

Understanding the Visual Impairment Student's Epistemic Beliefs With Low English Lexicons Spelling Competence

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Abstract—Learners with visual impairment have different way of acquiring and understanding written material. The learners with visual impairment learn through listening then memorizing the sounds as it is sounded. While writing, both of nondisabled learners and learners with visual impairment urge to recall the words that have been memorized. Learners with no vision will have more difficulties to write the letter because blind encode syllables by the sound as unity of word. The reading problem will affect their writing especially spelling. Since blind encode syllables by the sound as unity of words, they tend to write the words as it is sounded. This affects their English spelling since English words do not spelled as it is sounded. Factors contribute to the spelling errors committed by blind student are lack exposure to the words' formation, inherent of language (silent letter, homophone and borrowing words), different characteristics of L1 and L2, and student's preferences on reading (use-screen readers more than braille text). Research shows that the beliefs individuals hold about knowledge and knowing (epistemic beliefs) influence learning approaches and outcomes. However, little is known about the nature of visual impairment student's epistemic beliefs and how best to measure these. In this case study, one postgraduate student who are visually impaired was asked to spell 50 English words which are closed to their characteristics as the student with different abilities. Interviews also enabled the participant to describe wider range of his epistemic beliefs. These results indicate that although the visual impaired student has low English lexicons spelling competence, surprisingly he has sophisticated epistemic beliefs which holds implications for further research.

Keywords—visual impairment, epistemic beliefs, English lexicons

I. INTRODUCTION

A heavily reliance upon visually presented information is commonly utilized as classroom instruction. These include chalk and talk (teacher make gestures or talks during drawing or writing on white board or display handouts or slides with data, diagrams, graphs, or animation). Indeed, visualization has become one of standard tools for learning English as a foreign language (EFL) many important concepts, like linguistics aspects, especially spelling. Spelling, the art of right gathering words from their texts, is one of the important elements of successful EFL learning. Being convinced in spelling leads to self-confidence in all aspects of skills. The ability to recognize the connections between language of the same origin and understanding language relationships has

been demonstrated to improve understanding skills. Research has discovered that spelling, speaking, writing and understanding skills are all closely related. The research survey conducted by [1] for the Scientific Study of Language discovered that spelling education improves language knowledge, as it builds the novice knowledge of the alphabetic method as it is used in reading.

Spelling difficulties may be suffering at students with visually impairment, sometimes even after EFL has been successfully remediated. Addressing spelling difficulties is critical, because poor spelling may hinder writing and may communicate a negative impression even when the subject of the work is excellent. The fundamental form of knowledge which is needed for better English spelling requires phonic knowledge or knowledge of general letter-sound relationship [2]. Spelling difficulties occur when students are unable to accurately segment and combine the sounds in texts, for instance, if students do not understand that words has three distinct sounds, they cannot accurately spell it due to several disabilities, like visually impaired. Since they learn English language mostly from audio instructional media.

In relation to EFL learning, every learner owns epistemic beliefs which bring impact to their learning process, and somehow predict their learning success. Epistemic beliefs are beliefs about what is learning EFL and how to learn EFL, which can be categorized into low level (simple) and high level (sophisticated). Sophisticated epistemic beliefs are believe that students' capacity of knowledge can be improved through practice, they think that it is acceptable to make mistake during learning process since their learning style is process oriented. In the other hand, students with simple epistemic beliefs will prefer to learn something by the given materials only, they are tended to be result oriented learners since they are not allowed to dispose mistakes while learning[3]. Thus, students with simple epistemic beliefs which prefer to learn by receiving materials given only, whereas, students with sophisticated epistemic beliefs which prefer to learn by solving problem or exploring knowledge. Considering the fact that many visually impaired students posses sophisticated epistemic beliefs, the present study is an attempt to address a gap in our knowledge by examining their spelling competence.

II. MATERIALS AND METHODS

The study focuses on single subject to be researched which is a blind EFL learner. This study uses qualitative approach by case study design. Data collection is done by collecting subject's spelling composition. The data is analyzed by spelling errors of NFER's classification (National Foundation for Educational Research) there are Omissions, Substitutions, Insertions, Transpositions and, Grapheme substitution. After the spelling skill is found out then an epistemic belief questionnaire is addressed to the subject. The questionnaire uses to measure whether the subject has high, average or low epistemic belief in learning the instrument adopted from [3].

III. RESULTS AND DISCUSSION

Based on the results of epistemic beliefs measure, it revealed that the visual impaired student owns sophisticated epistemic beliefs, which means he has several criteria as EFL learner, such as (1) students with sophisticated epistemic beliefs believe that EFL learning is tentative or dynamic; (2) sophisticated students also believe that EFL learning can be improved over time since they believe that learning source can be from anywhere not only from teachers; (3) they tend to be involved in scientific approach while learning; (4) students' aptitude does not matter since they believe that everyone can learn EFL from the beginning; (5) in EFL learning process, sophisticated students prefer for being process oriented learner which means no problem for making mistakes while learning; and (6) sophisticated students are EFL learning by opportunity. So, those characteristics were revealed from the participant of the study, the visually impaired student.

Next, the spelling competence which was based on the analysis using NFER's (National Foundation for Educational Research) spelling error classification which are Omissions, Substitutions, Insertions, Transpositions and, Grapheme substitution, out of 5 types of errors, the subject faced 4 errors which are Omissions, Substitutions, Insertions, and Grapheme substitution. The results showed that error of Grapheme substitution was the highest portion of the error. Based on the analysis it is mostly caused by combination of external and internal information of phonetic knowledge because of deficit of visual memory so that, the subject spells words phonetically that are no phonetic in configuration. If it is compared to sighted student who learn English according to the previous study conducted by [4], it was found that errors of omission constituted the highest proportion of errors. It is caused by learners often associated a wide range of vowel and consonant combinations in an attempt to spell words accurately, sometimes even combining two distinct lexical items by overlapping vowels.

This study also found that blind learner which does not read braille in target language is more challenging to write because he does not have much direct exposure to the words formation resulting spelling errors. Words formation need to be obtained because it is skill to organize the words. It is in line with [5] that spelling ability is more closely related to organizational habits and other personality traits than our intelligence. So, it means that organizational skills influence spelling ability.

Instead of remembering the letters, the subject encodes the syllable of each word because he recognizes words as it is sounded. This challenge the blind to spell the words that he already heard to the letter without experiencing to the letters directly. It can be assumed that blind who learn English with braille would have better spelling. It is proved by previous study conducted by [6]. They compare the spelling skills of students who are braille readers to a normative sample. The test of written spelling was administered to the 23 students who are blind at various grade levels to ascertain their spelling ability. The result indicates no significant difference in spelling ability of both type of students. Thus, blind who is supported by braille and sighted students have equal ability in writing.

In this study, there are some factors contribute to the spelling errors committed by blind student. Based on the analysis and discussion, there are lack exposure to the words formation, inherent of language (silent letter, homophone and borrowing words), different characteristics of L1 and L2, and student's preferences on reading (use 'screen reader' more than braille text). The explanation elaborated as follows.

First, the subject is lack exposure to the word formation. The subject of the research does not use braille in exploring target language. Auditory input provides another way students can gain information. Auditory language triggers the creation of mental images that correspond with words [7]. Further, [7] states that when words have low-quality referential models this crucially affects the acquisition process of reading and writing skills. Visual impairment children learn to read complete configurational units (e.g. words), and whatever the visual channel gets in incomplete or unclear form, the mind completes by using additional external (e.g., acoustic, contextual) and internal (e.g., a previously stored word-model) information. Visual impairment children acquire writing by a similar "completion strategy", and the resulting combination of incomplete input information and often non-reliable, previously stored information, appears to be a frequent source of spelling mistakes or errors. In this study, the subject combines external (the words he heard) and internal (previously stored word-model both L1 and L2) information resulted in error spelling.

Second, inherent of language can contribute error spelling. It appears that English is one of the most difficult modern languages to learn to spell because of the evolution of word pronunciations over the centuries; the existence of many silent letters; the plethora of homonyms; the numerous rules for adding prefixes and suffixes, creating plural forms, and hyphenating words; and the hodge-podge of words from other languages that comprise it. The inherent language that subject faced are silent letter, homophone and borrowing words.

Third, the subject whom researcher observed do not consider that the fact the both Bahasa Indonesia (L1) and English language (L2) have completely different characteristics on writing system. It is considered that phonological systems of both languages *Bahasa Indonesia* (L1) and English language (L2) have some differences. It puts learners of L1 in much difficult in learning L2, particularly in learning sound systems since L1 has its own sound systems that are different from any other languages, and so does L2. Since blind encode syllables by the sound as unity of words, they tend to write the words as it is sounded. This affects their

English spelling since English words do not spelled as it is sounded.

Lastly, student's preferences on reading which use _screen reader' more than braille text to gain target language is affected to the spelling ability. Generally, in reading text, readers gain spelling information but the subject only gains the sound of the words, that way, blind loss word formation in reading. It is supported by [8] while the content is available in both cases, orthographic information is lost when text is read by a screen reader. In this case of writing words, the writers could have drawn on their spelling knowledge, which was marked by their effort to correspond grapheme with phoneme. Thus, the lack of orthographic information cause by student's preferences can affected the errors in writing. Thus, these factors could have contributed to the omission, substitution, insertion, transposition and grapheme substitution errors of the subject.

IV. CONCLUSION

The principal conclusion of this study is that although the visually impaired students owns sophisticated epistemic beliefs, these do not guarantee the students to outperform in his spelling competence. His low level competence for spelling is caused by several factors including his inability to word formation exposures, English language has spelling arbitrariness, differences between L1 and target language learned, and his reading preferences which used audio software most of the time. Therefore, it is important to the visually impaired students to be equipped with braille competence so that visually impaired students can experience EFL spelling arbitrariness through technology assisted tools.

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