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An Analysis of the Visually-Impaired Students' Satisfaction on English for the Blind Application in Thai Academic Contexts

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Abstract

Thailand has been categorized as a country with low English language proficiency over the past several years in ranking. Moreover, there were obstacles to educate students with disabilities principally in learning English owing to the fact that the office of the basic education commission lacked educational facilities for students with disabilities especially for visually-impaired students. For this reason, the researcher developed an application named "English for the Blind" to assist visually-impaired students in grades 10 to 12 in learning English for communication according to the indicators of 4 strands of learning areas of foreign languages contained in the Ministry of Education's Basic Education Core Curriculum (A.D. 2008), and conducted this study to study satisfaction of the students towards the application. The population for this research project comprised 99 visually-impaired students without additional overlapping disabilities in grades 10 to 12 in the 2021 academic year, chosen by random sampling. This study conducted from August to December 2021, collected through the use of application and an endline survey. This study used the 5-point Likert scale and the score assessment criteria of the Common European Framework of Reference for Languages (CEFR) to interpret the scores. Data were analyzed by mean, standard deviation, frequency, and percentage. The research findings indicated that they were highly satisfied with the content and activities in each lesson, which they felt were appropriate for the learner's levels (\bar{X} =4.43) (S.D.=0.67), and functioned to support the use for the visually-impaired students (\bar{X} =3.95) (S.D.=0.60). In conclusion, the application literally assisted students in learning English



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areas of foreign languages of the Ministry of Education’s Basic Education Core Curriculum (A.D. 2008) for high school students in grades 10 to 12.

Literature review

Previous Studies on Visually-impaired Students and English Language Learning

While reviewing on visually-impaired students and English language learning in Thai contexts, we found that most of the studies overemphasized on the development of tools or application for visually-impaired students and only specific skill (e.g., vocabulary, reading) rather than all four skills (reading, writing, listening, and speaking) of English language learning. For example, the investigation by Phichiensathien and Inpin (2021) have summarized the problems, technology assisted for vocabulary learning for visually impaired students, and useful materials; however, many resources are very difficult to access. Other studies proposed a new approach to English language learning, or application development. Considering this situation, there has been little information available on visually-impaired students, especially in Thai high school levels, as summarized in Table 1. This paper, therefore, aims to examine what are visually-impaired students’ satisfaction on English for the blind application.

Table 1: A summary of literature overview

Author(s)	Year	Results
Sester Retorta, et al.	2017	Visually-Impaired Brazilian Students Learning English with Smartphones: Overcoming Limitations found that after two years of the experiment, all students learned how to use, post, and listen to podcasts, and written texts on applications in both their native language and English.
Susanto, S. & Nanda, D. S.	2018	Teaching and Learning English for Visually Impaired Students: An Ethnographic Case Study revealed that visually-impaired students actually have unique ways of learning English supported by



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allows these students to download the lesson free and use text-to-speech reader on any educational tools, for example, Adobe program.

Data collection and Analysis

1. The data collection was conducted from August to December 2021 in 3 schools for the blind belong to Special Education Bureau, with 99 visually-impaired high school students without additional overlapping disabilities in grades 10 to 12.
2. The researcher asked students to use the application assisted in learning English for communication approximately for 4 months from 1st September to 26th December 2021.
3. After that, the researcher asked students to do the questionnaire on 1st May 2022 after finishing using the application.
4. The researcher rechecked and reviewed the accuracy and completeness of the data and analyzed by using descriptive statistics: frequency, standard deviation and mean score to present these students' satisfaction on the use of English for the Blind application.

Findings

Table 2 presents one of our key findings from the actual study concerning the students' satisfaction on the use of application, "English for the Blind". The results were divided into two categories: lessons and activities and accessibility and functions. The top 3 findings obtained from 99 visually-impaired high school students of two main categories showed that they were satisfied with the contents and activities in the application (\bar{X} =4.43, S.D.=0.67), followed by lessons clarity and accuracy (\bar{X} = 4.36, S.D.= 0.56), as well the lessons corresponding to their educational levels (\bar{X} = 4.26, S.D.= 0.56) respectively. Regarding to the accessibility and functions, these visually-impaired students revealed that the application supported their learning by using text-to-speech readers in the system (\bar{X} = 3.95, S.D.= 0.60), it was user friendly (\bar{X} = 3.94, S.D.= 0.52), and very convenient, accurate and fast (\bar{X} = 3.69, S.D.= 0.46).



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Table 2: The results of the mean, and standard deviation of the students' satisfaction towards the application after attending the experiment

Lessons and activities in the application				
No.	Lists	Mean	S.D.	Interpretation
1	The content and activities correspond to the learning standards and indicators of high education levels.	4.26	0.63	Satisfied
2	The contents and activities in each lesson are appropriate for the learner's level.	4.43	0.67	Satisfied
3	The numbers of contents and activities in each lesson are appropriate.	4.17	0.70	Satisfied
4	The content and activities in each lesson are accurate and clear.	4.36	0.56	Satisfied
5	The content and activities in each lesson are interesting.	4.16	0.50	Satisfied
	Overall	4.27	0.61	
Accessibility and functions of the application				
No.	Lists	Mean	S.D.	Interpretation
6	The overview of the application is simple and easy to use.	3.94	0.52	Satisfied
7	Functions to support the use for the visually-impaired students such as voiceover, talkback, sound system, or braille connection system	3.95	0.60	Satisfied
Accessibility and functions of the application				
No.	Lists	Mean	S.D.	Interpretation
8	Registration or login which is linked to various social media accounts is convenient, accurate and fast.	3.64	0.50	Satisfied
9	Connections to menus or functions in the application are convenient, accurate and fast.	3.69	0.46	Satisfied
10	To access to lessons and activities in the application is convenient, accurate and fast.	3.71	0.47	Satisfied
	Overall	3.78	0.51	



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