

The Contribution Of Higher Order Thinking Skill And Morphological Awareness To Reading Skill

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Abstract: This research aimed to find out the contribution of: (1) higher order thinking skill to reading skill; (2) morphological awareness to reading skill; and (3) higher order thinking skill and morphological awareness simultaneously to reading skill. This study used a correlational method with a cluster random sample of 35 students of the fourth semester students a University in Surakarta. The researcher used objective tests as the instrument to collect the data. Single and Multiple Linear Regression and Correlation were used to analyze the data. The research findings show that: (1) higher order thinking skill brings 33.25% contribution to reading skill; (2) morphological awareness brings 42.02% contribution to reading skill; and (3) higher order thinking skill and morphological awareness simultaneously bring 58.90% contribution to reading skill.

Keywords: *contribution, higher order thinking skill, morphological awareness, reading skill*

INTRODUCTION

Reading belongs to receptive skill which needs high focus and concentration. For this, many people think that reading is not an easy matter. During the process of reading, sometimes learners use some strategies, Mohammadi, Heidari&Niry (2012: 192) argue that there are many factors to give influence in reading strategies such as self-efficacy, motivation, gender, learning style, and critical thinking. Thus, students are recommended to think critically to evaluate the text when they read. In the reading skill, the readers will face complex interactions with the text, setting, purpose, motivation, background knowledge, and comprehension (Elangovan and Chia, 2013: 2). Thus, they are recommended to be a critical thinker to evaluate the text and confront the complex interactions above.

This claim is best manifested by Shriner (2004: 63), who states that critical thinking in reading, specifically, equips student to analyze and figure out the logic of an article, essay, or chapter and to evaluate an author's reasoning. Critical thinking has been one of the hottest issues in the field of education. Astleitner (2007: 53) said critical thinking is a higher-order thinking skill which includes evaluating arguments, and is a purposeful, self-regulatory judgment which ends in interpretation, analysis, evaluation, and inference. Hence, this research was focused on critical thinking as higher order thinking skill point of view. Heong (2011: 121) says that higher order thinking skills is an important aspect in teaching and learning. Thinking skills are fundamental in educational process.

The next major issues that arise with regard to the aspect which surely influences reading skill include vocabulary (word knowledge), reading need vocabulary as well as thinking and reasoning (Pang, et al., 1986: 14). Sometimes, readers find some words which are not understandable when they read a text. Thus, students need larger knowledge of word to overcome that problem. There are some factors that influence the vocabulary, and morphological awareness becomes one of them. Khodadoust, et al., (2013: 60) state that the more morphological awareness the learners possess the more easily they foster their vocabulary. So, morphology is considered to be one of the factors which positively correlate with reading skill. For more clarification, Simanjuntak (1988: 23) states that word attack skill includes morphological information dealing with how the reader can tackle the unknown words, and it becomes one of sub skills that can establish a reading skill for students

Despite many factors that influence reading skill above, the researcher highlights the link of higher order thinking skill, morphological awareness and reading skill in this research. Hence, the purpose of this research can be stated to investigate the contribution of: (1) higher order thinking skill to reading skill; (2) morphological awareness to reading skill; and (3) higher order thinking skill and morphological awareness simultaneously to reading skill.

The definition of reading skill has undergone through many improvements. Reading skill is a skill to comprehend, interpret, evaluate, and extend the meaning accurately and effectively by recognizing the letters and phonic elements in the written or printed text. Yildirim (2013: 79) says that reading skill is the ability to extend meaning from text accurately and effectively. In the

same path, Dallman, et al., (1964: 37) argue that reading skills are skill to recognize letters and phonic elements, skill to discover familiar elements in the longer unfamiliar word, skill to the main idea of a longer passage, how to adapt approach and speed of reading both the nature and the material read. Reading skill is acquired by learners in language learning to enhance the comprehension and the retention of the information inside the text. Reading skill is used to get some information, meaning, and message from the writing.

Higher order thinking is difficult to define but easy to recognize when it occurs. Higher order thinking skill is the complex and effortful intellectual thinking skills where people have to activate their minds in order to understand the hidden meaning from the information introduced to them. In fact, various definitions of the term higher order thinking skills are provided by several people who are interested in the field. Resnick (1987: 44) argues that the higher order thinking is a cluster of elaborative mental activities requiring nuanced judgment and analysis of complex situations according to multiple criteria. McDavitt (1993: 11-12) says that higher order thinking skills is skills to analyze, synthesize, and evaluate in requiring mastery of previous levels.

Morphological awareness refers to the awareness of and the meaning and structure of morpheme in relation to words or the ability to distinguish the structure of morphemes, and includes knowledge of inflectional and derivational morphemes (McBride-Chang, Wagner, Muse, Chow, & Shu, 2005: 417). It is relevant to any word that contains more than one meaningful units. It facilitates the learning of words that are correlated to others by prefixation, suffixation, or compounding. Therefore,

morphological awareness might also play an important part in constructing the meaning of a text.

When the related literature is viewed, it can be seen that there are some studies about the correlation of higher order thinking skill and reading (Fahim and Kamali, 2011; Hosseini, et al., 2012; Zohar & Dori, 2003) and the correlation between morphological awareness and reading skill (Apel, et al., 2013; Pike, 2011; Verhouvern and Perfetti, 2011). The research about higher order thinking skill, morphological awareness and reading skill gets much attention from some researchers. It is proven by the existence of many recent studies about it.

The following hypotheses in this research were outlined and examined: (1) there is a contribution of higher order thinking skill to reading skill of the fourth semester students of English Education Department of a University in Surakarta in the academic year 2013/2014, (2) there is a contribution of morphological awareness to reading skill of the fourth semester students of English Education Department of a University in Surakarta in the academic year 2013/2014, and (3) there is a contribution of higher order thinking skill, morphological awareness simultaneously to reading skill of the fourth semester students of English Education Department of Sebelas Maret University.

RESEARCH METHODS

The research had 35 student-respondents which were selected randomly from the fourth semester students of English Education in a University in the academic year 2013-2014. The tests were administered at English Education Department of a University in Surakarta over two days to minimize fatigue. Researcher used tests to

measure students' reading skill, higher order thinking skill and morphological awareness. The tests were the objective test in the form of multiple choices test. Before administering the tests, the researcher explained about the test instruction and the purpose of this research. First day of testing was higher order thinking skill and morphological awareness test. The higher order thinking skill test lasted for about 120 minutes. After doing the higher order thinking skill test, the students were asked to do the morphological awareness test for 100 minutes. The second day testing was reading skill test to measure students' ability in reading for about 120 minutes.

RESEARCH FINDINGS AND DISCUSSIONS

In this part of the research, the correlation between students' higher order thinking skill and their reading skill, the correlation between students' morphological awareness and their reading skill and the correlation between students' higher order thinking skill and morphological awareness simultaneously, and their reading skill were presented. The results showed that participants' higher order thinking skill, morphological awareness, and reading skill scores are normally distributed. So, the statistical tests of three variables in this research were valid and there is no diffraction especially in the small sample. The result of regression is linear and significant. So, the rise and the fall of reading skill followed linearly by the rise and the fall of higher order thinking skill and morphological awareness.

When examining the simple correlations associated with the regressions, the researcher noted that performance of higher order thinking skill was significantly related with performance of reading skill (r

= 0.576, $p= 0.05$). It means that there is a moderate positive correlation between the two variables. In order to investigate the correlation between morphological awareness and reading skill Pearson Product-moment correlation was also computed. The result showed that the correlation coefficient ($r = 0.648$, $p= 0.05$) is statistically significant. This means that there is high significant correlation between morphological awareness and reading skill. The multiple regression was run to assess the correlation between higher order thinking skill and morphological awareness simultaneously for their reading skill. It was found out that students' higher order thinking skill and morphological awareness simultaneously were significant predictors of students' reading skill and approximately 58.90% of the total variance for students' reading skill was explained by their higher order thinking skill and morphological awareness simultaneously. This means that there is significant correlation ($r = 0.766$, $p= 0.05$) between higher order thinking skill and morphological awareness simultaneously and reading skill.

For the first aim, the researcher was interested in determining whether there is a correlation between higher order thinking skill and reading skill. Based on the findings, the good reading skill of students is consistent with their higher order thinking skill. Students who have more correct answer on reading test in part of finding main idea, identifying the implicit information, and defining meaning of word based on the context, also have high higher order thinking skill score. Meanwhile, students who just understand about the explicit information can be classified that they lack of the higher order thinking skill. The result confirmed that there is a positive significant correlation ($t_0= 4,05493 > t_c=$

0.149) between higher order thinking skill and reading which is in line with Hosseini et al., (2012: 1361). That research came to the conclusion that test takers with higher order thinking skill are paralleled by improvements of reading skill ($r=0.905$, $n=70$, $p=.000$). While, Fahim and Kamali (2011: 107) has also found the levels of higher order thinking skill have significant effect ($r=0.79$) on the performance of the subjects on the reading comprehension. The correlation of higher other thinking skill and reading skill in this research was lower ($r=0.576$) than those previous studies. However, it can be seen that higher order thinking skill appeared to be a significant predictor of reading skill.

The second aim was finding out the correlation between morphological awareness and reading. For the second aim, the morphological awareness performance was assessed by inflectional, derivational, and compound words was correlated positively with the performance on reading skill. Reading skill needs morphological awareness because morphological awareness deals with understanding of the smallest of word part (morphemes) and it is used to tackle the unknown word in the text. It was in line with (Simanjuntak, 1988). Based on the computation, it showed that 42,02% variance of Reading skill was determined by morphological awareness. While, based on Apet, et al., (2013: 52) morphological awareness accounted for an additional 17% unique variance on reading comprehension. It was lower than this research and it might happen because of the sample differences. This research took college students as the respondents and Apel, et al., took young learners as the respondents.

The last result said that there is a positive correlation between higher order thinking skill and morphological awareness

simultaneously, and reading skill. It can be seen that the students can answer the reading skill test better than students who have lower score of higher order thinking skill and morphological awareness. Reading skill involves many aspects, morphology and thinking skill. Students who think critically and aware with the smallest part of word, they will know the meaning and understand message inside text, it can be said that they will comprehend the text automatically. It means that they will improve their reading skill by morphological awareness and higher order thinking skill. In the light of the data gathered, it can be stated that both students' higher order thinking skill and morphological awareness appeared to be significant predictor for their reading skill.

CONCLUSION AND SUGGESTIONS

The empirical analysis shows that there is a positive correlation between higher order thinking skill and reading skill, there is a positive correlation between morphological awareness and reading skill, and there is a positive correlation between higher order thinking skill and morphological awareness simultaneously, and reading skill of the fourth semester students of English Education Department of a University in the academic year 2013/2014. Judging by quantity, the morphological awareness brings more contribution (42.02%) to reading skill than the contribution of higher order thinking skill to reading skill (32.25%). With regard to the result, the higher order thinking skill and morphological awareness simultaneously brings the highest contribution to reading skill (52.90%).

The first suggestion would be directed to teachers or lecturers, they should teach higher order thinking strategies like analyzing, evaluating, and creating in their

reading teaching. It means incorporating higher order thinking skills to students' learning process help them be independent and responsible in their own learning. Also, teaching higher order thinking strategies would observe the progress of the students on their reading skill. In order to improve the students' reading skill and teachers or lecturers should be more serious to give more practice related to morphology into their teaching because morphological awareness is one way to make students' reading skill improved.

For students, it is important to use their higher order thinking skill and their awareness of morphology simultaneously. So, when they read a text, they are not only ready to answer the question about the explicit information, but also understand deeply the meaning and message inside text. They should master their morphology because their morphological awareness will contribute to their better reading skill in understanding the meaning inside of text. The last suggestion would be directed to other researcher, the findings of the research may be used as reference to conduct the better research which is related to reading skill

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