THE RELATIONSHIP BETWEEN READING SELF-EFFICACY, READING ATTITUDE AND EFL READING COMPREHENSION BASED ON GENDER DIFFERENCE

Sri Rachmajanti
Universitas Negeri Malang
loeksr@gmail.com

Uning Musthofiyah
Universitas Merdeka Malang
uningmusthofiyah@gmail.com

Abstract: Literacy has been of vital importance in learning in a foreign language, and lots of research have been conducted to investigate the importance of reading comprehension; however, studies on this dealing with gender are limited. Therefore, the purpose of the study is to examine the relationship among reading attitude, reading self-efficacy and reading comprehension of EFL tertiary students based on gender difference. A convenient sampling is used to draw data from 208 respondents ranging from the age of 19 to 24 years old using questionnaires and a reading comprehension test. This is a correlational study (Creswell, 2008) employing a multi-group path analysis. The result of analysis showed a pattern of relationships based on gender difference among reading attitude, reading self-efficacy and reading comprehension. The study has significant impacts for EFL reading comprehension by showing prediction of EFL reading comprehension achievement from reading self-efficacy and reading attitude on the basis of gender difference.

Keywords: *Gender Difference, Reading Self-Efficacy, Reading Attitude, EFL Reading Comprehension*

INTRODUCTION

The gap between research in cognitive domain (e.g. Abu-Rabia, Share and Mansour, 2003; Olson & Land, 2007) and affective factors improving reading comprehension is still wide. We need to narrow down the gap by providing more research that imposes affective domain because the success of second language acquisition is never achieved without considering affective domain. (Krashen, 1985:6 & Ni, 2012). Reading skill requires both cognitive and affective domain (Chapman & Tunmer in Lange 2011). When students are not interested in the L2 text, they will not read it (Wilson, Martens, Arya, & Altwerger in Lange, 2011).

Reading activity involves both cognitive and affective process (Chapman & Tunmer in Lange, 2011). Students are not interested in finishing the reading when they perceive the text does not make sense (Wilson, Martens, Arya, & Altwerger in Lange, 2011). Therefore, affective filter must be kept low to optimize second language acquisition (Krashen, 1985 & Ni, 2012). Arnold in Ni (2012) elaborated two rationals on the importance of affective domain in English language teaching, they are language learning becomes more effective and each student could have positive growth inside. As a filter, some affective factors determine the amount of intake and input students could perceive. Therefore students with high affective filter will develop difficulties in learning L2 language.

Five input hypothesis by Krashen (1985: 6) puts the limelight on the discussion of effectiveness of self-confidence and attitude to bring up reading comprehension skills. Both self confidence and attitude help promoting language acquisition, which is indicated by affective filter. Self-confident students with more positive attitude then to easily acquire the language acquisition because they have low affective filter (Krashen, 1985: 37). It was strengthened by research conducted by Ni (2012), taking subjects of top ten sophomores in Heze University, that affective factors help promoting the language input of learners.

Reading skill plays a big role on the achievement of academics. According to Cullinan (2000), high level of reading skill allows students to effortlessly understand materials during courses better than those of low level reading skills. A study about the relationship between reading instruction and students' GPA in the University of Missoury (Dalton, Gliessman, Guthrie & Rees, 1966) and Cullinan's theory (2000) about the positive impacts on academic achievement's students support the importance of reading skill in the success of student achievement. The students with higher level of reading skill tend to receive good scores in a range of subjects. Therefore, it is necessary to learn how the reading skills can be developed by promoting some affective factors. Henceforth, this study is intended to observe how far reading self-efficacy and reading attitude improve reading comprehension.

Realizing that affective factors in reading skill is regarded as important ones, we go deeper in discussing the meaning of reading attitude and reading self-efficacy. Reading attitude is regarded as a

learnt characteristic that ignites the willingness of students toward reading activities or otherwise (McKenna, Kear & Ellsworth, 1995) and a state of mind driven by emotions and feelings toward reading activity (Smith, 1990) and affected by cultural and social interaction (Black, 2006). Reading attitude is construed from three factors, i.e., beliefs on the outcomes of reading, normative belief and specific experiences on reading (McKenna et al., 1995). It plays a big role in second language acquisition by determining students' participation and improving reading ability (Krashen, 1985 & Manning, 2007). They are more willing to get involved in reading activity and more persistent on finishing the reading. Positive attitude leads on effective learning.

A Mathewson model shows that reading attitude determines the willingness on reading (McKenna et al., 1995). Meanwhile, negative attitude lowers down the progress of learning. Students with negative reading attitude tend to leave reading activity before finishing it, whereas, students with positive reading attitude acquire better reading ability than those of negative reading attitude (McKenna et al., 1995; Walberg and Tsai, 1995). The influence of reading attitude on reading ability becomes stronger since students pile up all the experiences they gain in reading activities and eventually influence their reading perception (Mc.Kenna, 1995) which is varied among other students (Briggs, 1987).

Meanwhile, self-efficacy is construed from reading ability (Sweet in Hisken, 2011) and peer comparison (Pajares, 2003) which drives students' persistence on reading activities (Bandura in Khajavi, 2012). Self-efficacy is regarded as interchangeable with self-esteem, self-competence and competency beliefs and self-concept (Bong & Clark in Liu, 2008; Pajares & Schunk, 2001).The writers prefer self-efficacy to other terms e.g., self-esteem, self-competence and competency beliefs and self-concept due to its extensive usage that can be classified into a range of domain (Sterin in Liu, 2008). In this case, the targeted domain would be reading ability.

Since the reading self-efficacy is regarded as interchangeable with self-confidence, the meaning of self-confidence would refer to reading self-efficacy (Bong & Clark in Liu, 2008; Pajares & Schunk, 2001). Students with high self-efficacy are more eager on reading activities because they believe in their reading competence (Wigfield & Guthrie, 1997). Whether reading self-efficacy influence reading skill or otherwise is still debatable. Sweet in Hisken (2011) stated that reading ability influences reading self-efficacy, while Cole (2002) argued reading self-efficacy influences reading ability. When students' reading ability surpass their classmates, they feel the growth of self confidence inside reading self-efficacy. Self efficacy is dominantly construed from what they believe, instead of their actual ability (Bandura in Pajares, 2002). This belief influences people's decision and action (Pajares, 2002) and behavior (Bandura in Pajares, 2001) better than other motivational constructs (Graham &Weiner in Pajares, 2002).

With reference to some studies related to the existence of gender difference in reading skill (McGeown, 2009; Stoet & Geary, 2013; Huang, Liang & Chiu. 2013), the writers focus on bringing the limelight on gender difference. Some common perception probably lies behind the existence of gender difference, which regards reading as a feminine activity that discourages boys to engage the reading activity and turn their heads on other masculine activities like sports, sciences, and maths (Meece, Bower & Burg, 2006). Female students exceed male students in the frequency of reading (Simpson, 1996). In cognitive domain, the gender difference in reading comprehension occurs, particularly in both metacognitive awareness and strategy use (Griva, Alevriadou, Semoglou, 2010).

METHOD

The study investigated a fixed pattern of relationship which is broken down into the following questions:
1. How are reading self efficacy, reading attitude, and reading comprehension of EFL adult learners related witheach other conceptually and empirically in a path model?
2. How isthe relationships among reading self-efficacy, reading attitude, and reading comprehension of EFL adult learners explained by gender?

The study uses multigroup path analysis (exploratory factor analysis) for an investigation of gender difference on the proposed model with IBM SPSS AMOS 20. Convenience sampling is used to collect data from the subjects of study without making any manipulation. To reduce bias due to convenience sampling, the researchers gave detailed information about the subjects and how the sample was taken (Byrne, 2010). The target population consists of college students (120 females and 88 males) in Malang, Indonesia with age ranging from 18 to 24 and various faculties i.e.: animal husbandry, management, nursing, pharmacy and medicine.

The data was collected by two instruments: 1) reading comprehension test and 2) 5-likert scale questionnaires construed from aspects measuring reading attitude and reading self-efficacy. Both instruments were taken for a try-out to examine validity, reliability, clarity of test instruction and practicality.

FINDINGS AND DISCUSSION

Three variables are formulated into a proposed path diagram with classification of 1) independent variables: reading self-efficacy (X1) and reading attitude (X2) and 2) a dependent variable: reading comprehension (Y). The proposed path diagram (Refer to Figure 3.1) displays reading self-efficacy initiating reading attitude which later influences reading comprehension.

Table 1: Output of Multivariate Analysis with AMOS 21

Variable	Min	Max	skew	c.r.	kurtosis	c.r.
Self-efficacy	26.000	51.000	.202	1.192	.867	2.554
Attitude	59.000	116.000	-.023	-.135	-.070	-.207
Reading	20.000	83.000	-1.627	-9.581	2.963	8.722
Multivariate					3.854	4.012

The value of kurtosis (see Table 3.1) is less than 7 and the skewness is less than 2, that shows the multivariate normality for the data and indicates the normality of the data and the assumptions of homoscedity and linearity (Kline, 2011). After a baseline model is established in Amos Graphics Interface, the researchers should investigate the adequacy of data.
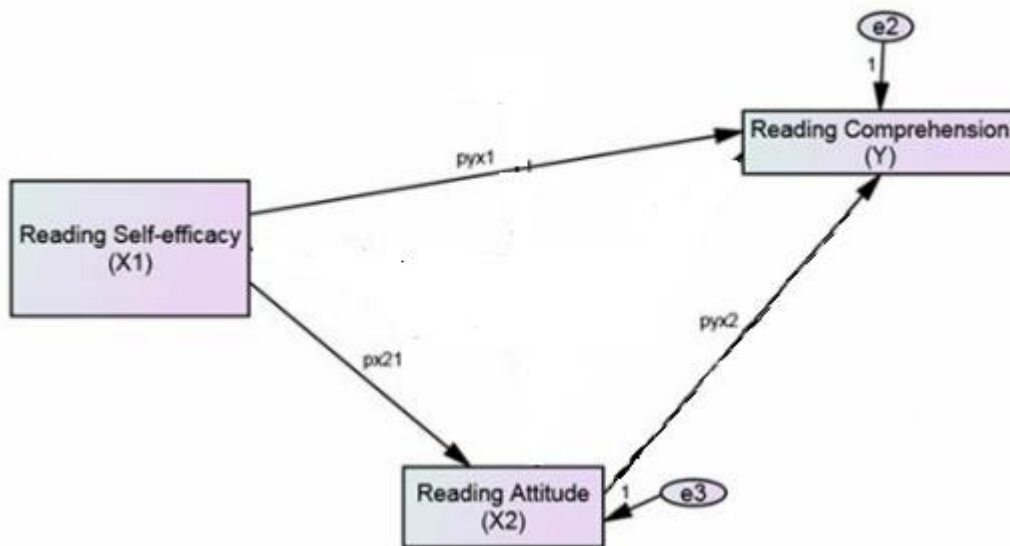

Figure 1: A Baseline Model

Once the baseline model fits data, the measurement invariance takes place. The result shows the model does not fit for hypothesis testing due to zero degree of freedom (Arbuckle, 2012). The model fit summary indicates sample moments of 28, number of parameters of 28 and degree of freedom of 0. Chi-square is zero and probability level is unidentified. Therefore, post hoc analysis is used to modify the proposed path diagram. It brings an expected result showing that the proposed path diagram perfectly fits the data.

Configural invariance and measurement invariance are needed to investigate the impact of equal constraints between groups, whether or not they have similar meaning (Kline, 1998). Null hypothesis is formulated with (H0), $\Sigma1 = \Sigma2$. Rejection of null hypothesis indicates nonequivalence between male and female groups and otherwise. If null hypothesis is accepted, invariance test is not required because the groups are equivalent (Byrne, 2010).
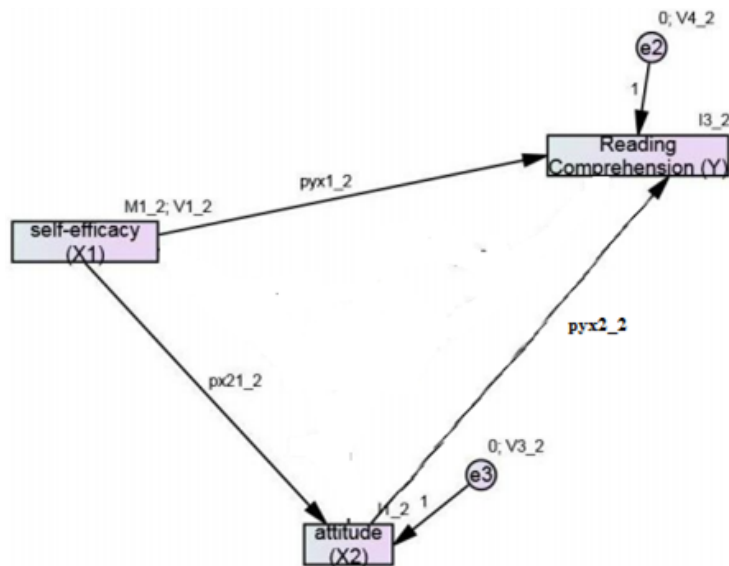
Figure 2: A Path Diagram for Female Group

Some fit indices clearly show the path model fit the data and can be accepted as baseline model for the female group. Chi-square value is 0,597 with df 1 and p-value 0,440. Female path diagram is indicated by additional digit of 2 on each factor loading and variance.

Table 2: Summary of Fit Indices of Female Model

Fit	Indices	Value	Note
CMIN/DF	0,597	Good	fit
RMSEA	0	Good	fit
NFI	0,991	Good	fit
CFI	1	Very good	fit

The path diagram of male group (Refer to Figure 3.3.) is analyzed using separate measurement invariance analysis. The result of analysis indicates an adequacy of male path diagram for hypothesis testing.
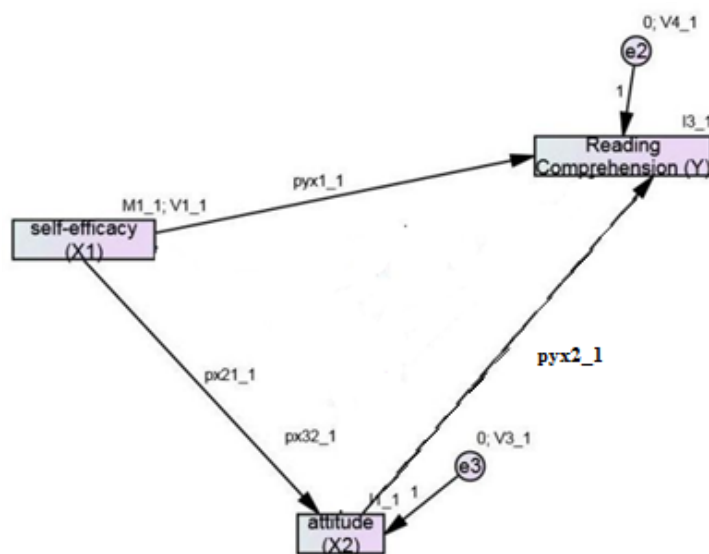

Figure 3: A Path Diagram of Male Group

To support the adequacy of male path diagram using fit indices (see Table 3.3), Chi-square statistics is used by identifying the significance of P-value.The Chi-square statistics reveal p-value of >0.25, supporting the adequacy of male path diagram.

Table 3: Summary of Fit Indices of Male Model

Fit	Indices	Value	Note
CMIN/DF	0,487	Good	fit
RMSEA	0	Good	fit
NFI	0,997	Good	fit
CFI	1	Very good	fit

Next, to examine an equivalency of parameters across groups using simultaneous analysis is necessary. Therefore, testing for metric invariance and scalar invariance are needed by imposing equality constraints across the groups and using chi-square test. If chi-square difference test shows no significant difference between constrained and unconstrained model, the hypothesis of equal structural parameters between male and female group is accepted. It implies that both male and female path diagrams are invariant.

Testing for Metric Invariance (Factor Loadings)

The metric invariance testing is taken by imposing equal constraint on some factor loadings of both male and female groups and digit 1 and all residual errors. Another model is established by removing the equal constraints of reading self-efficacy toward reading comprehension (pyx1) and reading self efficacy with reading attitude (px21). It shows parameter variance on residual errors and some path reading self-efficacy with reading comprehension (pyx1), reading self efficacy with reading attitude (px21).

Testing for Scalar Invariance

The chi-square difference for the constrained vs the unconstrained model is not statistically different (p>0,05; X2=14,381;df=4). By imposing some constraints on some intercepts and mean (I1_1 = I1_2; I2_1 = I2_2; M1_1 = M1_2) in path diagram, it reveals that the invariance of intercepts is only found in reading comprehension, which means female students have better score in reading comprehension than of male students.

Mean Comparison Using Chi-Square Statistics

The difference between male and female path diagram is examined by comparing mean of each variable using chi-square table. The null hypothesis is formulated. If null hypothesis is accepted, there is no significant difference between male and female groups and otherwise. The result shows that gender difference does not appear on reading attitude and reading self-efficacy, but reading comprehension, favoring female over male groups (Refer to Table 3.4).

Table 4: Regression Weights: (Male - Factor Loadings)

Variables	Estimate	S.E.	C.R.	P	Label
Attitude <--- Self-efficacy	1.649	.196	8.432	0.001	px21_1
Score <--- Self-efficacy	,996	.333	2.988	0.003	pyx1_1
Score <--- Attitude	676	.178	4.765	0.001	Pyx2_1

The relationship between reading self-efficacy and reading comprehension shows that reading self-efficacy of male students bring more significant impact on their reading comprehension rather than of female students, meaning that male students are more affected by reading self-efficacy rather than female students (Refer to Table 3.5). In contrast with male students, female students' reading comprehension scores seem less affected by reading self-efficacy. The difference on reading self-efficacy between male and female groups probably lies on the concept of actual ability and perceived ability in which male students have more logical thoughts about their ability, not merely relies on judgment than of female students (Meyer & Dickhauser, 2006). A study by Logan and Johnston (2009) could add up consideration about the existence of gender difference on reading self-efficacy, showing male students' reading self-efficacy bring more influence than of female students.

Table 5: Regression Weights: (Female - Factor Loadings)

Variables	Estimate	S.E.	C.R.	P	Label
Attitude <--- Self-efficacy	1.465	.218	8.432	0.001	px21_2
Score <--- Self-efficacy	.147	.257	.570	0.002	pyx1_2
Score <--- Attitude	.623	.223	4.210	0.001	Pyx2_2

The relationship between reading attitude and reading comprehension exists in the path diagram. The finding corresponds with McKenna's theory (1996) about the relationship between reading attitude and reading

comprehension. Positive reading attitude lead students to engage metacognitive process of reading which laterly improves reading comprehension. There is no significant difference between male and female groups in the relationship between reading attitude and reading comprehension.

Three factors that influence reading attitude i.e. normative beliefs, beliefs on outcomes of reading and specific reading experiences, proposed by McKenna (1995) supports the relationship between reading self-efficacy and reading attitude. It confirms that students' belief on reading influence the way students feel about reading. Gender difference can be found in the relationship between reading comprehension and reading score. Male appears to have closer relationship between reading self-efficacy and reading attitude if compared to female students.

Squared multiple correlation is used to understand the proportion of contribution of variances in path diagram, showing that male group are likely more predictable than of female groups with percentage value of 47% on reading attitude, and 13 % on reading comprehension accounted by reading self-efficacy.

Gender difference is found in the reading comprehension scores. Female students have higher reading comprehension scores than of male students. An assumption of reading as feminine activity (McGeown, Goodwin, Henderson & Wright, 2012) probably lies behind this superiority. The relationship between reading self-efficacy and reading attitude is confirmed in the path diagram, supporting a previous theory by McKenna (1995) on the influence of reading self-efficacy toward reading attitude by three factors i.e. s: normative beliefs, beliefs on outcomes of reading, and specific reading experiences.

CONCLUSIONS AND SUGGESTIONS

The multi group path analysis reveals that not only does gender difference occur on each variable but also on the relationship between variables. The findings of study show that the female students have higher score of reading comprehension than that of the male students. Yet, in the relationship between self-efficacy on reading comprehension, the male students surpass the female. The self-efficacy of the male students are reported to have bigger impact on reading comprehension scores if compared to the female, which only have low and insignificant effect.

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