EFL/ESL children is rare. One of the handfuls of them is Elley's study in Singapore (1989). It was found that



storytelling resulted in a 15% improvement on vocabulary for ESL children when a story was told once; but their improvement increased to 40% when the story was repeated three times with words clearly explained by teachers. Elley and other researchers maintain that "predictable books" with highly interesting illustrations and repetitive structure and vocabulary are ideal for EFL children's literacy development in the target language (Linse, 2007), believing that EFL/ESL children go through a similar language acquisition process as native speaker children do (Dhaif, 1990). Of great relevance to this discussion is Elley's finding that less proficient children gained at least as much as their more proficient counterparts and that acquisition was confirmed as permanent when measured on a delayed test.

Storytelling as a way of teaching children English has been blooming in recent years in Taiwan. For EFL kindergarteners, Chien and Huang (2000) found that predictable storybooks are effective in building children's oral ability and literacy development. Storytelling is also an equally conducive approach to teaching EFL children of lower ability. Tyan and Shen (2003) reported that less able students were more enthusiastic than their more competent peers about stories read to them by teachers, who helped make the stories more comprehensible. The question that remains is whether storytelling can eventually bring EFL children to the stage of reading independently. The only study that addresses this question is done by Wang and Lee (2007) who documented how 10 EFL children became independent and enthusiastic readers in their fourth year, a phenomenon rarely occurring in language art class in Taiwanese public schools. These children had attended twice-a-week story sessions since grade one, with little English background, hearing stories based on picture books with few words. Starting in year three, a 10 to 15 minute sustained silent reading time was provided. Most children were able to read chapter books, such as *Marvin Redpost* by Louise Sachar.

While Wang and Lee's results may be suggestive because of the lack of an experimental design, one case study with children of low ability has provided more convincing support with language measures and class performance evaluation (Juan & Cheng, 2008). The three children placed in the remedial class read storybooks with a partner who helped explain the story when necessary, three times for each book, for one semester. Results show that all three children improved in the letter identification test, the word recognition test, and the measure of reading accuracy, but one "was able to perform at an above average level in their regular English class after the program was completed."

These studies indicate that the storytelling-to-independent-reading path can serve as a model of EFL classes for children of normal and lower proficiency levels, supporting Trelease's assertion that that read-alouds help build children's aural literacy, which in turn pave the way to independent reading (2006). Once independent reading is achieved, the power of reading will lead the learner higher levels of competence (Krashen, 2004).

The Intervention of Technology

For children in need of special attention and extra help, listening to stories without seeing the illustrations and words could be challenging both aurally and visually. It has been established that illustrations can enhance vocabulary acquisition (Elley & Mangubhai, 1983; Jawitz, 1993). For this reason, "big books" have been developed for the purpose of shared reading in the family or primary education for L1 children (Colville-Hall & O'Connor, 2006). More and more EFL teachers have started to use big books for the same reason, but there are still problems. One problem is physical: For a class of 30 or sometimes more, the teacher has to hold the book, walk around, or place the book in front of the whole class; both are difficult to do. Another problem is the fact that some children have a short attention span. This project attempted to solve the problem by using power point designs. The storyteller can choose the illustrations as well as sections of stories while still maintaining the coherence of the entire story. The story is projected from slides on the big screen in the classroom, and sound effects and motion features are added in order to direct children's attention to the story, the illustrations, and the print. In this way, without holding the book, the storyteller can use his/her body language, voice and gestures to create a vivid storytelling experience, similar to the experience of seeing cartoons or reading manga (See Figure 1).

VoiceThread is an online conversation social network, equipped with a variety of functions and tools for users to create their Internet community, for teachers to design their curriculum, and for learners to do more teacher-directed or self-instructed practices. Because users can practice and listen to themselves repeatedly and revise before publishing their recordings, the VoiceThread system has the potential to give students a greater sense of self-efficacy and task involvement (Ducate & Lomicka, 2009; Stanley, 2006). The main tools applied in this study were the imaging, doodling, and recording functions. On the VoiceThread page, teachers can upload the storylines and pictures as visual aids; then they can record their reading of the story for children to listen to as many times as needed. The doodling function with use of the color marker is designed to direct children's attention along the words and lines. In addition, the icon of each member shown on the same page creates a



feeling of "club membership" (Smith, 1988) and cooperation (See Figure 2), because all children can stay around, hear their peers record their readings, and give support and help.

Using PPT designs to present stories may not be new. The use of the VoiceThread system has also been popular in education at all levels and for many different subjects, including teaching foreign languages (see http://voicethread.com/about/library/ for comments from teachers who have been utilizing the system). No studies have been done, however, to examine the application and usefulness of these technologies for teaching a foreign language to children with learning difficulties. The second aspect of this study thus investigated if using technology helps children comprehend the stories better, improve their learning motivation, and enhance their English learning in the regular English class.



Figure 1. The Power Point Slides of Little Beauty



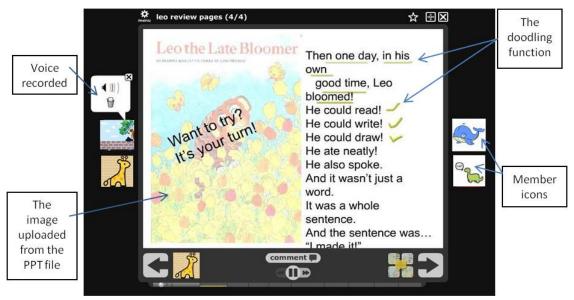


Figure 2. The VoiceThread Page

METHOD

This one year project followed the action research procedure with ethnographic observation and notation to record changes in the children's behavior during the course of the study. The storytelling sessions were held once a week for 35 minutes. A storytelling cycle was designed starting with the storyteller read aloud the story using PPTs, followed by activities to help enhance children's comprehension and interest, and ended with the reviewing and recording practices online.

Pupils

Twenty pupils, 2nd to 6th graders, were "pulled out" from their regular classes to participate in the storytelling sessions. All were recommended by their homeroom teachers and had problems in learning in nearly all school subjects.

The children's family backgrounds were determined through a three-hour teacher interview conducted by the researcher. Eleven out of the 20 children came from families with single parents, mothers from South East Asia and low in Mandarin language competence, or with grandparents as their care givers.

The interviews revealed that the children tended to be uninterested and unmotivated in learning English. They had rarely been read to, either in English or Mandarin, and many of their parents were not readers.

Storytellers

Eight university students, English majors in the Department of Foreign Languages and Applied Linguistics at a national university, were selected to tell stories to children. All of them had taken three courses related to English teaching. They were at the meantime taking other teacher training courses at the Center of Teacher Education during the project. Four of the students had had one year of storytelling experience and could offer suggestions to other storytellers when discipline and emotional problems occurred.

Procedure of Data Collection

Different kinds of data were collected at different stages during the study:

- 1. The first survey with children was done at the end of the first semester (Jan, 2011), aiming to get children's reactions to storytelling and the related activities.
- Interviews with the two English teachers were conducted in the second semester (April, 2011), to obtain further background information for each pupil as well as any changes observed in the regular English class.
- 3. The second survey with the children was done at the end of the second semester (June, 2011) to get more reactions, including their overall response to the weekly storytelling after one year, perception of the impact of storytelling on their English learning, attitudes toward the use of technology and the activities, and their feeling about the storytellers.



4. Storytellers' notes were collected at the end of the first month of the storytelling sessions (October, 2010) and the second semester (June, 2011). These notes recorded children's behavioral, motivational, and attitudinal changes throughout the one year program.

The Storytelling Cycle

There were 12 weeks available for the storytelling sessions, a total of 24 for the academic year. During the first semester, storytellers read and told stories from storybooks, which was followed by review activities (e.g. games, songs, drawing, etc.), and then proceeded with the recording practice with each child. As noted earlier, simple visual presentation of the books were not ideal. When storytellers held the book and acted out the story at the same time, most children were easily distracted and became impatient, complaining that the story was boring. To solve the problem, i.e. to help children concentrate better and view the pages more clearly and comfortably, it was decided to edit the story pages on the power point slides projected to a big white board. The story cycle was thus formed as follows:

- 1. Week 1: Storytellers told a story using power point slides, explaining the story, words or expressions using drawing, translation, or body language.
- Week 2: Storytellers did activities related to the story with children, using songs, games (puzzles, Q & A, TPR, etc.), drawing (hand crafted books), story chain (short sentences, key words), and role play (reader theatre).
- 3. Week 3: Children listened to the story again as well as short sentences that summarized the story on the VoiceThread page, and with storytellers' help children began reading the summary sentences out loud.

At the end of the program, eight stories were read aloud to children, and five recordings were completed. The ratings of the five recordings, however, were unable to show any significant development, due to the fact that some children's voices were too low for raters to give accurate judgments. This part was deleted from the results. Also, recording was not done with the five 2nd and 3rd graders, since the storytellers felt that their English competence was too weak to do this task. Thus, providing input using storytelling was the main task with these lower graders.

RESULTS AND DISCUSSION

Results of Teacher Interviews

The first part of teacher interview was intended to obtain the pupils' family and learning backgrounds and was presented above. In this section, teachers' teaching style and beliefs are discussed.

Both teachers had to follow the school-regulated curriculum using textbooks and would tell one or two stories each semester if time allowed. They acknowledged that children enjoyed hearing stories, but did not seem confident about the impact of storytelling on English acquisition,

"It is really difficult to observe any noticeable change in their English ability with this only-once-a-week storytelling activity."

"Yes! They'll come and tell me what they heard in today's session excitingly; but their test scores are still at the bottom..." (translated from Mandarin)

The teachers noticed, however, that the children became very positive about attending this remedial session after a few weeks. Some children told them about the story they were read to that morning and showed more cooperation in the English class. This attitudinal change and change in their responsiveness have been confirmed by storytellers' observations and pupil interviews.

Results of Storytellers' Observational Notes

Storytellers' notes were collected twice, as previously described. The first set of notes contained information related to motivation, behavior, and attitude. The following were selected from the first set of notes:

"The children did not know why they had to be away from their classrooms. They often complained about the boredom of the stories and wanted to return to their own classrooms to do the homework they were supposed to have finished before coming to school."

"Pupils often ran around the room or fought with others (Tim and Ted), and some just completely ignored the storytellers and played whatever they had brought with them, even a pencil, or strips of papers."

"Three pupils (Rita, Bike, & Ted) told the storytellers that they simply did not like English, no matter what storytellers did."



"Some pupils said they would not come if they had to do recording."

Most pupils exhibited behavioral problems, low motivation and poor attitudes, while others were indifferent.

Notes taken in the second semester revealed a great change in pupils' attitude, behavior, interest, motivation, as well as responsiveness during the sessions:

"Bike initially showed no interest in storytelling, but now gets the keys from the main office and opens the classroom. He has also become quieter in the storytelling sessions and would raise his hands to answer questions."

"Mandy loved stories and told her storyteller that she hoped to improve in English faster. She was now very responsive to the stories and the related games!" (Note: Mandy's English teacher said Mandy was "very" quiet in the regular English class.)

"Pupils were active in taking part in the activities after storytelling, which were often competitive. In order to win the game some pupils helped each other find answers in the stories. Jason would teach Ted how to read when they were on the same team."

"Rita, another child who had hated English, didn't want to take the candy, because she thought that was the last story she'd hear." (Note: Candy and gifts are often given in the last class as a farewell gift.)

"Ted would now ask the storyteller to help him practice the sentence before recording."

"Tim, who had not liked English, now liked both the story session and the English class!" (Note: Tim's teacher did not mention this change in Tim in the interview.)

"David would now visit the school library for the books he was read to before."

"Kevin was much more cooperative in reviewing the sentences and recording his own reading!"

Results of the Two Surveys

The results of the two surveys (Tables 1 and 2) confirmed the changes recorded in the storytellers' notes. The use of power point slides began in the second semester, thus seven questions were added in the second survey to determine how children responded to this new treatment.

Table 1. First survey with pupils after one semester

	Table 1. First survey with pupils after one semester	No	Not sure	Yes			
Abo	About storytelling						
1	Listening to stories help me learn new words.	0	7	13			
2	Listening to stories help me learn new sentences.	1	7	12			
3	Listening to stories help me improve my pronunciation.	0	7	13			
4	Listening to stories make me more interested in reading English stories.	6	8	6			
5	I feel stressed when the story is told all in English.	9	8	3			
6	I prefer the story session to the English class.	4	9	7			
Abo	ut recording						
7	I practice my pronunciation before recording.	2	6	12			
8	I feel particularly nervous before recording.	7	2	11			
9	I feel nervous when listening to my own voice.	11	7	2			
10	I try to imitate my storyteller's pronunciation when recording.	9	6	5			
11	I am happy when I can read a complete sentence when recording.	8	6	6			
12	I like doing recording.	6	1	13			
Abo	About the activities						
13	I like the follow-up games and activities after storytelling.	0	2	18			
14	I like to hear different stories every week.	8	12	0			
15	I like to hear a story followed by activities and games.	0	8	12			
16	These activities or games help me understand the language better.	2	7	11			
About the storytellers							
17	I like my storyteller.	0	2	18			
18	I like to read English because I like my storyteller so much.	9	7	4			
19	I like to come to the story session more because of the gifts given by the storytellers.	5	9	6			



Table 1 shows that the storytelling sessions had changed children's attitude toward English learning to some extent, compared to their initial reluctance and resistance in the first month. Ninety percent of the children liked their storytellers (item 17), but that did not seem to alter some children's negative attitude toward listening to English stories (45%, item 19). It was encouraging to know that five of the children liked to come to the storytelling session not because of the candy given out. Most children liked the activities designed to review the stories, words, phrases, or short sentences (90%, item 13), and more than half of them liked to listen to stories (60%, item 15) and believed that the follow-up activities did help them understand the language better (55%, item 16). Eight children chose not to listen to different stories every week but preferred the activities done in the following two weeks (item14). This result might indicate that these children need more time to digest the story and these activities are successful in boosting their learning interest.

As for the recording activity, 65% of the children now liked doing recording (item 12), and 60% would practice before recording (item 7). Fifty-five percent felt particularly nervous before recording (item 8), but six felt happy, or had a sense of achievement, when they could read a complete sentence (item 11). Five of the children said that they would try to imitate the storytellers' pronunciation when practicing and recording (item 10). Interestingly, one storyteller noted that

"those who were nervous when recording are also the ones who pay more attention to their performance. It reminds me of the 'facilitative anxiety,' or what Krashen called 'optimal' amount of anxiety, that may play a key to successful language learning, or at least better performance."

Generally speaking, after one semester, more than half of the children became more positive toward English storytelling that involved listening and practicing online. Twelve to thirteen children (60 to 65%) believed that listening to English stories helped them learn new words and remember them (items 1 and 2); they also believed that listening to stories helped improve their pronunciation (65%, item 3). Six of the children (30%, item 4) said that they became more interested in reading English stories, and seven (35%) preferred the story sessions to the regular English classes (item 6).

Table 2. Post survey (questionnaire) with children after the second semester

N = 20	Disagree	Slightly	Slightly	Agree	
		Disagree	Agree		
1. Overall response to the weekly storytelling activity					
a. I am no longer that afraid of learning English	3	0	3	14	
b. I have even begun to like learning English	2	0	2	16	
c. I want to attend every storytelling session	2	0	3	15	
d. I like listening to English stories more and more	1	1	5	13	
2. The impact of storytelling on English learning					
a. It helps me do better in English class	1	1	2	16	
b. It helps me understand the class material better	2	2	2	14	
c. English assignments have become easier	3	1	2	14	
d. I have become more interested in participating in	3	1	2	14	
Q&A practice in English class					
e. It makes my teacher's English easier to understand	1	4	3	14	
3. About the technological support					
A. About the use of PPT designs					
a. It helps me concentrate better during storytelling	1	0	1	18	
b. It helps me comprehend the stories better	1	0	5	14	
c. It helps me see the pictures and words in the stories	1	1	2	16	
better					
d. It helps me remember the story better	2	4	3	11	
e. It helps me remember the words better	2	1	4	13	
f. It helps me remember some simple sentences better	2	1	3	14	
g. I become more interested in listening to English	1	3	3	13	
stories					
B. About VoiceThread recordings (N = 15)					
a. I have more opportunity to practice reading (aloud)	3	2	2	8	
b. I pay more attention to my own pronunciation	2	0	1	12	



d. I imitate my storyteller's pronunciation e. I recognize more English words f. I remember some simple sentences better g. I am more likely to respond to questions in the English class h. Reading English (aloud) has become easier i. I am happy when I can read complete sentences when recording j. Listening to stories is becoming easier on the VoiceThread page k. The mobile color markers on the VoiceThread page help me follow along the sentences better l. I feel particularly nervous before recording a. I like the activities and games after storytelling b. The follow-up activities help me review and practice the language in the story c. The follow-up activities help me understand the story told by the storyteller d. The Reader Theater activity is very interesting (for 4th-6th graders only, n = 15)				_	
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f. I remember some simple sentences better g. I am more likely to respond to questions in the English class h. Reading English (aloud) has become easier i. I am happy when I can read complete sentences when recording j. Listening to stories is becoming easier on the VoiceThread page help me follow along the sentences better l. I feel particularly nervous before recording a. I like the activities and games after storytelling b. The follow-up activities help me review and practice the language in the story c. The follow-up activities help me understand the story told by the storyteller d. The Reader Theater activity is very interesting (for 4th - 6th graders only, n = 15)		2	3	1	9
g. I am more likely to respond to questions in the English class h. Reading English (aloud) has become easier i. I am happy when I can read complete sentences when recording j. Listening to stories is becoming easier on the VoiceThread page k. The mobile color markers on the VoiceThread page help me follow along the sentences better l. I feel particularly nervous before recording a. I like the activities and games after storytelling b. The follow-up activities help me review and practice the language in the story c. The follow-up activities help me understand the story told by the storyteller d. The Reader Theater activity is very interesting (for 4th - 6th graders only, n = 15)	e. I recognize more English words	1	0	5	9
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h. Reading English (aloud) has become easier i. I am happy when I can read complete sentences when recording j. Listening to stories is becoming easier on the VoiceThread page help me follow along the sentences better l. I feel particularly nervous before recording a. I like the activities and games after storytelling b. The follow-up activities help me review and practice the language in the story c. The follow-up activities help me understand the story told by the storyteller d. The Reader Theater activity is very interesting (for 4th - 6th graders only, n = 15)	g. I am more likely to respond to questions in the	2	0	5	8
i. I am happy when I can read complete sentences when recording j. Listening to stories is becoming easier on the VoiceThread page k. The mobile color markers on the VoiceThread page help me follow along the sentences better l. I feel particularly nervous before recording 1 0 2 9 4. About the follow-up activities a. I like the activities and games after storytelling b. The follow-up activities help me review and practice the language in the story c. The follow-up activities help me understand the story told by the storyteller d. The Reader Theater activity is very interesting (for 4th - 6th graders only, n = 15)	English class				
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j. Listening to stories is becoming easier on the VoiceThread page k. The mobile color markers on the VoiceThread page help me follow along the sentences better 1. I feel particularly nervous before recording 1 0 2 12 4. About the follow-up activities a. I like the activities and games after storytelling b. The follow-up activities help me review and practice the language in the story c. The follow-up activities help me understand the story told by the storyteller d. The Reader Theater activity is very interesting (for 4th - 6th graders only, n = 15)	i. I am happy when I can read complete sentences	4	1	2	8
VoiceThread page k. The mobile color markers on the VoiceThread page help me follow along the sentences better 1. I feel particularly nervous before recording 1 0 2 12 4. About the follow-up activities a. I like the activities and games after storytelling 0 1 1 18 b. The follow-up activities help me review and 3 0 2 15 practice the language in the story c. The follow-up activities help me understand the story told by the storyteller d. The Reader Theater activity is very interesting (for 4th - 6th graders only, n = 15)	when recording				
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story told by the storyteller d. The Reader Theater activity is very interesting (for 1 0 1 13 $4^{th} - 6^{th}$ graders only, $n = 15$)	practice the language in the story				
story told by the storyteller d. The Reader Theater activity is very interesting (for 1 0 1 13 $4^{th} - 6^{th}$ graders only, $n = 15$)	c. The follow-up activities help me understand the	0	3	2	15
$4^{th} - 6^{th}$ graders only, $n = 15$)					
	d. The Reader Theater activity is very interesting (for	1	0	1	13
	$4^{th} - 6^{th}$ graders only, $n = 15$)				
5. About the storytellers	5. About the storytellers				
a. My storyteller is very friendly 0 0 1 18	a. My storyteller is very friendly	0	0	1	18
b. My storyteller is very patient 0 0 0 20	b. My storyteller is very patient	0	0	0	20
c. My storyteller reads the stories very interestingly 2 0 0 18		2	0	0	18
d. I like my storyteller 2 0 2 16		2	0	2	16

The second survey questionnaire included more items and used a six point Likert Scale, from *Strongly Disagree* (1) to *Strongly Agree* (6). The items, *Slightly Disagree* (3) and *Slightly Agree* (4), were considered equivalent with "*Not Sure*" in the first survey and were intended to probe children's attitude more precisely. In addition, in Table 2, *Strongly Agree* (6) and *Agree* (5) were combined and represented by *Agree*, a definite indicator of children's positive attitude toward the item. Similarly, *Disagree* represented *Strongly Disagree* and *Disagree*. In the original data set, there were more children selecting *Strongly Agree* then those choosing *Agree*.

What Table 2 shows is even more encouraging. It appears that 90% of the children liked the storytelling activity more and even started to like to attend the storytelling sessions. Seventeen to 18 out of 20 (85% to 90%) children felt less afraid of their regular English class and began to like learning English (items 1b and 1c). Since the purpose of a remedial program is to help children do well in the mainstream, it is of interest that most children (80% to 90%) agreed with the statements that storytelling helped them understand class materials and teachers' English in their regular class (items 2a and 2b): they found the class assignments became easier (item 2c); and they became more interested in taking part in the Q & A practice in the English class (item 2d).

The use of power point slides for storytelling began in the second semester. Nearly all of the children (95%) felt that the use of the power point slides had helped them concentrate and comprehend better (items 3Aa and 3Ab). Also, most children found the visual representation helpful for them to remember the words (90%), sentences, (70%), and the whole story better (70%, items 3Ad to 3Af). Four children persisted in their negative opinions about listening to English stories, but the number of children who became more interested in listening to stories and even learning English doubled since the first semester (13-16/20), nearly up to 80% percent (item 3Ag).

More survey items were given to elicit information about how the VoiceThread system helped the children practice reading aloud and learn the target language. Eighty percent or more of the children began to pay more attention to their own pronunciation and more than half were aware that they had more chance practicing reading aloud, a rare opportunity in their regular class (items 3Ba and 3Bb). Listening to stories became easier on the VoiceThread page for 7 children, and 5 children were slightly positive (item 3Bj), possibly because of the mobile color marker moving along the words and phrases that helped them read along (60% to 86%, item 3Bk). Among the older children, most said that the online practices (e.g. listening to the story again and reading the review sentences aloud) helped them recognize more words (60% to 66%) and sentences (73% to 80%), and reading aloud English became easier (66% to 73%, items 3Be, 3Bf, and 3Bh)! Finally, eight children became more



responsive in class and five said they were slightly more so (item 3Bg). Although most felt nervous before recording, many thought that the recording activity was a good chance for them to learn and practice English.

Nearly all children liked the activities that helped them read and understand the stories (95%), and 75% to 85% of the children believed that the activities helped review the story and practice the language (items 4a to 4d). The very last activity was Reader Theater done by the fifteen 4th to 6th graders with the 2nd and 3rd graders the audience. The purpose was to involve all children in reading the lines of the story, *The Giving Tree* by Shel Silverstein. This activity replaced the last recording practice. The children enjoyed the story because they had heard it read to them in Mandarin by their homeroom teacher. Thirteen out of the fifteen children were positive about this activity, even though it involved a great deal of practice.

Comparison between Items in the Pre and Post Surveys

Table 3 shows children's responses to the items appearing in both the pre and post surveys. Results show that the rejection and reluctance seen at the beginning was greatly reduced, and interest and enthusiasm increased: Only one third of the children were interested in English stories after one semester, but twice that number after another semester (30% to 65% and possibly nearly 90%). Surprisingly, more than half of the children felt that listening to stories helped them learn and memorize new words and sentences, even though they were not asked to memorize vocabulary and sentences, after one semester, and several more children agreed with this after another semester (60% to 85%).

Activities, usually games, songs, TPR, or hand-crafted books after a story were done mainly to increase children's enthusiasm for listening to stories in English, and to enhance their motivation in learning English, a mission often fails in the regular class. Children's acceptance of these activities improved noticeably (55% to 85%).

More children tried to imitate their storytellers' pronunciation before recording (25% to 66%), the number of children who felt nervous about recording also increased (55% to 93%). This result could mean that children are getting serious about this practice and need continuing assistance from the teacher.

Table 3. Attitudinal change shown on pre and post surveys

Table 3.7 Reticalitat change shown on pre and post surveys						
13	3Ae. It helps me remember the	13-17				
(65%)	words better.	(65-85%)				
12	3Af. I remember some simple	14-17				
(60%)	sentences better.	(70-85%)				
6	1d. I like listening to English	13-18				
(30%)	stories more and more.	(65-90%)				
12	3Bc. I practice my pronunciation	8-11/15				
(60%)	before recording.	(53-73%)				
11	3Bl. I feel particularly nervous	12-14/15				
(55%)	before recording.	(80-93%)				
5	3Bd. I imitate my storyteller's	9-10/15				
(25%)	pronunciation.	(60-66%)				
6	3Bi. I am happy when I can read	8-10/15				
(30%)	complete sentences when	(53-66%)				
	recording.					
11	4c. The follow-up activities help	15-17				
(55%)	me understand the story told by	(75-85%)				
	the storyteller.					
	13 (65%) 12 (60%) 6 (30%) 12 (60%) 11 (55%) 5 (25%) 6 (30%)	3Ae. It helps me remember the words better. 12				

CONCLUSION

This action research supports the notion that comprehensible input provided in a more informal form—storytelling—helps improve children's attitude, interest, and motivation toward language learning (Chomesky, 1972; Krashen, 1985; Smith, 1988). The design of the story cycle also helped increase their involvement and responsiveness during the activities. These results correspond well with Juan and Cheng (2008) that children, after being helped with their story reading, felt a sense of achievement and rendered more confidence and willingness in the activities requiring language production.

The use of technology in this project greatly improved the storytelling condition and helped children concentrate better and thus learn the target language better, according to children's perspectives. This is consistent with the



scaffolds illustrated in Meskill (2005) in that the use of computer technologies (a) "reduces the size of the task so the child can complete it" (reviewing and recording); (b) "keeps the child's attention in the moment" (PPTs and the VoiceThread page); (c) "makes salient relevant features" (visual and aural representations of the story); and (d) models ways to accomplish" (story listening, reading, and recording). The teacher interview and storytellers' observational notes confirmed that children had made progress during the storytelling sessions as well as in their regular classes. This study does, however, suffer several limitations.

First, as previously mentioned, there had been an intention to measure children's read-aloud performance from their recording practices. This elementary school was located in a remote area with limited bandwidth and related technical support, which made this impossible.

Second, there was no comparison group involved and no measures of language proficiency were used. This group was too small to apply statistical tests, and more important, using any tests, it was felt, would not be appropriate with these children. In addition, adjustments made during the course of the treatment, typical with action research, made it impossible to do a true experiment.

One problem was the children's obvious nervousness about recording. This was interpreted by the storyteller as a concern for their performance. Caution should be taken not to force children to perform before they feel they are ready. It is clear, however, from the children's increased enthusiasm and obvious sense of achievement after recording, that this kind of technology can be of help for children who have not been able to progress at their own pace.

With the necessary technical support, and most important, more books for storytelling and for a longer term of treatment, it is hoped that projects such as this one will result in increased and continuing improvement, so that these children will be able to return to their regular classes as confident learners, instead of being "pulled-out" incessantly year after year.

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