The Mediating Role of Prospective Teachers' Teaching Self-Efficacy between Self-Efficacy Sources and Attitude towards Teaching Profession

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Abstract: The purpose of this study was to investigate a predictive power of prospective teachers' self-efficacy sources on their teaching self-efficacy and attitude towards the teaching profession. Design of the study was the correlational research. The study was conducted on 315 prospective teachers studying pedagogical formation education in a 2017-18 academic year. Instruments were "Prospective Teachers' Self-Efficacy Sources Scale", "Teaching Self-Efficacy Scale" and "Attitude Scale of Teaching Profession". Pearson Product Moment Correlation Coefficient and PATH analysis methods were used to analyze the data. Results indicated that emotional states, mastery experience, and verbal persuasion were significant predictors of prospective teachers' teaching self-efficacy and attitudes towards teaching profession.

Keywords: *Self-efficacy, self-efficacy sources, attitude, teaching profession, prospective teachers.*

Introduction

The Self-efficacy is a personal belief about one can successfully manage the necessary activities required to produce the outcomes (Bandura, 1977). Self-efficacy determines the feelings, thinking, motivation and behaviors of people (Bandura, 1994). Also, it affects how much effort will be spent and persisted by people in the face of obstacles and aversive situations. So, people with stronger self-efficacy belief will spend more effort to cope with obstacles (Bandura, 1977; 1982).

Teachers' self-efficacy is their beliefs about capabilities to make positive changes in the behavior and achievements of students (Gibson & Dembo, 1984). It affects teachers' general orientations in the educational process in addition to specific instructional activities. Creating a positive learning environment fostering students' development of competencies depends heavily on talent and self-efficacy perceptions of teachers (Bandura, 1997). Teachers with high teaching self-efficacy belief spend more time for academic activities, provide more guidance to overcome difficulties to students and praise their academic accomplishments (Gibson & Dembo, 1984). They use innovative teaching methods, effective classroom management technics, monitors students' progress, directs students to the inquiry (Czerniak & Chiarelott, 1990). Also, they have more willing to teach and maintain these teaching activities (Tschannen-Moran & Woolfolk-Hoy, 2001). If teachers perceive their instructional activities as successful, self-efficacy and expectations to be successful in future activities increase (Tschannen-Moran & Woolfolk Hoy, 2007).

The Sources of Self-Efficacy

Bandura (1977; 1994; 1997) proposed that there are four sources feeding self-efficacy. These sources are enactive mastery experience (performance accomplishments, performance attainments) , vicarious experience, verbal (social) persuasion and physiological and affective state (emotional arousal). *Enactive mastery experience* the most powerful information sources of self-efficacy because it relies on realistic personal experiences. While successful experiences increase self-efficacy, failures undermine it (Bandura 1977). *Vicarious experience* realizes in form of observing people in the social environment. People make judgments about their self-efficacy by comparing their own performances with the performances of other people in the social environment. Observing successful performances of people similar to

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oneself raise observer's self-efficacy, observing their failure performance diminishes it (Bandura, 1994). If a task is new, the effect of vicarious experience on self-efficacy belief may be profound (Bandura, 1997). *Verbal persuasion* is the third source of self-efficacy. If people are convinced that they have a necessary ability to overcome threating situations, their self-efficacy strengthens (Bandura, 1994). The power of verbal persuasion depends on the credibility of the person providing the feedback (Bandura, 1997). *Emotional state* is the last source of self-efficacy. Sometimes, people interpret their stress reactions, tension, fatigue, aches and pains as an indicator of poor performance. So, these negative physiological and affective states empower self-efficacy, vice versa (Bandura, 1977; 1994). The feeling of joy and pleasure perceived from teaching activities may foster teaching self-efficacy, yet a high level of stress and anxiety about whether or not apply teaching activities may decay teaching self-efficacy (Tschannen- Moran & Woolfolk Hoy, 2007).

Self-Efficacy- Activated Processes

People's self-efficacy belief has an effect on their cognitive, motivational, affective and selection processes (Bandura, 1989; 1993; 1994; 1997). That is, self-efficacy affects the lives of people by mean of these processes. These processes and their relations with self-efficacy were discussed in short.

Cognitive processes are affected by self-efficacy in various forms. Self-efficacy has an impact on thinking skills, especially analytic thinking, and memory performance of people (1993). The social cognitive theory posits that people set up events in mind before moving to action. Self-efficacy influences the anticipatory scenarios. While those who believe to have a high sense of self-efficacy visualize success scenarios, those doubting their competency visualize failure scenarios (Bandura, 1997). Self-efficacy has an effect on not only possession of knowledge but also on the usage of the knowledge and skills under the challenging conditions (Bandura, 1993).

Self-efficacy is of crucial role in motivational self-regulation (Bandura, 1994). Self-regulated learning circle starts with forethought phase. People set their own cognized goals, which is important in cognitive and *motivational functioning*, in this phase (Zimmerman, 1998). The difficulty level of these goals depends on self-efficacy belief of people. If a person has strong self-efficacy, one sets high goals and adheres to these goals firmly (Bandura, 1989). Self-efficacy affects causal attributions and outcome expectancies in addition to cognized goals which include in motivational processes. While people with high self-efficacy tend to see an insufficient effort as a cause of failure, people with high self-efficacy tend to see low ability as a cause of failure (Bandura, 1994). Also, duration of effort they spend and perseverance in face of difficulty depends on self-efficacy (Bandura, 1994).

Self-efficacy plays an important role in self-regulation of *affections* (Bandura, 1997). People's self-efficacy affects stress and depression they experience in challenging situations (Bandura, 1989). People have a belief that they can overcome threats do not envision aversive thought patterns. But people have a belief that they cannot overcome threats encounter high anxiety arousal. They enlarge possible threat perceptions and worry about them (Bandura, 1993).

People actively select and construct the environment in they live. They want to create a beneficial environment for themselves. Self-efficacy beliefs of people have control over selection and construction of these environments. People avoid activities which are undermining their coping capabilities, they take part in challenging activities that they can manage (Bandura, 1989). One of choice related processes affected by self-efficacy is career choice and development of people (Bandura, 1994). Highly self-efficacious people have a wide range of career options, and they prepare themselves educationally for these occupational pursuits (Bandura, 1989).

There are many studies on self-efficacy sources of teachers (Bautista, 2011; Blencher, 2007; Burton, Bambery & Harris-Boundy, 2005; Capa Aydin & Woolfolk Hoy, 2005; Chacon, 2005; Gabriele & Jarom, 2007; Garvis & Pendergast, 2011; Guo, Justice, Sawyer & Tompkins, 2011; Klassen & Chiu, 2010; Labone, 2004; Lumpe, Czerniak, Haney & Beltyukova, 2012; Mansfield & Woods-McConney, 2012; Milner, 2002; Milner & Woolfolk Hoy, 2003; Mohamadi & Asadzadeh, 2012; Mottet, Beebe, Raffeld & Medlock, 2004; Mulholland & Wallace, 2001; Phan & Locke, 2015; Raudenbush, Rowan & Cheong, 1992; Ross & Bruce, 2007; Ruble, Usher & McGrew, 2011; Tschannen- Moran & Johnson, 2011; Tschannen-Moran & McMaster, 2009; Tschannen-Moran &.Woolfolk Hoy, 2007; Wang, Tsai & Wei, 2015; Wolters & Daugherty, 2007) and prospective teachers (Cannon & Scharmann, 1996; Cantrell, Young & Moore, 2003; Cone, 2009; Gunnig & Mensah, 2011; Housego, 1990; Jamil, Downer & Pianta, 2012; Knoblauch & Woolfolk Hoy, 2007; Liaw, 2009; McDonnough & Matkins, 2010; Oh, 2011, O'Neil & Stephenson, 2012; Palmer, 2006; Poulo, 2007; Siwatu, 2011) in literature. These studies have mostly been carried out to determine the sources of teaching self-efficacy beliefs or to reveal the effects of these resources on their teaching self-efficacy beliefs. In literature, it was seen that there was no study to reveal the predictive role of teachers 'and teacher candidates' self-efficacy sources and teaching self-efficacy beliefs on affective processes. With this aspect, it is thought that this study will make a significant contribution to the relevant literature.

Teachers' ideas, understandings and attitudes influence their quality of instruction. Therefore, these features of them must be considered in the teacher education programs (Gunning & Mensah, 2011). Teachers' self-efficacy may affect not only teaching motivation and performance (Morris, Usher & Chen, 2017) but also their students' learning outcomes (Anderson, Green & Loewen, 1988; Klassen & Tze, 2014; Morris, Usher & Chen, 2017). Pre-service training of prospective teachers is very important to develop the qualified teachers. Teacher self-efficacy has a key role in teacher

effectiveness and should be a focus of teachers' professional development (Bray-Clark & Bates, 2003). Quality of pre-service teacher training increases in-service teachers' teaching self-efficacy (Cheung, 2008). So, the studies must be conducted to elicit sources of teachers and prospective teachers' teaching self-efficacy. This study aimed to investigate the predictive power of of self-efficacy sources on teaching self-efficacy and attitude of prospective teachers towards teaching profession. Also, self-efficacy affects activating processes. Even if it is not accepted as one of the affective processes influenced by the self-efficacy belief by Bandura, the attitude is one of the affective characteristics of the students (Bloom, 2012). So, in light of social cognitive theory, hypothesis model was proposed below.
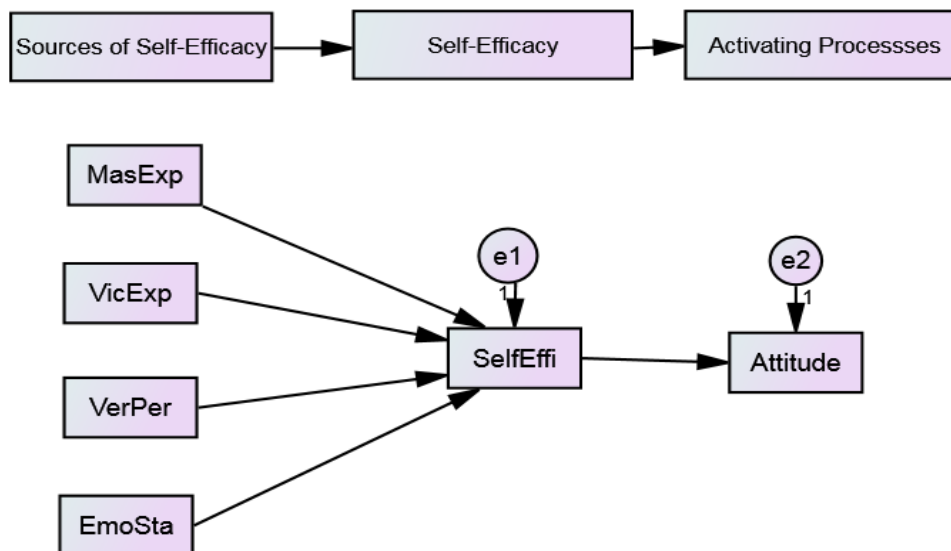

Figure 1. Hypothesis model

Hypotheses of this study are;

1. Prospective teachers' self-efficacy sources will affect their teaching self-efficacy positively.
2. Prospective teachers' self-efficacy sources and teaching self-efficacy will affect their attitudes towards teaching profession.

Methodology

Design

The design of this study was prediction research which is one of the correlational designs. The purpose of this design is to identify variables that will predict an outcome. In this design, a variable is designated a predictor and another as a criterion variable. An outcome can be predicted by more than one predictor (Creswell, 2012). In this study, the sources of self-efficacy were designated as predictor variables, self-efficacy as mediating variable and attitude as a criterion variable.

Participants

Participants were selected with convenience sampling method within target population. Because the study was conducted in a state university where the researcher Works from Turkey. There were 424 prospective teachers in pedagogical formation program. The researcher tried to include all prospective teachers enrolled in the program. The data were gathered from 315 voluntary pedagogical formation prospective teachers. Other 109 prospective teachers constitue absent and involuntary ones. While 92% of the participants were university senior students, 8% were graduated students. The distribution of students according to the program they graduated was as follows: 24% of literature, 21% of history, 28% of foreign languages, 12% of science (physics, chemistry, biology), 9% of economics and administrative sciences 6% had graduated from other programs. Participants constituted 257 (%82) women and 58 (%18) men.

Instruments

The data of the study were obtained with help of "*Attitude Scale of Teaching Profession*", "*Teachers' Sense of Efficacy Scale*" and "*Prospective Teachers' Self-Efficacy Belief Sources Scale*". Information about these scales was presented respectively.

Prospective Teachers' Self-Efficacy Belief Sources Scale

The scale was developed by Arslan and Akcaalan (2017) to identify the sources of teaching self-efficacy for prospective teachers. The pilot study of the scale was conducted on 373 prospective teachers. The scale constitutes four-factors and 19 items with five-point: never increase" (1), "little increase" (2), "moderate increase" (3), "quite increase" (4), and "highly increase" (5). These factors were performance accomplishment, vicarious experience, verbal persuasion and

emotional states. Four factors explained 66.583 % of total variance. Factor name, explained variance ratio, factor loading intervals, item-total correlation intervals, and Cronbach Alpha (α) values were presented in table 1.

Table 1. Construct validity and reliability values of factors.

Factor	n	Explained Variance	Factor Loading	Item-Total Correlation	Cronbach Alpha(α)	Cronbach Alpha(α) for this study
Performance Accomplishment	4	13.416	.62-.83	.50-.70	.79	.71
Vicarious Experience	4	13.404	.66-.78	.54-.65	.78	.76
Verbal Persuasion	5	19.510	.64-.86	.65-.81	.91	.90
Emotional States	6	20.254	.69-.83	.69-.80	.88	.88

Attitude Scale of Teaching Profession

The scale was developed by Ustuner (2006) to measure prospective teacher' attitude towards the teaching profession. The trial form applied to 449 prospective teachers to reveal construct validity and reliability. Exploratory factor analysis results indicated that the scale was one dimension containing 34 items with five-point changing between 1 (never agree) and 5 (strongly agree). This factor explained 30,37% of total variance. While the factor loadings of scale items varied between .41 and .74, item-total correlation coefficients varied between .42 and .74. The Cronbach Alpha (α) internal coefficients of scale items was . 93 in the original study and 0. 92 in this study.

Teachers' Sense of Efficacy Scale

The scale developed by Tschannen-Moran and Woolfolk-Hoy in the year 2001 was translated by Capa, Cakiroglu and Sarikaya (2005) into the Turkish Language. The Turkish version of this scale was used in this study. There were three factors in scale. These are "efficacy for student engagement (SE)", "efficacy for instructional strategies (IS)" and "efficacy for classroom management (CM)". While the factor loadings of items ranged from 0.49 to 0.74; item-total correlations ranged from.35 to.77. The Cronbach Alpha (α) internal coefficients of these factors .82 for SE and .86 for IS, .84 for CM and .93 for whole scale in Turkish version of scale. The total point of the scale was used in this study. The Cronbach Alpha (α) internal coefficients of the general efficacy scale was calculated as .94 in this study.

Procedure

The scales were prepared by researcher according to the purpose of the study. The participants were informed about the study and the scales. The researcher stated that participation to the study is voluntary. Some of the prospective teachers did not want to participate in the study. So, the scales were not distributed to them. After the scales were collected, it was checked by researcher whether the prospective teachers filled in properly. It was determined that 11 pre-service teachers did not mark the scale items properly and they were not included in the study.

Analysis

Data were obtained with equal interval scale. Firstly, the mean of prospective teachers' responses for each scale were calculated. Also, the distribution of data was examined to decide analyses methods. It was observed that skewness and kurtosis values were between -2,00 and 2,00. So, parametric analysis methods were applied to data (George & Mallery, 2016). Also, the Pearson product moment correlation coefficient was used to identify the relationships among variables in SPSS 23. And, PATH analysis method in AMOS 21 was conducted to examine the predictive power of prospective teachers' self-efficacy sources on teaching self-efficacy and their attitude towards teaching profession. Also, PATH analysis method calculates direct and indirect effect of predictor variable on criterion variable.

Results

This study firstly aimed to investigate the relationship among variables. So, Pearson Product Moment Correlation Coefficient method was conducted to elicit the relationship between prospective teachers' self-efficacy sources, self-efficacy, and attitude towards the teaching profession. Correlation values of variables were presented in table 1.

Table 2. Zero-Order Correlation Coefficients

	MasExp	VicExp	VerPer	EmoSta	Self-Effi	Attitude
MasExp	1					
VicExp	.37**	1				
VerPer	.34**	.54**	1			
EmoSta	.41**	.33**	.48**	1		
Self-Effi	.28**	.24**	.29**	.30**	1	
Attitude	.23**	.17**	.26**	.41**	.37**	1
M	4.41	3.46	3.90	4.39	6.98	4.17
SD	.51	.82	96	.66	.94	.56

**p<.01

MasExp: Mastery Experience; **VicExp:** Vicarious Experience; **VerPer:** Verbal Persuasion; **EmoSta:** Emotional States; **Self-Effi:** Self-Efficacy.

The correlation table indicates that there was close correlation coefficient between teaching self-efficacy scores and self-efficacy sources scores. The positive and highest correlation was observed between self-efficacy and emotional states which is one of teaching self-efficacy sources ($r=.30$; $p<.01$). Emotional states was followed by verbal persuasion ($r=.29$; $p<.01$), mastery experiences ($r=.28$; $p<.01$) and vicarious experiences ($r=.24$; $p<.01$). Similarly, the correlation between attitude towards teaching profession and teaching self-efficacy sources. The correlation table indicates that there was an only positive and moderate correlation between attitude and emotional states ($r=.41$; $p<.01$). As if self-efficacy, there were positive and weak correlation respectively between attitude and verbal persuasion ($r=.26$; $p<.01$), mastery experiences ($r=.23$; $p<.01$), vicarious experiences ($r=.17$; $p<.01$). Also, it was examined the relationship between self-efficacy and attitude towards the teaching profession. At the end of the analysis, it was observed that a positive and moderate correlation between them ($r=.37$; $p<.01$).

This study aimed to investigate the predictive power of prospective teachers' self-efficacy sources on teaching self-efficacy and attitude towards the teaching profession. So, it was designated self-efficacy sources as a predictor variable, teaching self-efficacy as mediating variable and criterion variable, and attitude towards teaching profession as criterion variable. At the end of the modification proposed, it was obtained the modified model. The goodness fit index values of the hypothesis and modified models was presented in table 2.

Table 3. The goodness fit index values of model

Model	χ^2/df	RMSEA	RMR	GFI	AGFI	NFI
Hypothesis	31.563	.312	.149	.711	.392	.227
Modified	.272	.000	.004	.999	.995	.998

When the goodness fit index values of hypothesis model was examined, it was observed that hypothesis model is not fit data set. So, modification proposed was applied to model step by step. Firstly, the correlation arrows were drawn among the sources of self-efficacy. Secondly, Path coefficient of vicarious experiences to self-efficacy was insignificant. So, this source removed from the model. Lastly, program proposed covariance arrow from emotional states to attitude. At the end of these modifications, the goodness fit index values indicated that modified model is very fit to data set. The modified model and PATH coefficients were presented in Model 2.
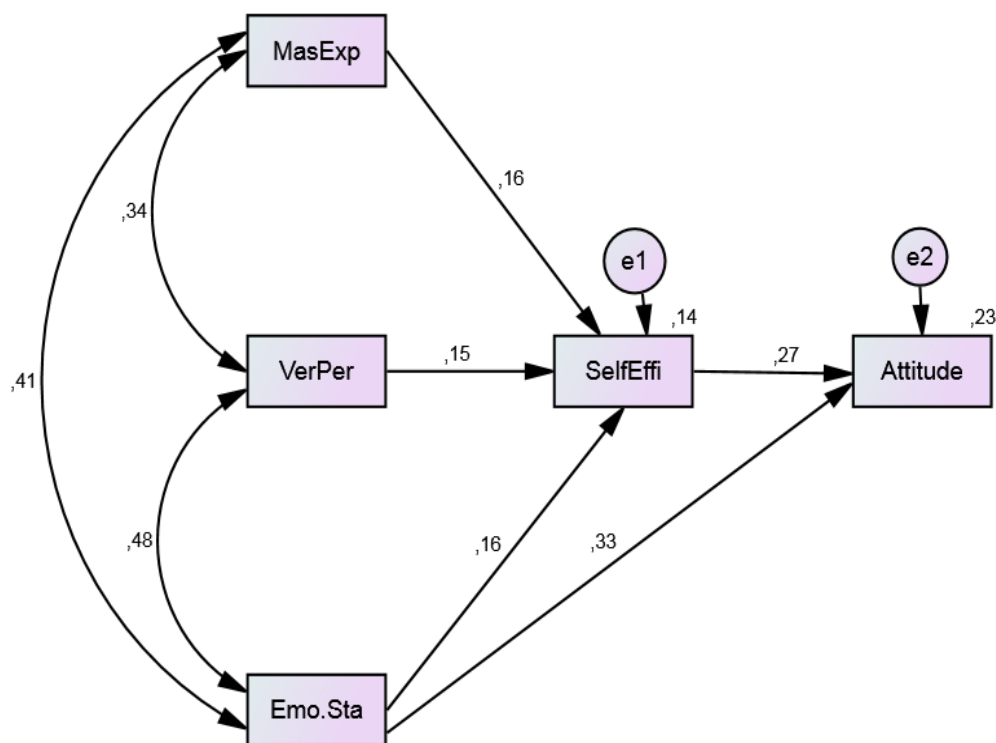

Figure 2. Significant PATH coefficients

The model demonstrates PATH coefficients. Indirect effect values in addition to direct effect were presented in table 3.

Table 3. Direct and indirect effects on teaching self-efficacy belief and attitude

Effect	Direct	Indirect	Total	R^2
On Self-Efficacy				
of mastery experience	.16	-	.16	
of verbal persuasion	.15	-	.15	.14
of emotional states	.16	-	.16	
On Attitude				
of mastery experience	-	.04	.04	
of verbal persuasion	-	.04	.04	.23
of emotional states	.33	.04	.37	
of self-efficacy	.27	-	.27	

As, hypothesized, path coefficients from mastery experience (β=.16; z:2.76; p<.01), verbal persuasion (β=.15; z:2.51; p<.05) and emotional states (β=.16; z:2.60; p<.05) to self-efficacy was significant. But, only the path coefficient of verbal persuasion isn't statistically significant. The effect of three sources of self-efficacy on teaching self-efficacy is nearly equal. These sources predicted 14% of teaching self-efficacy.

At the same time, the direct and indirect effect of self-efficacy and teaching self-efficacy sources on attitude towards teaching profession were investigated. Emotional states was the strongest source affecting attitudes of prospective teachers. Emotional states directly (β=.33; z:6.36; p<.001) and indirectly (β=.04) influenced attitudes of prospective teachers. Unlike emotional states, other self-efficacy sources mastery experience (β=.04) and verbal persuasion (β=.04) had an indirect effect on the attitude of prospective teachers towards teaching profession. Furthermore, path coefficient from self-efficacy to attitude (β=.27; z:5.14; p<.001). As a consequence, mastery experience, verbal persuasion and emotional states that are sources of self-efficacy and also self-efficacy itself predicted 23% of the attitude of prospective teachers towards teaching profession.

Discussion and Conclusion

This study investigated the predictive power of self- efficacy sources of prospective teachers on teaching self-efficacy and attitude towards the teaching profession. Also, mediational role of teaching self-efficacy belief between teaching self-efficacy sources and attitude of prospective teachers towards the teaching profession was examined.

The findings indicated that emotional states were the highest correlated source with self-efficacy and attitude towards teaching profession. Also, path analysis results indicated that it was the most powerful sources of teaching self-efficacy, contrary to Mulholland and Wallace (2001) and Poulou (2007). Also, only emotional states from sources of self-efficacy affected directly attitude towards teaching profession. This may be due to the fact that the attitude and emotional state are both affective characteristics of human. Emotional state in this study indicates positive perceptions about the teaching profession and feelings of prospective teachers. The perception of the teaching profession as pleasurable, entertaining and respectable by the prospective teachers may increase their self-efficacy beliefs and their attitudes towards the teaching profession. For this reason, the teaching activities carried out during the teaching process should be fun and emotionally satisfying for prospective teachers. Similarly, prospective teachers have high motivation and energy about teaching profession and love to teach may cause these results. So, teacher training programs should not only focus on the knowledge and skills of the teaching profession, but also the affective aspect of the teaching profession, such as the importance of the teaching profession and its benefits to society.

Anxiety is one of the emotional states that negatively affect self-efficacy. The fear of prospective teachers not being appointed or finding a job after graduation may decrease their self-efficacy belief. Increasing the job opportunities of prospective teachers may increase their self-efficacy beliefs and attitudes towards the teaching profession. For this reason, the number of private education institutions should be increased or the state should train as many teachers as they need, and assign them immediately when they graduate.

Bandura (1997) postulated enactive mastery experience is the most powerful informative source of self-efficacy. Similarly, enactive mastery performance was the most potent source of self-efficacy in a university context (Morris, 2010). It was found that the mastery experience was the most powerful predictor of self-efficacy beliefs of prospective teachers, along with the emotional states, in this study. The successful experiences in courses, early field experiences, microteaching practices, community based service learning applications and extra-curricula during pre-service education have an effect on teaching self-efficacy beliefs of prospective teachers (Cannon & Scharmann 1996; Cantrell, Young & Moore, 2003; Cone, 2009; Gunnig & Mensah, 2011; Housego, 1992) and teachers in early years (Cheung, 2008). This source also has an indirect effect on the attitudes of prospective teachers towards the teaching profession. These results indicate the importance of active participant of prospective teachers in teaching activities and applied for courses in teacher training. Prospective teachers generally learn the teaching profession skills theoretically, the application dimension is ignored. To allow prospective teachers to apply their knowledge and skills may increase

teaching self-efficacy and attitude towards the teaching profession. This result implies that teaching knowledge and skills by practicing is crucial in teacher education. So, the number and hours of applied activities such as teaching practices, early field experiences, microteaching practices, community based service learning applications and extra-curricula should be increased in teacher education programs to enhance their teaching self-efficacy and attitude towards the teaching profession. Especially, school experience course is an important change for prospective teachers with respect to four sources of-self-efficacy. Because prospective teachers can use teaching skills, monitor experienced teachers, takes positive feedback from their mentor teachers, and experience joyful side of the teaching profession during this course.

It was found that verbal persuasion is the third effective factor on teaching self-efficacy and attitudes of prospective teachers towards teaching profession in this study. Verbal persuasion contains convincing words of people in the social environment. This result implies that if prospective teachers' classmates, family, lecturer, mentor teacher, a student tell that they will be a good teacher in the future, their teaching self-efficacy and attitude towards teaching profession may increase, while lack of recognition in a social environment may diminish teachers' sense of self-efficacy (Webb & Ashton, 1989). Similarly, positive communication with principals, colleagues, parents, and students increases prospective teachers' self-efficacy (Arslan, Yildirim & Akcaalan, 2018). Tschannen-Moran and Woolfolk Hoy (2007) and Woolfolk Hoy and Burke- Spero (2005) reported that adequacy support presented from colleagues and community to novice teachers enhances their self-efficacy. This result indicates also the importance of positive feedback. Rosenholtz (1989) stated that teachers' self-efficacy beliefs were correlated with receiving positive feedback on their teaching performance and collaboration with colleagues. To monitor the prospective teachers and give feedback to them about their teaching applications may increase their teaching self-efficacy and attitude towards the teaching profession. So, prospective teachers' lecturer in university and mentor teacher should monitor them, record their progress and give feedback about their applications.

Verbal persuasion also refers to the pep talks and encouragement of prospective teachers by human in their social environments. If they convince that they will be successful teacher in future, prospective teachers' teaching self-efficacy increase. So, prospective teachers' lecturers, classmates, family and mentor teacher should encourage that they can teach difficult subjects.

The findings of this study also corroborate the argument of the Social Cognitive Theory that self-efficacy affects cognitive processes. It was found that prospective teachers' teaching self-efficacy belief was significant predictor of their attitude towards teaching profession. This implies that more the teaching self-efficacy beliefs of prospective teachers increase, more their attitudes towards teaching profession also increase. Therefore, in order to increase the attitudes of pre-service teachers towards the teaching profession, the teaching activities mentioned above aiming to increase their self-efficacy belief should be emphasized.

Limitations of The Study

This study was conducted in correlational design. So, the internal validity of the study was weak. To research the effect of self-efficacy sources on teaching self-efficacy and attitude towards teaching profession by experimental designs may be more effective with respect to internal validity.

Data of the study were obtained with self-reported scales. So, these are relatively subjective. To increase the objectivity of data may be increased through observation and interviews. The study was conducted on 315 pedagogical formation prospective teachers. Data were collected from only a university. Similar studies should be conducted on larger groups with prospective teachers enrolled in educational faculty.

The participants were selected with convenience sampling method within target population and conducted in a state university where the researcher works. So, the conclusions of the study cannot be generalized.

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