Teacher Self−efficacy of EFL University Teachers in Henan Province of China

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Abstract: When teachers have high levels of self-efficacy, they are energized, motivated, and willing to work assiduously to meet the needs of the students. This study investigated the current situation of teacher self-efficacy among 361 EFL university teachers in Henan Province of China, and the differences in teacher self-efficacy as related to demographic features.

Keywords: Teacher Self-efficacy; EFL University Teachers; Student Engagement; Classroom Management; Instructional Strategies

Teacher self-efficacy beliefs are defined as a teacher's situation-specific beliefs in their ability to organize and execute courses of action necessary to successfully accomplish a specific behavior at a specified level of quality (Bandura, 1977; Bandura, 1997). Teacher self-efficacy originates from self-efficacy,which is an important component in Bandura's social cognitive theory. It is usually regarded as domain specific and context specific. It has been widely acknowledged that teacher self-efficacy is one of the most important constructs in teachers' belief systems that influences the failure and success of different educational aspects. However, presented teacher self-efficacy research in general educational settings rather than highlighting this construct in a certain domain or context, for example, in English as foreign language (EFL) teaching contexts (Hoang, 2018).

1. Teacher self−efficacy

1.1 Studies on teacher self-efficacy

The first study of teacher self-efficacy was conducted by the RAND Corporation in the mid-1970s.After the success of the Rand studies, many researchers began to focus on the study of teacher self-efficacy.When teachers have high levels of self-efficacy, they are energized, motivated,and willing to work assiduously to meet the needs of the students (Topkaya, 2010; Williams, 2009). As a result,teachers set higher expectations and standards for students and the students are more likely to improve their performance (Tschannen-Moran& Johnson, 2011).

Moderate level self-efficacy was reported among 121 primary school teachers from eight Department of Education and Skills run primary schools in Dublin, Ireland. While İpek et al. '(2018)investigated EFL teachers working at preparatory school of a state university in Turkey using the 9-point Likert TSES,and found the respondents had high levels of teacher self-efficacy (M = 7.33) and all three dimensions,instructional strategies (M = 7.32), classroom management (M = 7.42), student engagement (M=7.06).

The first empirical study on teacher self-efficacy in China was conducted by Xin Tao, Shen Jiliang and Lin Chongde in 1994. In recent years, self-efficacy has attracted much attention of Chinese scholars with the advanced study

of teachers. Li Ying and Zhu Xinchen (2010) found university teachers' self-efficacy varies in teaching experience, educational background and different school types. Teachers with longer teaching experience, higher educational background and higher school level have higher sense of self-efficacy. Yang Jieying (2015) found teacher's age, years of teaching experience and professional title had positive correlation with EFL university teachers' personal teaching efficacy but negative correlation with their general teaching efficacy. However, there is no difference of educational background on teacher's sense of self-efficacy. Using the measurement of GTE and PTE, Han (2016) studied the teacher self-efficacy level of young female EFL teachers from four universities in Gansu Province, and revealed that those young female EFL teachers had high level of self-efficacy (M = 3.99), personal teaching efficacy (M = 4.20) and general teaching efficacy (M = 3.78). Their sense of personal teaching efficacy was higher than general teaching efficacy.

Some strategies were put forward to develop teachers' sense of self-efficacy. Schools should arrange workload reasonably, control the size of classes, provide positive social persuasion, promote the study of teaching reform, as well as foster EFL university teachers to reflect on themselves very often so that their sense of self-efficacy will be enhanced (Ma Jiangtao, 2009; Lin Xiao, 2018). Teacher educators should evaluate EFL university teachers' level of self-efficacy by using the teacher self-efficacy scale in the teacher training program; EFL university teachers themselves should reflect on their teaching activities consistently to increase their sense of personal teaching efficacy as well as to improve their educational background (Yang Jieying, 2015).

1.2 Measurement of teacher self-efficacy

In the early 1980s, researchers began to design some instruments for measuring teacher self-efficacy, and various instruments have been developed till now. The teacher self-efficacy model of Tschannen-Moran, and Hoy (1998) offered an important breakthrough by combining together Rotter's theory and Bandura's theory. They used Rotter's locus of control theory (1966) to understand context and task analysis. However, more significantly, they focused on the attribution analysis and interpretation of Bandura's four principal sources of information for the construction of teacher self-efficacy beliefs. The dual conceptual foundation can be found in the dimensions offered in their teacher self-efficacy model.

The Teachers' Sense of Efficacy Scale (TSES) includes a long form and a short form. The long form contains 24 items, and the short form contains 12 items. In order to examine the research questions in this current study and make comparisons to previous studies related to teacher self-efficacy, the long form was used to test EFL university teachers' self-efficacy levels. The TSES instrument has three subscales of efficacy: student engagement (items1, 2, 4, 6, 9, 12, 14, 22), instructional strategies (items 7, 10, 11, 17, 18, 20, 23, 24), and classroom management (items 3, 5, 8, 13, 15, 16, 19, 21), (Tschannen-Moran & Hoy, 2001). Each subscale includes eight items, with a score range of 8-72. The responses are based on a 9-point Likert-type scale, with 1 indicating "nothing", 3 indicating "very little", 5 indicating "some influence", 7 indicating "quite a bit", and 9 indicating "a great deal". High scores indicate strong feelings of efficacy (Tschannen-Moran & Hoy, 2001). Mean scores are calculated based on the total score for each subscale.

2. Research design

2.1 Objectives

The present study aims at investigating the teacher self-efficacy level of EFL university teachers in Henan Province of China. With a better understanding of the actual situation of EFL university teachers' self-efficacy, educational administrators and teacher education institutions can make more informed teacher education decisions, and adopt more specific policies to promote teacher self-efficacy appropriately.

2.2 Respondents

130 EFL university teachers in Henan Province of China were invited to answer the original TSES questionnaire as the pilot study in May 2019. Then for the field study in June and July, 361 respondents were randomly selected from 12 local application-oriented universities in Henan Province.

2.3 Instrument

The adapted version of TSES was used as the research instrument in this study. Demographic information was added to the first part of the questionnaire. The demographic items including gender, age, years of teaching experience, etc.

3. Data analysis and discussion

All the data collected were put into SPSS 23.0 software for analysis. Validity and reliability of the instrument were tested in this study. In the data screening and cleaning procedure, no missing value or outlier was detected. The

Independent Samples T-test and the One-way ANOVA test were employed to investigate the differences among teacher self-efficacy and demographic features.

3.1 Pilot study

The reliability of the questionnaire was tested with Cronbach's Alpha. The values of the reliability of three sub-scales and the overall scale were above 0.7, from 0.772 to 0.893, implying all the items were reliable and ready for exploratory factor analysis (EFA).

From the first EFA result, the Principal Component Analysis (PCA) procedure has extracted five components with eigenvalue exceeding the value of 1.0, with the total variance explained for all five components to be 75.478%, over the sixty percent value as the minimum percentage of acceptable variance explained in factor analysis for a construct to be valid. However, from the rotated component matrix results, component 4 only had three items: IS1, CM6, and SE7. The factor loading of item SE7 was only 0.263 <0.6. Component 5 only had two items: CM8 and SE8. Therefore, all these five items needed to be deleted.

After dropping the five items, the final results of the EFA of teacher self-efficacy displayed that the existence of three-factor components with 19 items only. The final result revealed that the PCA procedure has extracted three clear-cut components with eigenvalue exceeding the value of 1.0. Explicitly, the three components explained a total of 73.419% of the variance; By component 1 contributing 25.537%, component 2 contributing 24.610%, and component 3 contributing 23.272%. So the final version of TSES used in this study consisted of 19 items.

3.2 The overall situation

The data of the field study was also put into SPSS software for analysis. The mean value of teacher self-efficacy and its three dimensions was calculated first.

Table 1. Descriptive Analysis of Sub-Scales of Teacher Self-Efficacy

No.	Construct/Sub-Construct	Mean	SD
1	Teacher Self-efficacy	5.196	1.235
2	Student Engagement	4.874	1.295
3	Classroom Management	4.778	1.464
4	Instructional Strategies	5.831	1.722

Table 1 shows the overall level of teacher self-efficacy and its three sub-scales. Based on this nine-point scale (1-9), the overall mean score of teacher self-efficacy (mean = 5.196, SD = 1.235) indicated a relatively moderate level of self-efficacy among EFL university teachers. The levels of teacher self-efficacy were also divided into three categories: 1-3.66 = low, 3.67-6.33 = moderate, and 6.34-9 = high. The highest percentage (70.6%) rated the overall levels of teacher self-efficacy was "Moderate". Meanwhile, the mean score of all three sub-constructs of teacher self-efficacy indicated that they were all rated as "Moderate". The results showed that the self-efficacy level of EFL university teachers in Henan Province of China was moderate. It was different from the results of Han's research (2014) and İpek et al. (2018), which both found high levels of teacher self-efficacy.

3.3 Analyses in demographic features

In this part, teacher self-efficacy was investigated according to demographic features, in order to analyze how teacher self-efficacy is related to gender, age, years of teaching experience.

3.3.1 Gender

The Independent Samples T-Test was employed to find out whether male and female EFL university teachers have differences in their teacher self-efficacy levels. Table 2 showed that in the present study, the level of teacher self-efficacy and all the three dimensions had no statistically significant difference in the perspective of gender. In other words, though the mean values of male EFL university teachers' self-efficacy and its two dimensions (except for the Instructional Strategies dimension) were all a little higher than female teachers, all the differences were statistically not significant. As a result, in the field of EFL teaching, male teachers suffered a little higher self-efficacy than their female colleagues, but the difference was not significant.

Table 2. Gender Differences in Teacher Self-Efficacy

	Gender	N	Mean	SD	Sig.
Teacher Self-Efficacy	Male	66	5.2364	1.20824	.402
	Female	295	5.2023	1.23634	
Student Engagement	Male	66	4.9795	1.33024	.826
	Female	295	4.8564	1.28754	
Classroom Management	Male	66	4.8051	1.46118	.909
	Female	295	4.7765	1.45583	

Instructional Strategies	Male	66	5.8264	1.74681	.980
	Female	295	5.8639	1.70950	

3.3.2 Age

The One-way ANOVA was employed to find out whether different age or teaching experience among EFL university teachers have differences in teacher self-efficacy. Since in some research, teacher self-efficacy was believed to be related with age and the length of work experience. In this study, age was ranked into 7 ranges: "30 or under", "31-35", "36-40", "41-45", "46-50", "51-55", and "56 or above". It can be seen from Table 3 that age did not show any significant differences ($p > 0.05$) in the level of teacher self-efficacy and its three dimensions.

Table 3. Age Differences in Teacher Self-Efficacy

	Age	N	Mean	Sig.
Teacher Self-Efficacy	30 or under	54	5.2105	
	31-35	96	5.2524	
	36-40	147	5.1464	
	41-45	27	5.5127	
	46-50	15	4.7293	.600
	51-55	9	5.2895	
	56 or above	13	5.3797	
Student Engagement	30 or under	54	4.8497	
	31-35	96	4.8622	
	36-40	147	4.8878	
	41-45	27	5.1235	
	46-50	15	4.3214	.702
	51-55	9	5.0333	
	56 or above	13	4.9762	
Classroom Management	30 or under	54	4.6536	
	31-35	96	4.8810	
	36-40	147	4.7642	
	41-45	27	5.1049	
	46-50	15	4.3690	.691
	51-55	9	4.8333	
	56 or above	13	4.4881	
Instructional Strategies	30 or under	54	5.9972	
	31-35	96	5.9052	
	36-40	147	5.6958	
	41-45	27	6.1958	
	46-50	15	5.3878	.455
	51-55	9	5.9000	
	56 or above	13	6.4898	

3.3.3 Years of teaching experience

The years of teaching experience was ranked into 6 ranges: "5 years or less", "6-10 years", "11-15 years", "16-20 years", "21-25 years", and "26 years or more". From Table 4, it is obvious that EFL university teachers with different years of teaching experience showed no significant difference in their levels of self-efficacy and the three dimensions of it.

Table 4. Teaching Experience Differences in Teacher Self-Efficacy

	Years of teaching	N	Mean	Sig.
Teacher Self-Efficacy	5 or less	77	5.0570	
	6-10	99	5.3309	
	11-15	106	5.3197	
	16-20	41	4.8511	.225
	21-25	14	5.0567	
	26 or more	24	5.3401	
Student Engagement	5 or less	77	4.7032	
	6-10	99	4.9983	
	11-15	106	4.9938	
	16-20	41	4.5407	
	21-25	14	4.8462	.305

	26 or more	24	4.9808	
Classroom Management	5 or less	77	4.5525	
	6-10	99	4.9010	
	11-15	106	4.9735	
	16-20	41	4.5122	.300
	21-25	14	4.7179	
	26 or more	24	4.6282	
Instructional Strategies	5 or less	77	5.7926	
	6-10	99	5.9844	
	11-15	106	5.8959	
	16-20	41	5.4077	.366
	21-25	14	5.5275	
	26 or more	24	6.2582	

4. Conclusion

This study analyzed and investigated the current level of EFL university teachers' self-efficacy in Henan Province of China. The main findings are: ① The self-efficacy of EFL university teachers were on a moderate level. ② Female EFL teachers reported lower levels of self-efficacy than male teachers (except for the Instructional Strategies dimension), but the difference was not significant. ③ Teachers of different age groups did not have significant different levels of teacher self-efficacy. ④ Years of teaching experience did not cause significant difference in the self-efficacy degree.

The results in this study showed that all EFL university teachers had moderate level of self-efficacy, without significant difference related to gender, age, years of teaching experience.

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