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# IMPLEMENTING THE TEACHING OF TRANSFORMATIVE LEARNING TO IMPROVE UNIVERSITY STUDENTS' READING SELF-EFFICACY IN CHINA

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#### **Abstract:**

This paper aims to investigate the implementation of the teaching of transformative learning to improve students' reading self-efficacy at university in China. The study used a questionnaire on reading self-efficacy as the research instrument to survey 85 non-English students' reading self-efficacy. A comparison of the pre- and post-test mean scores of the students reading self-efficacy using Wilcoxon Signed Ranks Test indicated a significant difference with the introduction of the teaching of transformative learning in improving the students' reading self-efficacy. The three main features of the teaching of transformative learning include (1) using critical reflection to change students' thinking and improve their self-efficacy, (2) using rational discourse to change students' psychological state, and (3) using peaceful and equal classroom atmosphere to enhance dialogue and students' self-efficacy to build an environment that is congruent with the learners' learning expectancy.

#### **Keywords:**

Teaching Of Transformative Learning, Critical Reflection, Rational Discourse, Reading Self-efficacy

#### Introduction

Since the introduction of Mezirow's transformative learning theory (Mezirow, 1991), it has been adopted in the teaching and learning in the adult education and also higher education for several decades. In China's English as foreign language settings, recent research on transformative learning related to English teaching or learning are as follows: Chang's (2016) study investigated college English teachers' reflection and beliefs. He highlighted that most of the teachers' reflection and beliefs were mainly on morals, classroom management and critical thinking; he suggested the instructors needed to focus more on practical teaching activities to change the real teaching practice based on the transformative learning theory. Zhao (2018) and Luo and Zhu (2018) interpreted the transformative learning theory and proposed that early-service English teachers should self-reflect and establish the identity of the subject learners to promote the former's English teaching or professional development. In addition, Wang, Hiew and Swanto (2002a) investigated the reason very few English teachers applied transformative learning theory in the teaching and learning of English at a university in China. Wang et al. suggested that teachers should establish an interdisciplinary group and apply transformative learning theory in their research to solve problems in their teaching practice.

A few studies investigated learners' problems and proposed countermeasures. Zhang and Zhao's (2020) study explored postgraduates' writing problems at Henan Polytechnic University and proposed introducing transformative learning consciousness as a new method and a creative expression in their writing. Wen and Wang (2021) carried out an action research on the college students' learning English to improve their reflection ability in learning English. A study by Wang, Hiew and Swanto (2022b) on the teaching of transformative learning (TTL) indicated that TTL was successful in improving students' English learning autonomy.

#### **Literature Review**

Self-efficacy is defined as learners' beliefs or judgement whether they have the capability to succeed in executing a task (Bandura, 1986). Bandura also claims that people can change their self-efficacy by adopting coping measures (Bandura, 1977). Self-efficacy can affect learners' decision, behaviors and efforts while they are facing challenges (Bandura, 1986). Correlational study outcomes on student's self-efficacy in China were reported as follows: There was a significant correlation between college students' English learning self-efficacy and learning strategies (Liu, 2017; Liu, 2010; Feng, 2008). There was also a high correlation between students' self-efficacy and their academic achievement (Wang, 2006; Zhang & Yuan, 2004).

Some studies investigated students' problems or factors influencing their learning experience, and subsequently proposed countermeasures or strategies. For example, Liu (2007) found the freshman's English learning objectives were vague and the self-efficacy was relatively low. She proposed that English teachers should establish a harmonious student-teacher relationship and help students set up appropriate learning objectives to improve their self-efficacy. Li (2010) analyzed influential factors from the self-efficacy theory and proposed that students should set appropriate learning objectives and use the successful peer modeling to improve their self-efficacy. Qiu (2017) used mobile network in a flipped classroom teaching model to improve the college students' self-efficacy in learning English at Fujian Agriculture and Forestry University. Zheng (2012) introduced a meta-cognitive intervention technique to students at Liaoning Normal University. Both studies by Qiu and Zheng indicated a significant difference in the English learning self-efficacy between students in the experimental and control groups at the end of the study.

However, to the present researcher's knowledge, using the teaching of transformative learning (TTL) to increase university students' English reading self-efficacy (RSE) in teaching English reading in China is very scarce. Therefore, this study aims to implement the TTL to improve the non-English major students' RSE. Specifically, this study intends to answer the following research questions:

- 1. What are the students' reading self-efficacy before implementing the Teaching of Transformative Learning intervention?
- 2. What are the students' reading self-efficacy after implementing the Teaching of Transformative Learning intervention?
- 3. Does the Teaching of Transformative Learning make a difference in improving the students' reading self-efficacy in the EFL settings in China?

#### **Research Method**

# **Participants**

In this quasi-experiment study, there were 85 students majoring in Primary School Education and Software Engineer. They were freshmen in their second semester who attended the TTL teaching intervention. The participants studied college English at a university in China for a whole semester. They were students in the present researcher's classes that were assigned by the dean of the College English Teaching Sector. Therefore, this study adopted a convenience sampling (Saunders, Lewis & Thornhill, 2012).

#### Instrument

In this study, a questionnaire was used to test the students' RSE. The RSE questionnaire was designed by Ghonsooly and Elahi (2010). The present researcher made minor amendments in the questionnaire by changing the negative statement form into the positive form for items 2, 10 and 11. This is to adapt the questionnaire items to the students' real-life situation. The questionnaire was validated by three experts who are experienced in self-efficacy. Besides agreeing to the content, the three experts suggested translating the questionnaire into Chinese, so as to let the students understand it more clearly. The present researcher translated the questionnaire and sent it to a colleague, who has a master's degree of English-Chinese translation, for verification. After a few minor corrections, the questionnaire was finalized. Before the actual use in the study, the researcher carried out a pilot study with 44 non-English major students to test the reliability of the questionnaire. The Cronbach's Alpha test showed a coefficient of 0.943, as shown in Table 1. This indicates the questionnaire has a high reliability (Qin, 1999).

**Table 1: Reading Self-Efficacy Questionnaire Reliability** 

Scale: ALL VARIABLES

#### **Case Processing Summary**

		N	%
Cases	Valid	44	100.0
	Excludeda	0	.0
	Total	44	100.0

a. Listwise deletion based on all variables in the procedure.

#### Reliability Statistics

Cronbach's Alpha	N of Items
.943	11

The questionnaire consists of a 5-point Likert scale (A-Strongly Agree, B-Agree, C-Neither Agree nor Disagree, D-Disagree, E-Strongly Disagree). Each response is assigned a score as follows: A-5 points, B-4 points, C-3 points, D-2 points, and E-1 point. Thus, every item was assigned a mean and a mode in the pretest and post-test of the students' RSE before and after implementing the TTL. The comparison of the mean and mode of the results of the pretest and post-test determined whether the TTL improved the students' RSE. Wilcoxon Signed Ranks Test was used to test whether there was a significant difference between the means of each item in the pretest and the post-test in the same questionnaire. The results determined whether the students' RSE is significantly different between the beginning and the end of the study.

### Research Design

A quasi-experimental research design was adopted to collect data using questionnaire at two different time stages: one before the quasi-experiment; another at the end of the quasi-experiment. The research design of this study is shown in Figure 1 below.

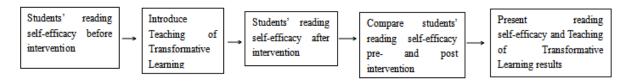


Figure 1: Research Design

# **Teaching of Transformative Learning Intervention**

The proposed TTL by Wang, Hiew and Swanto (2022b), which bears the prominent characteristics of the critical reflection and the rational discourse, embodies the main traits of the transformative learning by Mezirow (1991) in the teaching process of English reading. The TTL in this study varies from the original intervention designed by Wang, Hiew and Swanto (2022b) only in the activities of first and the 18th week. In the present study, the pretest and the post-test were used to test the student's reading self-efficacy rather than the students'

English reading autonomy. Based on the TTL in Table 2 below, the present researcher carried out the TTL activities to trigger students' reflection on their inaccurate perspectives to promote transformative learning in their English reading course through persistent and encouraging questioning. For example, if the researcher finds that a student cannot do the English reading exercise well, he will ask the student why he/she cannot do well until he makes the student realize his/her inaccurate perspectives, methods or emotional factors that affect his/her learning. The researcher will provide some support to encourage the student to change his/ her perspectives, methods or emotional factors to overcome the problems that he/she meets in the TTL.

**Table 2: Activities for the Teaching of Transformative Learning** 

Week	Activities
1	Conducting pretest on students' RSE.
2-3	Reflecting on the value of College English learning by asking students' opinion on the importance of College English learning.
4-5	Reflecting on students' beliefs or convictions of College English learning by asking students whether they have the beliefs or convictions to learn English well.
6-7	Reflecting on students' attitudes towards College English learning.
8-9	Reflecting on students' application of reading skills or strategies in English reading
10-11	Conducting rational discourse with students about their overall practice on the reading skill or strategies.
12-13	Reflecting on students' monitoring the effectiveness of their reading skills.
14-15	Reflecting on students' English Learning method by asking how they improve their overall English language ability.
16-17	Conducting rational discourse with students about their overall practice on the comprehensive skills or strategies on learning English.
18	Conducting post-test on students' RSE.

# **Findings**

The findings include the pretest results, the post-test results, and the significant difference of the means of the 11 items in the pretest and the post-test of students' RSE.

# The Pretest Results of the Students' Reading Self-Efficacy

The present researcher carried out a pretest among 85 non-English major students to determine students' RSE before introducing the TTL. The pretest results are shown in Table 3, which presents the mean and mode values of each item in the RSE questionnaire.

Table 3: The Pretest Result of the Students' Reading Self-Efficacy Before the Teaching of Transformative Learning

#### **Statistics**

-	-	Item1	Item2	Item3	Item4	Item5	Item6	Item7	Item8	Item9	Item10	Item11
N	Valid	85	85	85	85	85	85	85	85	85	85	85
	Missing	0	0	0	0	0	0	0	0	0	0	0
Mean		3.02	3.07	2.75	3.06	3.02	3.09	3.12	3.07	2.84	2.95	3.16
Mode		3	3	3	3	3	3	3	3	3	3	3

Table 3 shows that the mode for the students' RSE is three in the 11 items of the questionnaire, which implies that most of the students' RSE is at a moderate level. The mean values from item 1 to item 11 range between 2.75 and 3.16.

# The Post-test Results of the Students' Reading Self-Efficacy

The present researcher carried out a post-test on the students' RSE at the end of the TTL. The results are shown in Table 4 below.

Table 4: The Post-test Results of the Students' Reading Self-Efficacy at the End of the Teaching of Transformative Learning

# **Statistics**

	_	Item1	Item2	Item3	Item4	Item5	Item6	Item7	Item8	Item9	Item10	Item11
N	Valid	85	85	85	85	85	85	85	85	85	85	85
	Missing	0	0	0	0	0	0	0	0	0	0	0
Mean		3.59	3.55	3.66	3.64	3.61	3.54	3.62	4.14	3.61	3.58	3.65
Mode		4	4	4	4	4	4	4	4	4	4	4

Table 4 shows that the mode of students' RSE has increased to 4 at the end of the 18-week TTL intervention, which implies that most of the students' RSE is within the "agree" rank. The mean values for item 1 to item 11 in the questionnaire range between 3.55 and 4.14.

# Comparison Between the Students' Reading Self-Efficacy Pre- and Post-test Results

In order to determine whether there is a significant difference between the pre- and post-test mean scores of the students' RSE after the introduction of the TTL, the present researcher ran the Wilcoxon Signed Ranks Test. The result is shown in Table 5 below.

Table 5: Comparison Between the Students' Reading Self-Efficacy Pre- and Post-test Results

## **Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum	
Mean1	11	3.0136	.12282	2.75	3.16	
Mean2	11	3.6545	.16585	3.54	4.14	

### Wilcoxon Signed Ranks Test

#### **Ranks**

	-	N	Mean Rank	Sum of Ranks
Mean2	- Negative Ranks	0 <sup>a</sup>	.00	.00
Mean1	Positive Ranks	11 <sup>b</sup>	6.00	66.00
	Ties	$0^{c}$		
	Total	11		

a. Mean2 < Mean1

b. Mean2 > Mean1

c. Mean2 = Mean1

Test Statistics<sup>b</sup>

			Mean2 - Mean1
Z			-2.934ª
Asymp. tailed)	Sig.	(2-	.003

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

The descriptive statistics show that the pre- and post-test mean scores of the 11 items of the RSE questionnaire are 3.01 and 3.65, respectively. The minimum and maximum of the pre-test mean scores are 2.75 and 3.16, respectively, while the minimum and maximum post-test mean scores are 3.54 and 4.14, respectively. The p value equals to 0.003 (p < 0.05), which implies there is a significant difference between the pre- and post-test means scores in the students' RSE. This result also further indicates that implementing the TTL to improve the students' RSE has achieved a good effect in this study.

#### **Discussion**

The quantitative findings above indicated a significant improvement in the students' RSE after introducing the Teaching of Transformative Learning for 18 weeks. These findings are supported based on three main features of the TTL, which is discussed below.

## Changing Students' Thinking and Improving Self-Efficacy Through Critical Reflection

In this study, the present researcher carried out a reflection on the value of English with the students. In this process, some students realized that possessing good English competence is very helpful or rewarding for them to find a good job, sit for the postgraduate exam and/or develop their career in the future. This reflection changed the students' inaccurate ideas or thought that English is only a subject that they have to learn in the process of schooling. On reflecting the students' reading strategies, some students found that their former strategies were less effective, and they developed new strategies under the teacher's guidance. Therefore, the improvement of the students' meta-cognition of the value of English and their reading strategies promoted the motivation to learn English, which improved their RSE in this study. This finding is consistent with other scholars' opinions that improvement of learners' metacognition can increase learners' self-efficacy (Zheng, 2012; Zhu, 2016; Wu, 2019). In a study by Zheng (2012), he implemented a meta-cognitive intervention on the students at Liaoning Normal University to improve their meta-cognition and found that there was significant difference between the experimental and control group's English learning self-efficacy. Zhu (2016) carried out a similar study among 300 non-English major students at three universities in Xi'an city and found positive correlation between the improvement of the students' metacognition and the students' English self-efficacy. A case study by Wu (2019) at Fuzhou No. 4 high school to investigate the relationship among the students' meta-cognition, and the RSE and the reading achievement. He also found a positive significant correlation between the students' meta-cognition and the RSE. In short, improvement in the students' meta-cognition can also improve their self-efficacy.

#### Changing Students' Psychological State Through Rational Discourse

In this study, the present researcher carried a rational discourse, which is a kind of caring and courageous talk between the students and the teacher to support the TTL. Sometimes the rational discourse extended to after-class talk using WECHAT messaging. From the exchange of information on rational discourse, the present researcher found that some students identified with the present researcher' positive opinions of learning English to improve their perspectives, beliefs, attitudes and reading strategies (or skills). However, some students with low English competency did not agree with him. In this situation, he always gave them encouragement, tried to persuade them to build up their confidence in improving their English ability or gave them suggestions to self-motivate themselves when they felt depressed in learning English. In this way, the researcher found that some students liked to talk with him about their problems even though their problems are not related to learning English. The emotional support from the teacher's encouragement, care, and understanding in the rational discourse changed some students' psychological judgement of their self-efficacy and improved their self-efficacy, which is consistent with other scholars' viewpoints that the perceived emotional support can increase learners' self-efficacy (Jia, 2012; Ye, 2019; Sakiz, 2007). For example, Jia (2012) investigated 511 students in Liaocheng No. 3 Middle School and found that teachers' encouragement has a significant positive correlation on students' sense of self-efficacy. Ye (2019) chose 285 art and sports students from a Middle School in Shuangliu District of Sichuan Province as his research subjects to undertake a correlation study between perceived teacher's

emotional support and students' academic self-efficacy and English academic achievement. The finding showed a significantly positive correlation between the perceived teacher's emotional support and the students' academic self-efficacy. This indicated that the perceived teacher's emotional support had a significant effect on the students' academic self-efficacy and their English academic achievement. Meanwhile, Sakiz (2007) investigated whether there was a relationship between teacher affective support and early adolescents' self-efficacy in middle school mathematics classrooms in Midwestern City of USA. The results showed that the perceived teacher affective support was significantly related to early adolescents' self-efficacy.

# Enhancing Dialogue and Students' Self-Efficacy Through Peaceful and Equal Classroom Teaching Atmosphere

In the TTL, the present researcher created a peaceful, equal and friendly classroom atmosphere so that the students felt free to express their ideas or opinions. According to Dewey (1997), this classroom is a form of supportive and democratic learning condition or environment, which can enhance the learners' learning experience. When the students in the present researcher's study were asked why they did the reading exercise wrong in their reading course. They showed their reason for doing it wrongly. This was a good chance for the teacher to know the students' opinions about their mistake from their cognitive, emotional and strategical aspects. The researcher would ask the students who read the text correctly to explain the steps they adopted in the reading exercise. In this equal and friendly condition, the students who did the reading exercise wrong can learn from their peers through peer modeling. According to social learning theory, peer modeling (vicarious experience) can increase learners' self-efficacy (Bandura, 1977; Murphy, 2015). The more important aspect of this supportive condition or environment is that it is congruent with learners' expectancy control, which can increase learners' selfefficacy (Strickland, 1978; Chamblis & Murray, 1979; Xin, 2013). For example, Strickland (1978) reviewed the internal-external locus of control expectancies and behaviors, and found that the supportive condition that is congruent with subjects' expectancy control would increase the subjects' self-efficacy. Chamblis and Murray (1979) carried out a weight loss experiment and found that the supportive experimental condition — that is identical with the subjects' expectancy — increased their belief that they could lose weight and finally increased their selfefficacy. Meanwhile, a survey among 744 college students from four university in Xi'an city showed that the supportive learning condition (environment) of peer support and teachers' practical activity support were positively correlated with college students' self-efficacy in learning (Xin, 2013).

#### Conclusion

The study carried out the TTL in the College English reading course among 85 non-English major students at a university in China. A summary of the findings in reference to the three research questions are as follow: (1) The pretest results of the students' RSE ranged between 2.75 and 3.16; (2) There was an increase in the post-test results of the students' RSE that ranged between 3.55 and 4.14; (3) A comparison between the pre- and post-test mean scores for students' reading performance indicated a significant difference. This implied that the TTL has a good effect on improving the students' RSE. In the TTL, the reflection on the value of English, reading strategies or skills improve the students' meta-cognition, which improved the students' RSE. The rational discourse in the form of care, encouragement and understanding for students illustrated teacher's emotional support for students' learning, which improved the students' self-efficacy. Finally, the equal, peaceful and friendly teaching atmosphere also created a supportive condition that is congruent with the students' expectancy control, which

improved that students' self-efficacy. In short, the TTL of this study showed a positive effect on improving the students' self-efficacy because the TTL has the function of changing the learners' inaccurate perspectives, ideas, presumption and inappropriate psychological states about their learning of English. Changes in these three aspects subsequently resulted in the improvement in their reading performance.

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# Appendix 1: EFL Learners' Self-efficacy Scale in Reading Comprehension (Adapted from Ghonsooly and Elahi, 2010)

Items	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1) I have the ability to focus all my concentration on the content of the text I am reading.					
2) I believe that my reading comprehension proficiency improves everyday.					
3) I am capable of improving my reading comprehension skill.					
4) Reading L2 texts is not stressful.					
5) My reading comprehension teacher believes that I am proficient.					
6) I enjoy practicing reading L2 texts with a proficient friend.					
7) I believe that by more practice of reading L2 texts, I can improve the course grades.					
8) In my reading class, I always volunteer to answer the questions the teacher asks.					
9) I am among the best students in my reading class.					
10) My world knowledge is good. I have no problems in reading comprehension.					
11) I do mind whether I can get high scores in my reading course.					



# Appendix 2: EFL Learners' Self-efficacy Scale in Reading Comprehension (Chinese Version)

项目	强烈同意	同意	不知道	不同意	强烈地不同 意
1) 我有能力将我所有的注意力集中在我正在阅读的文本内容上					
2) 我相信我的阅读理解能力每天都在提高					
3) 我有能力提高我的阅读 理解能力					
4) 阅读第二语言文本没有压力					
5)我的阅读理解老师认为我很精通					
6) 我喜欢和一个精通第二 语言的朋友练习阅读第二 语言的文本					
7) 我相信通过多阅读第二语言文本的练习,我可以提高课程成绩					
8) 在阅读课上,我总是自愿回答老师提出的问题					
9) 我是阅读课上最好的学生之一					
10) 我的世界知识很好, 阅读理解没有问题					
11) 我很介意我是否能在阅读课上拿高分					