



EXAMINATION OF ACADEMIC SELF-EFFICACY: A SURVEY ON PRE-SERVICE AND INSERVICE ENGLISH LANGUAGE TEACHERS

Yeliz Yazici,

Erhan Surⁱ

Sinop University,
Gerze Vocational School,
Turkey

Abstract:

Academic self-efficacy can be defined as person's belief that he can successfully achieve at a desired level on an academic task or a specific goal (Schunk & Pajares, 2002). This study aims to investigate the level of academic self-efficacy levels of pre-service and in-service teachers. In this study problem solving skills and epistemological beliefs are evaluated as predictors of academic self-efficacy levels of pre-service and in-service groups. Each groups are consisting of 40 people. The data gathered via online questionnaire form via link given in the Facebook group pages. The gathered data analyzed using regression, t-test and related descriptive analysis. The results show that epistemological beliefs and problem solving skills can predict the %14 for in-service English language teachers and this is %15 for pre-service English language teachers. Besides the results show that when the relationship between the gender and the other dependent factors there is only relation in pre-service teachers 'academic self-efficacy and epistemological beliefs. The female participants have higher values than male ones.

Keywords: academic efficacy, ELT, pre-service, in-service

1. Introduction

Academic self-efficacy can be defined as a person's belief that he can successfully achieve at a desired level on an academic task or a specific goal (Schunk & Pajares,

ⁱ Correspondence: email erhansur@msn.com

2002) (Bandura, Self-Efficacy, 1994). It functions at a multilevel set of beliefs that effect the way people feel, think, behave and motivate. Rooting from these multilevel set of beliefs, in this study problem solving skills and epistemological beliefs are to be examined as predictors of academic self-efficacy of pre-service and in-service language teachers around Turkey. It is also examined the relationship and the effect of perceived beliefs and acquired skills on self-efficacy in terms of gender, age and related variables. Epistemological beliefs can be broadly defined as the beliefs about the source of knowledge and the criteria, process of knowing and the level of certainty. It refers to the ways of reaching, acquiring and practicing the data to the current environment. In this context, it is learning-teaching environment. In order to measure it, Epistemological Beliefs Questionnaire which was developed by Schammer (1990) and adapted by Chan and Elliot (2002, 2004) is to be applied. Another independent variable of the study as predictor of academic self-efficacy is problem solving skills. The efforts and the process of eliminating the problems faced during the time in attaining a goal can be defined as problem solving (Bingham, 1998) and it is crucial to have alternative skills throughout the problem solving process. To measure these skills Problem Solving Inventory for Adults which was developed by Heppner and Petersen (1982) and adapted by Şahin and Heppner (1993) is to be applied. The academic self-efficacy as a dependent variable measurement scale is Academic Self-Efficacy Scale and it was developed by Morgan and Jnik(2003). Examining academic self-efficacy is considered to help the understanding, explaining and developing the behaviours of the teachers both in-service and pre-service. As it is believed that self-efficacy effects performance (Eccles, 2005; McGrew, 2008), it's highly related to develop performances of the in-service teachers. It helps not only developing themselves but also build relationships between these beliefs, skills and efficacy which enlighten different perspectives on their knowledge and beliefs in an academic context.

2. Literature Review

Academic self-efficacy has gained importance since the first outbreak with Bandura's social cognitive theory. Self-efficacy is a term that presents the person's belief on himself when life becomes hard and when the person come across with new life events (Bandura, 1977, s. 191-215). According to Bandura (1977), the people who have high self-efficacy levels are better in coping with new and/or challenging life issues. Academic self-efficacy is the academic dimension of general self-efficacy which shows the relation between the challenges of academic life events and persons belief on himself. There are numerous studies carried on academic self-efficacy (Pintirch, 2002;

Eccles & Wigfield, 2002; Linenbrink & Pintrich, 2003) and it has been concluded that both students and teachers who have high academic self-efficacy levels are good at in problem solving skills. For students it seems that they can use a variety of problem solving skills and for teachers it seems that they are more willing and open to the new methods while teaching.

The other term is problem solving skills and it has been investigated and developed by Heppner and Petersen in 1982 (s. 66-75). Problem solving skills target and research four main skills in persons' behaviour and these are: defining the problem and formulating it helping to understand the possible solutions, formulating different ways of solutions, giving decisions and applying the solutions and evaluation. Literature review shows that both teachers and students need effective problem solving skills in order to overcome the teaching-learning problems in an effective way. Problem solving skills are the combination of two basic elements: observation and critical thinking (Dora, Campell & Luretta, 1997; Özden, 1999; Yalçınkaya, 2003). By the help of these two elements, teachers can recognize the source of the problem and critical thinking skills help them to find effective solutions in the classroom environment.

The other element used in this study to examine the academic-efficacy is epistemological beliefs of the participants. This belief emphasizes the way of learning and teaching the knowledge so it has clearly been related with the perceptions of teachers and students. Epistemological beliefs show all the decisions taken during the lives of individuals, the elements affecting the decisions and the conclusion also. The elements affecting epistemological beliefs can be listed as age, level of education, family structure and the environment in which people live etc. It has a dynamic nature and can change according to these variables (Belenky et al. 1986, Buehl et al. 2002, Bayrak, 2013). Along with all these terms, the current study focuses on following research questions:

1. Can epistemological beliefs and problem solving skills predict the academic self-efficacy of in-service English language teachers?
2. Can epistemological beliefs and problem solving skills predict the academic self-efficacy of pre-service English language teachers' candidates?

3. Methodology

In this study, the effect of problem solving skill and epistemological beliefs over academic self-efficacy levels of pre-service and in-service language teachers is examined and presented. A questionnaire was applied to the English language teachers and teacher candidates via online systems. There are three different questionnaires and these are Epistemological Beliefs Questionnaire; it is used to define the participants'

beliefs about the source of the knowledge. Problem Solving Inventory is used to define the levels of the participants in times of problems and Academic Self-Efficacy Scale is used to examine the participants' beliefs on themselves in terms of academic success. The gathered data were analyzed using SPSS programs ANOVA, the descriptive analysis are also applied.

3.1 Participants

The participants are teachers (n=38) and pre-service teachers (n=38). They attended at the study via online forms send blindly using internet groups at social media. The %87.5 of the in-service teachers (n=35) are male and the %12.5 (n=5) of them are females. The pre-service participants are composing of 13 (%32.5) males and 27 (%67.5) females. In terms of their experience in teaching; %70 of the teachers (28 teachers) have experience between 1-10 years, %27 of them (11 teachers) have experience between 11-20 years and %2.5 of them (1 teacher) have 21 and more experience in teaching. The grades of the university students are range as follows: %22.5 of the students (9 students) are first year, and same amount for second grades, %15 of them (6 students) are third grade students and %40 of them (16 students) at their fourth year in the university.

3.2 Data Collection Instruments

Epistemological Beliefs Questionnaire was developed by Schommer (1990) and it was adapted into Turkish Deryakulu and Büyüköztürk (2002). The questionnaire composed of 35 items and the scale five-point and it has three sub-dimensions.

Problem Solving Inventory was first developed by Heppner and Peterson (Heppner & Petersen, 1982) and it was adapted into Turkish by Şahin et al. (Şahin, Şahin, & Heppner, 1993). It has 35 items and it is 6 likert type scale. The answers change from 6 to 1 and 6 means 'I always act like that' and 1 means 'I never act like that'. If participants get high scores it means the participant evaluate himself inadequate in problem solving skills.

Academic Self-Efficacy Scale is formed by Owen & Froman (1988) and it was adapted to Turkish by Ekici (2012, s. 174-185). The scale composes of 33 items and it is prepared in five-point likert type. It changes from 5 to 1 and 5 means 'agree' and 1 means 'strongly disagree'. If the points are high then it means the participants have high academic self-efficacy levels and if it is low, it means the participants have low academic self-efficacy levels.

3.3 Procedure

The questionnaires were applied at an online environment. The related questionnaires were prepared and sent via mails or using the social platforms, Facebook messages and/or Twitter messages. The questionnaires were gathered in national scale and the participants were volunteers in attending at the study. The Cronbach-alpha value for self-efficacy scale is found .936 for teachers and .760 for students. The second research questionnaire is epistemological belief questionnaire and its Cronbach-alpha value for teachers is .896 and the same value for .612 and the third scale is problem solving skills. The Cronbach alpha value for teachers .927 while the same value for students is found .911.

5. Analysis

The research paper aims to find answers for mainly two research questions and the first one is whether epistemological beliefs and problem solving skills can predict the academic self-efficacy levels of the in-service language teachers or not. In order to find the answer for this research question regression analysis was applied to the data. The related issue of the data analysis is given in Table 1.

Table 1: Regression Analysis Results for the In-Service Candidates

Independent Factors	B	Std. Error	β	t	p
Epistemological Beliefs	.555	.287	.329	1.936	.061
Problem Solving Skills	,-113	.210	,-092	,-593	.593

R=379 R2=144 F(3.107)= 057 p>005

The results of the regression analysis show that epistemological beliefs and problem solving skills neither can nor predict the academic self-efficacy levels of the in-service language teachers. The p value for the epistemological beliefs is not statistically meaningful (p=.061, p>.05) and it is also same for the problem solving skills (p=.593, p>.05). Also the R and R2 values show that the correlation between the factors are quite low.

The second research question is related with prediction of the pre-service language teachers (teacher candidates) academic self-efficacy level via problem solving skills and epistemological beliefs. The related data analysis is given in Table 2.

Table 2: Regression Analysis Results for the Pre-Service Candidates

Independent Factors	B	Std. Error	β	t	p
Epistemological Beliefs	.857	1.612	.365	2.226	.032
Problem Solving Skills	.868	.390	-.145	-.881	.384

R=449 R2=201 F (4.660) = 016 p<005

At Table 2 the results for the pre-service teachers` academic self-efficacy levels prediction via epistemological beliefs and problem solving skills are given. It can be seen that the results for epistemological beliefs are statistically meaningful ($p=.032$, $p<.05$) while the problem solving skills` results are not statistically meaningful ($p=.384$, $p>.05$). The R and R2 values show that the correlation between the factors show relatively low of the total variation in the dependent variable.

6. Discussion and Conclusion

This study is based on to find the relationship the academic self-efficacy levels of pre-service and in-service language teachers between problem solving and epistemological beliefs. The study was carried in an online platform. The results show that while the epistemological beliefs and problem solving skills scales can predict the academic self-efficacy level of pre-service participants, it is not the same for the in-service teachers. The research studies are generally carried separately with these factors such as the relation between self-efficacy levels and problem solving skills etc.

The findings show that academic achievements and activities at school have effect on self-efficacy levels of the students (Schunk & Pajares, 2002) and the participants in the study have a heavy background at schooling so they have a moderate level of academic self-efficacy levels at least they have faced with events challenging their self-efficacy levels. At this study the epistemological beliefs of the participants seems to have a relation with the academic self-efficacy levels. It can be said that because of these challenges these participants have a statistically meaningful.

Another study in the literature shows that there is a relation between self-efficacy and academic performances (Pajares, 1996). The students` self-efficacy levels effect their achievements and performances. Their expectations also are effected by the self-efficacy levels and in this study, although they are considered as teachers they are still students (teacher candidates) so it will be better to explain that their academic self-efficacy levels are closely related with the epistemological beliefs. These factors are all effective by themselves and they have effect over each other. If the epistemological beliefs of the participants are the subject it can be said that it is effective on problem solving skills. When the subject is teacher candidates epistemological beliefs have impact on their

conception of teaching (Ching, Myint, & Teo, 2006). Ching et al. (2006) find that pre-service teachers believe that strong effort is the way in acquiring the knowledge and they also think that knowledge is something continuously changing and this requires hard work. Findings in this study also show that pre-service teachers have similar beliefs related to the source of the knowledge and they are in search of the correct sources. At this point the in-service and pre-service participants believe that the experts' saying generally are true sources in getting the new knowledge.

Another item at this research study is the problem solving skills and in the related studies, it is seen that there is a relationship between the problem solving skills and self-efficacy levels (Yalmançı & Aydın, 2014). Problem solving skills and self-efficacy levels are directly related because the higher the self-efficacy level the higher the success in overcoming a problem, it is thought (Bandura, Self-Efficacy, 1994). The same situation is true for the academic self-efficacy levels in coping with the problem solving skills in an academic situation. This close relationship can be seen while solving the problems, using the strategies and accomplishing the tasks. Sharna and Nasa (2014, s. 57-64) define academic self-efficacy as a reliable predictor in education especially of performances. In this study it is thought that pre-service teachers are still coping with problems that's why their data is statistically significant but for in-service teachers they should have the awareness of self-efficacy and academic self-efficacy first and their role in developing students' academic self-efficacy. Teachers can develop by setting goals for students, strategy trainings, modeling and giving feedbacks (Schunk D. , Self-efficacy and education and instruction, 1995).

At the end of these findings, it can be said that all of the factors that have been studied here share some common features such as being continuous, effected by personal experiences along with the environment. Family and teacher support is also while developing these feature and it needs to be evaluated with all of these elements. For future studies, the relation between these factors and vulnerability can be studied, it is also considered to be fruitful to study with different levels.

References

1. Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
2. Bandura, A. (1994). Self-Efficacy. *Encyclopedia of Human Behaviour*, 4, 71-81.

3. Ching, S. C., Myint, S. K., & Teo, T. (2006). Epistemological beliefs on teaching and learning: a survey among pre-service teachers in Singapore. *Educational Media International*, 43(4), 285-298. doi:10.1080/09523980600926242
4. Deryakulu, D., & Büyüköztürk, Ş. (2002). Epistemolojik İnanç Ölçeğinin Geçerlik ve Güvenirlik Çalışması. *Eğitim Araştırmaları Dergisi*, 8, 111-125.
5. Ekici, G. (2012). Akademik Öz-Yeterlik Ölçeği: Türkçeye Uyarlama, Geçerlik ve Güvenirlik Çalışması. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 43, 174-185.
6. Heppner, H. P., & Petersen, C. H. (1982). The development and implications of a personal problem-solving inventory. *Journal of Counseling Psychology*, 29(1), 66-75. doi:10.1037/0022-0167.29.1.66
7. Owen, S., & Froman, R. D. (1988). National Council on Measurement in Education. *Development of a College Academic Self-Efficacy Scale*. New Orleans.
8. Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of educational research*, 66(4), 543-578.
9. Schommer, M. (1990). Effects of Beliefs about the Nature of Knowledge on Comprehension. *Journal of Educational Psychology*, 82(3), 498-504.
10. Schunk, D. (1995). Self-efficacy and education and instruction. J. E. Maddux içinde, *Self-efficacy, adaptation and adjustment: Theory, research and application* (s. 281-303). New York: Plenum Press.
11. Schunk, D. H., & Pajares, F. (2002). The development of academic self-efficacy. D. H. Schunk içinde, *Development of achievement motivation* (s. 16-29). California, USA: Academic Press.
12. Schunk, D., & Pajares, F. (2002). The Development of Academic Self-Efficacy. (A. Wigfield, & J. S. Eccles, Dü) *American Psychology Association*, 15-31. doi:10.1016/B978-012750053-9/50003-6
13. Sharna, H. L., & Nasa, G. (2014, July). ACADEMIC SELF-EFFICACY: A RELIABLE PREDICTOR OF EDUCATIONAL PERFORMANCES. *British Journal of Education*, 2(3), 57-64.
14. Şahin, N., Şahin, N. H., & Heppner, P. P. (1993). Psychometric Properties of Problem Solving Inventory in a Group of Turkish University Students. *Cognitive Therapy and Research*, 4(17), 379-396.
15. Taylan, S. (1990). Heppner'in Problem Çözme Envanteri Uyarlama, Güvenirlik ve GEçerlik Çalışmaları. Ankara: Ankara Üniversitesi.
16. Yalman, S. G., & Aydın, S. (2014, Ağustos). Fen bilgisi öğretmen adaylarının akademik öz-yeterlik algılarının incelenmesi. *Kafkas Eğitim Araştırmaları Dergisi*, 2(1), 21-27.

Yeliz Yazici, Erhan Sur
EXAMINATION OF ACADEMIC SELF-EFFICACY:
A SURVEY ON PRE-SERVICE AND INSERVICE ENGLISH LANGUAGE TEACHERS

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Education Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).