

A Probe into Teacher Self-Efficacy as a Tractable Variable in EFL Teacher Training Courses

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Abstract

The present study examined the impact of language teachers' gender, age, and experience on their self-efficacy. Moreover, it aimed to find out the mediating role of teacher education in modifying the effects of foregoing variables. To this end, a stratified sample of 180 English teachers in high schools, private language institutes, and university settings in seven cities in Iran were initially handpicked as the participants of the study. Next, Teachers' Sense of Efficacy Scale (Tschamen-Moran & Woolfolk-HoyHoy, 2001) was administered to the participants to specify their initial self-efficacy. Further, they attended a 20-session in-service teacher training program focused on theoretical and empirical issues related to learner variables and aiming at empowering the participants to tackle relevant problems in the context of the classroom. Finally, The Self-Efficacy Scale was administered to probe viable changes in the participants' self-efficacy posterior to the treatment in relation to gender, age and experience. Results showed significantly higher levels of self-efficacy for males prior to and for females after the treatment. Additionally, the findings revealed that teacher self-efficacy was positively influenced by increase in teachers' age and teaching experience and that in-service teacher training could avert disparities among the teachers across the diverse age groups and experience levels. The results underscore the paramount importance of in-service training courses aimed at empowering teachers.

Keywords: EFL Teachers, Language Teaching, Teacher Education, Teacher Self-Efficacy, Teacher Variables

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1. Introduction

In the light of numerous studies (e.g. Chea & Shumow, 2014; Kim & Lorschbach, 2005; Pajares, 2003; Pajares & Miller, 1995; Pajares & Valiante, 2001) self-efficacy has become a tantalizing and intriguing concept in research into the affective domain. As suggested by Bandura (1997, p. 3), it alludes to “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments”. In other words, it comprises credence in one’s capacity to embark on a precise undertaking as a paramount precondition and prerequisite to implement anterior aspirations (Schunk, 1991). The utmost gravity of self-efficacy emanates from its concomitant causes and effects in academic settings owing to its concurrent and reciprocal correspondence with individual beliefs and performance (Pajares & Urdan, 2006). More specifically, self-efficacy prompts the individual to endeavor to attain antecedent objectives and prevent the attribution of failure to superficial and extraneous circumstances (Bandura, 1986). This affective factor envisages the checkered route to realization of predetermined propositions which are judged as elegant or exceptional (Bandura, 1997).

The concept of self-efficacy has become the bedrock of educational psychology owing to its capability to modify and transform the performance of practitioners including teachers (Labone, 2004). Teacher self-efficacy encompasses teachers’ perceptions in regard to their percipience, and acumen to augment students’ attainment in academic settings (Schunk, 1995). In other words, it embraces the judicious execution of skills and propensities to facilitate acquisition in instructive contexts (Midgley, Feldlaufer, & Eccles, 1989). The intricate nature of this affective variable has provoked a compelling urge to scrutinize its role in the characterization of teacher conduct in the classroom (Pajares & Valiante, 2006).

Researchers have probed its impacts on teaches’ practices ranging from fleeting tactics to permanent propositions (Woodrow, 2011). More specifically, research has been concerned with the predictive value of teacher self-efficacy in the specification of the distinctive teacher practices (Graham, et al, 2001). Nonetheless, this line of research has envisaged self-efficacy as a congenital and ingrained attribute which is irreversible and absolute (Labone, 2004). In other words, the empirical studies of this variable have not endeavored to deal with its multifaceted essence among the cognitive, affective, and personal factors (Bandura, 2006). What has to be taken into account is the fact that teacher self-efficacy does not exert an influence on teacher performance linearly. Instead, it is situated within a network of individual variables where it affects and is modified by a multitude of other factors (Bandura, 1999). The interactions between teacher self-efficacy and the abundance of teacher-related variables underpin the fact that research in

this regard is indispensable for characterizing the role of teacher self-efficacy in classroom milieu (Pajares, 2005).

Among primary and predominant teacher personal factors applying researcher in the field of teacher education are gender, age, and teaching experience. Research findings have revealed that gender and age may either influence self-efficacy or modify the impact of other factors on it (Matthews, 2010). Likewise, the gravity of the role of experience in the characterization of this construct has been reinforced in the theoretical model of teacher self-efficacy formulated by Bandura (1986, 1997). However, teacher self-efficacy has been considered as one of those teacher characteristics that might be profoundly influenced through teacher education (Pajares & Schunk, 2001). Yet, the empirical research on teacher self-efficacy has not dealt with the role that teacher training courses may play in the modification of teacher self-efficacy (Zheng, Michael, Young, Robert, & Wagner, 2009).

Contemporary second language teacher education has predominantly appraised the sociocultural nature of teacher knowledge. More specifically, this field has made an endeavor to explicate and expound the development of teachers' knowledge in regard to the intricacies of the target language through participation in diverse social and situational contexts (Johnson, 2009). This trend presupposes the paramount and consequential role of teacher education course content in molding and whittling the teacher cognition in the circuitous and intricate process of teaching (Graves, 2009). Notwithstanding, a scrutiny of the relevant literature shows that the practitioners have chiefly speculated about the content of education programs and have enunciated their reflections in the form of specific hypotheses in regard to teacher education course content (Kiely & Askham, 2012). In other words, methodical and empirical enquiry into constructive, functional and advantageous factors in teacher education is scant in the field of second language teaching (Freeman & Johnson, 1998; Johnson, 2009).

Notwithstanding, the last decade has been empirically fruitful and has provided fascinating and valuable insight into the contribution of teacher cognition to the process of classroom instruction. Research (e.g. Borg, 2010, 2011) has underscored the fact that the informed reform of teacher education is indispensable to the development of effective teachers (Borg, 2005, 2006). These issues highlight the exigent situation regarding teacher education programs in both second and foreign language learning contexts.

The perusal of the theoretical and empirical backgrounds of teacher education manifests certain lines of research into this construct. First, a plethora of studies have investigated the concept of professionalism which comprises the accumulation of potentialities and aptness that are indispensable to the process of instruction in academic settings (e.g. Brown

& Ferrill, 2009; Demirkasmoglu, 2010; Kennedy, 2007; McBer, 2000; Pratte & Rury, 1991). Second, a number of empirical endeavors have made an effort to itemize the factors which should be highlighted in training courses for effective instruction (e.g. Danielson & McGreal, 2000; McBer, 2000).

Iranian researchers have predominantly followed these lines in their investigations. More specifically, they have been concerned with Iranian ELF teachers' professionalism (e.g. Aghaalikhani & Maftoon, 2018; Sabzian, Ismail, & Fathi Vajargah, 2013) and have made an endeavor to catalogue the consequential variables for constructive teaching in the context of the classroom (e.g. Khaksefidi, 2015). Furthermore, a number of empirical investigations (e.g. Ganji, Ketabi, & Shahnazari, 2018; Jamshidi Avanaki, & Sadeghi, 2014) in the Iranian EFL context have made an effort to compare Iranian teacher training courses and the international teacher education programs such as Certificate in Teaching English to Adults (CELTA). Notwithstanding, there is a lack of research into the impact of teacher education on teacher self-efficacy for pre-service and in-service teachers in both ESL and EFL learning contexts.

The provided overview underlines particular and conspicuous gaps in the literature of teacher self-efficacy and teacher education in foreign language contexts including the Iranian EFL context and underscores the pronounced need for empirical investigation into these issues. First, EFL teacher training programs are mostly concerned with pre-service teachers and disregard the amelioration of in-service teachers' capacities and expertise. Second, these programs refuse to acknowledge the variability among the teachers which stem from their personal factors including their age, gender, and experience. Third, the training courses do not sufficiently render instruction in regard to teacher self-efficacy and its consequential role in classroom instruction. Fourth, there is a lack of research in regard to the impact of teachers' personal factors on their self-efficacy. Fifth, empirical investigations have not appraised the tractability of teacher self-efficacy in training programs. Finally, researchers have not inspected the possibility of overcoming the effect of teachers' personal factors by means of teacher education. The present study endeavors to deal with the mentioned issues in the EFL context of Iran. More specifically, this study makes an effort to determine the impacts of the teachers' personal factors on their self-efficacy. To this end, the study tries to answer the following research questions:

1. Do EFL teachers' gender, age, and experience have an effect on their self-efficacy?
2. Does teacher education modify the impacts of teachers' gender, age, and experience on their self-efficacy?

2 Method

2.1. Participants

The research sample was recruited from among EFL teachers in different locations and educational settings to secure its representativeness and the generalizability of the obtained results. In view of the objectives, 180 (90 male & 90 female) English as a Foreign Language (EFL) teachers in public and private juniors and senior high schools, private language institutes, and university settings in seven cities in West Azerbaijan province (Iran) were selected using stratified sampling procedure. To be more specific, the researchers divided the population members into homogeneous groups (i.e. strata) in terms of gender, age, and experience owing to the fact that the sub-populations of the study varied in terms of the aforementioned participant characteristics. Next, they employed simple random sampling to select the required number of participants within each stratum.

The majority of these teachers had taught general English courses at high school and private institutes. A number of the university lecturers had experience in teaching both general English courses and English for Specific Purposes (ESP) courses. Taking into account the purpose of the study, they were assigned to six groups based on their years of teaching experience including: Group 1 (0-5), Group 2 (5-10), Group 3 (10-15), Group 4 (15-20), Group 5 (20-25), and Group 6 (25-30). Each one of these groups comprised 30 EFL teachers (15 males and 15 female).

Furthermore, these teachers were appointed to eight groups on the basis of their age range including: Group 1 (20-25), Group 2 (25-30), Group 3 (30-35), Group 4 (35-40), Group 5 (40-45), Group 6 (45-50), Group 7 (50-55), and Group 8 (55-60). The first six groups comprised of 22 participants (11 males and 11 females). Group 7 and Group 8 included 24 EFL teachers (12 males and 12 female).

The participants were primed for the study by means of focused-group discussions with one of the researchers who implemented the study. In these discussion sessions, the researcher informed the participants of the main intent of the study, notified them of the research tendency of the teacher training treatment and reassured their anonymity throughout the study.

2.2. Materials and Instruments

Taking note of the overriding and foremost purpose of the study, Teachers' Sense of Efficacy Scale (Tschamen-Moran & Woolfolk-Hoy, 2001) was utilized to determine the participants' self-efficacy both prior and posterior to the treatment of the study. This self-report questionnaire encompasses 24 items which are scored on a 9-point Likert-Scale ranging from 1 to 9 with the higher points designating a higher level of teacher self-efficacy. Tschamen-Moran and Woolfolk-Hoy (2001) noted that, statistical

analyses have guaranteed the reliability index (.89) and the empirical validity (.87) of this scale and it is an acceptable instrument for the assessment of teacher self-efficacy. It took the participants approximately 20 minutes to answer the items of this questionnaire. In order to ensure the reliability of this instrument in Iranian EFL context, the researchers piloted it on a norm group of 90 teachers (45 male & 45 female) sharing the characteristics of the target teachers. The Cronbach's Alpha value of was found to be .88 in Iranian context which constitutes a satisfactory index of internal consistency.

2.3. Procedure

Having selected the research sample, as notified in the previous section, the Teachers' Sense of Efficacy Scale (Tschamen-Moran & Woolfolk-Hoy, 2001) was administered to all of the participants to discern their teacher self-efficacy prior to the treatment.

Next, the 20-session training program was based on a researchers-designed syllabus that delineated the content and the methodology of the program. The noteworthy learner factors which are functional in interlanguage development were selected based on Ellis's (2008) textbook entitled *The Study of Second Language Acquisition*. Accordingly, the selected variables comprised language aptitude, learning strategies, learning styles, cognitive styles, personality traits, motivation, anxiety, willingness to communicate, intelligence, and age. Each of these constructs was propounded in two consecutive sessions. The content related to each learner variable was further graded in three consecutive stages of presentation of the theoretical definitions and discussions of the pertinent learner factor, discussion of the results of major lines of empirical endeavors and predominant assessment instruments of the germane learner factor, their structure, and their advantages and drawbacks. The first two stages were completed during the first session and the third one which was more practically-oriented was implemented in the second session.

The treatment began two weeks after the completion of the questionnaire and continued for five months with weekly sessions. The sessions lasted for two hours and were held on Friday mornings.

Each variable was addressed in two successive sessions. The first session commenced with a brief interactive introduction of the learner variable in question at the presentation stage of the training session. During the second stage, the participating teachers were engaged in reflection on their personal experiences regarding the learner variable in the focus, the intricacies it causes in the classroom, and their characteristic teaching practices which aim to deal with the effect of the learner factor on the students' interlanguage development. During this stage, the teachers were encouraged to commit their reflections into paper and share them with the

researcher. The researcher randomly selected a number of sheets of paper, shared their content with all of the teachers and asked them to provide their own perspectives in regard to the pertinent teaching practices. These stages took place in the first session of the examination of the relevant learner variable.

At the end of the session the researcher exhorted the teachers to ponder over the learner variable and the discussions of the session in order to come up with insightful and judicious teaching practices to deal with the relevant factor. The teachers were asked to email their individual perspectives to the researcher within three days after the end of the session. During the remaining days of the week (before the next session), the researcher scrutinized the teachers' perspectives, categorized them, and gathered information on the perspectives which were supported by the relevant literature of the germane learner factor.

In the second session focused on the same variable, the researcher provided the teachers with sufficient information regarding the teaching practice categories based on the teachers' own standpoints and evaluated them based on the existing literature. At the end of the session, the researcher and the teachers reached a consensus on the most functional and practical teaching practices in regard to the discussed learner factor.

These stages were repeated for all the ten learner factors listed in the syllabus. During the treatment sessions, the researcher made an endeavor to empower the participants by means of theoretical discussions and practical applications of the pertinent conceptual constructs. To this end, he apprised the participants of the germane individual learner differences which could impact upon the sequence and pattern of acquisition in instructed second language acquisition. More specifically, the researcher familiarized the participants with these variables, explicated their effect on language learning, highlighted the predominant instruments for their assessment, and expounded on the practical approaches to tackling with these differences in the classroom.

Finally, the participants received the teacher self-efficacy questionnaire of the study for the second time two weeks' posterior to the treatment of the study. SPSS 20 was utilized for the data analysis of the study.

3. Results and Discussion

3.1. Results

Prior to conduct any statistical analyses, the normality of the research data was verified, as presented in Table 1.

Table 1

Tests of Normality for the Participants' Results on the Self-Efficacy Pretest and Posttest

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.217	180	.214	.928	180	.442
Posttest	.254	180	.322	.878	180	.617

As shown in Table 1, the results of the Kolmogorov-Smirnov and Shapiro-Wilk tests verified that the data were normally distributed, sig. > .05. Thus, parametric tests were employed to analyze the data and answer the research questions. Further, the descriptive statistics of the male and female participants' self-efficacy prior to the treatment were computed. Table 2 presents the relevant descriptive statistics:

Table 2

Descriptive Statistics for Male and Female EFL Teachers' Self-Efficacy before the Treatment

Groups	N	Mean	Std. Deviation	Std. Error Mean
Male	90	154.11	15.78	1.66
Female	90	145.04	21.59	2.27

As shown in Table 2, the male participants reported a higher level of teacher self-efficacy (M=154.11, SD = 15.78) in comparison with the females (M=145.04, SD = 21.59). Then, an independent t-test was conducted to compare the self-efficacy scores for males and females, the results of which are displayed in Table 3.

As shown in Table 3, there was a significant difference in scores for males (M=154.11, SD = 15.78) and females (M=145.04, SD = 21.59; $t(178) = 3.21$, $p = .002$, two-tailed). The magnitude of the difference in the means (mean difference = 9.07, 95% CI: 3.50 to 14.62) was close to medium (eta squared = .055). This difference is shown in Figure 1.

Table 3

Independent-Samples T-test of Male and Female EFL Teachers' Self-efficacy before the Treatment

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Prestte	Equal variances assumed	22.32	.517	3.21	178	.002	9.067	2.81	3.50	14.63
	Equal variances not assumed			3.21	162.99	.002	9.067	2.81	3.49	14.63

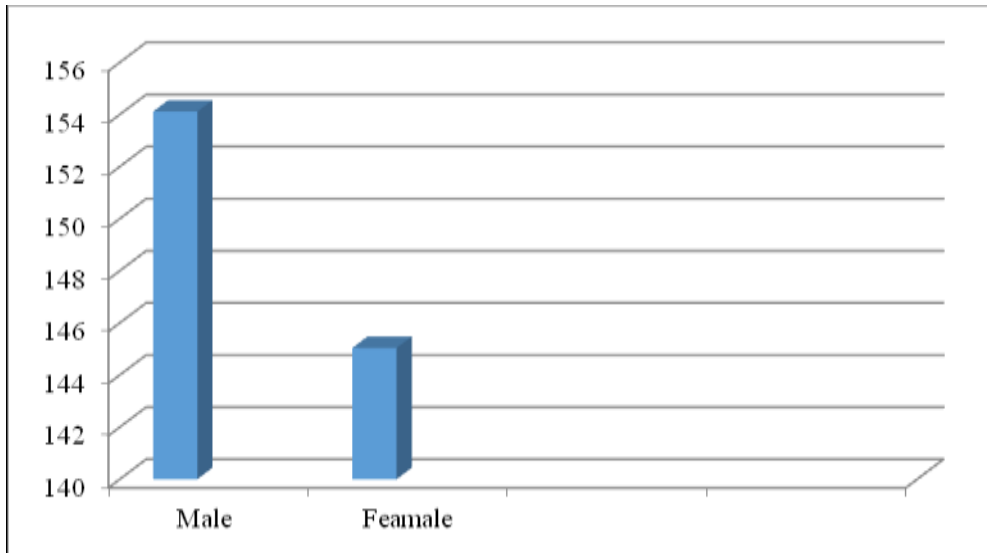


Figure 1. Male and Female EFL Teachers' Self-Efficacy before the Treatment

Additionally, the descriptive statistics of the participants' initial self-efficacy scores were computed based on their age, as provided in Table 4.

Table 4

Descriptive Statistics for EFL Teachers' Self-efficacy in Different Age Groups before the Treatment

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
					G1	22
G2	22	140.00	5.49	1.17	137.56	142.44
G3	22	147.50	4.63	.98	145.44	149.56
G4	22	163.45	8.83	1.88	159.54	167.37
G5	22	169.50	3.66	.78	167.88	171.12
G6	22	171.77	4.26	.90	169.88	173.66
G7	24	170.42	4.34	.88	168.58	172.25
G8	24	170.67	8.83	1.80	166.94	174.40
Total	180	157.65	17.49	1.30	155.08	160.22

The results showed observed differences among the 8 age groups' scores. Hence, a one-way between-groups analysis of variance was conducted to explore the impact of age on levels of the participants' teacher self-efficacy. Accordingly, the results of the one-way between-groups analysis of variance (ANOVA) test were examined. These results are itemized in Table 5.

Table 5

ANOVA Test of EFL Teachers' Self-efficacy in Different Age Groups before the Treatment

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	47992.011	7	6856.002	174.058	.000
Within Groups	6774.939	172	39.389		
Total	54766.950	179			

There was a statistically significant difference among these groups at the $p < .05$ level in self-efficacy scores for the eight age groups: $F(7, 172) = 174.09$, $p = .000$. The effect size, calculated using eta squared, was .87. Yet, to locate the significance of the difference more precisely, another Post Hoc Tukey test was run, as displayed in Table 6.

Table 6

Post Hoc Tukey Test of EFL Teachers' Self-efficacy in Different Age Groups before the Treatment

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.
G1	G2	-14.455*	1.892	.000
	G3	-21.955*	1.892	.000
	G4	-37.909*	1.892	.000
	G5	-43.955*	1.892	.000
	G6	-46.227*	1.892	.000
	G7	-44.871*	1.852	.000
	G8	-45.121*	1.852	.000
	G2	G1	14.455*	1.892
G3		-7.500*	1.892	.003
G4		-23.455*	1.892	.000
G5		-29.500*	1.892	.000
G6		-31.773*	1.892	.000
G7		-30.417*	1.852	.000
G8		-30.667*	1.852	.000
G3		G1	21.955*	1.892
	G2	7.500*	1.892	.003
	G4	-15.955*	1.892	.000
	G5	-22.000*	1.892	.000
	G6	-24.273*	1.892	.000
	G7	-22.917*	1.852	.000
	G8	-23.167*	1.852	.000
	G4	G1	37.909*	1.892
G2		23.455*	1.892	.000
G3		15.955*	1.892	.000
G5		-6.045*	1.892	.035
G6		-8.318*	1.892	.001
G7		-6.962*	1.852	.006
G8		-7.212*	1.852	.003
G5		G1	43.955*	1.892
	G2	29.500*	1.892	.000
	G3	22.000*	1.892	.000
	G4	6.045*	1.892	.035
	G6	-2.273	1.892	.931
	G7	-.917	1.852	1.000
	G8	-1.167	1.852	.998
	G6	G1	46.227*	1.892
G2		31.773*	1.892	.000
G3		24.273*	1.892	.000
G4		8.318*	1.892	.001
G5		2.273	1.892	.931
G7		1.356	1.852	.996
G8		1.106	1.852	.999

*Table6
(Continued)*

G7		44.871*	1.852	.000
	G1			
	G2	30.417*	1.852	.000
	G3	22.917*	1.852	.000
	G4	6.962*	1.852	.006
	G5	.917	1.852	1.000
	G6	-1.356	1.852	.996
	G8	-.250	1.812	1.000
G8	G1	45.121*	1.852	.000
	G2	30.667*	1.852	.000
	G3	23.167*	1.852	.000
	G4	7.212*	1.852	.003
	G5	1.167	1.852	.998
	G6	-1.106	1.852	.999
	G7	.250	1.812	1.000

Post-hoc comparisons using the Tukey HSD test indicated that the mean self-efficacy scores for the first four age groups, ranging from 20 to 40, were significantly lower than the other four groups aging from 40 to 60 who reported a plateau in self-efficacy after the age of 40. Figure 2 represents these results.

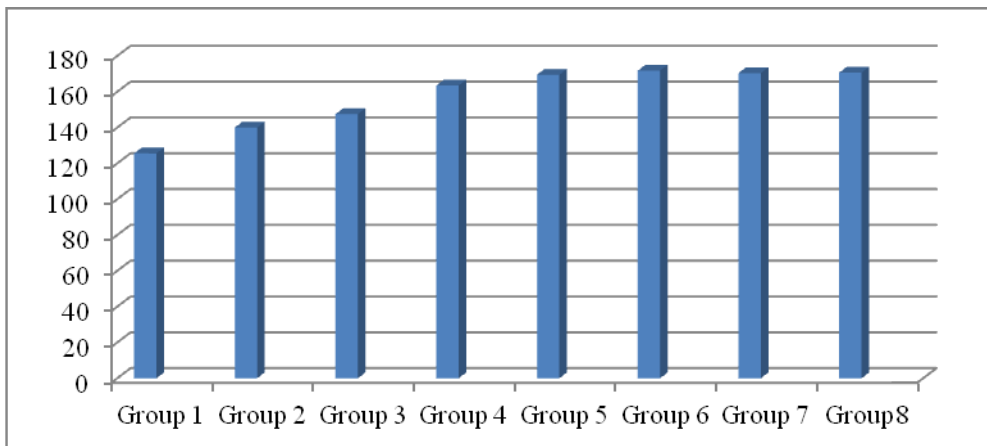


Figure 2. EFL Teachers' Self-efficacy in Different Age Groups before the Treatment

Finally, the descriptive statistics in the participant teachers' self-efficacy were computed with respect to their teaching experience, as demonstrated in Table 7.

Further, the impact of teaching experience on the eight groups of participants' levels of self-efficacy was measured via another one-way between-groups ANOVA. Table 8 indicates the results.

Table 7

Descriptive Statistics for EFL Teachers' Self-efficacy at Different Experience Levels before the Treatment

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
G1	30	131.17	15.605	2.849	125.34	136.99	114	160
G2	30	143.10	16.390	2.992	136.98	149.22	125	180
G3	30	156.57	17.880	3.264	149.89	163.24	120	180
G4	30	169.10	3.507	.640	167.79	170.41	162	175
G5	30	170.57	4.754	.868	168.79	172.34	160	177
G6	30	169.33	5.228	.955	167.38	171.29	162	180
Total	180	156.64	19.232	1.433	153.81	159.47	114	180

Table 8

ANOVA Test of EFL Teachers' Self-efficacy at Different Experience Levels before the Treatment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	40276.561	5	8055.312	54.05	.000
Within Groups	25928.967	174	149.017		
Total	66205.528	179			

As displayed in Table 8, there was a statistically significant difference among these groups at the $p < .05$ level in self-efficacy scores for the six experience groups: $F(5, 174) = 54.05$, $p = .000$. The effect size, calculated using eta squared, was .61. Next, the difference among the groups was located more precisely via another Post Hoc Tukey test, the results of which are revealed in Table 9.

Post-hoc comparisons showed that the mean self-efficacy scores for the first three experience groups ranging in teaching experience from 0-5 for the first novice group to 10-15 for the third group were significantly different from each other and lower than the other four groups whose experience ranged from 15 to 30 and have reached a state of plateau. In other words, self-efficacy grew significantly with increase in the teachers' teaching experience. Figure 3 illustrates these results.

Table 9

Post Hoc Tukey Test of EFL Teachers' Self-Efficacy at Different Experience Levels before the Treatment

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.
G1	G2	-11.933*	3.152	.003
	G3	-25.400*	3.152	.000
	G4	-37.933*	3.152	.000
	G5	-39.400*	3.152	.000
	G6	-38.167*	3.152	.000
G2	G1	11.933*	3.152	.003
	G3	-13.467*	3.152	.000
	G4	-26.000*	3.152	.000
	G5	-27.467*	3.152	.000
	G6	-26.233*	3.152	.000
G3	G1	25.400*	3.152	.000
	G2	13.467*	3.152	.000
	G4	-12.533*	3.152	.001
	G5	-14.000*	3.152	.000
	G6	-12.767*	3.152	.001
G4	G1	37.933*	3.152	.000
	G2	26.000*	3.152	.000
	G3	12.533*	3.152	.001
	G5	-1.467	3.152	.997
	G6	-.233	3.152	1.000
G5	G1	39.400*	3.152	.000
	G2	27.467*	3.152	.000
	G3	14.000*	3.152	.000
	G4	1.467	3.152	.997
	G6	1.233	3.152	.999
G6	G1	38.167*	3.152	.000
	G2	26.233*	3.152	.000
	G3	12.767*	3.152	.001
	G4	.233	3.152	1.000
	G5	-1.233	3.152	.999

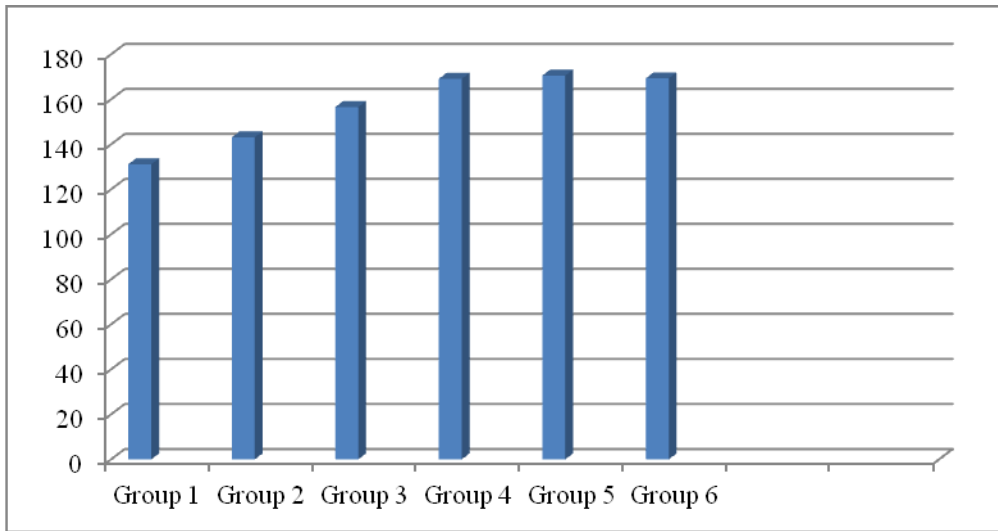


Figure 3. EFL teachers' Self-efficacy at Different Experience Levels before the Treatment

On the basis of the results, it was argued that, EFL teachers' gender, age, and experience level influenced their teacher self-efficacy in classroom instruction. Hence, the answer to the first research question is positive.

The second research question delved into whether teacher education could modify the impacts of teachers' gender, age, and experience on their self-efficacy. First, the relevant descriptive statistics were computed, as shown in Table 10.

Table 10

Descriptive Statistics for Male and Female EFL Teachers' Self-efficacy after the Treatment

Groups	N	Mean	Std. Deviation	Std. Error Mean
Male	90	167.97	9.08	.958
Female	90	172.08	7.65	.806

As shown in Table 10, female teachers' self-efficacy (M= 172.08) was higher than the male teachers' self-efficacy (M=167.97). Thus, another independent t-test was conducted to compare male and female teachers' self-efficacy scores posterior to the treatment.

Table 11

Independent-Samples T-test of Male and Female EFL Teachers' Self-Efficacy after the Treatment

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
							Lower	Upper	
Equal variances assumed	.1	642	3.28	178	.001	-4.111	1.252	-6.582	1.64
Equal variances not assumed			3.28	172.96	.001	-4.111	1.252	-6.583	1.64

As Table 11 displays, there was a significant difference in scores for males (M=167.97, SD = 9.08) and females (M=172.08, SD = 7.65; $t_{(178)} = -3.28$, $p = .001$, two-tailed) with females reporting higher levels of self-efficacy. The magnitude of the difference in the means (mean difference = -4.11, 95% CI: -6.58 to -1.640) was close to medium (eta squared = .057). Figure 4 shows these results:

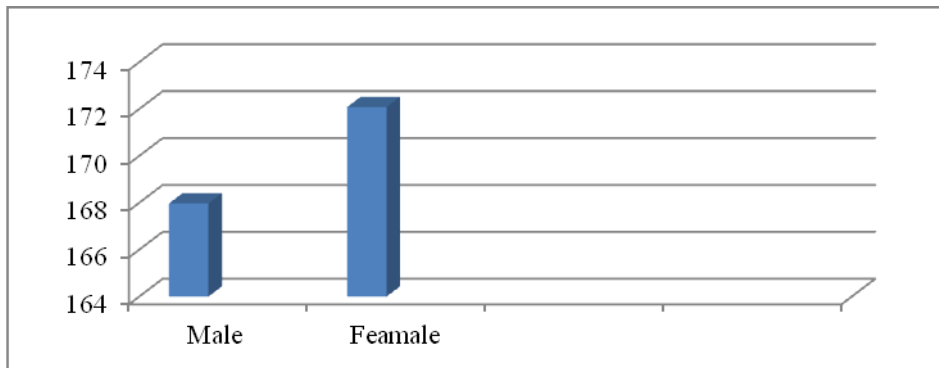


Figure 4. Male and Female EFL Teachers' Self-efficacy after the Treatment

Moreover, the descriptive statistics of the eight age groups of participants were computed, as presented in Table 12.

Table 12

Descriptive Statistics for EFL Teachers' Self-efficacy in Different Age Groups after the Treatment

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
G1	22	173.64	7.09	1.51	170.49	176.78	165	189
G2	22	174.82	4.71	1.00	172.73	176.91	167	189
G3	22	176.00	10.06	2.14	171.54	180.46	158	198
G4	22	173.09	5.49	1.17	170.66	175.53	162	180
G5	22	172.14	5.01	1.07	169.91	174.36	165	180
G6	22	173.95	6.45	1.37	171.09	176.82	160	180
G7	24	175.17	5.18	1.05	172.98	177.36	165	187
G8	24	175.33	4.01	.82	173.64	177.03	166	180
Total	180	174.29	6.22	.46	173.37	175.20	158	198

As shown, very slight differences were observed among the groups the significance of which was tested via a one-way ANOVA test. Table 13 provides these results.

Table 13

ANOVA Test of EFL Teachers' Self-efficacy in Different Age Groups after the Treatment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	260.584	7	37.226	.959	.463
Within Groups	6678.394	172	38.828		
Total	6938.978	179			

As displayed in Table 13, there was not a statistically significant difference among the eight age groups at the $p < .05$ level in self-efficacy scores: $F(7, 172) = .959$, $p = .463$. The effect size, calculated using eta squared, was .037. Figure 5 represents these results.

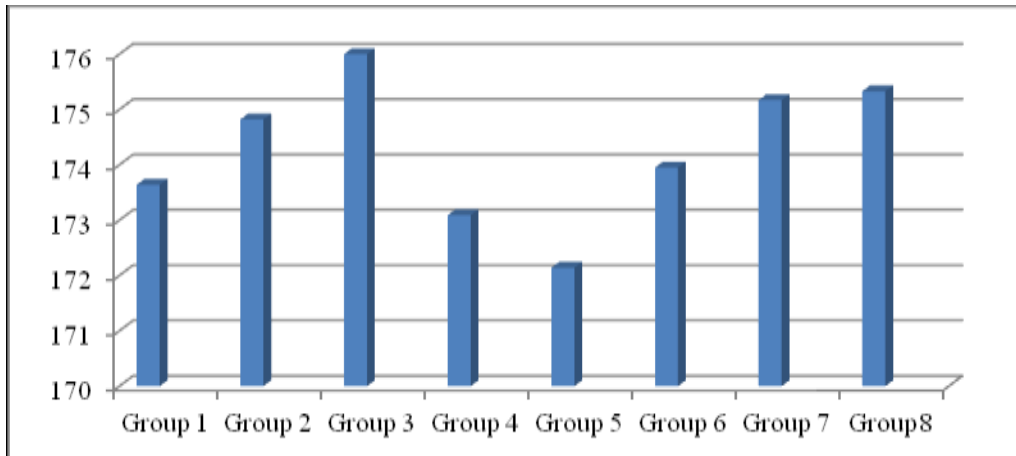


Figure 5. EFL Teachers' Self-efficacy in Different Age Groups after the Treatment

Finally, the descriptive statistics for the post-treatment self-efficacy scores were computed for the six experience groups, as illustrated in Table 15.

Table 15

ANOVA Test of EFL Teachers' Self-efficacy at Different Experience Levels after the Treatment

	N	Mean	Std. Deviation	Std. Error	95% Interval for Mean	Confidence Interval	Min.	Max.
					Lower Bound	Upper Bound		
G1	30	175.9	6.863	1.253	173.37	178.50	164	189
G2	30	176.4	10.954	2.000	172.38	180.56	157	190
G3	30	175.1	9.386	1.714	171.60	178.60	158	190
G4	30	172.2	10.736	1.960	168.19	176.21	158	198
G5	30	174.3	6.886	1.257	171.80	176.94	165	190
G6	30	173.7	7.659	1.398	170.91	176.63	157	190
Total	180	174.6	8.900	.663	173.33	175.95	157	198

As displayed, quite slight differences were observed among teachers at various experience levels. Therefore, another one-way ANOVA test was

implemented to significance of the observed difference, as shown in Table 16.

Table 16

ANOVA Test of EFL Teachers' Self-efficacy at Different Experience Levels after the Treatment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	360.361	5	72.072	.907	.478
Within Groups	13819.167	174	79.420		
Total	14179.528	179			

As displayed in Table 13, the observed slight difference among the six experience groups did not reach significance at the $p < .05$ level in self-efficacy scores: $F(5, 174) = .907, p = .478$. The effect size, calculated using eta squared, was .025. Figure 6 shows these results.

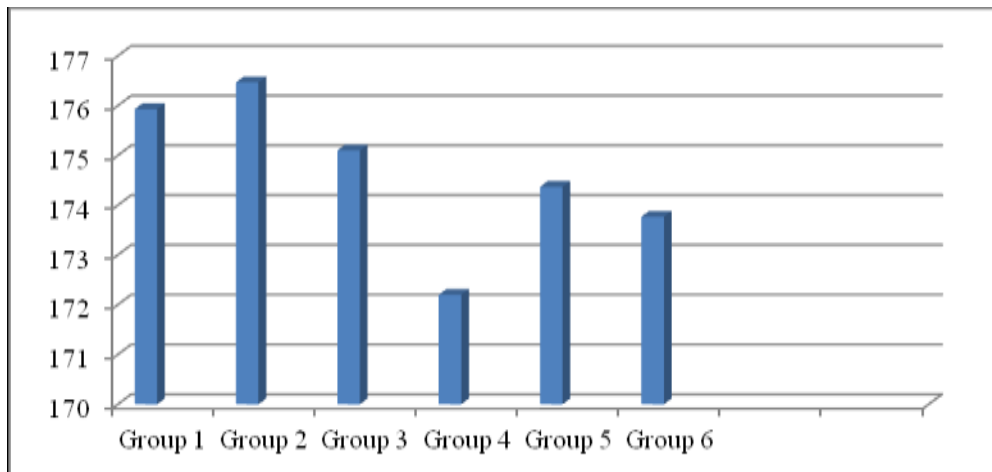


Figure 6. EFL Teachers' Self-efficacy at Different Experience Levels after the Treatment

3.2. Discussion

The first research question of this study strived to particularize the capacity of EFL teachers' gender, age, and experience to orientate, modify, and convert their teaching self-efficacy which constitutes a main and key attribute in instructed language learning. The results evinced that these personal characteristics may exert influence on the instructors' self-efficacy and sway their pedagogical practices. These results buttress and reinforce the main theoretical contention (e.g, Dörnyei, 2005; Ellis, 2008; Horwitz, 2000;

Robinson, 2002; Skehan, 1989) that personal features impact on the process of education. More specifically, the findings seem to rationalize the assertion that unique, personalized and exclusive idiosyncrasies are competent to remold the inbuilt, ingrained, and congenital attributes comprising the teaching self-efficacy.

A careful and intense scrutiny of the findings in regard to age and experience accentuates their congruency with common sense. Indeed, the appraisal of results foregrounds and lends credence to the insight that self-efficacy is a judicious concomitant of maturity in personal and professional life. Furthermore, the male instructors' higher self-efficacy at the onset of the study might be attributable to their built-in, inherent, and deep-seated disposition to compete and emulate their peers. To put it another way, males seem to be more inclined to be on a par with their colleagues and are liable to adopt, develop embrace, and endorse the alleged and putative efficient attributes to substantiate their supremacy and ascendancy in the process of education. Alternatively, their initial superiority in self-efficacy could be associated with the superiority images they acquire in the patriarchal social context in which they have taught for years. Interestingly, however, such significant differences reversed as a result of instruction and raising the female participants' awareness of how to handle learner-related problems. This finding highlights the need to raise awareness of practicing teachers of strategies they can employ to enhance their self-efficacy.

The second research question endeavored to discern the role of teacher education in the mediation of the impacts of teachers' gender, age, and experience on their self-efficacy. The findings underscored the fact that, formal education received during the training program served to obscure and blur the variations among the participating teachers across the age groups and experience levels. Additionally, the results seem to lend credence to the proposition that nurture (in the form of formal education) has the property to vanquish, overwhelm, and outstrip nature which is embodied in male teachers' higher self-efficacy. More specifically, the results underline the prospect that a specific category of deep-seated personalized idiosyncrasies comprising self-efficacy may not constitute fossilized distinctive attributes which are immutable, perpetual, and invariant.

The results partially underpin the results of foregoing studies (e.g. Aghaalikhani & Maftoon, 2018; Sabzian, Ismail, & Fathi Vajargah, 2013). Notwithstanding, these findings append an unhackneyed and newfangled dimension to the research agenda in teacher education due in large to the fact that they elucidate, annotate, and explicate the foreseeable role of teacher educational in the modification of particular inbuilt dispositions including self-efficacy.

The results may be ascribed to both intrinsic and extrinsic properties. Indeed, both innate and extraneous factors collaborate and amalgamate to predispose the instructors to embrace and underwrite the establishment of specific attributes in the context of classroom (Danielson & McGreal, 2000). More specifically, the findings might be imputed to the conformity, compatibility and consonance between formal instruction and the teachers' hemispheric dominance (Danesi, 1988). Put differently, formal instruction was advantageous and serviceable for a number of teachers with a low level of self-efficacy due largely to the fact that they were left-brain dominated. More specifically, owing to their neurological configuration, these teachers were inherently predisposed to seek confirmed pedagogical propositions and prevailing and prevalent teaching practices to systematically superintend the process of instruction. Notwithstanding, lack of apt and pertinent education in their pre-service years had a detrimental effect on their potentiality to handle the classroom peculiarities in the process of instruction. Consequently, formal education furnished these teachers with their preferable theoretical and experiential information which expedited and accelerated the development of their self-efficacy.

Additionally, it seems that, teachers' inborn and congenital self-efficacy was affected by particular extrinsic and extraneous variables comprising their instrumental orientation and attitudes (Dörnyei, 2001). Otherwise speaking, it appears that, a number of teachers deemed that, the educational course was an opportune moment to substantiate and attest their supremacy in comparison with their colleagues and peers. Accordingly, they endeavored to endorse and foster the educational interplay between themselves and the researcher to burgeon and expand the range of their pedagogical potentialities in the context of classroom. This issue foregrounds the great import of the exploration of contextual factors alongside with affective and cognitive attributes in teacher education studies.

4. Conclusion and Implications

The present study aspired to particularize and stipulate the plausible and tenable impact of EFL teachers' personalized attributes on their self-efficacy. Additionally, it strived to pinpoint the role of teacher education in mediating the potency of these variables in the modification of teacher self-efficacy. Two conclusions may be drawn based on the findings. Firstly, English teachers' age, gender and teaching experience can have a bearing on their innate and ingrained capacities and attributes such as self-efficacy. Secondly, apt and apposite in-service training programs which furnish practising teachers with expedient and propitious information on pedagogical alternatives might serve to subdue the aversive effects of attributes like gender, age and experience.

The findings from the current enquiry offer a number of pedagogical implications. First and foremost, in-service training courses can suggest as a way of ameliorating English teachers' self-efficacy in Iranian EFL context. To be more specific, both pre-service and in-service teachers should be fully apprised of the prevalent fallacies concerning the consequential role of personal characteristics in the efficacy of academic instruction. They should realize that effective teaching hinges on the fusion of expertise in underlying theoretical principles and competence in the application of these propositions to pedagogic practices. Accordingly, the training courses have to blend theoretical knowledge and practical considerations to the teachers with the help of trainers and mentors. Furthermore, the teacher training courses have to oblige the administrators, superintendents, supervisors, and executives in the EFL academic settings to attend particular briefing meetings of these courses. In these meeting sessions, these principals have to become mindful of the popular misconceptions about the individualistic nature of learning and the need to personalize instruction.

Notwithstanding, caution must be exercised in the interpretation and extension of the findings. More specifically, the researchers should bear in mind that this study addressed the issue of teacher education in an EFL context. The scrutiny of the major variables of this study in a second language context might lead to unreservedly different outcomes. Additionally, these results appertain to specific ingrained and appropriated personal attributes comprising age, gender, and experience and do not necessarily apply to other personalized idiosyncrasies such as background knowledge, academic major and cognitive style among the others. Consequently, the findings should be vigilantly associated with analogous further studies.

These issues foreground and underline the import of further research and underscore the fact that it is a matter of great substance in teacher education. The findings of this study evinced that specific personal attributes have the propensity to sway teacher self-efficacy. Nonetheless the specification and itemization of the whole array of these idiosyncratic characteristics requires detailed and judicious scrutiny. By the same token, the study strived to pinpoint the tractability of self-efficacy as a result of education and did not address analogous ingrained characteristics including motivation and self-esteem among the others. Accordingly, the exploration of comparable concepts in teacher education studies seems to be a plausible line of research.

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