

How Mentally Disabled Students Solve Difficulties on Learning English Vocabulary: Technology-Based Learning Material

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Abstract: This study is aimed to develop technology-based learning material to address the English vocabulary learning difficulties of mild mentally disabled students in Sekolah Luar Biasa (Public Special School) 2 Yogyakarta, Indonesia. Specifically, it seeks; the learning difficulties of mentally disabled students in English vocabulary, intervention measures can be proposed based on the identified problems, technology-based learning material can be developed, and curricularly valid technology-based learning material. The research method was qualitative research with instruments used were interviews, observations, and documents supported by curricular validation in statistical terms to check the research product's appropriateness. This research also used descriptive analysis as a method in seeking an interpretation of the data. This research objects were the mild mentally disabled students of 7C consisting of five students; two females and four males (thirteen to seventeen years old). Those were BAA, MA, MRA, MRZ, and ADS. These research findings are that mentally disabled students face more complex problems such as reading (pronouncing) very short and simple English, writing the vocabulary (syllables), and mentioning numbers in English. Besides, intervention measures such as visual aids, concrete objects, and endless practice drills in pronunciation, spelling, and phonetic sounds are useful to increase mastery in English vocabulary. Audio-visual clips aided by technology can promote better recognition of objects, comprehension, and retention. The learning materials developed by the researcher named "Learn English" is very evident in the following criteria: the content learning video clips with the average weighted mean is 4.76. The structure of the video with an average weighted mean is 4.76. All interpreted as very evident.

Keywords: *mentally disabled students, English vocabulary learning difficulties, technology-based learning material*

INTRODUCTION

Learning vocabulary is never easy. It takes some time to learn different languages' different vocabulary and use them according to their intended meaning and purpose. Learning the English language will be as tricky as other native languages without constant practice and

actual use, especially if there are physical, biological/genetic impediments and restrictions beyond medical science control. However, the environmental exposure may directly influence the speed and accuracy of learning the English language, the support of the family, community, media, educational tools, support of organizations, and the culture itself.

(Thornbury, 2002) Mastering vocabulary is the learner's necessity to understand reading materials, conversation, or article in English. Without vocabulary, nothing can be conveyed. Therefore, vocabulary is crucial in learning English because by having vocabulary, students, especially those who are learning English as a foreign language, can use English more easily. It is very different when students have limited vocabulary; they cannot understand English correctly because they can utter the vocabulary. Vocabulary learning is central to language learning, whether the language is first, second, or foreign. In recent years, specialists now emphasize the need for a systematic and principled approach to vocabulary by both the teacher and the learner. Therefore, without mastering enough vocabulary, it would be impossible for people to reach the goal (Thornbury, 2002)

Moreover, students must learn and use thousands of new words in their various subject discipline studies, and they are required to perform complex tasks using new vocabulary (Thornbury, 2002). In preparation for the 21st century, the students in Indonesia would have acquired the competence in speaking the English language despite the limited lessons given once a week. But because of exposure to media and various communication platforms like TV, social media, books, journals, and communication networks, vocabulary competence in English shall be manifested among Indonesian citizens despite varied cultures, ethnicities, beliefs, religions, races, and physical and psychological make-up.

Despite the availability of learning avenues in increasing vocabulary competence, Indonesians feel inferior in speaking the English language though understandably, English is a foreign language to Indonesians. Therefore, much support is needed from the school, family, and community stakeholders, especially to those with special needs in learning basic English vocabulary. English vocabulary must be seen at the macro level as a potential factor for increasing communicative competence because the communication barriers had already been reduced by globalization. The increasing demand for the workforce is evident worldwide as communication facilities converge people worldwide despite physical boundaries.

One essential and potential workforce in Indonesia belongs to the group of people that needs special attention and whose world is different from those exposed to stable environments known as mentally retarded. The question is, will learning vocabulary make these students that need special attention better? Will English vocabulary empower themselves? Will English vocabulary change their lives? The answer is yes.

Special students with learning disabilities are mentally disabled (US; *mental retardation*, UK; *mentally retarded*, while in New Zealand; *intellectually handicapped* and The United Nations (UN); *mentally disabled or intellectually disabled*.). Mentally disabled is someone who has an intelligence below average and is accompanied by an inability to adapt to the behaviors that arise in development. It is a condition before the age of eighteen years

characterized by a weak intelligence (usually the IQ score below 70) and challenging to adapt to everyday life. The main characteristic of Mentally retarded is a weak intellectual function. They are also difficult to adjust and develop. Mentally disabled students are regarded as people who cannot master an age-appropriate skill and do not care for themselves. The learning process for the mentally disabled students is aimed at self-development and socialization, developing students' academic ability optimally to be independent in life, preparing learners to have the basics of intelligence, knowledge, personality, and noble character, providing learners to continue the education level further and preparing learners to socialize in the community.

So, the huge question is how to help mentally disabled students learn English as a foreign language to become assets in the community despite their limited mental capacities. Mentally disabled students also have the opportunity to learn English just as average students do. But learning difficulties prevail because of biological circumstances.

Enriching mentally disabled students' learning resources can increase their learning chances, just as normal individuals do. Providing good education shall expand their horizons, draw respect from others and create an inclusive atmosphere free from discrimination. One is confirmed by article 130 Government Regulation No. 17 of 2010 (Peraturan Pemerintah (PP), 2010) states that; special education for students with disabilities can be held on all paths and types of education in primary and secondary education, the implementation of special education can be done through special education, general education, vocational education, and religious education units, and further provisions concerning special education programs in special education, public education, vocational education, or religious education units as referred to in paragraph (2) shall be regulated by a Ministerial Regulation.

METHODS

Research Design

The descriptive-qualitative study was employed to examine the mentally disabled students' learning difficulties in vocabulary by documenting the teacher's checklist and the researcher's notes. The evaluation was conducted to Seventh Graders of Class C of Sekolah Luar Biasa 2 Yogyakarta in the academic year of 2018/2019. The descriptive-qualitative research design is aimed to explore how mild mentally disabled students learn English *vocabulary*, especially their difficulties in learning English (Baker, 2006). Besides observations, the researcher interviewed and collected documents as secondary instruments (supporting instruments) to the homeroom teacher of 7C Junior High School Sekolah Luar Biasa 2 Special Regency of Yogyakarta, Indonesia. Pictures were taken as proofs of the actual survey and evaluation (Bungin, 2003).

Data Collection Technique

The researcher used a questionnaire checklist to guide the researcher in the investigation's conduct (Sugiyono, 2008). However, the primary source of data was observation reports. The interview was also conducted with the teacher, who provided factual information, then

supported by some documents such as teacher’s note, attendance list, pictures, videos, and lesson plans.

Data Analysis Technique

Recording, picture taking, document evaluation, and observations led to gathering data presented in narratives and pictures. Qualitative data tend to be in the form of words than series of numbers (Sutopo, 2006). The data was analyzed using a descriptive qualitative technique done by the interactive model proposed by Miles and Huberman. There were some steps in this process, and those were data reduction, data display, and data conclusion (Miles, 1992)

RESULTS AND DISCUSSION

The Results of Research

The significant findings of the current research are mentally disabled students found difficulty in identifying, reading, writing, and speaking/ pronouncing English vocabulary words, which refer to objects that are found in the surrounding; the students found it hard to master the skill in memorizing, identifying, and using the English vocabulary; and hard for the students too to use the words correctly in a sentence. Besides, intervention measures such as visual aids, concrete objects, and endless practice drills in pronunciation, spelling, and phonetic sounds are useful to increase mastery in English vocabulary. Audio-visual clips aided by technology can promote better recognition of objects, comprehension, and retention. The learning materials developed by the researcher named “Learn English” is very evident in the following criteria: the content learning video clips with the average weighted mean is 4.76. The structure of the video with an average weighted mean is 4.76. All interpreted as very evident.

Discussion

The Identified Learning Difficulties of Mentally Disabled Students in English Vocabulary
Table 1. The Summary of Students Learning Difficulties in English Vocabulary

Name of students	Reading	Writing	Simple Number Pronunciation
MRZ	Student experienced difficulties in reading English vocabularies, especially in reading aloud. Pronunciation as one of the aspects, <i>[/eraser/]</i> for <i>[/ɪ'reɪsər/]</i> , <i>[/bæg/]</i> for <i>[/bæg/]</i> ,	The student had learning difficulties determining the letter and words written on the whiteboard. He could not write the	The student found it hard to recite numbers 1 to ten in English, <i>[/fɪv/]</i> for <i>[/five/]</i> , <i>[/fɔːr/]</i> for <i>[/fɔːr/]</i> .

	<p>/bʊk/ as vocabulary without [/bɒk/], [/'ma:r.kə/] as the teacher's [/'marker/], [/'pen.səl] guidance. was [/'pen tʃɪl/], [/'waɪt.bɔ:rd/] was [/'wet.bɒd/], [/'bɪr/] for [/'bɜ:d/], [/'tʃʊ/] as [/'kəʊ/].</p>		
<p>BAA</p>	<p>The student was incorrect and slow in reading English vocabulary. He had to see the example several times to obtain the written spelling.</p>	<p>The student was incorrect and slow in writing English vocabulary.</p>	<p>BAA experienced errors in mentioning English numbers <i>six</i> 6) and <i>nine</i> 9) because the numbers had an almost similar form. He was only able to mention numbers <i>one</i> 1) and <i>two</i> 2) without the teacher's guidance.</p>
<p>MA</p>	<p>Student experienced difficulty in understanding English alphabet, so he was constrained in reading English words, for instance [/'eraser /] for [/'reɪsə /], [/'beg/] for [/'bæg/], [/'book/] as [/'bʊk/], [/'maker/] for [/'ma:r.kə/], [/'penseɪ/] for [/'pen.səl], [/'wɒt.bɒr/] for [/'waɪt.bɔ:rd/], [/'bɜ:d/] for [/'bɪt/], [/'el.pən/] for [/'el.ə.fənt/], [/'gʊt/] for [/'gʊt/].</p>	<p>MA cannot write words properly. The students also forgot the importance of using spaces, dots, commas and other punctuation marks. Student was constrained in the consistency of distance between letters in words and sentences.</p>	<p>Student found it difficult to read numbers one to four in English.</p>
<p>MRZ</p>	<p>Reading and pronouncing words are difficult for MRZ; [/'ereser /] for [/'reɪsə /], [/'bek/] for [/'bæg/], [/'bɒk/],</p>	<p>Student's writings skill is poor. He cannot imitate the word/words written by the teacher.</p>	<p>Student experienced difficulty in imitating numbers in English. He was incorrect to say numbers properly, e.g. [/'a:n/] for [/'wʌn/], [/'tu:wo/] for [/'tu:/],</p>

[/bɒk/],[/ˈmɑːrkə/]
 for [/ˈmɑːr.kə/],
 [/ˈpɪnsəl/] for [/ˈpen.səl],
 [/ˈwɒt.bɔːrd/] for
 [/ˈwaɪt.bɔːrd/], [/ˈkæɪrət/]
 [/ˈkæɪrət/], and [/
 toˈmɑːto /] as [/təˈmeɪtʊ
 /] [/bɜːrd /] into [/biːrd
 /], [/kæʊ /] into [/kɒʊ /],
 and [/ˈelɪfənt/] into [/
 ˈelepen /].

/triː/] for [/θriː/], [/faɪv/] as
 [/faɪv/], etc.

ADS

Students ignored the function on phonetic sounds. She was experiencing difficulty in imitating the teacher's reading drill as focused in pronunciation. She also pretended to bubble to spell letter/ and words. For instance; [/bæg /] as [/ bag /], [/pensl /] as [/pencil /], [/bɒk /] as [/ bok /], [/gɒt /] for [/ gʊd /], [/bɜːrd/] into [/be:t /], [/ˈtʃɪkɪn /] as [/ ˈtʃɪkən /], [/kæʊ /] to be [/ ˈtʃoʊ /], [/ˈelɪfənt /] to be [/elɪpan /].

ADS found it difficult to write a single word or phrase at a time (in imitating the writing), the informant required repeated actions to write one word in English. Besides taking time to write English words, the student also skipped the letters of some words. She wrote *elephant* on the word *elephant*, she wrote *chickn* on the word *chicken*. She needs more practice in spelling and writing.

In mentioning numbers, she was not able to imitate the teacher's drill surely well. Repeating in wrong reading was often found, for instance for saying [tuwo/] for [/tuː/], [/faɪv/] as [/fɪv/], etc.

This study was anchored from Nation's Vocabulary Learning Theory and the Theory of mentally disabled students.

The first, Nation's Vocabulary Learning Theory as cited in (Alqahtani, 2015) argues that in English as a second language (ESL) and English as a foreign language (EFL) learning vocabulary items play a vital role in all language skills (i.e., listening, speaking, reading, and writing). One means that all English skills need vocabulary as the crucial foundation in building English mastery. It is like the bridge to send the knowledge in English, so the information will be sent and received clearly. For much of the last half-century, therefore, the consideration of

vocabulary in the process of language learning, testing, and teaching appears to have been sidelined.

The next theory is the theory of mentally disabled Students' Learning by (Somantri, 2007) explains *that* Mentally retarded or also known as *mental retardation* (English terminology) is the condition of the limitations in intelligence that makes children are indicated as feels challenging to follow education programs in ordinary schools classically, therefore Mentally retarded requires special educational services that are suitable with the ability. Usually, the IQ score of mentally disabled students is below 70. This condition makes them in mental capability as in adaptive activities, challenging to adapt activities to everyday life. They can not master an age-appropriate skill because of the lack of cognitive (IQ).

From those theories above, the researcher proposes his approach, which is connected to them, called **Tech-Based VLaMTS**. It stands for the researcher's nickname; *Tech-Based VLaMTS* is the acronym of *Technology-Based Vocabulary Learning Material for mentally disabled Students*; *Tech-Based* is Technology-Based, *V* stands for vocabulary, *La* is for learning, *M* is for material, *T* is for Mentally retarded, and *S* leads for students. This theory centers on developing technology-based English vocabulary learning material to address the vocabulary learning difficulties of mentally disabled students. This theory tells that learning is made possible despite biological/ typical limitations with technological aids.

The Intervention Measures Based on the Identified Difficulties, The researcher summarized some interventions to face mentally disabled students' difficulties in learning English vocabulary by those supporting statements.

Giving Daily Drills. The teacher may have a vocabulary drilling program that applies every day. For instance, the teacher provides five vocabularies before the class started. The teacher reads them while the students imitate the pronunciation repeatedly.

Changing the Learning Methodology from Passive to Active. The teacher allows the students to have self-learning where they can develop their ability by finding new knowledge. The learning is more focused on the students' center.

Doing Field Trips. The teacher visits tourism places where there are many English native speakers there. They can observe or have a simple conversation with them. Besides, students and the teacher can have a holiday to some countries using English as L1 or L2. The students can learn from them or at least feeling the English atmosphere while having fun.

Using the Technology-Based Material in the form of Learning Video Clips. It is learning video clips created by the author to facilitate the learning process in English vocabulary. This media is crucial in the form of a themed video consisting of eight themes. The researcher

supports an explanation based on the research and experts to give a more deep description; the importance of learning video clips.

English Vocabulary Learning Materials (Learning Video Clips); *Learn English Vocabulary*

This section presents the learning video clips media developed by the researcher based on the mild mentally disabled students who have difficulties learning English vocabulary. The video clips consist of eight themes: *things in the class, animals, fruits, transportation, kitchen tools, vegetables, solar system, and numbers*. This sustainable media is named “*Learn English*.” The themes are usually found in students’ daily life up the electronic media they use to grab information.

Those learning video clips are presented in a compact disk containing an animation character named Andrew, which invites students to learn vocabulary collaboratively. The learning media includes several vocabulary based on the theme, how to pronounce the words, and spell the words by letter completed by the mentioned object. It is also designed using an interesting animation effect that can encourage students’ motivation to learn while also completing cheerful music suitable for mild mentally disabled students to learn English vocabulary more fun. The learning video clips are pictured in the form of a screenshot, which represents the whole material.

These screenshots are put in the handled book and used as guidebooks to use the learning video clips. Besides that, the guidebook can be used to make the learning easier, accompanied by the video served.

Curriculum Validation of the Development of English Vocabulary Learning Video Clips

The five psychology instructors conducted the curricular validation in the University of Saint Anthony (USANT), Iriga City, Philippines, regarding the learning video clip with the title “*Learn English*.” The validation indicators were inspired by (Tomlinson, 1998) are divided into two parts; the content of the materials and the structure of the learning video clips.

The Materials Content result showed that in indicator 1, the Weighted Mean is 4.8, which means that it is Very Evident (VE). It is followed by indicator 2 with 4.8 (VE), indicator 3 with 4.6 (VE), indicator 4 with 5 (VE), and indicator 5 with 4.6 (VE).

The data showed that the average weighted mean for the *Content of learning video clips* is 4.76. It can be inferred that the task's content is at the level of very evident (VE). It also means that the learning video clips have appropriate content and can be used for merely drilling students’ English skills.

Meanwhile, in the learning video clips structure, it can be inferred that all indicators show the Very Evident (VE). The result of indicator 1 showed that the weighted mean is 4.8, which means that it is Very Evident (VE). It is also followed by indicator 2 with 4.8 (VE), indicator 3 with 4.8 (VE), indicator 4 with 4.6 (VE), and indicator 5 with 4.8 (VE) as well.

The data showed that the average weighted mean for the structure of the video is 4.76. It can be concluded that it is evident that the learning video clips have been suited to the requirement of the structure of a learning media (especially learning video), which can be used as the learning media in drill students' English skills.

Based on the result, the researcher may imply that the English vocabulary learning video clips, *Learn English with Andrew*, referring to the result of the content and structure validation, are valid and fulfil the requirement of an appropriate English learning media. The video can be used and implemented in the teaching and learning process to develop students' English ability.

CONCLUSION

Based on the findings, the following conclusions were drawn; the mentally disabled students find it challenging to learn English vocabulary. Intervention measures are needed to increase students' mastery in learning English vocabularies, technology-based teaching, and learning aids the learning English vocabulary. The learning material entitled "*Learn English*" is curricularly valid.

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