REPUBLIC OF TURKEY
ÇUKUROVA UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES
DEPARTMENT OF ENGLISH LANGUAGE TEACHING

PRE-SERVICE AND IN-SERVICE EFL TEACHERS' EPISTEMOLOGICAL BELIEFS, TEACHING-LEARNING CONCEPTIONS AND SENSE OF SELF-EFFICACY

Şeyma YILDIRIM

PhD. DISSERTATION

ADANA / 2021

REPUBLIC OF TURKEY
ÇUKUROVA UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES
DEPARTMENT OF ENGLISH LANGUAGE TEACHING

PRE-SERVICE AND IN-SERVICE EFL TEACHERS' EPISTEMOLOGICAL BELIEFS, TEACHING-LEARNING CONCEPTIONS AND SENSE OF SELF-EFFICACY

Şeyma YILDIRIM

Supervisor : Assist. Prof. Dr. Adnan BIÇER
Member of Examining Committee : Prof. Dr. Hasan BEDIR
Member of Examining Committee : Prof. Dr. Şehnaz ŞAHINKARAKAŞ
Member of Examining Committee : Assoc. Prof. Dr. Mahmut Oğuz KUTLU
Member of Examining Committee : Assoc. Prof. Dr. Eser ÖRDEM

DOCTOR OF PHILOSOPHY

ADANA / 2021

To Çukurova University Institute of Social Sciences,

We certify that this dissertation is satisfactory for the award of the degree Doctor of Philosophy in the Department of English Language Teaching

Supervisor: Assist. Prof. Dr. Adnan BİÇER

Member of Examining Committee: Prof. Dr. Hasan BEDİR

Member of Examining Committee: Prof. Dr. Şehnaz ŞAHİNKARAKAŞ

Member of Examining Committee: Assoc. Prof. Dr. Mahmut Oğuz KUTLU

Member of Examining Committee: Assoc. Prof. Dr. Eser ÖRDEM

I certify that this dissertation confirms to the formal standards of the Institute of Social Sciences. …./…./20….

Prof. Dr. Serap ÇABUK
Director of Institute

NOTE: The uncited usage of the reports, charts, figures, photographs in this thesis, whether original or quoted from other sources, is subject to the law of Works of Art and Thought No: 5846.

NOT: Bu tezde kullanılan ve başka kaynaktan yapılan bildirişlerin, çizelge, şekil ve fotoğrafların kaynak gösterilmeden kullanımı, 5846 sayılı Fikir ve Sanat Eserleri Kanunu'ndaki hükümlere tabidir.

ETİK BEYANI

Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Tez Yazım Kurallarına uygun olarak hazırladığım bu tez çalışmasında;

- Tez içinde sunduğum verileri, bilgileri ve dokümanları akademik ve etik kurallar çerçevesinde elde ettiğimi,
- Tüm bilgi, belge, değerlendirme ve sonuçları bilimsel etik ve ahlak kurallarına uygun olarak sunduğumu,
- Tez çalışmasında yararlandığım eserlerin tümüne uygun atıfta bulunarak kaynak gösterdiğimi,
- Kullanılan verilerde ve ortaya çıkan sonuçlarda herhangi bir değişiklik yapmadığımı,
- Bu tezde sunduğum çalışmanın özgün olduğunu,

bildirir, aksi bir durumda aleyhime doğabilecek tüm hak kayıplarını kabullendiğimi beyan ederim. …. / …. / 2021

Şeyma YILDIRIM

To my son, Ege Erdem…

ABSTRACT

PRE-SERVICE AND IN-SERVICE EFL TEACHERS' EPISTEMOLOGICAL BELIEFS, TEACHING-LEARNING CONCEPTIONS AND SENSE OF SELF-EFFICACY

Şeyma YILDIRIM

Ph.D. Dissertation, Department of English Language Teaching
Supervisor: Assist. Prof. Dr. Adnan Biçer
August 2021, 191 pages

Study of beliefs has gained great importance since teachers' beliefs affect different things related to teaching and learning. Among the study of beliefs, investigating epistemological beliefs have aroused interest since the late 1990s because such studies provide one lens through which the teaching-learning process in teacher education can be viewed. Teachers' teaching-learning conceptions and their sense of self-efficacy are considered to be among the important constructs which can be affected from each other and their epistemological beliefs. Therefore, teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy should be investigated since they are directly related to the effectiveness of teaching. In this regard, this current study aims to investigate pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy.

A mixed method research design was utilized to conduct the study. Quantitative data were collected through the Turkish versions of Epistemological Beliefs Questionnaire, Teaching and Learning Conceptions Questionnaire, Teacher Sense of Efficacy Scale from 374 4th grader pre-service teachers studying ELT in state universities and 192 in-service teachers working at state schools. Qualitative data were collected through open-response questions form 42 pre-service and 19 in-service teachers who were volunteer to answer the questions. Descriptive statistical techniques, Pearson correlation analysis, regression analysis, t test and content analysis was used in order to analyse the data.

Findings of the study revealed that both pre-service and in-service teachers had relatively more sophisticated beliefs in the learning process/expert knowledge and

learning effort dimensions of epistemological beliefs. Both groups adopted the constructivist conception more than the traditional conception, and they felt efficacious in instructional strategies, student engagement and classroom management respectively. The results showed that there was a relationship among pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy. Some dimensions of epistemological beliefs made significant contributions to pre-service and in-service EFL teachers' constructivist conception and sense of self-efficacy. Besides this, the constructivist conception made a significant contribution to EFL pre-service and in-service teachers' efficacy for classroom management, student engagement and instructional strategies. The results also showed that in-service teachers believed in innate-fixed ability and certainty knowledge more than pre-service teachers. While pre-service teachers adopted constructivist conception more than in-service teachers, in-service teachers adopted constructivist conception more than pre-service teachers. In addition, in-service teachers felt more efficacious than pre-service teachers on classroom management and instructional strategies. Considering the research process and its results, several implications and suggestions were formulated for the main stakeholders of language teacher education.

Keywords: Epistemological beliefs, teaching-learning conceptions, self-efficacy, teacher training

ÖZET

İNGİLİZCEYİ YABANCI DİL OLARAK ÖĞRETEN HİZMET ÖNCESİ VE HİZMET İÇİ ÖĞRETMENLERİN EPİSTEMOLOJİK İNANÇLARI, ÖĞRENME-ÖĞRETME YAKLAŞIMLARI VE ÖZ-YETERLİK İNANÇLARI

Şeyma YILDIRIM

Doktora Tezi, İngiliz Dili Eğitimi Ana Bilim Dalı
Danışman: Dr. Öğr. Üyesi Adnan Biçer
Ağustos 2021, 191 sayfa

Öğretmenlerin inançları öğretme ve öğrenme ile ilgili farklı şeyleri etkilediği için inançların incelenmesi büyük önem kazanmıştır. İnanç çalışmaları arasında, epistemolojik inançların araştırılması 1990'ların sonlarından itibaren merak uyandırmıştır çünkü bu tür çalışmalar öğretmen eğitiminde öğretme-öğrenme sürecinin izlenebileceği bir mercek sağlar. Öğretmenlerin öğretme-öğrenme anlayışları ve öz yeterlik algıları birbirlerinden ve epistemolojik inançlarından etkilenebilecek önemli yapılar arasında sayılmaktadır. Öğretmenlerin epistemolojik inançları, öğretme-öğrenme anlayışları ve öz yeterlik algıları öğretimin etkililiği ile doğrudan ilişkili olduğu için araştırılmaya değer konulardır. Bu bağlamda, bu çalışma, hizmet öncesi ve hizmet içi İngilizce öğretmenlerinin epistemolojik inançlarını, öğretme-öğrenme anlayışlarını ve öz-yeterlik algılarını araştırmayı amaçlamıştır.

Araştırmanın yürütülmesi için karma yöntem araştırma deseni kullanılmıştır. Nicel veriler devlet üniversitelerinde İngilizce öğretmenliği bölümü okuyan 374 son sınıf öğretmen adayından ve devlet okullarında görev yapan 192 öğretmenden Epistemolojik İnançlar Anketi, Öğretme ve Öğrenme Anlayışları Anketi, Öğretmen Yeterlik Duygusu Ölçeği'nin Türkçe versiyonu aracılığıyla toplanmıştır. Nitel veriler, soruları yanıtlamaya gönüllü olan 42 öğretmen adayı ve 19 öğretmenden açık uçlu soru formu aracılığıyla toplanmıştır. Verilerin analizinde betimsel istatistiksel teknikler, Pearson korelasyon analizi, regresyon analizi, t testi ve içerik analizi kullanılmıştır.

Araştırmanın bulguları, epistemolojik inançların öğrenme süreci-otorite/uzman bilgisine şüphe ve öğrenme çabası boyutlarında hem hizmet öncesi hem de hizmet içi öğretmenlerin nispeten daha karmaşık inançlara sahip olduğunu ortaya koymuştur. Her

iki grup da yapılandırmacı anlayışı geleneksel anlayışa göre daha fazla benimsemekte ve sırasıyla öğretim stratejilerinde, öğrenci katılımında ve sınıf yönetiminde kendilerini yeterli hissetmektedirler. Sonuçlar, hizmet öncesi ve hizmet içi öğretmenlerin epistemolojik inançları, öğretme-öğrenme anlayışları ve öz-yeterlik algıları arasında bir ilişki olduğunu göstermektedir. Epistemolojik inançların bazı boyutları, hizmet öncesi ve hizmet içi İngilizce öğretmenlerinin yapılandırmacı anlayışlarına ve öz-yeterlik algılarına önemli katkılar sağlamaktadır. Bunun yanı sıra, yapılandırmacı anlayış, hizmet öncesi ve hizmet içi öğretmenlerin sınıf yönetimi, öğrenci katılımı ve öğretim stratejileri konusundaki yeterliğine önemli katkı sağlamaktadır. Sonuçlar ayrıca, hizmet içi öğretmenlerin, sabit yetenek ve bilginin kesinliğine hizmet öncesi öğretmenlerden daha fazla inandıklarını göstermektedir. Hizmet öncesi öğretmenler hizmet içi öğretmenlere göre yapılandırmacı anlayışı daha fazla benimserken, hizmet içi öğretmenler de hizmet öncesi öğretmenlere göre geleneksel anlayışı daha fazla benimsemektedirler. Ayrıca, sınıf yönetimi ve öğretim stratejileri konusunda hizmet içi öğretmenler, hizmet öncesi öğretmenlere göre kendilerini daha yeterli hissetmektedirler. Araştırma süreci ve sonuçları göz önüne alındığında, İngilizce öğretmen eğitiminin ana paydaşları için çeşitli çıkarımlar elde edilmiş ve öneriler sunulmuştur.

Anahtar kelimeler: Epistemolojik inançlar, öğretme-öğrenme anlayışları, öz yeterlik, öğretmen eğitimi

ACKNOWLEDGEMENTS

Undertaking this PhD has been the longest and the most challenging journey of my life. It contributed a lot to my academic and personal growth. I would like to extend my deepest gratitude to very special people whose contributions helped me complete this process.

First and foremost, I would like to extend my deepest and most sincere gratitude to my supervisor Assist. Prof. Dr. Adnan Biçer for his support, expertise, continuous encouragement, and infinite patience. Without his profound guidance and valuable advice, this dissertation could not have been successfully completed.

Besides my supervisor, I would like give my special thanks to Prof. Dr. Hasan Bedir who has always provided invaluable contributions to my professional growth and supported me with his experience and knowledge. I will always be grateful for his support and constructive feedback that made this dissertation possible. I would like to offer sincere thanks to Assoc. Prof. Dr. Mahmut Oğuz Kutlu whose insightful comments and encouragement broadened my academic vision. I also would like to thank to Prof. Dr. Şehnaz ŞAHİNKARAKAŞ and Assoc. Prof. Dr. Eser Ördem for their guidance and constructive criticism contributing to the final version of my study.

Also, I owe my deepest gratitude to our dean Prof. Şener Büyüköztürk for supporting me throughout my academic career, Prof. Dr. Feyza Doyran for being a role model as a great academician and Assist. Prof. Dr. Görsev Sönmez for encouraging me throughout this process. My wholehearted thanks go to my dear friends Merve Yıldırım Seheryeli for her vigorous support, and encouragement, my office mates Büşra Nur Durmaz and Fatma Çiloğlan Konur who cheered me up and motivated me to go on.

I owe very special thanks to my son Ege Erdem Yıldırım for his endless love and great patience while I was studying on my thesis instead of spending time with him. I would like to express my special thanks to my husband Mehmet Yıldırım for his endless patience, love and encouragement. I would also like to thank my mom for her support and encouragement and my dear family who has encouraged me during the whole journey.

TABLE OF CONTENTS

Page

ABSTRACT iv
ÖZET vi
ACKNOWLEDGEMENTS viii
LIST OF ABBREVIATIONS xv
LIST OF TABLES xvi
LIST OF FIGURES xx
LIST OF APPENDICES xxi

CHAPTER I
INTRODUCTION

1.1. Introduction 1
1.2. Background to the study 1
1.3. Statement of the Problem 2
1.4. Aim and Research Questions 4
1.5. Significance of the Study 5
1.6. Limitations of the study 6
1.7. Definitions of the key concepts 7

CHAPTER II
REVIEW OF LITERATURE

2.1. Introduction 8
2.2. Epistemology and Epistemological Beliefs 8
2.2.1. Epistemological Developmental Approaches 9
2.2.1.1. Perry's Work: The First Focused Attempt for Epistemological Development 9
2.2.1.2. Women's Ways of Knowing 10
2.2.1.3. Epistemological Reflection Model 12
2.2.1.4. Reflective Judgment Model 12
2.2.1.5. Argumentative Reasoning 14

2.2.2. Multidimensional System of Epistemological Beliefs 16
2.2.2.1. Schommer's epistemological beliefs system 16
2.2.2.2. Hofer and Pintrich's multi-dimensional theoretical framework 18
2.2.3. Studies on the Relationship between Epistemological Beliefs and Other Constructs 18
2.2.4. Epistemological Beliefs Measurement Instruments 20
2.2.5 Research on Epistemological Beliefs 23
2.2.5.1 Research on Epistemological Beliefs in EFL context in Turkey 23
2.2.5.2 Research on Epistemological Beliefs in EFL context in other countries 25
2.3. Teaching-Learning Conceptions 27
2.3.1. Traditional Conception 29
2.3.2. Constructivist Conception 30
2.3.2.1. Piaget 30
2.3.2.2. Vygotsky 31
2.3.3. The Relationship of Teaching-Learning Conceptions to Other Constructs 31
2.3.4. Teaching-Learning Conceptions Measurement Instruments 33
2.3.5 Research on Teaching-Learning Conceptions 34
2.3.5.1 Research on Teaching-Learning Conceptions in EFL context in Turkey 34
2.3.5.2 Research on Teaching-Learning Conceptions in EFL context in other countries 36
2.4. Bandura's Social Cognitive Theory 38
2.5. Self-efficacy 39
2.5.1. Sources of Self-Efficacy 40
2.5.2. Teacher Sense of Self-Efficacy 42
2.5.3. Teacher Efficacy Measurement Instruments 43
2.5.4. The Relationship of Teacher Sense of Self-Efficacy to Other Constructs 44
2.5.5 Research on Self-Efficacy Beliefs 46
2.5.5.1 Research on Sense of Self-Efficacy in EFL context in Turkey 46
2.5.5.2 Research on Self-efficacy in EFL context in other countries 50

CHAPTER III
METHODOLOGY

3.1. Introduction 53
3.2. Research Design 53
3.3. Sampling and Participants 55
3.4. Data Collection Tools 57
3.4.1. Epistemological Beliefs Questionnaire (EBQ) 58
3.4.2. Teaching and Learning Conceptions Questionnaire (TLCQ) 59
3.4.3. Teacher Sense of Efficacy Scale (TSES) 59
3.4.4.Open-Response Questions 61
3.5. Data Collection Procedure 61
3.6. Data Analysis 62
3.7. Ethical Considerations 66

CHAPTER IV
DATA ANALYSIS AND RESULTS

4.1. Introduction 67
4.2 Findings Related to the First Research Question 67
4.2.1. Pre-service EFL teachers' epistemological beliefs 67
4.2.2. Pre-service EFL teachers' teaching-learning conceptions. 68
4.2.3. Pre-service EFL teachers' sense of self-efficacy 69
4.3 Findings Related to the Second Research Question 69
4.3.1. In-service EFL teachers' epistemological beliefs 69
4.3.2. In-service EFL teachers' teaching-learning conceptions. 70
4.3.3. In-service EFL teachers' sense of self-efficacy. 71
4.4. Findings Related to the Third Research Question 72
4.4.1. The Relationship between pre-service EFL teachers' epistemological beliefs and teaching-learning conceptions 72
4.4.2. The Relationship between pre-service EFL teachers' epistemological beliefs and sense of self-efficacy 74
4.4.3. The Relationship between pre-service EFL teachers' teaching-learning conceptions and sense of self-efficacy 75

4.5. Findings Related to the Fourth Research Question 76
4.5.1. The Relationship between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions 76
4.5.2. The Relationship between in-service EFL teachers' epistemological beliefs and sense of self-efficacy 78
4.5.3. The Relationship between in-service EFL teachers' teaching-learning conceptions and sense of self-efficacy 79
4.6. Findings Related to the Fifth Research Question 80
4.6.1. The effects of pre-service and in-service EFL teachers' epistemological beliefs on their teaching-learning conceptions 80
4.6.1.1. The effects of pre-service EFL teachers' epistemological beliefs on constructivist conception (dimension 1) 80
4.6.1.2. The effects of in-service EFL teachers' epistemological beliefs on constructivist conception (dimension 1) 81
4.6.1.3. The effects of pre-service EFL teachers' epistemological beliefs on traditional conception (dimension 2) 82
4.6.1.4. The effects of in-service EFL teachers' epistemological beliefs on traditional conception (dimension 2) 83
4.6.2. The effects of pre-service and in-service EFL teachers' epistemological beliefs on their sense of self-efficacy 84
4.6.2.1. The effects of pre-service EFL teachers' epistemological beliefs on efficacy for classroom management (dimension 1) 85
4.6.2.2. The effects of in-service EFL teachers' epistemological beliefs on efficacy for classroom management (dimension 1) 86
4.6.2.3. The effects of pre-service EFL teachers' epistemological beliefs on efficacy for student engagement (dimension 2) 87
4.6.2.4. The effects of in-service EFL teachers' epistemological beliefs on efficacy for student engagement (dimension 2) 88
4.6.2.5. The effects of pre-service EFL teachers' epistemological beliefs on efficacy for instructional strategies (dimension 3) 89
4.6.2.6. The effects of in-service EFL teachers' epistemological beliefs on efficacy for instructional strategies (dimension 3) 90
4.7. Findings Related to the Sixth Research Question 91
4.7.1. The effects of pre-service EFL teachers' teaching-learning conceptions 91

on their sense of self-efficacy 91
4.7.1.1. The effects of pre-service EFL teachers' teaching-learning conceptions on efficacy for classroom management (dimension 1) .. 91
4.7.1.2. The effects of in-service EFL teachers' teaching-learning conceptions on efficacy for classroom management (dimension 1) .. 92
4.7.1.3. The effects of pre-service EFL teachers' teaching-learning conceptions on efficacy for student engagement (dimension 2) 93
4.7.1.4. The effects of in-service EFL teachers' teaching-learning conceptions on efficacy for student engagement (dimension 2) 93
4.7.1.5. The effects of pre-service EFL teachers' teaching-learning conceptions on efficacy for instructional strategies (dimension 3) 94
4.7.1.6. The effects of in-service EFL teachers' teaching-learning conceptions on efficacy for instructional strategies (dimension 3) 95
4.8. Findings Related to the Seventh Research Question 96
4.8.1. The difference between pre-service and in-service EFL teachers' epistemological beliefs 96
4.8.2. The difference between pre-service and in-service EFL teachers' teaching-learning conceptions 97
4.8.3. The difference between pre-service and in-service EFL teachers' sense of self-efficacy 98
4.9. Qualitative Findings 99
4.9.1. Qualitative Findings from Pre-service Teachers 100
4.9.2 Qualitative Findings from In-service Teachers 108

CHAPTER V
DISCUSSION

5.1. Introduction 116
5.2. Pre-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy 117
5.3. In-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy 121

5.4. The relationship between pre-service EFL teachers' epistemological beliefs and teaching-learning conceptions, epistemological beliefs and sense of self-efficacy, teaching-learning conceptions and sense of self-efficacy 125
5.5. The relationship between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions, epistemological beliefs and sense of self-efficacy, teaching-learning conceptions, and sense of self-efficacy 129
5.6. The effects of pre-service and in-service EFL teachers' epistemological beliefs on their teaching-learning conceptions and their sense of self-efficacy 132
5.7. The effects of pre-service and in-service EFL teachers' teaching-learning conceptions on their sense of self-efficacy 135
5.8. The differences between pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy 136

CHAPTER VI
CONCLUSION

6.1. Introduction 139
6.2. Conclusions 139
6.3. Implications of the Study 143
6.4. Suggestions for Future Research 146
REFERENCES 147
APPENDICES 165
CURRICULUM VITAE 191

LIST OF ABBREVIATIONS

CFA : Confirmatory Factor Analysis

CLEV : Checklist of Educational Values

EBI : Epistemic Beliefs Inventory

EBQ : Epistemological Beliefs Questionnaire

EBS : Epistemological Beliefs Scale

EFL : English as a Foreign Language

ELT : English Language Teaching

MER : Measure of Epistemological Reflections

NTSES : Norwegian Teacher Self-Efficacy Scale

OSTES : Ohio State Teacher Efficacy Scale

TEBS- Self : Teachers' Efficacy Beliefs System-Self

TLCQ : Teaching and Learning Conceptions Instrument

TSES : Teacher Sense of Efficacy Scale

TSE : Teacher Self-Efficacy Scale

LIST OF TABLES

Page

Table 1. Models of epistemological development in late adolescence and adulthood 15
Table 2. Sample scales of Epistemological Beliefs 22
Table 3. Representative Studies on the Epistemological Beliefs in EFL Context in Turkey 24
Table 4. Representative Studies on the Epistemological Beliefs in EFL Context in Other Countries 26
Table 5 Traditional and Constructivist Models of Education 28
Table 6. Sample Scales of Teaching and Learning Conception 34
Table 7. Representative Studies on the Teaching-Learning Conceptions in Turkey 35
Table 8. Representative Studies on the Teaching-Learning Conceptions in Other Countries 37
Table 9. Sample Scales of Teacher Self-Efficacy 44
Table 10. Representative Studies on Self-efficacy in EFL contexts in Turkey 47
Table 11. Representative Studies on Self-efficacy in EFL contexts in other countries 51
Table 12. Main Elements of Methodology 53
Table 13. Demographic Characteristics of Pre-Service EFL Teachers 56
Table 14. Demographic Characteristics of In-Service EFL Teachers 56
Table 15. Data Collection Instruments 57
Table 16. Research Questions and Method of Analysis 63
Table 17. Pre-service EFL teachers' epistemological beliefs 67
Table 18. Pre-service EFL teachers' teaching-learning conceptions 68
Table 19. Pre-service EFL teachers' sense of self-efficacy 69
Table 20. In-service EFL teachers' epistemological beliefs 70
Table 21. In-service EFL teachers' teaching-learning conceptions 71
Table 22. . In-service EFL teachers' sense of self-efficacy 72
Table 23. The Relationship between pre-service EFL teachers' epistemological beliefs and teaching-learning conceptions 73

Table 24. The Relationship between pre-service EFL teachers' epistemological beliefs and sense of self-efficacy 74
Table 25. The Relationship between pre-service EFL teachers' teaching-learning conceptions and sense of self-efficacy 75
Table 26. The Relationship between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions 77
Table 27. The Relationship between in-service EFL teachers' epistemological beliefs and sense of self-efficacy 78
Table 28. The Relationship between in-service EFL teachers' teaching-learning conceptions 79
Table 29. The effects of pre-service EFL teachers' epistemological beliefs on constructivist conception (dimension 1) 81
Table 30. The effects of in-service EFL teachers' epistemological beliefs on constructivist conception (dimension 1) 82
Table 31. The effects of pre-service EFL teachers' epistemological beliefs on traditional conception (dimension 2) 83
Table 32. The effects of in-service EFL teachers' epistemological beliefs on traditional conception (dimension 2) 84
Table 33. The effects of pre-service EFL teachers' epistemological beliefs on efficacy for classroom management (dimension 1) 85
Table 34. The effects of in-service EFL teachers' epistemological beliefs on efficacy for classroom management (dimension 1) 86
Table 35. The effects of pre-service EFL teachers' epistemological beliefs on efficacy for student engagement (dimension 2) 87
Table 36. The effects of in-service EFL teachers' epistemological beliefs on efficacy for student engagement (dimension 2) 88
Table 37. The effects of pre-service EFL teachers' epistemological beliefs on efficacy for instructional strategies (dimension 3) 89
Table 38. The effects of in-service EFL teachers' epistemological beliefs on efficacy for instructional strategies (dimension 3) 90
Table 39. The effects of pre-service EFL teachers' teaching-learning conceptions on efficacy for classroom management (dimension 1) 91
Table 40. The effects of in-service EFL teachers' teaching-learning conceptions on efficacy for classroom management (dimension 1) 92

Table 41. The effects of pre-service EFL teachers' teaching-learning conceptions on efficacy for student engagement (dimension 2)..... 93
Table 42. The effects of in-service EFL teachers' teaching-learning conceptions on efficacy for student engagement (dimension 2)..... 94
Table 43. The effects of pre-service EFL teachers' teaching-learning conceptions on efficacy for instructional strategies (dimension 3) 95
Table 44. The effects of in-service EFL teachers' teaching-learning conceptions on efficacy for instructional strategies (dimension 3)..... 96
Table 45. The difference between pre-service and in-service EFL teachers' epistemological beliefs..... 97
Table 46. The difference between pre-service and in-service EFL teachers' teaching-learning conceptions 98
Table 47. The difference between pre-service and in-service EFL teachers' sense of self-efficacy 99
Table 48. Frequencies and Ratios by Codes under Theme 1 for Pre-Service Teachers 100
Table 49. Frequencies and Ratios by Codes under Theme 2 for Pre-Service Teachers 101
Table 50. Frequencies and Ratios by Codes under Theme 3 for Pre-Service Teachers 102
Table 51. Frequencies and Ratios by Codes under Theme 4 for Pre-Service Teachers 103
Table 52. Frequencies and Ratios by Codes under Theme 5 for Pre-Service Teachers 103
Table 53. Frequencies and Ratios by Codes under Theme 6 for Pre-Service Teachers 104
Table 54. Frequencies and Ratios by Codes under Theme 7 for Pre-Service Teachers 105
Table 55. Frequencies and Ratios by Codes under Theme 8 for Pre-Service Teachers 106
Table 56. Frequencies and Ratios by Codes under Theme 9 for Pre-Service Teachers 107
Table 57. Frequencies and Ratios by Codes under Theme 1 for In-Service Teachers 108

Table 58. Frequencies and Ratios by Codes under Theme 2 for In-Service Teachers 109
Table 59. Frequencies and Ratios by Codes under Theme 3 for In-Service Teachers 110
Table 60. Frequencies and Ratios by Codes under Theme 4 for In-Service Teachers 111
Table 61. Frequencies and Ratios by Codes under Theme 5 for In-Service Teachers 111
Table 62. Frequencies and Ratios by Codes under Theme 6 for In-Service Teachers 112
Table 63. Frequencies and Ratios by Codes under Theme 7 for In-Service Teachers 113
Table 64. Frequencies and Ratios by Codes under Theme 8 for In-Service Teachers 114
Table 65. Frequencies and Ratios by Codes under Theme 9 for In-Service Teachers 115

LIST OF FIGURES

Page

Figure 1. Theoretical Model of Triadic Reciprocal Interaction. Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman and Company. 38

Figure 2. Sources of Self-efficacy. Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman and Company. 40

Figure 3. Phases of Thematic Analysis..... 65

LIST OF APPENDICES

Page

Appendix 1. Permissions obtained for the usage of the Epistemological Beliefs Questionnaire and Teaching-Learning Conceptions Questionnaire..... 165
Appendix 2. Permissions obtained for the usage of the Teachers' Sense of Self-Efficacy Scale..... 166
Appendix 3. Epistemological Beliefs Questionnaire 167
Appendix 4. Teaching-Learning Conceptions Questionnaire..... 170
Appendix 5. Teacher Sense of Self-Efficacy Scale 172
Appendix 6. Open-Response Questions Form..... 174
Appendix 7. Permission obtained from Gaziantep Provincial Directorate of National Education..... 176
Appendix 8. Permission obtained from Çanakkale 18 Mart University..... 177
Appendix 9. Permission obtained from Çukurova University..... 178
Appendix 10. Permission obtained from Gaziantep University..... 179
Appendix 11. Permission obtained from Hatay Mustafa Kemal University 180
Appendix 12. Histograms for Sub-Scales of Epistemological Beliefs Scale for Pre-service Teachers 181
Appendix 13. Histograms for Sub-Scales of Teaching-Learning Conceptions Scale for Pre-service Teachers..... 183
Appendix 14. Histograms for Sub-Scales of Sense of Self-Efficacy Scale for Pre-service Teachers 184
Appendix 15. Histograms for Sub-Scales of Epistemological Beliefs Scale for In-service Teachers 186
Appendix 16. Histograms for Sub-Scales of Teaching-Learning Conceptions Scale for Pre-service Teachers 188
Appendix 17. Histograms for Sub-Scales of Sense of Self-Efficacy Scale for Pre-service Teachers 189

CHAPTER I

INTRODUCTION

1.1. Introduction

This chapter makes a general introduction to the study. It starts with the background of the study. Then it presents the statement of the problem, aim and research questions, the significance of the study, limitations, and definitions of the key concepts respectively.

1.2. Background to the study

Research in teacher education has shown that teachers' behaviour in the classroom and activities they use are determined by a set of theoretical framework which is belief driven (Clark & Peterson, 1986; Richardson, 1996). This means their conceptions about teaching and learning can be the result of their beliefs. Therefore, anything related to teaching and learning such as student performance, classroom atmosphere, techniques and strategies used, activities implemented might be influenced by teachers' beliefs.

When we consider the criticism directed to teacher education programs all over the world and Turkey as well, we notice that current programs do not equip their teachers with the 21st century skills which require being learner-centred and preparing the learners to deal with shaping their futures. If we want to look for the reasons for this failure, we have to start from the very beginning which is to explore the beliefs of teachers even before they start teaching. Epistemological beliefs defined as individuals' cognitions associated with knowledge and the nature of knowledge (Hofer & Bendixen, 2012) are also related to the teaching and learning process (Chan & Elliot, 2004). Therefore, tracing pre-service and in-service teachers' epistemological beliefs and focusing on the relationship between epistemological beliefs and other constructs related to teacher and teaching might give us opinions about their actions in the classroom.

Bandura (1989) states that people's thoughts, beliefs and feelings affect their behaviour. This means what teachers think might influence how they perform in the classroom. Self-efficacy defined as our belief in our capabilities (Bandura, 1994) shows

how well we can accomplish tasks in the classroom. Self-efficacy level was found to be affecting different constructs related to classroom such as instructional strategies (Eslami & Fatahi, 2008), academic achievements (Kotbaş, 2018), problem-solving skills (Behjoo, 2013). Therefore, investigating what affects self-efficacy levels of pre-service and in-service teachers is important in order to see how successful a teacher education program is (Woolfolk, 1990).

Although trainings influence teachers' cognition, those trainings ignoring teachers' beliefs about knowledge and learning may not show the desired influence (Borg, 2003). This means investigating pre-service and in-service teachers' beliefs is necessary in order to see what teaching-learning conceptions they adopt and how efficacious they are in the language teaching process and accordingly how effective a teacher training program is and what is needed in order to make things better.

1.3. Statement of the Problem

Teachers obtain a set of beliefs from various sources like individual personality, prior learning experiences as students and teaching practices, and they bring those beliefs to the classroom (Borg, 2003). There are a number of constructs affected by teachers' beliefs in the teaching process. According to Clark and Peterson (1986), their beliefs affect teachers' planning and decision-making processes, the approaches, tasks and materials they use in the classroom and also the relationship with students. For this reason, study of beliefs has gained great importance.

Among the studies of beliefs, studies in epistemological beliefs have aroused interest since the late 1990s because such studies provide one lens through which the teaching-learning process in teacher education can be viewed. Hofer and Pintrich (1997) stated that "beliefs about learning and teaching are related to how knowledge is acquired" (p. 116). This means epistemological beliefs meaning the nature of knowledge and knowledge acquisition are related to teaching and learning conceptions. While there are several studies on epistemological beliefs and teaching-learning conceptions (Chan and Elliot, 2004; Cheng, Chan, Tang, and Cheng, 2009; Ketabi, Zabihi & Momene, 2014) in different countries, there is a limited number of studies conducted in Turkey (Aypay, 2010; Kırmızı & Irgatoğlu, 2021; Sarıçoban & Kırmızı, 2021; Tanrıverdi, 2014; Yılmaz & Sahin, 2011).

Knowing teaching-learning conceptions that teachers hold is important because this gives us information about what is happening in classrooms. Teachers' conceptions about teaching-learning have a crucial role in their decisions about techniques and strategies they use. Therefore, investigating these conceptions will open the doors to the classrooms and give us chance to see the real situation. There is a relationship between teaching and learning conceptions and teachers' beliefs about their preferred ways of teaching-learning and the roles of teacher and students. (Chan & Elliott, 2004). If we want to investigate teaching-learning conceptions, we have to start from the very beginning, which requires questioning our beliefs about acquiring knowledge. For this reason, in order to understand teaching-learning conceptions well, first, we have to understand epistemological beliefs and the relationship between them.

Another prominent topic which has become popular with the emergence of social cognitive theory is the sense of self-efficacy. It was defined as one's own evaluation of capabilities to organize and complete an action (Bandura, 1986). When we define efficacy as our own evaluation of capability to complete an action, this action can be considered as teaching in the field of education. Teacher sense of efficacy is about teachers' belief in their own capabilities to be successful in activities related to teaching (Bandura, 1977). Accordingly, epistemological beliefs concerning how knowledge is acquired and teaching-learning conceptions dealing with the way we learn things might be among the factors affecting teachers' self-efficacy. Different variables connected to the sense of self-efficacy have been investigated by researchers such as attitudes towards using innovative instructional strategies (Swars, 2005; Eslami & Fatahi, 2008), students' academic achievement (Ashton & Webb, 1986; Caprara, Barbranelli, Steca & Malone, 2006; Tella, 2008), teachers' commitment to teaching (Coladarcı, 1992), democratic values (Topkaya & Yavuz, 2011) and motivation (Guskey & Passaro 1994). However, there has been little attempt to investigate the relationship between self-efficacy and epistemological beliefs or self-efficacy and teaching-learning conceptions.

When the instructional beliefs of pre-service and in-service teachers are examined, some differences can be noticed although both groups receive similar education with similar curriculums. The differences might be resulting from various factors like experience, environment, working conditions, student levels, the difference between theory and practice, or there might be some other factors that affect their beliefs. In order to find the reasons, the first thing to do must be to understand whether there are any differences between their beliefs. For this reason, this study was carried

out with both pre-service and in-service teachers in an attempt to compare both groups and see the differences.

Investigating the deficiencies in teacher training programs might be considered as one of the steps to improve the quality and effectiveness of foreign language teaching in Turkey. However, even if some deficiencies are found and necessary changes are made, some other problems would arise when the most important components that might be affecting these problems are not investigated. Teachers' epistemological beliefs giving information about the nature of knowledge and knowledge acquisition might be considered among the primary topics to be investigated when their possible effects on activities related to teaching and learning. Teachers' teaching learning-conceptions giving information about their preferred ways of teaching and learning and their sense of self-efficacy meaning their beliefs about their capabilities to be successful in teaching are also considered to be among the crucial topics that might be affected from each other and from epistemological beliefs, and investigating these constructs together might also contribute to improving the quality of teacher training and foreign language teaching accordingly. For this reason, the present study aiming to investigate epistemological beliefs, teaching learning-conceptions and a sense of self-efficacy contributes to filling the gap in the current literature of ELT teacher education studies and have various implications in the field.

1.4. Aim and Research Questions

Epistemological beliefs, teaching-learning conceptions, and self-efficacy issues have traditionally been investigated separately or the relationship between two of them has been investigated. Most of the studies about these topics especially the ones about epistemological beliefs and teaching-learning conceptions have been conducted with Science Education and Physical Education pre-service or in-service teachers. A small amount of research conducted so far has dealt with investigating epistemological belief, teaching-learning conceptions, and sense of self-efficacy in the EFL context. This may be considered as a gap in the literature of language teacher education in Turkey. This study attempts to bring three topics together and tries to show the relationship among epistemological beliefs, teaching-learning conceptions, and the sense of self-efficacy.

Since the study is conducted with both pre-service and in-service teachers, the difference between pre-service and in-service teachers' epistemological beliefs,

teaching-learning conceptions, and self-efficacy is examined. Investigating the differences between pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of efficacy gives an idea to see the possible differences in order to take further actions.

To do this following research questions are asked:

1- What are the pre-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy?
2- What are the in-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy?
3- Is there a relationship between pre-service EFL teachers'
    a. epistemological beliefs and teaching-learning conceptions?
    b. epistemological beliefs and sense of self-efficacy?
    c. teaching-learning conceptions and sense of self-efficacy?
4- Is there a relationship between in-service EFL teachers'
    a. epistemological beliefs and teaching-learning conceptions?
    b. epistemological beliefs and sense of self-efficacy?
    c. teaching-learning conceptions and sense of self-efficacy?
5- Is there an effect of pre-service and in-service EFL teachers' epistemological beliefs on
    a. their teaching-learning conceptions?
    b. their sense of self-efficacy?
6- Is there an effect of pre-service and in-service EFL teachers' teaching-learning conceptions on their sense of self-efficacy?
7- Is there a significant difference between pre-service and in-service EFL teachers'
    a. epistemological beliefs?
    b. teaching-learning conceptions?
    c. sense of self-efficacy?

1.5. Significance of the Study

Literature review in this study shows that there has been considerable research on epistemological beliefs, teaching-learning conceptions and self-efficacy in different

fields. Some of those research are about the relationship between epistemological beliefs and teaching-learning conceptions (Chan & Elliot, 2004; Cheng, Chan, Tang, & Cheng, 2009; Ketabi & Zabihi, 2014; Aypay, 2010; Tanrıverdi, 2014; Yılmaz, 2011), some are about different variables connected to sense of self efficacy (Swars, 2005; Eslami & Fatahi, 2008; Ashton & Webb, 1986; Caprara, Barbranelli, Steca & Malone, 2006; Tella, 2008; Coladarcı, 1992; Topkaya & Yavuz, 2011; Guskey & Passaro 1994), and some are about the relationship between epistemological beliefs and self-efficacy (Rakıcıoğlu, 2005; Gürol, Altunbaş & Karaaslan, 2010). However, the relationship among epistemological beliefs, teaching-learning conceptions and self-efficacy has not been focused on much in Turkey, which suggests that there is a need to study this subject. Besides, the aforementioned studies have been conducted with either pre-service or in-service teachers, but none has focused on both. In addition, most of the studies related to epistemological beliefs and teaching-learning conceptions were applied to Science and Physical Education pre-service or in-service teachers, and there is no study investigating these three constructs together in EFL context. For this reason, a study investigating pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions and self-efficacy may contribute to the literature about language teacher education field.

1.6. Limitations of the study

The primary limitation of this study is that only four universities gave permission to collect data although the researcher applied to seven universities with a permission request. Therefore, the number of the universities the pre-service teacher participants attend is a limitation of the study. As a second limitation, although the findings have been obtained from a variety of instruments, only one of them provided qualitative data. Another limitation of the study is that this study focuses on perceptions and views of pre-service and in-service EFL teachers; however, the findings may not truly show what is actually happening in the classroom context. Finally, the instruments used in the study consisted of 84 items in total, 20 in the Epistemological Beliefs Questionnaire, 30 in the Teaching-Learning Conceptions Questionnaire, and 24 Teachers' Sense of Efficacy Scale. Therefore, the participants might have lost their attention while reading the items and filling in the forms.

1.7. Definitions of the key concepts

This section provides the definitions of some key concepts related to the research.

Epistemological Beliefs: Epistemological Beliefs are a branch of philosophy concerning what knowledge is and how people justify it (Hofer & Pintrinch, 1997).

Teaching-Learning Conception: It is defined as beliefs about teachers' preferred ways of teaching and learning and the roles of teachers and students (Chan & Elliott, 2004).

Self-Efficacy: It is defined as beliefs in one's own capabilities to organize and execute the courses of action (Bandura, 1997).

Teachers' Sense of Self- Efficacy: Teacher sense of self-efficacy is defined as teachers' beliefs about their capabilities to be successful in teaching related activities like engaging and motivating (Bandura, 1977).

CHAPTER II

REVIEW OF LITERATURE

2.1. Introduction

This chapter presents the literature review related to the research focus of the present study. Firstly, epistemological beliefs and developmental approaches are mentioned. It is followed by the relationship of epistemological beliefs to other constructs, an alternative framework of personal epistemology and epistemological beliefs measurement instruments. Secondly, teaching-learning conceptions are explained deeply. Teaching-learning conceptions measurement instruments and the relationship of teaching-learning conceptions to other constructs are mentioned. Finally, teacher sense of self-efficacy, teacher efficacy measurement instruments, and the relationship of teacher sense of self-efficacy to other constructs are touched on.

2.2. Epistemology and Epistemological Beliefs

The research investigating teachers' and students' beliefs about the nature of knowing, how their knowledge is constructed, and defined ground on epistemology which is defined by Hofer and Pintrinch (1997) as a branch of philosophy concerning what knowledge is and how people justify it. The arousing interest in understanding how people know and hold beliefs about knowing led the researchers to understand what epistemological beliefs people held.

Piaget (1950) using the term genetic epistemology is considered as the initiator of research in epistemology. Kitchener (1981) defines genetic epistemology as "the study of the passage from states of lesser knowledge to states of knowledge (that are judged to be) more advanced" (p. 402). Describing his theory of intellectual development, Piaget was concerned with the real or psychological 'construction of knowledge.

Regarding epistemology "as a philosophical enterprise concerned with the origin, nature, limits, methods, and justification of human knowledge and knowing" (p. 47). Hofer (2010) believes that personal epistemology includes individual understandings of knowledge and knowing comprised by specific dimensions. In their detailed overview on epistemological theories, Hofer and Pintrich (1997) explain three

groups of researchers investigating epistemology from different perspectives. The first group of investigators deals with interpretations of educational experiences made by individuals (Baxter Magolda, 1987, 1992; Belenky et al., 1986; Perry, 1970, 1981). The second group concern with the analysis of thought and reasoning processes (King & Kitchener, 1994; Kitchener & King, 1981; Kitchener, King, Wood, & Davison, 1989; Kitchener, Lynch, Fischer, & Wood, 1993). The last and the most recent group focus on epistemology as a system of more-or-less independent beliefs (Ryan, 1984a, 1984b; Schommer, 1990, 1994b).

2.2.1. Epistemological Developmental Approaches

Each epistemological developmental approach is discussed with the following sub-titles and a summary of the models of epistemological development in late adolescence and adulthood is given in Table.1.

2.2.1.1. Perry's Work: The First Focused Attempt for Epistemological Development

Almost all of the studies on epistemological beliefs have some connection to the studies of Perry and his research team. He conducted annual interviews with a range of college students in Harvard in the late 1950s and early 1960s. His aim was to understand how students make meaning of their educational experiences, and he formed an instrument named Checklist of Educational Values (CLEV) with the aim of selecting students for the initial interviews. After administrating the CLEV with randomly selected 313 freshmen, he invited 31 of them (27 men, 4 women) to the annual interview.

Perry and his team identified a sequence of nine positions constituting a scheme of intellectual and ethical development. The second longitudinal study was launched in order to validate the scheme with a random sample of 109 freshmen, and similar results were reported. Although Perry was expecting that the students' answers would be an indicator of personality differences, he found out that the data obtained from two longitudinal studies followed a directional pattern (Hofer, 2001). The nine positions of the scheme were classified into four categories: dualism, multiplicity, relativism, and commitment within relativism (Hofer & Pintrich, 1997):

The first category *Dualism* includes Positions 1 and 2 concerning the dualistic and absolutist view of the world. The knowledge is believed to be either right or wrong. Authorities or teachers know the truth, and their role is to transfer it to the learner. Position 3 and 4 are involved in *Multiplicity.* Position 3 shows a modification in dualism having the idea of diversity and uncertainty. At Position 4, dualism is modified again. Different viewpoints and the possibility of uncertainty are accepted by the individuals. *Relativism* consists of Positions 5 and 6. Individuals start to believe that they can actively make meaning at Position 5. Position 6 shows a major shift in the knowledge being perceived as relative, contingent, and contextual. The final positions in the category *Commitment within Relativism* show the shift from structural to more qualitative development. There is a focus on engagement and responsibility in the last category.

Perry made further research on connections among cognitive styles, learning strategies, and development although he did not go on investigating the connections between his conceptions of epistemological development and student learning; however, he was the first one who claimed that how college students made meaning of their experiences based on their education resulted from an evolving developmental process not a reflection of personality (Hofer & Pintrich, 1997). On the other hand, Perry (1970) mentions the limitations of the study as follows: Students were selected from only one college as participants, the researchers who outlined the scheme were the ones who interviewed, validation was conducted in relation to the data, and the scheme was derived from the same data. Despite all the limitations, Perry's scheme of intellectual and ethical development has a significant place among the research of epistemology since almost all of the models can be traced back to this work.

2.2.1.2. Women's Ways of Knowing

Perry's work (1970) on intellectual and ethical development was criticised since all the participants were predominantly male students, and they were from an elite college. Although Belenky et al. (1986) built their work on Perry's work, they were interested in women from diverse backgrounds. Their aim was to examine women as knowers and learners and to understand how women view reality and draw conclusions about truth, knowledge, and authority. They aimed not to report stages of development but perspectives on ways of knowing. With this aim, they conducted interviews with

135 women from different backgrounds, and as a result of these interviews, they proposed five positions around the metaphor of voice.

In the position of *silence*, women's voice was silenced by the voice of external authority. Authorities were described by women as wordless authorities who rarely made what they wanted or expected clear, but expected women to know it beforehand. The next position is *received knowledge* which is parallel to Perry's dualism. Knowledge is perceived as either good or bad, true or false. In this position, women believe that knowledge is produced outside the self, but they can speak about this knowledge or reproduce it, unlike silence position. In the position of *subjective knowledge,* women believe that knowledge is not produced outside the self, but the source is the self. It is based on observations and experiences related to the immediate environment. Subjective knowledge is dualistic as well. Clinchy (2002) states that even though women cannot understand others' opinions, they accept that others can hold different opinions from their own. In the position of *procedural knowledge,* women can reflect on the knowledge and systematically analyse the knowledge. Procedural knowledge, according to Belenky et al. (1986), takes two forms; Separate Knowing and Connected Knowing. The first one is about critical thinking. They question the knowledge including their own knowledge and believe that everyone including themselves may be wrong. The second one is about acceptance rather than criticism. Empathy is valued in this respect. Understanding rather than judgement is important. In the position of *constructed knowledge,* knowledge is constructed by the knower being a part of the knowledge. This knowledge is an integration of subjective and objective strategies of knowing. The person constructing the knowledge can reconstruct it depending on the context.

Extending the work of Perry, Belenky et al (1986) contributed to the field developing a model on how women view reality and draw conclusions about truth and knowledge. While Perry's work describes the nature of knowledge and truth, Belenky et al focus on the source of knowledge and truth. Belenky et al (1986) state that a "transformation of understanding of self begins to generalize and affect how women think about truth, knowledge and expertise" (p. 138).

2.2.1.3. Epistemological Reflection Model

Baxter Magolda (1992) conducted a study with the aim of quantifying students' ways of thinking. She dealt with gender perspectives in her study while developing the Epistemological Reflection Model. Her work is similar to Perry's scheme in terms of aiming at the epistemic assumptions affecting the college students' interpretation of educational experiences. Baxter Magolda started a longitudinal study with 101 (of whom 51 were female and 50 were male) randomly selected college students. She conducted open-ended interviews every year for five years and also gave the students the Measure of Epistemological Reflection (MER). Baxter Magolda (1992) interpreted seventy complete longitudinal sets in the development of this model. Baxter Magolda (1992) came up with four qualitatively different "ways of knowing".

According to the Epistemological Reflection Model, *absolute* knowers believe that knowledge is certain, and the ones who know all the answers are authorities. *Transitional* knowers find out that authorities do not know everything and they also believe that knowledge can be uncertain. *Independent* knowers believe that authorities cannot be the only ones who know everything, but that their opinions are also valid. *Contextual* knowers have the ability to build individual perspectives through the judgement of evidence in context.

While the researchers like Perry and Belenky et al. conducted their research on epistemology with only one gender, Magolda studied both men and women longitudinally. The findings of this study show consistency with those of Belenky et al. Both studies concluded that there may be gender-related patterns in knowing. However, she also concluded that although these patterns may be similar in both men and women, they may appear in the beginning and then converge (Hofer, 2001). The findings also show that the ways of knowing that are common among men are "impersonal" and "individualist", while women are found to be more "personal" and "interindividualist" knowers (Hofer & Pintrich, 1997).

2.2.1.4. Reflective Judgment Model

King and Kitchener (1994) developed a model concerning the epistemic assumptions that underlie reasoning. Their seven-stage developmental model was developed through interviews conducted for fifteen years with people from high school age through adulthood. They were asked about four ill-structured problems and

expected to justify their views by responding to six follow-up questions. These questions focused on knowledge and its source. The reflective judgment model shows how people understand the process of knowing and how they justify their beliefs.

There are seven stages that describe the way people perceive and justify ill-structured problems in this model. These seven stages consist of three levels: pre-reflective level (Stages 1,2,3), quasi-reflective level (Stages 4,5), and reflective level (Stages 6,7). At Stage 1, people consider knowledge as absolute and certain. They believe that knowledge is provided through direct observation. What is seen is regarded as the truth. Stage 2 is similar to Dualism in Perry's model in terms of the importance of authorities. The ones who know the truth are authorities in this stage. At Stage 3, there is a temporary uncertainty allowing for judgments based on personal opinions. However, this uncertainty disappears when absolute knowledge is obtained from authorities. In a quasi-reflective level consisting of Stages 4 and 5, people start to believe that they cannot know certainty. At Stage 4, knowledge is understood as an abstraction. At Stage 5, since people filter their knowledge through their perceptions and judgement, knowledge is seen as contextual and subjective. In the reflective thinking level, people believe that they can actively construct knowledge. At Stage 6, expert knowledge is critically evaluated since it is believed that knowledge is uncertain and it is context-dependent. At the last stage, people believe that they can question every judgment and evaluate every conclusion.

Hofer & Pintrich (1997) stated that the Reflective Judgment Model is the most extensive developmental scheme with epistemological elements. The results of the study show that higher-stage reasoning was more evident than lower-stage reasoning. Another finding of the study is that there was a strong linear relationship between age and stage. This means higher educational attainment was correlated with higher stages. Although there was not a significant difference between males and females during the first two testings, males scored at higher stages in the latter two testings. The reason can be about the educational attainment of males who were more likely to attend post-baccalaureate education (King & Kitchener, 1994).

Reflective judgment is thought to be very similar to critical thinking; however, King and Kitchener (1994) claimed that they are different constructs even though they are related. While critical thinking is mostly required for solving closed and well-structured problems, reflective judgment deals with ill-structured problems. Also, epistemic assumptions can be ignored in critical thinking. On the other hand, Hofer and

Pintrich (1997) pointed out that there were several limitations of the study. Epistemological beliefs do not get activated by only ill-structured problems which are used in this study. The population of the study consists of only White students, and also the problems which the students are asked about may not be a good reflection of real-life problems.

2.2.1.5. Argumentative Reasoning

How people try to solve ill-structured problems has also been studied by Kuhn (1991). Although the main purpose of the study was to understand how argumentative thinking works and how and why people reason, results related to beliefs about knowledge also came out. Kuhn (1991) conducted interviews with individuals from four age groups: teens, 20s, 40s, and 60s. The gender and educational level were equally represented in each group. The participants were interviewed twice and they were asked about three social problems. The questions were about the reasons why prisoners commit crimes again when they are released, the reasons why children fail in school, and the reasons for unemployment. The participants were asked to justify their opinions offering a counter-argument and proposing a solution for the problem.

Kuhn (1991) came up with three categories of epistemological views: absolutist, multiplist, and evaluative. For Absolutists, knowledge is absolute and certain. Facts and being an expert are the basis for knowing. Questioning the expertise and the certainty of knowledge, Multiplists do not accept the idea that experts have the certain knowledge. Since they value emotions and ideas, they believe that one's own view cannot be less valid than experts' view. Although the evaluatists do not view knowledge as certain, they believe in expertise see themselves as less certain than the experts. They also believe that the ideas can be compared and evaluated (Hofer & Pintrich, 1997). Kuhn was thought to be contributed to the literature on epistemology, not because of the model she offered, but because of her simplified three-stage representation of Perry's scheme (Hofer & Pintrich, 1997). Some strengths of the study are the broad age range of the participants and the problems related to everyday situations, and limitations of the study are related to the uncertain elements that consist of the epistemological theories (Hofer & Pintrich, 1997).

Table 1.

Models of epistemological development in late adolescence and adulthood

Intellectual and ethical development (Perry)	Women's ways of knowing (Belenky et al.)	Epistemological reflection (Baxter Magolda)	Reflective judgment (King and Kitchener)	Argumentative reasoning (Kuhn)
Positions	Epistemological perspectives	Ways of knowing	Reflective judgment stages	Epistemological views
Dualism	Silence Received knowledge	Absolute knowing	Pre-reflective thinking	Absolutists
Multiplicity	Subjective knowledge	Transitional knowing		Multiplists
			Quasi-reflective thinking	
	Procedural knowledge			
	(a) Connected knowing			
Relativism	(b) Separate knowing	Independent knowing		Evaluatists
Commitment within relativism	Constructed knowledge	Contextual knowing	Reflective thinking	

Note. Stages and positions are aligned to indicate similarity across the five models.

Table 1. Hofer, B. K., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of educational research, 67*(1), 88-140.

2.2.2. Multidimensional System of Epistemological Beliefs

While the approaches presented above consider knowledge as a single dimension, Schommer (1990,1993) and Hofer and Pintrich (1997) proposed multi-dimensions of epistemological beliefs. The following sections introduce these two frameworks.

2.2.2.1. Schommer's epistemological beliefs system

Perry's work (1970) inspired many others about personal epistemology; however, there were some contradictions in the existing literature. Schommer (1990) drawing on the work of Perry proposed a model of beliefs that have more or less independent dimensions, which made it different from the preceding models organized into positions or stages. Schommer (1990) adapted some items from the original survey of Perry (1970), and some items from the related studies (Dweck and Leggett, 1988; Kitchener and King,1981; Ryan, 1984b; Schoenfeld, 1983, 1985), and suggested a new framework with an aim to explain the nature of knowledge and how it is acquired. The dimensions she proposed in the preliminary work were *the structure, certainty, source of knowledge, control, and speed of knowledge acquisition.*

Developing a questionnaire with 63 short statements, Schommer (1990) in her study wrote the statements characterizing epistemological beliefs in either the negative or the positive extreme on the questionnaire. This means that the responses on the one side of a traditional Likert scale were called "naïve" while the responses on the other side of the scale were labelled as "sophisticated". Schommer-Aikins (2004) states that "an individual who believes that knowledge is simple and certain and that learning is quick and fixed at birth, is considered less mature" (p. 21). According to the factor analysis performed in this and subsequent studies, Schommer (1990, 1993) proposed four belief dimensions:

1. Knowledge is best characterized as isolated facts (simple knowledge),
2. Knowledge is unchanging (certain knowledge),
3. The ability to learn is fixed at birth (innate ability),
4. Learning occurs quick or not-at-all (quick learning).

Schommer has conducted more studies on epistemological beliefs. Using her questionnaire (EBQ), she investigated the relationship between beliefs about knowledge, strategy use, and performance (Schommer, 1990), the relationship between beliefs about knowledge, comprehension confidence, and performance (Schommer et al., 1992), comparing the junior college and university students' beliefs about knowledge (Schommer, 1993a), comparing the beliefs about knowledge of gifted students and others in ninth grade (Schommer & Dunnell, 1994), differences in beliefs during high school years with a cross-sectional study (Schommer, 1993b), investigation of adults' beliefs about knowledge (Schommer, 1992). Schommer (2002) in her review explained why dimensions are needed in epistemological research, and the indicators of the sophistication level of epistemological beliefs as the quality of study strategies, problem solving, comprehension, and interpretation.

Schommer's studies have contributed to the field of epistemological beliefs in three areas (Hofer & Pintrinch, 1997):

a) suggesting that epistemological beliefs may be a system of dimensions that are relatively independent of one another,
b) initiating an empirical investigation of the study of several proposed dimensions, and
c) initiating an important and insightful line of research that links epistemological beliefs to issues of academic classroom learning and performance.

Schommer (1994) stated that epistemological beliefs are made up of more or less independent dimensions, which means that a person might not be naïve or sophisticated in all the dimensions simultaneously. Schommer's approach to the study of personal epistemology was significant as it suggested that personal epistemology is a system of beliefs. Some constructs like comprehension might be affected by this system of beliefs, and some other constructs like educational background might affect this belief system. This study has also led a group of researchers to work on the identification of the relation between epistemology and learning.

2.2.2.2. Hofer and Pintrich's multi-dimensional theoretical framework

Hofer and Pintrich (1997) reviewed and criticised Schommer's (1990) multidimensional framework and proposed a theoretical framework of epistemological beliefs called personal theories in their article. They criticised Schommer's framework stating that the definition of personal epistemology has only the dimensions about the nature of knowledge, so two dimensions about the nature of learning should not be included in personal epistemology. They also criticized the items in Schommer's (1990) questionnaire and claimed that they do not represent the content domain of epistemological beliefs.

Hofer & Pintrich (1997) proposed four dimensions: certainty of knowledge and simplicity of knowledge under nature of knowledge area; source of knowledge and justification for knowing, under nature of knowing area.

- *Nature of Knowledge* is a progressive understanding moving from the view of knowledge as absolute to a relativistic view and then to a contextual, constructivist view.
    - *Certainty of knowledge* is related to the degree to which one sees knowledge as fixed or more fluid.
    - *Simplicity of knowledge* is related to the degree to which one sees knowledge as discrete, concrete, knowable facts or relative, contingent, and contextual.
- *Nature of Knowing* is related the source of knowledge and the justification for including evaluation of evidence, the role of authority, and the process of justification.
    - *Source of knowledge* is related to the knowledge originating outside the self or being an active constructor of meaning.
    - *Justification for knowing* is related to one's assessments towards knowledge claims, authority, and evidence for knowledge.

2.2.3. Studies on the Relationship between Epistemological Beliefs and Other Constructs

Different studies have been conducted so far to investigate the relationship between epistemological beliefs and other constructs such as conceptions of teaching

and learning, self-efficacy, motivation, achievement or academic performance, and field of study.

Chan and Elliot (2004) investigated the relationship between epistemological beliefs and conceptions of teaching and learning. They found a correlation between the dimensions ‘innate ability’, ‘authority knowledge’, ‘certain knowledge’ and ‘traditional teaching’ conception. They also stated that there was a correlation between the dimension ‘learning effort’ and ‘constructivist teaching’ conception. Chan (2004) also pointed out that epistemological beliefs are related to conceptions about teaching/learning and that teachers’ conceptions and class teaching are beliefs driven. In another study, Chan (2004) concluded that epistemological beliefs were significantly related to the deep and surface strategies adopted by students and those beliefs had a predictive effect, and he found significant relations between epistemological beliefs and learning strategies as well as between epistemological beliefs and conceptions of learning.

The relationship between epistemological beliefs and strategy use has also been investigated. Metallidou (2013) conducted a study with 160 middle school students and found out that epistemological beliefs about the speed of learning and the ability to learn significantly affected the use of cognitive and motivational regulation strategies. Schommer-Aikins and Easter (2008) conducted research with an aim to examine the individual differences in epistemological beliefs, ways of knowing, study strategies, and academic performance among different cultural groups. They reported that there was a meaningful relationship between epistemological beliefs and study strategies.

Another construct investigated in the studies related to epistemological beliefs as a variable was self-efficacy beliefs. Yilmaz-Tuzun and Topcu (2008) investigated preservice elementary science teachers’ epistemological beliefs and the relationships among their epistemological beliefs, epistemological world views, and self-efficacy beliefs. They found that there was a negative correlation between the dimension Innate Ability and self-efficacy beliefs. In another study, Sünger (2007) analysed preservice science teachers at elementary science teaching and secondary science teaching with respect to their self-efficacy beliefs, epistemological beliefs, and attitudes towards science teaching. He could not find any significant relationship between self-efficacy beliefs and epistemological beliefs.

Paulsen and Feldman (1999) investigated student motivation and epistemological beliefs and found out that college students' motivation to learn is related

to their epistemological beliefs. Kızılgüneş et al. (2009) also conducted a study with 1041 sixth grade elementary students in Turkey and investigated how epistemological beliefs, achievement motivation, and learning approach related to achievement. The results of their study showed that students who believed knowledge to be evolving and handed down by authority were more likely to be self-efficacious in their learning.

In a study investigating gender, disciplinary differences, and academic performance of first-year college students in terms of epistemological beliefs, Hofer (2000) found that there was a link between academic performance and epistemic beliefs in terms of certain knowledge dimensions. Schommer (1993a) also investigated epistemological beliefs and academic performance of high school students and she found that students performed better when they believed in quick learning, simple knowledge, certain knowledge, and fixed ability less. However, the results changed after general intelligence was added to the analyses and only quick learning predicted academic performance. Schommer-Aikins, Duell, and Hutter (2005) conducted another study with middle school students and they found that epistemological beliefs affect mathematical performance and overall academic performance.

2.2.4. Epistemological Beliefs Measurement Instruments

There are a number of epistemological beliefs questionnaires developed by different researchers. One of the most commonly used questionnaires was developed by Schommer (1990). It is a 63-item questionnaire with 4 factors. The dimensions have 12 subsets. Participants are asked to rate their degree of agreement by pointing for each item on a 5-point-scale from 1 (strongly disagree) to 5 (strongly agree). The low scores obtained on the dimensions show sophisticated beliefs, and the high scores indicate the naïve beliefs of the participants. Deryakulu and Büyüköztürk (2002, 2005) adapted Schommer's scale into Turkish context. They conducted two studies at several Turkish universities and formed the 34-item Turkish version of the scale consisting of three dimensions: the belief that learning depends on effort, the belief that learning depends on ability, and the belief that there is only one truth.

Another researcher who developed an Epistemological Beliefs Measurement Instrument was Jehng (1991). He developed a 51-item epistemological beliefs questionnaire with independent dimensions. Jehng, Johnson, and Anderson (1993)

stated that one's beliefs about learning may change if s/he gets further education. They reduced Jehng's (1991) original questionnaire into 34 items with 5 factors.

Wood and Kardash (2002) also developed a new questionnaire by blending the items in Schommer's and Jehng's scales. The new questionnaire investigates epistemological beliefs through five dimensions: on the speed of knowledge acquisition, structure of knowledge, knowledge construction and modification, characteristics of successful students, and attainability of truth

Schraw, Bendixen, and Dunkle (2002) developed a modified version of Schommer's questionnaire and called it the Epistemic Beliefs Inventory (EBI). This new questionnaire contained 32 items based on the five factors proposed by Schommer (1990). Cam, Topcu, Sulun, Guven, and Arabacioglu (2012) adapted this questionnaire in the Turkish context after translating and validating it with Turkish pre-service teachers. The three-factor model was found after factor analysis with dimensions: certain knowledge, innate ability, and quick learning.

Chan and Elliott (2002, 2004) developed a questionnaire based on Schommer's 63-item "Epistemological Beliefs Questionnaire". They revised the original scale by using factors analysis, adding new items, and changing the existing items. The new scale consists of 30 items on a five-point Likert scale (5=completely agree–1=completely disagree). It has five factors: Innate/ Fixed Ability, Learning Effort, Learning Process/Expert Knowledge, and Certainty Knowledge. Aypay (2011) adapted Chan and Elliott's scale into the Turkish context. She conducted a study with 342 pre-service teachers studying at a Turkish university. Turkish version of the scale consists of the same items and factors as the original scale.

Table 2.

Sample scales of Epistemological Beliefs

Designer of the Scale	**Scale**	**Items**	**Sub-scales**
Schommer (1990)	Epistemological Beliefs Questionnaire (EBQ)	63 items	4 sub-scales Innate Ability Quick Learning Simple Knowledge Certain Knowledge
Jehng et al. (1993)	Epistemological Beliefs Scale	34 items	5 sub-scales certain knowledge omniscient authority, orderly process innate ability quick learning
Wood & Kardash (2000)	Epistemological Beliefs Questionnaire	38 items	5 sub-scales speed of knowledge acquisition structure of knowledge knowledge construction and modification characteristics of successful students attainability of truth
Schraw et al. (2002)	Epistemic Belief Inventory	32 items	5 sub-scales Certain Knowledge Innate Ability Quick Learning Simple Knowledge Omniscient authority
Chan & Elliott (2002)	Epistemological Belief Instrument	30 items	4 sub-scales Fixed/Innate Ability Authority/Expert Knowledge Certainty Knowledge Learning/Effort Process

2.2.5 Research on Epistemological Beliefs

To examine the research on epistemological beliefs that have been conducted so far, an extensive literature search was performed to elicit empirical studies conducted in Turkey and in other countries. The review indicated that there has been a number of studies conducted in science and physical education fields and several studies in the EFL context. The relevant studies conducted in the EFL context in Turkey and in other countries are presented in the forthcoming sections.

2.2.5.1 Research on Epistemological Beliefs in EFL context in Turkey

Several studies were conducted with EFL students, pre-service and in-service teachers on epistemological beliefs in the EFL context. The results of the literature review have been shown in Table 3. The authors, date, aim of the study, participants, and conclusions of each study are presented in the table.

Table 3.

Representative Studies on the Epistemological Beliefs in EFL Context in Turkey

Author(s) (Date)	**Aim**	**Participants**	**Conclusions**
Rakıcıoğlu, A. Ş. (2005)	to examine the epistemological beliefs, the teacher-efficacy beliefs and the relationship between these beliefs	456 pre-service teachers	The pre-service EFL teachers' sense of efficacy and personal epistemology were found to affect their perceptions either positively or negatively.
Pan, V. L. & Yelken, T. Y. (2016)	to examine preservice English language teachers' epistemological beliefs and study processes	237 pre-service teachers	Pre-service English Language teachers have an advanced level of epistemological beliefs, have an idea about their own level and these beliefs have an effect on learning.
Munis, M. E. (2017)	to examine the relationship between epistemological and foreign language learning beliefs of university students.	302 EFL university students	EFL students had sophisticated epistemological beliefs in terms of learning depending on effort and ability. There was a significant relationship between students' epistemological and FLL beliefs.
Dere, Y. (2017)	to investigate foreign language learning beliefs and epistemological beliefs and the relationship between these beliefs	155 EFL university student	Students possessed both naïve and sophisticated epistemological beliefs. Epistemological and language learning beliefs were mostly uncorrelated.
Öner, U. (2019)	to examine the relationship between English teacher's epistemological beliefs and teaching styles	347 in-service teachers	A significant difference was found between English teacher's epistemological beliefs and teaching styles.
Yalçın, F. (2019)	to examine the relationship between epistemological beliefs, curriculum design orientations preferences, and teaching styles of pre-service English teachers	472 pre-service teachers	Pre-service English teachers preferred student and problem centred curriculum design orientations most, subject-centred curriculum design orientations least. They had sophisticated epistemological beliefs
Kırmızı, Ö. & Irgatoğlu, A. (2021)	to examine the relationship between pre-service EFL teachers' epistemological beliefs and their approaches to teaching.	105 pre-service teachers	The most important sub-dimension of epistemological beliefs that predict teaching approaches is the effort dimension of epistemological beliefs
Sarıçoban, A. & Kırmızı, Ö. (2021)	to investigate correlations between and among pre-service EFL teachers' epistemological beliefs, perceived engagement levels, and instructional preferences.	149 pre-service teachers	Teacher engagement plays an important role in teachers' instructional preferences. The ability to learn and source of knowledge dimensions of epistemological beliefs affect transmission-based teaching

Table 3. shows that all of the studies conducted in Turkey focused on the relationship between epistemological beliefs and other constructs. These constructs are teacher-efficacy beliefs, study processes, foreign language learning beliefs, teaching styles, curriculum design orientations preferences and teaching styles of pre-service English teachers, perceived engagement levels, and instructional preferences. The results indicated that there were slight or significant differences between these constructs and at least one dimension of epistemological beliefs.

2.2.5.2 Research on Epistemological Beliefs in EFL context in other countries

Epistemological beliefs studies have also been conducted in other countries especially with EFL students, pre-service and in-service teachers. The results of the literature review have been shown in Table 4. The authors, date, country where the study was conducted, the aim of the study, participants, and conclusions of each study are presented in the table.

Table 4.

Representative Studies on the Epistemological Beliefs in EFL Context in Other Countries

Author(s) (Date)	Country	Aim	Participants	Conclusions
Ketabi, S. et al. (2014)	Iran	to investigate the relationship between pre-service EFL teachers' epistemological beliefs and their conceptions of teaching and learning.	92 pre-service teachers	There were significant positive relationships between traditional teaching-learning conceptions and some dimensions of epistemological beliefs and significant correlations between constructivist conceptions and some dimensions of epistemological beliefs.
Ismail, A. A. M. (2017)	The United Arab Emirates	to investigate the relationship between pre-service EFL teachers' epistemological beliefs and their assessment orientations.	114 pre-service teachers	EFL teachers with naive epistemological beliefs adopted surface-level assessment orientations while those with sophisticated epistemological beliefs showed adopted deeper level approaches to assessment in language settings more.
Kahsay, M. T. (2019)	Ethiophia	to examine the level of EFL students' epistemological beliefs and learning strategy use and the contribution of epistemological beliefs to their learning strategy use	136 EFL students	EFL students with sophisticated epistemological beliefs were more strategic in handling learning situations through deploying appropriate higher order cognitive and metacognitive learning strategies.
Mardiha, M. S. & Alibakhshi, G. (2020)	Iran	to explore the correlation between EFL teachers' epistemological beliefs and their conceptions of teaching and learning.	120 in-service teachers	The correlation between in-service teachers' perceptions of teaching and learning and epistemological beliefs is statistically significant.
Soleimani, N. (2020)	Iran	to show English language teachers' epistemological beliefs, teaching styles, and possible between EB and teaching styles.	200 in-service teachers	EFL teachers' teaching style is informed by their epistemological beliefs

As shown in Table 4, all of the studies conducted in other countries investigated the relationship between epistemological beliefs and other constructs in a similar line with the studies conducted in Turkey. These constructs are EFL teachers' conceptions of teaching and learning, pre-service EFL teachers' assessment orientations, and teaching styles. Different from the studies in Turkey, some of the studies conducted in other countries investigated the impacts of educational level and gender on epistemological beliefs and contributions of epistemological beliefs to learning strategy use.

2.3. Teaching-Learning Conceptions

Teachers' views or beliefs about teaching and learning have been investigated intensely (Burns, 1996; Busch, 2010; Johnson, 1992; Kern, 1995; Peacock, 2001; Richards & Lockhart, 1996; Smith, 1996) and have long been considered as a dynamic affecting every aspect of their decisions about instruction. Chan and Elliott (2004) point out that teaching and learning conceptions are related to teachers' beliefs about their preferred ways of teaching and learning and the roles of teachers and students.

Although sometimes called as student-centred and teacher-centred approaches (Trigwell et al., 2005) or transmissive and progressive modes of learning (Chan & Elliott, 2004), teaching and learning conceptions are often associated with two learning models: traditional and constructivist conceptions (Chan and Elliott, 2004; Clements & Battista, 1990; Clifford, 1992). While the former refers to the transmission of knowledge from the teacher to students, the latter focuses on the construction of knowledge based on students' previous learning experiences with the guidance of the teacher (Chan and Elliot 2004).

Meighan and Meighan (1990) argue that when teachers accept learners as “resisters” or “receptacles” or “raw materials”, they tend to teach in a teacher-centred way; however, when they see learners as “clients” or “partners” or “individual explorers” or “democratic explorers”, they teach in a learner-centred way. There are a lot of differences between traditional and constructivist conceptions in terms of constructs such as learning and teaching, teachers’ and learners’ role, motivation, and evaluation. Table 5. illustrates how Traditional and Constructivist Models of Education are different from each other according to Kohonen (1992).

Table 5

Traditional and Constructivist Models of Education

Dimensions	**Traditional Model: Behaviourism**	**Experiential Model: Constructivism**
1. View of Learning	Transmission of knowledge	Transformation of knowledge
2. Power Relation	Emphasis on teacher's authority	Teacher as "learner among learners"
3. Teacher's Role	Providing mainly frontal instruction; professionalism as individual autonomy	Facilitating learning (largely in small groups; collaborative professionalism)
4. Learner's Role	Relatively passive recipient of information; mainly individual work	Active participation, largely in collaborative small groups
5. View of Knowledge	Presented as "certain", application problem-solving	Construction of personal knowledge; identification of problems
6. View of Curriculum	Static; hierarchical grading of subject matter, predefined content and product	Dynamic; looser organization of subject matter, including open parts and integration
7. Learning Experiences	Knowledge of facts, concepts and skills; focus on content and product	Emphasis on process; learning skills, self-inquiry, social and communication skills
8. Control of Process	Mainly teacher-structured learning	Emphasis on learner; self-directed learning
9. Motivation	Mainly extrinsic	Mainly intrinsic
10. Evaluation	Product-oriented: achievement testing; criterion-referencing (and norm referencing)	Process-oriented: reflection on process, self- assessment; criterion-referencing

Table 5. Kohonen, V. (1992). Experiential language learning: Second language learning as cooperative learner education. In D. Nunan (Ed.), Collaborative Language Learning and Teaching. Cambridge: Cambridge University Press.

2.3.1. Traditional Conception

The belief that knowledge can be simply given to learners by the instructor underlies the traditional conceptions of teaching and learning (Dewey 1897). In traditional conception, knowledge is transmitted from the teacher to students as the teacher is viewed as the source of knowledge (Chan and Elliot 2004). While the teacher plays the dominant role in transmitting information, students are the passive receivers. Traditional education also isolates the learners from social interaction (Dewey, 1987) since they are passive and directed only by the teacher. In traditional conception, learning is receiving information, especially from the teacher and textbooks to make students learn well-defined concepts (Howard et al, 2000). According to Cohen (1988), in traditional conception, while teachers are described as "tellers of truth who inculcate knowledge in students" (p. 15), students have the passive role of being "accumulators of material who listen, read, and perform prescribed exercises" (p. 15). This means teachers are the only authority who knows the subject well and convey it to the students accurately and clearly.

When the second or foreign language teaching is the case, traditional approaches give priority to grammar teaching as the basis of language proficiency, and grammar is taught through direct instruction composed of repetitions and drills (Richards, 2006). Such approaches employ several techniques that require memorization, question-and-answer practice, and drilling. A typical lesson conducted with a traditional approach has a three-phase sequence (Richards, 2006); Presentation (explanation of the new structure by the teacher), Practice (use of new structure through drills and substitution exercises), and Production (use of new structure in a different context). Such conceptions place the teacher in the centre of the learning process giving them the responsibility to teach by transferring the knowledge to learners. The one who actively talks interacts, and asks is the teacher while students listen, get what they are given, and do not ask why.

Traditional approaches began to lose their popularity with the start of a reaction to grammar-based instruction in the 1970s. With the realization of the necessity to learn

the knowledge and skills needed for communicative purposes, learning grammar being the focus of language learning has been questioned (Richards, 2006).

2.3.2. Constructivist Conception

Constructivism emerged and became the dominant paradigm in education in the 1980s. In constructivist conception, active learning environments are created to permit critical thinking, collaborating and discovering (Chan and Elliot 2004). In such an environment, students are involved in higher-order thinking and they do activities like reading, discussion, writing, having the emphasis on students' exploration of their own attitudes and values (Bonwell & Eison, 1991).

While the teacher is the authority who transmits the knowledge in traditional conception, knowledge is created through the interaction of students with each other, or through the interaction of students and teachers, and the teacher is a facilitator during this constructions process in constructivist conception (Watkins, 1998). This conception is considered as learner-centred since learners use sensory inputs and constructs meaning out of those inputs in the learning process. Dewey (1987) points out that the learner is not passive who receives but is involved in the learning process. In other words, the learner is responsible for learning by being an active participant in the learning process.

In language teaching, constructivism requires action-oriented learning, cooperation between students and creativity. It is based on the student-centred learning in which learners can use their own knowledge to develop or construct something autonomously. Teachers play a facilitating role in the learning process by using appropriate strategies and techniques. In a student-centred classroom, learning takes place by learning how to learn and through experiments, solving real-life problems, reflection, interaction, and discussion while traditional classrooms require the teacher to transmit the knowledge to students. Constructivism is rooted in notions from cognitive constructivism grounded in the work of Piaget (1970) and social constructivism focusing on the social construction of knowledge proposed by Vygotsky (1978).

2.3.2.1. Piaget

According to Piaget's theory of cognitive constructivism, people should construct their own knowledge instead of being given the information directly (Piaget,

1953). Learning is considered as a developmental process, which occurs through the construction of new understandings. In this theory, children go through three distinct yet interrelated processes; assimilation, accommodation, and equilibrium. Assimilation is when new experiences are integrated into existing schema and accommodation is when children change their schemas to accommodate the new information (Piaget, 1953). Equilibrium is the outcome of these processes, which is the achievement of new understandings, coherence, and cognitive stability (Piaget, 1953). Piaget's theory of cognitive development suggests that children construct their knowledge cognitively by passing through a series of stages (1953).

2.3.2.2. Vygotsky

Vygotsky (1978) underscored how effective the social environment is on learning and knowledge construction. Children's thinking and meaning-making are socially constructed when they interact with their environment in which learning is facilitated by parents, peers, teachers, and others around them. One of Vygotsky's main theories is the zone of proximal development which is described as the distance between the learners' actual developmental level and the level of their potential development, which is achieved when the child is helped in learning a concept (Vygotsky, 1962). This help may consist of active engagement, the pursuit of different paths to discover, concept acquisition, and external and internal scaffolding. are central to the learning process. While external scaffolding includes breaking down tasks into comprehensible components, modelling, coaching, providing feedback, and appropriating responsibility for learning to learners by the others, internal scaffolding means the learner's reflection and self-monitoring. In a school context, teachers can provide instructional support by designing appropriate, authentic, and meaningful lessons and by scaffolding which is to help learners achieve (Wood et al., 1976).

2.3.3. The Relationship of Teaching-Learning Conceptions to Other Constructs

The relationship between teaching-learning conceptions and other constructs has been investigated in different studies so far. Chan and Elliot (2004) investigating the relationship between epistemological beliefs and conceptions of teaching and learning found a correlation between the dimensions 'innate ability', 'authority knowledge',

‘certain knowledge’ and ‘traditional teaching’ conception. and a correlation between the dimension ‘learning effort’ and ‘constructivist teaching’ conception.

Self-efficacy was another construct investigated with teaching styles. Heidari et al, (2012) investigated the relationship between two key personality factors of teachers, namely self-efficacy and teaching styles in an Iranian EFL context. They found a significant relationship between teachers’ self-efficacy and their teaching styles and a significant difference in teachers’ self-efficacy with regard to their teaching styles.

Tavakoli et al, (2015) conducted research to learn whether teachers’ traditional and constructivist conceptions of teaching and learning may have any role to play in the formation of teacher prejudice. The results showed significant positive correlations between traditional conceptions of teaching and learning and teachers’ bias towards perfectionism as well as their biases against the use of learners’ first language and their risk-taking behaviour. They also found negative correlations between the constructivist conceptions of language teaching and learning and teachers’ bias in favour of the Western culture as well as their bias against learners’ use of the L1.

Another construct investigated in studies related to teaching and learning conceptions was teacher burnout. Zabihi and Khodabakhsh (2017) conducted a study with 74 teachers to find out the dominant type of teaching/learning conceptions among the second language and to see if there is any relationship between L2 teachers’ teaching/learning conceptions and their burnout level. They found that teachers were more inclined towards constructivist conceptions of teaching and learning and a significant positive correlation between teachers’ total burnout level alongside two of its subscales and their traditional conceptions of learning and teaching.

Yalçın (2019) investigate the relationship between epistemological beliefs, curriculum design orientations preferences, and teaching styles of 472 pre-service English teachers. He found out that pre-service English teachers adopted facilitator/personal model/expert and delegator/facilitator/expert teaching styles, which are categorized as student-centred teaching styles. He also found a significant relationship between teaching styles and curriculum design orientations preferences.

In another study, Solemani (2020) investigated English language teachers’ epistemological beliefs, teaching styles, and possible relationships between epistemological beliefs and teaching styles with a sample of 200 EFL teachers. The results showed that the facilitator style is the dominant style of teaching and learners.

She also found out that EFL teachers' teaching style is informed by their epistemological beliefs.

Sarıçoban and Kırmızı (2021) conducted research to see potential correlations between and among pre-service EFL teachers' epistemological cognitions, perceived engagement levels, and instructional preferences. The results showed that teacher engagement plays an important role in EFL teachers' instructional preferences and that the ability to lean and source of knowledge dimensions was influential on transmission-based teaching.

2.3.4. Teaching-Learning Conceptions Measurement Instruments

Teaching and learning have been investigated through different instruments which measure teaching and learning conceptions, teaching styles, or teaching practices in various studies. One recent and most widely used instrument is the Teaching and Learning Conceptions Instrument (TLCQ) designed by Chan and Elliott (2004). The questionnaire has 30 items scored based on a Likert scale of 5 points (1=Never; 2=Rarely; 3=Sometimes; 4=Often; 5=Always). There are two subscales in the questionnaire: constructivist conceptions (12 items) and traditional conceptions (18 items). Aypay (2011) conducted a study with 342 pre-service teachers studying at a Turkish university in order to adapt the scale into the Turkish context. Turkish version of the scale consists of the same items and factors as the original scale.

Another instrument investigating teaching styles is the Teaching Styles Inventory developed by Grasha (1996). There are 40 items and five subscales on the scale which indicate five different: expert, formal authority, personal model, facilitator, and delegator. Each item is scored on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The scale was adapted into Turkish context by Üredi (2006).

Choi and Lee (2000) developed a scale named Teaching Practices Scale in order to find out how frequently teachers use teaching practices. The scale consists of two subscales: communicative and non-communicative teaching and 8 items scored based on a 6-point rating scale (1 refers to Never, 6 refers to Always).

Table 6.

Sample Scales of Teaching and Learning Conception

Designer of the Scale	Scale	Items	Sub-scales
Chan & Elliott (2004)	Teaching and Learning Conceptions Instrument (TLCQ)	30 items	2 sub-scales constructivist conceptions traditional conceptions
Grasha (1996)	Teaching Styles Inventory	40 items	5 sub-scales expert formal authority personal model facilitator delegator
Choi and Lee (2000)	Teaching Practices Scale	8 items	2 sub-scales communicative non-communicative teaching

2.3.5 Research on Teaching-Learning Conceptions

The research on teaching-learning conceptions studies that have been conducted so far has shown that there are several studies conducted in Turkey. Most of the research in this field has been made in other countries. The relevant studies conducted in the EFL context in Turkey and in other countries are presented in the forthcoming sections.

2.3.5.1 Research on Teaching-Learning Conceptions in EFL context in Turkey

Several studies were conducted with pre-service and in-service EFL teachers on the sense of self-efficacy in the EFL context. The results of the literature review have been shown in Table 7. The authors, date, aim of the study, participants, and conclusions of each study are presented in the table.

Table 7.
Representative Studies on the Teaching-Learning Conceptions in Turkey

Author(s) (Date)	**Aim**	**Participants**	**Conclusions**
Canbay, O. & Beceren, S. (2012)	to determine the university instructors' conceptions of teaching in ELT departments	4 in-service teachers	The type of the institution where the teachers work is not a strict factor that shapes the way how the teachers teach and how they define some of the components of teaching.
Kaymakamoğlu, S. E. (2017)	to investigate the EFL teachers' beliefs, perceived practice and actual classroom practice in relation to traditional and constructivist teaching	10 in-service teachers	The findings showed that traditional practice was more frequent than communicative potentially constructivist practice
Yalçın, F. (2019)	to investigate the relationship between epistemological beliefs, curriculum design orientations preferences and teaching styles of pre-service English teachers	472 pre-service teachers	Pre-service English teachers preferred student and problem centred curriculum design orientations most, subject-centred curriculum design orientations least. They had sophisticated epistemological beliefs
Doğan, Ç. (2020)	to investigate the relationship between the levels of English teachers' self-efficacy beliefs and their classroom practices.	152 in-service teachers	They use both teaching practices. The frequency of employing communicative teaching practices is higher. There is a significant positive relationship between self-efficacy and communicative teaching practices, no significant relationship was determined with non-communicative teaching practices
Özdemir, M. (2020)	to examine the perceived levels of EFL instructors' overall self-efficacy beliefs and self-efficacy beliefs for student engagement, classroom management, and instructional strategies	323 in-service teachers	Efficacy in student engagement could predict personal model, facilitator, and delegator teaching styles, and efficacy in instructional strategies predicts personal model, facilitator, and formal authority teaching styles.
Kırmızı, Ö. & Irgatoğlu, A. (2021)	to examine the relationship between pre-service EFL teachers' epistemological beliefs and their approaches to teaching.	105 pre-service teachers	Pre-service teachers moderately agreed with the sub-dimensions of epistemological beliefs. The most important sub-dimension predicting teaching approaches is the effort dimension of epistemological beliefs
Sarıçoban, A. & Kırmızı, Ö. (2021)	to see potential correlations between and among pre-service EFL teachers' epistemological cognitions, perceived engagement levels, and instructional preferences	149 pre-service teachers	The ability to learn and source of knowledge dimensions of epistemological beliefs affect transmission-based teachin

Table 7. shows that there are several studies related to teaching and learning conceptions in the Turkish EFL context. The studies investigated the teaching and learning conceptions of in-service and pre-service EFL teachers and the relationship between teaching and learning conceptions and other constructs. These constructs are teachers' beliefs, perceived practice, epistemological beliefs, curriculum design orientations preferences, self-efficacy beliefs perceived engagement levels. The studies investigate teaching and learning conceptions with different names or perspectives such as actual classroom practice in relation to traditional (teacher-centred) and constructivist (learner-centred) teaching, teaching styles, classroom practices, instructional strategies, and instructional preferences.

2.3.5.2 Research on Teaching-Learning Conceptions in EFL context in other countries

Studies related to teaching and learning conceptions have also been conducted in other countries with pre-service and in-service EFL teachers, especially in Iran. The results of the literature review have been shown in Table 8. The authors, date, country where the study was conducted, the aim of the study, participants, and conclusions of each study are presented in the table.

Table 8.

Representative Studies on the Teaching-Learning Conceptions in Other Countries

Author(s) (Date)	**Country**	**Aim**	**Participants**	**Conclusions**
Heidari, F., Nourmohammedi, E. & Nowrouzi, H. (2012)	Iran	to examine the relationship between self-efficacy and teaching styles in an Iranian EFL context.	102 in-service teachers	There is a significant correlation between teachers' teaching styles and their self-efficacy.
Ketabi, S., Zabihi, R. & Ghadiri, M. (2013)	Iran	to investigate the relationship between pre-service EFL teachers' epistemological beliefs and their conceptions of teaching and learning.	92 pre-service teachers	Most of the participants adopted traditional conceptions. There were significant positive relationships between traditional teaching/learning conceptions and some dimensions of epistemological beliefs.
Tavakoli, M., Zabihi, R. & Ghadiri, M. (2015)	Iran	to see whether teachers' traditional and constructivist conceptions of teaching and learning affect teacher prejudice.	124 in-service teachers	The results showed the prevalence of constructivist teaching inclinations among Iranian English language teachers.
Zabihi, R. & Khodabakhsh, M. (2017)	Iran	to investigate the dominant type of teaching/learning conceptions among second language teachers	74 in-service teachers	Teachers were more inclined towards constructivist conceptions of teaching and learning.
Sayed, M. M. & Goudarz, A. (2020).	Iran	to explore the correlation between EFL teachers' epistemological beliefs and their conceptions of teaching and learning.	120 in-service teachers	Iranian EFL teachers have high perceptions of constructivists teaching and learning.
Soleimani, N. (2020)	Iran	to investigate English language teachers' epistemological beliefs, teaching styles and possible relationships between EB and teaching styles.	200 in-service teachers	EFL teachers teaching style is predicted by their epistemological beliefs. EFL teachers predominantly practice facilitator style of teaching.

It can be seen from Table 8. that the studies conducted in other countries investigated the teaching and learning conceptions of in-service and pre-service EFL teachers and the relationship between teaching and learning conceptions and other

constructs. Self-efficacy, epistemological beliefs, teacher prejudice and burn-out level are the constructs investigated in the studies related to

2.4. Bandura's Social Cognitive Theory

In social cognitive theory, people are in dynamic interaction with their environments. What people do is not only producing but also contributing to cognitive life circumstances (Bandura, 2006). According to Bandura (1989), personal factors, behavioural factors, and environmental factors are three elements that work in a bidirectional interaction in which they affect each other. This is called "triadic reciprocal determinism" (Bandura, 1989, p. 2) (See Figure 1.).

Figure 1. Theoretical Model of Triadic Reciprocal Interaction

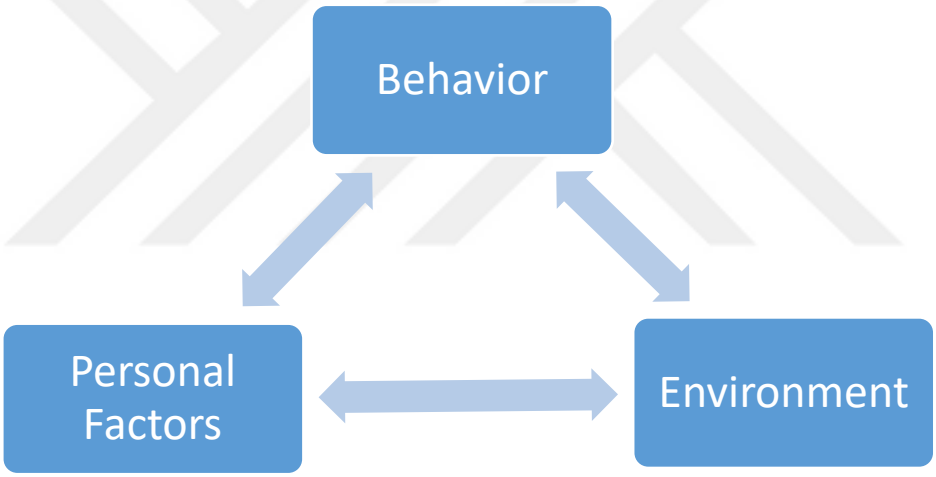


Figure 1. Theoretical Model of Triadic Reciprocal Interaction. Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman and Company.

Behaviour, personal factors, and environment reciprocally interact with each other, which results in individuals' cognitive and psychological development. According to this model, "what people think, believe, and feel affects how they behave." (Bandura, 1989, p. 3). There is an interaction between internal personal factors and behaviour. Cognitive, affective, and biological events consisting of internal personal factors shape behaviour. Similarly, behaviour can also affect thought patterns and emotional reactions. There is another interaction between behaviour and the external environment. This means that our behaviour can change the environmental

conditions, and the environment can change our behaviour. There is also an interaction between the external environment and internal personal factors. Even if we do not say or do anything, our characteristics can affect the environment. Similarly, the environmental factor has the power to affect our characteristics.

Behaviourist theories explaining human behaviour as observable acts governed by stimulus-response sequences are considered to be different from Bandura's social cognitive theory emphasizing both environmental and behavioural variables in the process of conceptualizing human change (Pajares, 2002).

Bandura (2001, 2006) suggests four main components of human agency: intentionality, forethought, self-reactiveness, and self-reflectiveness. Intentionality is defined as agency referring to our intentional actions (Bandura, 1997). Forethought involves "the temporal extension of agency", self-reactiveness is "the ability to construct appropriate courses of action and to motivate and regulate their execution" and self-reflectiveness is a "metacognitive capability to reflect upon oneself and adequacy of one's thoughts and actions" (Bandura, 2006, p.164-165).

The theory supports the idea that both intrinsic factors and environmental factors are effective in shaping what we can do, and we consciously learn things and shape our capabilities, which means human agency (Bandura, 2001). Bandura classifies human agency as personal, proxy, and collective (2001). The first one is our conscious and self-regulatory nature. The second one is about the social aspect of our lives. The last one is about how we live in groups with our shared values and properties. Our self-efficacy beliefs are determined with human agency (Bandura, 2001).

2.5. Self-efficacy

Self-efficacy is a concept based on Social Cognitive Theory and defined as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). After the publication of the article titled "Self-efficacy: toward a unifying theory of behavioural change" (Bandura, 1977), the self-efficacy concept started to gain importance. We can evaluate our own capabilities to organize and complete an action. How we think, feel and behave is determined by our self-efficacy beliefs.

When we have confidence in our capabilities, we can manage to deal with a difficult task if we have a high sense of efficacy (Bandura, 1994). Thus, self-efficacy is

an important concept, which leads to giving up in the face of a difficult task if we do not have the belief that we will be successful (Pajares, 1996). Schunk (1990) states that if we have a high sense of efficacy in a specific area, we tend to set higher goals and fail less and even if we fail, we tend to search for new strategies.

The concept of self-efficacy is different from self-concept and self-esteem. Pajares and Schunk (2001) point out that self-concept and self-esteem contain general sums, and they are composed of different sources. However, self-efficacy is related to how we see our competence rather than the exact level of competence. Jabbarifar (2011) points out that since self-efficacy is task-specific, high efficacy in one task may not be at the same level in another task. According to Bandura (1997) self-esteem is related to how we value our-selves, but self-efficacy is related to how well we perform a task.

2.5.1. Sources of Self-Efficacy

According to Bandura (1977), people acquire their self-efficacy beliefs from four sources (See Figure 2.):

Figure 2. Sources of Self-efficacy

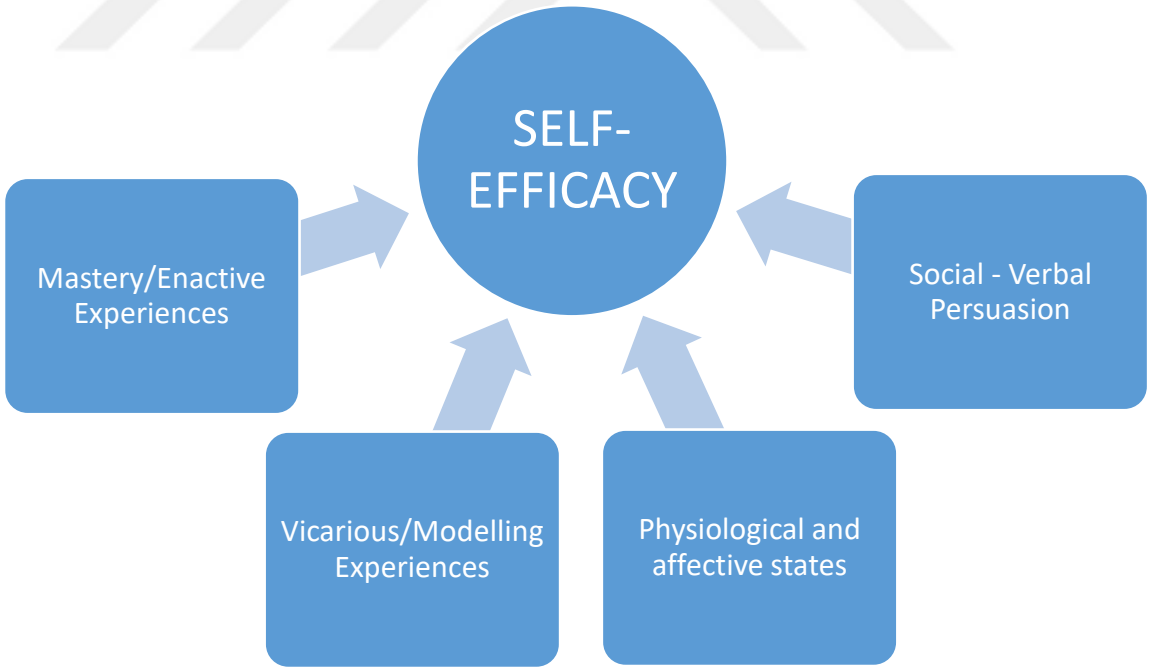


Figure 2. Sources of Self-efficacy. Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman and Company.

Bandura (1997) explains the process as follows:

> In processing the information from the four sources, there are two separate functions. The first one is the types of information people attend to and use as indicators of personal efficacy, and second function is "the combination of rules and heuristics people use to integrate efficacy information from different sources (p. 55).

Mastery experiences are the most powerful source and play an important role in both strengthening and weakening self-efficacy beliefs. Since they are the evidence of people's actual capabilities, mastery experiences are the most effective source (Bandura, 1997). Our experiences are accepted to be the essential sources for self-efficacy formation. When we are successful, the enthusiasm to achieve again will increase and we will have the belief of self-efficacy by believing in our capabilities. Similarly, when we have failures, there will be a decrease in our expectations and self-efficacy. Bandura (1994) states that "successes build a robust belief in a person's efficacy and that failures undermine it, especially if failures occur before a sense of efficacy is firmly established" (p. 72).

Vicarious experiences are considered to be the second source of self-efficacy. They refer to the experiences we gain in our social environment by observing the others with whom we find similarities and take as a model (Bandura, 1997). Such experiences contribute positively to the observer's self-efficacy. According to Bandura (1997), vicarious experiences "alter efficacy beliefs through the transmission of competencies and comparison with the attainment of others" (p. 79). If the target model experiences failure, this decreases the motivation of the observer and plays a negative role in the development of self-efficacy beliefs (Brown & Inouye, 1978).

Social/verbal persuasion is considered to be another means of strengthening people's self-efficacy beliefs. When we are encouraged by others about our capabilities and potential to be successful, we can find ways to be successful. We can be persuaded by others thanks to their feedback especially in the course of challenging situations. Social/verbal persuasion may not be enough to gain self-efficacy, but it contributes to the beginning of a task by encouraging (Bandura, 1994).

Physiological and affective states defined as "from which people judge their capableness, strength, and vulnerability to dysfunction" by Bandura (1997, p. 79) refer to our emotions and mood which affect our self-efficacy beliefs. Negative emotions such as anxiety, and stress can negatively influence our belief in our capabilities and

performance while positive emotions such as joy and pleasure positively contribute to our self-efficacy beliefs.

2.5.2. Teacher Sense of Self-Efficacy

A teacher sense of self-efficacy is defined as teachers' beliefs about their capabilities to be successful in teaching-related activities like engaging and motivating (Bandura, 1977). According to Duffin, French & Patrick (2012) teachers "need to be confident in their abilities to enact effective instructional practices that result in students' learning, motivation, and other positive outcomes" (p. 827). Teacher sense of self-efficacy involves the teachers' belief in their capability to accomplish the tasks in the teaching context (Tschannen-Moran et al., 1998). Therefore, having high levels of self-efficacy is important for teachers to use a variety of instructional techniques and strategies, to interact with students, and to cope with the problems occurred in the classroom.

Teachers' sense of efficacy affects the classroom environment created and the learning tasks used by teachers (Bandura, 1997). Ashton (1984) states that teacher self-efficacy is directly related to student achievement. A high level of self-efficacy is also associated with enhancing student motivation (Ashton & Webb, 1986; Roeser, Arbreton, & Anderman, 1993), increasing self-esteem (Borton, 1991), having more positive attitudes toward school (Miskel, McDonald, & Bloom, 1983) and decreasing classroom management problems (Chacon, 2005). All these studies show that teacher self-efficacy has a direct influence on student outcomes.

Teachers are expected to be open to new ideas and be ready for the requirements of the new era, which means taking action for personal and career development all the time. Cousins and Walker (2000), Guskey (1988), and Stein and Wang (1988) point out that high self-efficacy levels of teachers help them try new methods, adopt new ideas and be open to innovations to conduct a more effective teaching process. Teachers who have a high level of self-efficacy also use new techniques better and they are good at classroom management and teaching tasks compared to the ones who have a low level of self-efficacy (Özder, 2011). Teachers with high efficacy levels are more enthusiastic about their profession (Guskey, 1982), and more committed to their jobs (Evans & Tribble, 1986; Coladarci, 1992). Ashton & Webb (1986) point out that teachers with high efficacy are less critical about the mistakes made by students.

2.5.3. Teacher Efficacy Measurement Instruments

There are several teacher efficacy measurement instruments that has been used by researchers for many years. Bandura (1997) developed a teacher self-efficacy scale which consists of 30 items and seven sub-scales; efficacy on decision making, school resources, instructional efficacy, disciplinary efficacy, parental involvement, community involvement, and efficacy to create a positive school climate. Each item on the scale is measured on a 9-point scale ranging from 1-nothing to 9- a great deal. One sample item from the scale is "How much can you do to get students to believe they can do well in schoolwork?" This scale inspired other researchers to develop teacher efficacy scales.

The teacher self-efficacy scale (TSE) involving 30 items was developed by Gibson and Dembo (1984). There are two sub-scales in the scale: personal teaching efficacy and general teaching efficacy. Each item on the scale is measured on a 6-point scale ranging from strongly disagree to strongly agree. One sample item from the scale is "When a student gets a better grade than he usually gets, it is usually because I found better ways of teaching.". This scale was used by many researchers and it was validated in various contexts.

One recent and most widely used scale developed by Tschannen-Moran and Hoy (2001) is the Ohio State Teacher Efficacy Scale (OSTES) or Teachers' Sense of Efficacy Scale (TSES). This scale has 24-item long and 12-item short versions. There are three sub-scales in the scale; efficacy for student engagement, efficacy for instructional strategies, and efficacy for classroom management. One sample item from the scale is "How much can you help other teachers with their teaching skills". The most widely used teacher self-efficacy scales are given below (Table 9.).

Table 9. *Sample Scales of Teacher Self-Efficacy*

Designer of the Scale	**Scale**	**Items**	**Sub-scales**
Bandura (1997)	Teacher Self-efficacy scale (TSS)	30 items	7 sub-scales efficacy to influence decision making efficacy to influence school resources instructional efficacy disciplinary efficacy efficacy to enlist parental involvement efficacy to enlist community involvement efficacy to create a positive school climate
Gibson & Dembo (1984)	Teacher self-efficacy scale (TSE)	30 items	2 sub-scales personal teaching efficacy general teaching efficacy
Tschannen Moran & Hoy (2001)	Ohio State Teacher Efficacy Scale (OSTES) or Teachers' Sense of Efficacy Scale (TSES	a 24-item long form a 12-item short form	3 sub-scales efficacy in student engagement efficacy in instructional strategies efficacy in classroom management
Skaalvik & Skaalvik (2007)	Norwegian Teacher Self-efficacy Scale (NTSES)	24 items	6 sub-scales instruction adapting education to individual students' needs motivating students keeping discipline cooperating with colleagues and parents coping with changes and challenges
Dellinger, Bobbett, Olivier & Ellett (2008)	Teachers' Efficacy Beliefs System-Self (TEBS- Self)	30 items	3 sub-scales classroom management communication/clarification accommodation of individual differences

2.5.4. The Relationship of Teacher Sense of Self-Efficacy to Other Constructs

The relationship between the sense of self-efficacy and other constructs has been investigated by a number of researchers. Esen (2012) conducted a study to explore

English language teacher's general and professional sense of self-efficacy profile according to their gender, school type, years of experience, department graduated, and academic level, and to investigate whether the level teachers' general self-efficacy predict their English language teaching sense of self-efficacy level and to develop a reliable and valid scale based on the English language teacher proficiency indicators determined by the Ministry of National Education in order to obtain the professional sense of self-efficacy data of English language teachers. She has found a positive and meaningful correlation between each dimension of teachers' professional sense of self-efficacy and general self-efficacy, and that teachers' professional sense of self-efficacy can be highly predicted by general self-efficacy.

Another construct investigated in the studies related to self-efficacy as a variable was instructional strategies. Eslami and Fatahi (2008) conducted a study to examine the efficacy beliefs of non-native English speaking Iranian EFL teachers, their perceptions of teaching efficacy in terms of personal capabilities to teach English as a Foreign Language, and perceived English language proficiency level. They found that the more efficacious the teachers felt, the more inclined they were to use communicative-based strategies.

Kotbaş (2018) investigated the relationships among pre-service EFL teachers' English self-efficacy, teacher goal orientations, and academic achievements. He found positive correlations between English self-efficacy and teacher goal orientation, English self-efficacy and academic achievement, academic achievement, and goal orientations.

Problem-solving skills were also investigated as a variable in self-efficacy studies conducted in the ELT context. Behjoo (2013) investigated the relationship between self-efficacy, academic self-efficacy beliefs, problem-solving skills, and foreign language achievement among prospective ELT teachers. He found a statistically significant relationship among self-efficacy, academic self-efficacy, problem-solving skills, and foreign language achievement of the prospective teachers.

Professional identity was another construct investigated in studies related to self-efficacy. İlgör (2019) examined the relationship between English language teachers' professional identity perceptions and self-efficacy beliefs. She found out that participants' professional identity perceptions were high, and their professional identity perceptions differed significantly according to gender, age, years of teaching experience, faculty graduated from and school type at which they work. She also found

that there was a positive correlation between professional identity perceptions and self-efficacy beliefs.

Taşçı (2019) investigated EFL instructors' self-efficacy beliefs and motivation beliefs about both intrinsic and extrinsic dimensions. She found that instructor's instructional strategies and student engagement beliefs associate with intrinsic motivation beliefs, and a relationship between intrinsic and extrinsic motivation variables and self-efficacy.

Another construct investigated in the studies related to epistemological beliefs as a variable was emotional intelligence and teacher knowledge. Karakaş (2016) investigated pre-service ELT teachers' sense of self-efficacy, emotional intelligence (EQ), and teacher knowledge in search of constituents of teacher identity. She found that after completing the teaching practice, pre-service teachers' sense of self-efficacy, emotional intelligence, and teacher knowledge levels grew higher, so they were developmental in nature. The teaching experience was found to have an important impact on pre-service teachers' sense of self-efficacy, emotional intelligence, and teacher knowledge in teacher identity shaping.

Mızrak (2019) investigated the burnout levels and self-efficacy beliefs of English instructors. The results of the study showed that there was a moderate and negative correlation between instructors' self-efficacy beliefs and their burnout levels, which means enhancing teachers' self-efficacy tends to have a positive influence on diminishing teachers' burnout.

2.5.5 Research on Self-Efficacy Beliefs

To examine the research on self-efficacy that has been conducted so far, an extensive literature search was performed to elicit empirical studies conducted in Turkey and in other countries. The review indicated that there has been a number of studies conducted in different fields and several studies in the EFL context. The relevant studies conducted in the EFL context in Turkey and in other countries are presented in the forthcoming sections.

2.5.5.1 Research on Sense of Self-Efficacy in EFL context in Turkey

Several studies were conducted with pre-service and in-service EFL teachers on the sense of self-efficacy in the EFL context. The results of the literature review have

been shown in Table 10. The authors, date, aim of the study, participants, and conclusions of each study are presented in the table.

Table 10.
Representative Studies on Self-efficacy in EFL contexts in Turkey

Author(s) (Date)	**Aim**	**Participants**	**Conclusions**
Atay, D. (2007)	to investigate the change of pre-service English language teachers' self-efficacy beliefs throughout practicum process.	78 pre-service teachers	There was a positive change in the beliefs regarding instructional strategies and student engagement as a result of practicum.
Kimav, A. U. (2010)	to examine EFL teachers' experiences with the interrelationship between individual and collective teacher efficacy and burnout	127 in-service teachers	Personal teaching efficacy did not associate with emotional exhaustion.
Şahin, F. E. and Atay, D. (2010)	to investigate changes in pre-service EFL teachers' self-efficacy beliefs in their training years and induction year	27 pre-service teachers	Instructional strategies had higher values than classroom management and student engagement, but overall levels of self-efficacy beliefs increased linearly from training years and decreased slightly through the end of induction year
Şekerci, S. A. (2011)	to investigate whether English competency, years of teaching experience, graduate department and self-reported proficiency predict instructors' self-efficacy beliefs.	257 in-service teachers	The instructors have high self-efficacy beliefs and feel more efficacious in classroom management than using instructional strategies. Experience, English competency and self-reported proficiency were predictors of instructors' overall self-efficacy beliefs.
Esen, G. (2012)	to investigate the primary school English language teacher's general and professional sense of self-efficacy profile	345 in-service teachers	A positive and meaningful correlation between each dimensions of teachers' professional sense of self efficacy and general self-efficacy was found. English language teachers' professional sense of self efficacy can be highly predicted by the general self-efficacy level of the teachers.
Inceçay, G. and Dollar, Y. K. (2012)	to investigate teacher self-efficacy beliefs of English language teachers.	36 pre-service teachers	There was a significant relationship between classroom management and teacher self-efficacy.
Aslan, E. (2013)	to examine the teacher efficacy beliefs, self-reported English proficiency level and use of pedagogical strategies EFL teachers	28 in-service teachers	A relationship among self-efficacy beliefs, the use of pedagogical strategies, and self-reported language proficiency was found.

Author(s) (Date)	Aim	Participants	Conclusions
Ekizler, F. (2013)	to investigate the relationship between pre-service and in-service teachers' levels of self-efficacy and teaching concerns	181 pre-service teacher, 111 in-service teachers	In-service EFL teachers had higher self-efficacy than pre-service EFL counterparts with relation to the variables of student engagement, instructional strategies and classroom management.
Ülkümen, H. A. (2013)	to understand whether EFL instructors' mastery experience, university type, major and years of experience, colleague and administration support predict self-efficacy beliefs of EFL instructors	285 in-service teachers	Years of experience, university type, mastery experience and administration support predict self-efficacy beliefs of EFL instructors and mastery experience was the most significant predictor.
Onbaşı. M, (2014)	to investigate the association between EFL teachers' self-efficacy beliefs and writing efficacy.	98 in-service teachers 307 pre-service teachers	EFL teachers had moderate level of efficacy in teaching writing and felt the least efficacious in student engagement. Experience was also the predictor of their self-efficacy beliefs.
Taşer, D. (2015)	to investigate the predictors of Turkish EFL instructors' self-efficacy beliefs at the tertiary level	434 in-service teachers	The instructors have a rather high overall level of self-efficacy in terms of classroom management and instructional strategies
Dolgun, H. (2016)	to explore pre-service and in-service EFL teachers' levels of self- efficacy beliefs.	180 in-service teachers 75 pre-service teachers	Self-efficacy beliefs of pre-service in-service EFL teachers are relatively high.
Karakaş, M. (2016)	to explore pre-service ELT teachers' sense of self-efficacy, emotional intelligence and teacher knowledge in search of constituents of teacher identity.	207 pre-service teachers	Pre-service teachers' sense of self-efficacy, emotional intelligence and teacher knowledge levels grew higher after completing the teaching practice.
Ercan-Demirel, E. (2017)	to investigate pre-service EFL teachers' self-efficacy beliefs in consideration of gender and age variables	208 pre-service teachers	Pre-service teachers had a high level of self-efficacy for their future teaching career.
Kotbaş, E. (2018)	to investigate the relationships among pre-service EFL teachers' English self-efficacy, teacher goal orientations and academic achievements	495 pre-service teachers	Positive correlations between English self-efficacy and teacher goal orientation, English self-efficacy and academic achievement, academic achievement and goal orientations were found.
Dolgun, H. and Caner, M. (2019)	to investigate whether there were similarities or differences between pre-service and in-service EFL teachers' self-efficacy in Turkey.	180 in-service teachers 75 pre-service teachers	There was a very slight difference between the two groups in overall score of self-efficacy in favour of pre-service teachers.

Author(s) (Date)	Aim	Participants	Conclusions
Can, S. (2019)	to investigate university preparatory school instructors' self-efficacy beliefs in teaching English and its interaction with their background characteristics, reported proficiency level in English and their perceived use of teaching strategies	374 in-service teachers	that instructors have a rather high level of self-efficacy. there was a significant relationship between instructors' self-efficacy beliefs and their language proficiency. and that there was a significant relationship between teaching experience and self- efficacy.
İlgör, B. (2019)	to investigate the relationship between English language teachers' (ELT) professional identity perceptions and self-efficacy beliefs	290 in-service teachers	the participants had high levels of self-efficacy. there was a significant difference between the self-efficacy beliefs of ELT teachers in terms of gender, the faculty they graduated from and current job title.
Mızrak, P. (2019)	to investigate the burnout levels and self-efficacy beliefs of English instructors and the relationship between instructors' self-efficacy beliefs and burnout levels and examine to what extent self-efficacy beliefs differ in instructors experiencing burnout	59 in-service teachers	Instructors have almost high levels of self-efficacy, and there is a moderate and negative correlation between instructors' self-efficacy beliefs and their burnout levels, which highlights that enhancing teachers' self-efficacy tends to have a positive influence on diminishing teachers' burnout.
Serin, N. (2019)	to find out if there is a significant difference between the self-efficacy beliefs of native and non-native English language teachers and to determine if experience and self-efficacy are related or not.	58 in-service teachers	There is a significant difference between the self-efficacy levels of native and non-native English teachers with regard to some variables such as experience and nativeness.
Taşçı, Ç. (2019)	to investigate the overall beliefs of EFL instructors regarding motivation beliefs about both intrinsic and extrinsic dimensions and self-efficacy beliefs	221 in-service teachers	Instructors' motivation beliefs significantly correlate with their self-efficacy beliefs. there is a significant correlation between motivation and self-efficacy beliefs
Doğan, Ç.(2020)	to determine the relationship between the levels of English teachers' self-efficacy beliefs and their classroom practices.	152 in-service teachers	The levels of English teachers' self-efficacy beliefs are quite high. there is a significant positive relationship between self-efficacy and communicative teaching practices
Üstünbaş, Ü. (2020)	to examine teacher self-efficacy and metacognitive awareness of preservice and in-service English language teachers and if there is any relationship between their self-efficacy beliefs and metacognition.	53 in-service teachers 96 pre-service teachers	Both groups had high levels of self-efficacy and metacognitive awareness, and there was a strong relationship between self-efficacy and metacognitive awareness.
Yılmaz, A (2020)	to reveal the relationship between teachers' mind-sets and their perceived self-efficacy beliefs.	151 in-service teachers	There is a statistically significant relationship between teacher mind-set scale total score, self-efficacy total score, and its subscales such as efficacy in instructional strategies and classroom management.

As shown in Table 10., there are a number of studies related to self-efficacy beliefs in the Turkish EFL context. The studies conducted investigated the overall self-efficacy beliefs of in-service and pre-service EFL teachers, the sources of self-efficacy beliefs, and the relationship between self-efficacy beliefs and other constructs. These constructs are individual and collective teacher efficacy, burnout, English competency, years of teaching experience, graduate department, self-reported proficiency, use of pedagogical strategies, teaching concerns, academic self-efficacy beliefs, problem-solving skills, foreign language achievement, mastery experience, university type, colleague and administration support, writing efficacy, willingness to use communicative activities, emotional intelligence, teacher knowledge in search of constituents of teacher identity, teacher goal orientations, use of teaching strategies, motivation beliefs, classroom practices, metacognitive awareness, teachers' mind-sets. Different from the studies in other countries, some of the studies conducted in Turkey investigated the change of pre-service English language teachers' self-efficacy beliefs throughout practicum process or training years and induction year, and also similarities or differences between pre-service and in-service EFL teachers' self-efficacy beliefs, and the difference between the self-efficacy beliefs of native and non-native English language teachers.

2.5.5.2 Research on Self-efficacy in EFL context in other countries

Self-efficacy studies have also been conducted in other countries with pre-service and in-service EFL teachers. After the literature review, it has been found that self-efficacy studies are conducted in Iran by a majority. The results of the literature review have been shown in Table 11. The authors, date, country where the study was conducted, the aim of the study, participants, and conclusions of each study are presented in the table.

Table 11.

Representative Studies on Self-efficacy in EFL contexts in other countries

Author(s) (Date)	**Country**	**Aim**	**Participants**	**Conclusions**
Gerges, G. (2001)	USA	to identify and describe the relationship, if any, between the teacher efficacy of pre-service teachers and instructional variation	32 pre-service teachers	there were not any significant correlations between the variables of instructional variation and pre-service teachers' sense of teaching-efficacy.
Wertheim, C. & Leyser, Y. (2010)	Israel	to examine efficacy beliefs and choices of differentiated instructional strategies needed for effective teaching in inclusive classrooms	191 pre-service teacher	there are low but statistically significant, positive correlations between personal teacher efficacy and each of the instructional categories for the willingness to use and perceived effectiveness.
Akbari, S. & Moradkhani, S. (2010)	Iran	to examine the associations between experience/academic degree, experience and teacher efficacy with.	447 in-service teachers	Experienced had greater level of total efficacy beliefs, efficacy in student engagement, classroom management, and instructional strategies than novice teachers' efficacy beliefs
Skaalvik, E. M. & Skaalvik, S. (2010)	Norway	to put forward any relationship between teacher-self efficacy, social context, job satisfaction and burn-out	2249 in-service teachers	There was no positive relationship between self-efficacy beliefs and teacher burn-out.
Sabokrouh, F. (2014)	Iran	to explore the perceptions of Iranian EFL teachers' regarding English language and English language proficiency and their sense of efficacy quantitatively.	68 in-service teachers	Teachers attitude toward the language and their confidence were related to their' current English proficiency level and English as an International Language.
Phan, N. T. T. & Locke, T. (2015)	Vietnam	to investigate the sources of self-efficacy of EFL teachers	8 in-service teachers	Social persuasion was the most influential element, and vicarious experiences and physiological/affective states were reported to be additional sources of self-efficacy.

Author(s) (Date)	Country	Aim	Participants	Conclusions
Choi, E. & Lee, J. (2016)	Korea	to explore the link between self-efficacy and language proficiency	167 in-service teachers	Language proficiency and self-efficacy beliefs were interdependent, and teachers have minimum threshold levels of language proficiency as one aspect of effective teaching behaviour.
Crook, C. (2016)	Thailand	to investigate specific teacher characteristics and self-efficacy beliefs of EFL teachers.	257 in-service teachers	Two variables, perceived English proficiency and longevity resulted in statistically significant individual contributions to explain why perceived self-efficacy varied.
Marashi, H. & Azizi-Nassab, F. (2018)	Iran	to investigate the link among self-efficacy, language proficiency and classroom management	110 in-service teachers	There was a significant relationship between proficiency and self-efficacy scores but no correlation between proficiency and classroom management.

Table 11. shows that the studies conducted in other countries investigate the overall self-efficacy beliefs of in-service and pre-service EFL teachers, the sources of self-efficacy beliefs, the relationship between self-efficacy beliefs and other constructs. These constructs are experience/academic degree, social context, job satisfaction, and burn-out, pedagogical success, gender, learner satisfaction and achievement, job satisfaction, the well-being of teachers and classroom management. Most of the studies resulting with no, slight or significant relationship were mostly conducted with in-service EFL teachers.

CHAPTER III

METHODOLOGY

3.1. Introduction

This chapter presents the methodological approach of the study. It elaborates on the research design, sampling and participants, data collection tools, data collection procedure, and data analysis. The methodological details are presented in the headings, respectively. Table 12. summarizes the main elements of the methodology of the study.

Table 12.

Main Elements of Methodology

Research Design	Quantitative (Correlational)
Sampling Strategy	Convenience Sampling
Participants	374 Pre-service, 192 In-service Teachers 42 Pre-service, 19 In-service
Data Collection Tools	• Epistemological Beliefs Questionnaire (EBQ) • Teaching and Learning Conceptions Questionnaire (TLCQ) • Teacher Sense of Efficacy Scale (TSES) • Open-Response Questions Form
Data Analysis	• Descriptive Statistics • Content Analysis

3.2. Research Design

For the current study, a mixed-method approach was employed. It is the most suitable design to use when the researcher seeks to build on the strengths of both qualitative and quantitative data (Creswell, 2009). Convergent parallel mixed methods design in which both qualitative and quantitative data was collected together, analysed separately, and compared to see the confirmation or disconfirmation of the results (Creswell, 2009) was used. For the quantitative part, this research is a correlational

study which aims to find out the pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy, the relationship among these dimensions and the differences between pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy. According to Dörnyei (2007) "…the quantitative inquiry is systematic, rigorous, focused, and tightly controlled, involving precise measurement and producing reliable and replicable data that is generalizable to other contexts" (p. 34). In quantitative research, data collection procures are based on numerical data, which requires the use of statistical methods.

In terms of design, this is a descriptive study since it gives descriptive information about the pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy. Mackey & Gass (2005) state that the distribution of variables is given in a descriptive study without considering the existing cause and effect relationship among variables or other hypotheses. This study can also be considered as correlational research because of the fact that the relationship among the pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy is investigated. In correlational design, the researcher explains the relationship between two or more variables and whether one variable predicts the score on another variable by using the correlational statistic (Creswell & Creswell, 2017).

The analyses have been conducted to seek answers to the following research questions:

1. What are the pre-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy?
2. What are the in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy?
3. Is there a relationship between pre-service EFL teachers'
    a. epistemological beliefs and teaching-learning conceptions?
    b. epistemological beliefs and sense of self-efficacy?
    c. teaching-learning conceptions and sense of self-efficacy?
4. Is there a relationship between in-service EFL teachers'
    a. epistemological beliefs and teaching-learning conceptions?
    b. epistemological beliefs and sense of self-efficacy?
    c. teaching-learning conceptions and sense of self-efficacy?

5. Is there an effect of pre-service and in-service EFL teachers' epistemological beliefs on
   a. their teaching-learning conceptions?
   b. their sense of self-efficacy?
6. Is there an effect of pre-service and in-service EFL teachers' teaching-learning conceptions on their sense of self-efficacy?
7. Is there a significant difference between pre-service and in-service EFL teachers'
   a. epistemological beliefs?
   b. teaching-learning conceptions?
   c. sense of self-efficacy?

3.3. Sampling and Participants

The aim of this study was to investigate the pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy. This means, every prospective teacher studying at English Language Teaching departments in Turkey, and every English language teacher working in schools teaching English as a Foreign Language was considered as a potential participant for the study.

The study was conducted with two different groups. In the first group, the quantitative data was collected from 405 prospective teachers; however, after the estimation of missing value and extreme value analysis, 31 participants were not included in the analysis. Therefore, the first group consists of 374 4^{th} grade students studying at the English Language Teaching departments of four state universities in Turkey. Among those 374 participants, 42 pre-service teachers voluntarily accepted to answer the open-response questions. The development of epistemological beliefs, teaching learning conceptions and sense of self-efficacy have been considered to be completed substantially before the end of four-year training during which they receive training on content knowledge, pedagogical content knowledge and general pedagogical knowledge. In addition, data was collected towards the end of the spring term considering the fact that prospective teachers have completed their practicum which give them a chance to practice in the real school context. In the second group, 205 in-service teachers participated in the study at the very beginning. Similarly, the number has changed after the estimation of missing data and extreme value analysis, and 13

participants were not included in the analysis. The second group consists of 192 in-service teachers working in state schools in Gaziantep province. 19 of the 192 in-service teachers were volunteers to answer the open-response questions.

The sample was chosen based on the convenience sampling method (Büyüköztürk, 2019). This method can be used when it is hard to select a random or systematic non-random sample, so the researcher reaches a sample that is available and easy to reach (Fraenkel, Wallen, & Hyun, 1993). Demographic information of the pre-service teacher is displayed in Table 13, and demographic information of the in-service teacher is displayed in Table 14.

Table 13.

Demographic Characteristics of Pre-Service EFL Teachers

		N	*%*
Gender	Male	80	21,4
	Female	294	78,6
Age	20-25 years old	351	93,8
	26-30 years old	10	2,7
	31-35 years old	9	2,4
	36-40 years old	4	1,1
Total Number		374	

Table 14.

Demographic Characteristics of In-Service EFL Teachers

		N	*%*
Gender	Male	38	19,8
	Female	154	80,2
Age	20-25 years old	14	7,3
	26-30 years old	41	21,3
	31-35 years old	47	24,5
	36-40 years old	41	21,3
	41-45 years old	25	13
	46-50 years old	16	8,3
	51-55 years old	8	4,2
Years of experience	0-5 years	43	22,4
	6-10 years	48	25
	10 years or above	101	52,6
Education	Bachelors	175	91,1
	Master	17	8,9
Total Number		192	

3.4. Data Collection Tools

The present study which aimed to investigate the pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy, the relationship among these dimensions, and the differences between pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy. A variety of data collection tools were used to gather data in order to answer the research questions (Permissions obtained for the usage of the questionnaires are presented in Appendices 1-2). Table 15. shows the data collection instruments and the research questions they aimed at answering.

Table 15.

Data Collection Instruments

The aim of the research question	Data Collection Instrument
• To investigate the pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy • To examine the relationship between pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy • To examine the effect of pre-service and in-service EFL teachers' epistemological beliefs on their teaching-learning conceptions and sense of self-efficacy • To examine the effect of pre-service and in-service EFL teachers' teaching-learning conceptions on their sense of self-efficacy	1. Epistemological Beliefs Questionnaire (EBQ) 2. Teaching and Learning Conceptions Questionnaire (TLCQ) 3. Teacher Sense of Efficacy Scale (TSES)
• Confirming/disconfirming preliminary findings	1. Open-Response Questions

3.4.1. Epistemological Beliefs Questionnaire (EBQ)

Epistemological belief scale (EBS) which was developed by Chan and Elliott (2002, 2004) was used to collect data about in-service and pre-service EFL teachers' epistemological beliefs. The scale is based on the 63-item Epistemological Belief Questionnaire designed by Schommer (1990). Since they found out that Schommer's scale was not applicable in the Hong Kong context (Chan and Elliott, 2000), they adapted the scale with four sub-scales Innate/Fixed Ability, Learning Effort/Process, Authority/Expert Knowledge, and Certainty Knowledge. They developed the new scale using factors analysis, adding new items, and changing the existing items. They validated the scale with a sample of 385 Hong Kong teacher education students by means of confirmatory factor analysis (GFI = 0.93; AGFI = 0.93; RMSEA = 0.058), and they conducted a reliability analysis both for the whole instrument and for each one of the factors. Cronbach Alpha coefficients ranged from .60 to .70., which means the reliability of the four sub-scales was satisfactory and acceptable for research purposes (Chan, 2000). The internal consistency of the scale was found to be 0.89 (Chan & Elliott, 2004)

The Epistemological Beliefs Questionnaire (Chan & Elliot, 2002, 2004) was adapted by Aypay (2009) to be used in the Turkish context (see Appendix 3). The 30-item scale was tested with a Confirmatory Factor Analysis (CFA) by Aypay (2009). The results of confirmatory factor analysis showed a good fit (NFI 0.64, CFI 0.77, RMSEA 0 .054). CFA results indicated that the factors structure of the instrument consisted of four factors of beliefs (Innate/ Fixed Ability, Learning Effort, Learning Process/Expert Knowledge, and Certainty Knowledge). When the overall reliability of the instrument was tested with Cronbach Alpha, the reliability was found as.78. The Epistemological Beliefs Questionnaire uses a 5-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree. The items related to sub-scales of the instrument consist of:

(a) Learning Process/Expert Knowledge (4, 6, 8, 9, 10, 11, 12, 14, 20, 22, 29)
(b) Innate/Fixed Ability (1, 18, 19, 21, 23, 24, 25, 30)
(c) Learning Effort (2, 15, 16, 27, 28)
(d) Certainty knowledge (2, 5, 7, 13, 17, 26)

3.4.2. Teaching and Learning Conceptions Questionnaire (TLCQ)

Teaching and Learning Conceptions Questionnaire (TLCQ) was developed by Chan and Elliot (2004). Chan (2004) points out that the scale was developed from two sources. The first one is a literature review which gave insights into the different perspectives about teaching and learning The second source, dialogues with students in class and before teaching practice gave the authors a good chance to review prospective teachers' concerns, thoughts, and beliefs about teaching and learning. The questionnaire was developed after conducting pilot studies with repeated processes of factor analysis, item identification, and interview. The questionnaire includes thirty items which are scored on a Likert scale of five points (1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Always), having two factors measuring two different conceptions of teaching and learning. The Cronbach alpha value of the whole scale was found to be 0.86. Confirmatory factor analysis was conducted and the results showed a good fit (GFI =0.93, AGFI = 0.91, RMSEA =0.54, RMR = 0.50).

Aypay (2011) adapted the Teaching and Learning Conceptions Questionnaire (TLCQ) to be used in the Turkish context (see Appendix 4). The reliability of the questionnaire was measured with the Cronbach Alpha coefficient. A Confirmatory Factor Analysis was conducted to test the 30-item scale. The results, NFI 0.72, CFI 0.80., RMSEA 0.067 showed that there was a fit in the model. The overall reliability was found to be .71, and the sub-scale reliabilities were .88 for the Constructivist Conception and .83 for Traditional Conception. The items related to sub-scales of the instrument consist of:

(a) Constructivist Conception (1, 3, 4, 6, 11, 15, 17, 19, 22, 25, 28, 30)
(b) Traditional Conception (2, 5, 7, 8, 9, 10, 12, 13, 14, 16, 18, 20, 21, 23,24, 26, 27, 29)

3.4.3. Teacher Sense of Efficacy Scale (TSES)

Teacher sense of self-efficacy scale was developed by Tschannen-Moran and Woolfolk Hoy in 2001. The aim of the scale is to evaluate teachers' sense of efficacy. When they decided to develop this scale, they took Bandura's (1998) scale as a base. The scale has both a long 24-item form and a 12-item short form. This research

employed the 24-item long-form. The scale is composed of 24 items with three subscales having 8 items. The items related to sub-scales of the instrument consist of:

(a) efficacy for student engagement (1, 2, 4, 6, 9, 12, 14, 22)
(b) efficacy for instructional strategies (7, 10, 11, 17, 18, 20, 23, 24)
(c) efficacy for classroom management (3, 5, 8, 13, 15, 16, 19, 21)

Analyses of both short and long forms indicated that TSES was reliable and valid for assessing teacher efficacy construct. Both versions supported the three-factor model with high subscale reliabilities which range from 0.87 to 0.91 for the longer version and 0.81 to 0.86 for the shorter version. Internal consistency of the scale reported by Tschannen-Moran and Woolfolk-Hoy, (2001) was .94, and Tsigilis et al. (2007) also reported internal consistency as .97. They also cross-validated the validity of the instrument through various studies using independent samples. The instrument's validity was also confirmed by Stewart et al. (2010).

With the assumption that the concept of teacher efficacy could be influenced by the distinctive features of cultures, Çakıroğlu and Çakıroğlu (2002) conducted a study comparing pre-service elementary teachers' sense of efficacy beliefs in Turkey and USA. The scale was adapted by Çapa, Çakıroğlu, and Sarıkaya into the Turkish context in 2005 (see Appendix 5). The original English version of the scale was translated into Turkish by qualified individuals who were proficient both in English and Turkish and they had been doing research on teacher efficacy for a long time. After this, they edited and reviewed the scale again. The final version of the scale was field-tested by four high school teachers in Turkey for linguistic clarity. The subscales of the scale were measured with confirmatory factor analysis (CFA) and Rasch measurement. At the end of the adaptation process, it was found that the coefficient alpha values for the Turkish pre-service teachers were .82 for SE, .86 for IS, and .84 for Covariance Matrix (CM). The reliability of efficacy scores was .93. with all items contributing to the reliability with high item-total correlations. As the last step, the instrument was pilot tested with 97 pre-service teachers in an ELT program.

Baloğlu and Karadağ (2008) conducted a study and found out that the scale's translation validity findings were in line with the original English items. The Turkish translation of the scale was found to be matching up with its original English version. They also found out that The Turkish items' language and meaning validity average was

found to be 9.62 out of 10. This means that the Turkish version of the scale is comprehensible. The scale uses a 9-point Likert-type scale ranging from 1=Nothing to 9= A Great Deal. In this study, the reduced form of the anchors with 5-point Likert-type (ranging from 1= Not efficient, 2= Very little efficient, 3= A little efficient, 4= Quite efficient and 5= Very efficient) used by Karakaş (2016) who has found that the scale with these anchors was also reliable (Alpha= 0.92) after the reliability analysis.

3.4.4.Open-Response Questions

In order to strengthen the results of the present study, to get a deeper insight into the topic, and to support quantitative data via qualitative data, an open-response questions form (see Appendix 6) has been developed. According to Mack et al (2005), qualitative research is "especially effective in obtaining culturally specific information about the values, opinions, behaviours, and social contexts of particular populations" (p. 1). With this aim, the researcher wanted to reach qualitative data about pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy. Open-response questions were designed by the researcher considering research purposes with the help of the relevant literature and experts from the field. The form consists of 9 questions which were written in Turkish and later translated verbatim.

All the participants were informed about the aim of the study, scales and the open-response questions form in detail. Among the 374 pre-service teachers who filled in the scales, 42 pre-service teachers voluntarily accepted to answer the open-response questions. 19 of the 192 in-service teachers were volunteers to answer the open-response questions.

3.5. Data Collection Procedure

The data were collected towards the end of the 2019-2020 spring term. The necessary approvals from universities and the Gaziantep Provincial Directorate of National Education were received and presented in Appendices 7-11. The Turkish versions of the Epistemological Beliefs Questionnaire (EBQ), Teaching and Learning Conceptions Questionnaire (TLCQ), Teacher Sense of Efficacy Scale (TSES) were administered to 374 pre-service and 192 in-service teachers via pen and paper. The questionnaires were delivered to the pre-service teachers by colleagues who hold Ph.D.

degrees in English Language Teaching so that the participants could get help from the experts when they needed it. For the administration of the questionnaires, the researcher arrived in the state schools which were chosen due to ease of access, and the data were collected from the in-service teachers under the direct supervision of the researcher. Open-Response Questions Form was also received by both pre-service and in-service teachers who were volunteer to answer the questions right after the administration of the questionnaires during the presence of experts. In order to prevent any misunderstandings, the open-response questions were written in Turkish.

3.6. Data Analysis

Although this is a quantitative study, the data analysis of the study included both quantitative and qualitative analysis methods. The reason is that all the participants were asked to answer open-response questions, and 61 of the total participants accepted to answer the questions. Quantitative analysis included the statistical analysis of the scales, and the qualitative analysis included the analysis of the open-response questions. The analyses and the research questions that the analyses address are shown in Table 16.

Table 16.

Research Questions and Method of Analysis

Research Questions	Method of Analysis
1. What are the pre-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy? 2. What are the in-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy?	Descriptive Analysis
3. Is there a relationship between pre-service EFL teachers' a. epistemological beliefs and teaching-learning conceptions? b. epistemological beliefs and sense of self-efficacy? c. teaching-learning conceptions and sense of self-efficacy? 4. Is there a relationship between in-service EFL teachers' a. epistemological beliefs and teaching-learning conceptions? b. epistemological beliefs and sense of self-efficacy? c. teaching-learning conceptions and sense of self-efficacy?	Pearson Correlation Analysis
5. Is there an effect of pre-service and in-service EFL teachers' epistemological beliefs on a. their teaching-learning conceptions? b. their sense of self efficacy? 6. Is there an effect of pre-service and in-service EFL teachers' teaching-learning conceptions on their sense of self-efficacy?	Regression Analysis
7. Is there a significant difference between pre-service and in-service EFL teachers' a. epistemological beliefs? b. teaching-learning conceptions? c. sense of self-efficacy?	T-test

This study made use of the SPSS 23 package program to analyse quantitative data. The first research question aimed to explore the pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy. Descriptive statistical techniques were used in this respect and to learn about the participants' demographic information and also to examine whether the data set was normally distributed for the following analyses. The second and third research questions

tried to highlight the relationship between pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy. Pearson Correlation analysis was conducted to see the relationship. Pearson correlation is conducted to understand the relationship between two continuous variables in a dataset that is normally distributed (Büyüköztürk, 2019). Regression analysis which is a set of statistical methods used to estimate the relationship between a dependent and one or more independent variables (Büyüköztürk, 2019) was used to find the cause and effect relationship in the fourth and fifth research questions. The last research question is about the differences between pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy. To see the difference, an independent samples t-test comparing two independent groups (Büyüköztürk, 2019) was conducted.

The qualitative data collected through open response questions were analysed with content analysis. According to Merriam (2009), after simultaneous coding of raw data, categories that capture relevant characteristics are constructed in the content analysis process. Fraenkel et al. (1993) point out several reasons to use content analysis such as obtaining descriptive information about a topic, formulating themes that help to organize and make sense out of large amounts of descriptive information, checking other research findings, obtain information useful in dealing with educational problems and testing hypotheses. To make the data as reliable and valid as possible (Huberman & Miles, 2002), the researcher consulted two colleagues who hold Ph.D. degrees in English Language Teaching throughout the analysis of the qualitative data. The thematic analysis pattern suggested by Braun and Clarke (2006) was used in this study. The stages of the analysis pattern are presented in Figure 3.

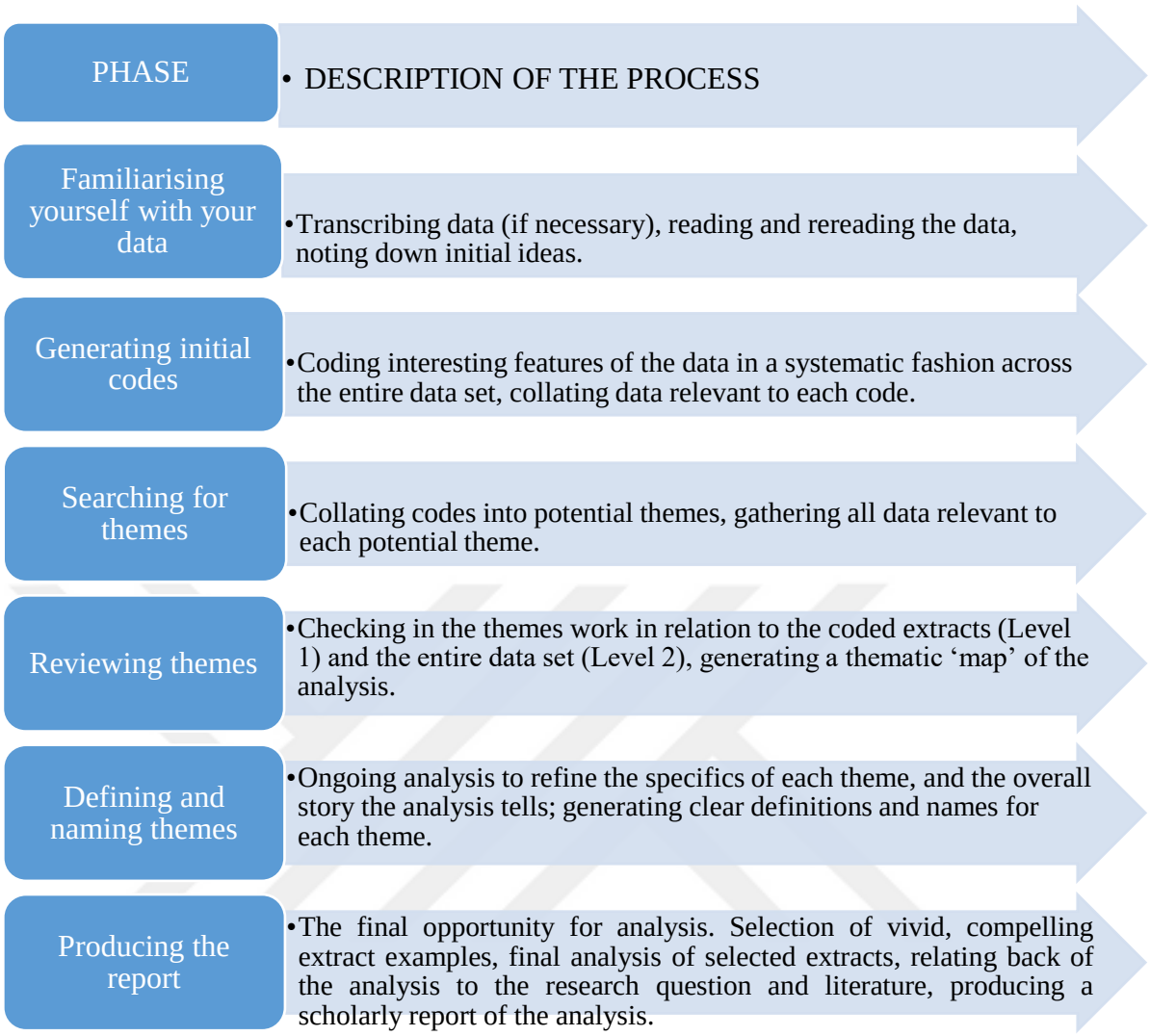


*Figure 3.*Phases of Thematic Analysis

Figure 1. Phases of Thematic Analysis. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative research in psychology, 3(2), 77-101.

The first step of qualitative analysis was reading all responses given by the participants, which resulted in being familiar with the data. After this step, the researcher generated initial codes and searched for the themes. The themes were grouped into relative themes. The potential themes were reviewed so as to remove the irrelevant ones and see the overlaps. The process of defining and naming the themes was completed after reviewing the potential themes. Before the final report was produced, the connections between the themes were checked to be logical and meaningful so that maintain coherence throughout the whole analysis.

3.7. Ethical Considerations

To avoid the discrepancies related to qualitative data, the researcher followed some principles cited in the literature (Berg, 2001, pp. 54-60; Merriam, 2009, pp. 247-248):

- informed consent
- anonymity and confidentiality
- data security
- honesty and trust
- objectivity

The researcher obtained the necessary permission from the universities and the Provincial Directorate of National Education (See Appendices 7-11). Before the administration of the questionnaires, the researcher gave information to each colleague, who would help her collect data from pre-service teachers, about the aim of the study and ethical issues as well. All the participants were also informed about the aim of the study and the estimated duration to fill in the questionnaire. The researcher delivered a consent form for the open-response questions and asked every volunteer to read and sign it if they approved to answer the questions. They were also told that they had a chance to decline participation any time they wished. All the participants were also asked to feel free to ask for clarification when they needed it.

Ensuring anonymity and confidentiality were the principles that the researcher paid attention to throughout the study. The participants were assured that any of the participants would not be harmed since they participated or not participated in the research. They were also told that their identity would never be revealed. For data security, the researcher kept all the documents were stored in a locked cabinet. Honesty was another principle that was taken into consideration by the researcher. This principle requires being honest about the aim of the study and the procedure of data collection and analysis. To make the data reliable and transparent, the researcher consulted two colleagues who hold Ph.D. degrees in English Language Teaching during this process.

CHAPTER IV

DATA ANALYSIS AND RESULTS

4.1. Introduction

In this chapter, the data gathered from the EBQ, TLCQ and TSES are presented. The results based on the research questions are presented respectively.

4.2 Findings Related to the First Research Question

4.2.1. Pre-service EFL teachers' epistemological beliefs

The first research question examines pre-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy. In order to answer this question, descriptive statistics were utilized. Table 17. presents the descriptive statistics related to pre-service EFL teachers' epistemological beliefs.

Table 17.

Pre-service EFL teachers' epistemological beliefs

	N	Minimum	Maximum	Mean	Std. Deviation	Mean (five point likert scale)	Skewness	Kurtosis
Learning process/Expert knowledge	374	29,00	55,00	42,90	4,65	3,90	-0,02	0,13
Innate-Fixed Ability	374	8,00	34,00	20,54	4,76	2,56	0,18	-0,10
Learning effort	374	9,00	25,00	18,16	3,09	3,63	-0,11	-0,13
Certainty knowledge	374	6,00	26,00	14,93	3,22	2,48	-0,04	0,17

In order to determine whether the data fulfilled the prerequisites of parametric tests, Skewness and Kurtosis values were examined, and it was found out that the data is normally distributed since the Skewness and Kurtosis values are between -1 and +1 (See

Appendix 12). For learning process/expert knowledge (dimension 1), the mean score is 3,90 and the standard deviation is 4,65. This shows the mean score for the items which explain the importance of the learning process and questioning the information given by experts. The mean score for the items related to innate-fixed ability (dimension 2) is 2,56 and the standard deviation is 4,76. The items related to innate-fixed ability generally support the idea that learning ability is inborn. The mean score is 3,63 for the items related to learning effort, and the standard deviation is 3,09. This shows the mean score for the items which means that how much effort you make shows how much you learn. For Certainty knowledge (dimension 4) which means knowledge is certain and cannot be changed, the mean score is 2,48 and the standard deviation is 3,22.

4.2.2. Pre-service EFL teachers' teaching-learning conceptions.

Table 18. presents the descriptive statistics related to pre-service EFL teachers' teaching-learning conceptions.

.

Table 18.

Pre-service EFL teachers' teaching-learning conceptions

	N	Minimum	Maximum	Mean	Std. Deviation	Mean (five point likert scale)	Skewness	Kurtosis
Constructivist conception	374	36,63	60,00	53,26	5,21	4,43	-0,76	0,28
Traditional conception	374	18,00	73,00	41,70	9,89	2,3	0,32	0,15

The Skewness and Kurtosis values are between -1 and +1. This means the data is normally distributed (see Appendix 13). The mean score for the items related to constructivist conception supporting the idea that learning should be student-centred and knowledge is constructed by students (dimension 1) is 5,21 and the standard deviation is 4,43. The mean score is 2,3 for the items related to traditional conception (dimension 2) and the standard deviation is 9,89. These items show the importance of transmission-based and teacher-centred instruction.

4.2.3. Pre-service EFL teachers' sense of self-efficacy

Table 19. presents the descriptive statistics related to pre-service EFL teachers' sense of self-efficacy.

Table 19.

Pre-service EFL teachers' sense of self-efficacy

	N	Minimum	Maximum	Mean	Std. Deviation	Mean (five point likert scale)	Skewness	Kurtosis
Efficacy for classroom management	374	17,00	40,00	29,72	4,13	3,71	-0,04	-0,14
Efficacy for student engagement	374	19,00	40,00	30,55	3,64	3,81	-0,16	0,32
Efficacy for instructional strategies	374	20,00	40,00	30,82	3,76	3,85	-0,05	-0,22

The data is normally distributed when the Skewness and Kurtosis values (between -1 and +1) are examined (see Appendix 14). For efficacy for classroom management showing the use of classroom management techniques successfully (dimension 1), the mean score is 3,71 and the standard deviation is 4,13. The mean score for the items related to efficacy for student engagement meaning the success in engaging students into lessons (dimension 2) is 3,81 and the standard deviation is 3,64. The mean score is 3,85 for the items related to efficacy for instructional strategies showing the use of various instructional strategies successfully (dimension 3), and the standard deviation is 3,76.

4.3 Findings Related to the Second Research Question

4.3.1. In-service EFL teachers' epistemological beliefs

The second research question examines in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy. Table

20. presents the descriptive statistics related to pre-service EFL teachers' epistemological beliefs.

Table 20.

In-service EFL teachers' epistemological beliefs

	N	Minimum	Maximum	Mean	Std. Deviation	Mean (five point likert scale)	Skewness	Kurtosis
Learning process/Expert knowledge	192	29,75	53,00	43,23	4,10	3,93	-0,11	-0,12
Innate-Fixed Ability	192	11,00	35,00	21,90	4,68	2,73	0,31	-0,22
Learning effort	192	10,00	25,00	18,49	2,88	3,69	-0,09	-0,17
Certainty knowledge	192	9,00	26,00	16,42	3,44	2,73	0,24	-0,27

When the Skewness and Kurtosis values were examined, it was found out that the data is normally distributed since the values are between -1 and +1 (see Appendix 15). For learning process/expert knowledge (dimension 1), the mean score is 3,93 and the standard deviation is 4,10. The mean score for the items related to innate-fixed ability (dimension 2) is 2,73 and the standard deviation is 4,68. The mean score is 3,69 for the items related to learning effort, and the standard deviation is 2,88. For Certainty knowledge (dimension 4), the mean score is 2,73 and the standard deviation is 3,44.

4.3.2. In-service EFL teachers' teaching-learning conceptions.

Table 21. presents the descriptive statistics related to in-service EFL teachers' teaching-learning conceptions.

Table 21.

In-service EFL teachers' teaching-learning conceptions

	N	Minimum	Maximum	Mean	Std. Deviation	Mean (five point likert scale)	Skewness	Kurtosis
Constructivist conception	192	37,00	60,00	52,32	4,85	4,36	-0,25	-0,31
Traditional conception	192	19,00	69,00	45,61	10,21	2,53	0,17	-0,57

The Skewness and Kurtosis values are between -1 and +1, which means the data is normally distributed (see Appendix 16). The mean score for the items related to constructivist conception (dimension 1) is 4,36 and the standard deviation is 4,85. The mean score is 2,53 for the items related to traditional conception (dimension 2), and the standard deviation is 10,21.

4.3.3. In-service EFL teachers' sense of self-efficacy.

Table 22. presents the descriptive statistics related to in-service EFL teachers' sense of self-efficacy.

Table 22. .

In-service EFL teachers' sense of self-efficacy

	N	Minimum	Maximum	Mean	Std. Deviation	Mean (five point likert scale)	Skewness	Kurtosis
Efficacy for classroom management	192	21,00	40,00	31,83	4,01	3,97	-0,27	-0,10
Efficacy for student engagement	192	19,00	39,00	30,34	3,81	3,79	-0,38	-0,15
Efficacy for instructional strategies	192	21,00	40,00	31,93	3,97	3,99	-0,32	0,09

The data is normally distributed when the Skewness and Kurtosis values (between -1 and +1) are examined (see Appendix 17). For efficacy for classroom management (dimension 1), the mean score is 3,97 and the standard deviation is 4,01. The mean score for the items related to efficacy for student engagement (dimension 2) is 3,79 and the standard deviation is 3,81. The mean score is 3,99 for the items related to efficacy for instructional strategies, and the standard deviation is 3,97.

4.4. Findings Related to the Third Research Question

The third research question aimed to highlight whether pre-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy are related to each other. To test this, Pearson correlation coefficient analyses were conducted.

4.4.1. The Relationship between pre-service EFL teachers' epistemological beliefs and teaching-learning conceptions

The analyses were conducted for every two variables one by one. Table 23. shows the relationship between pre-service EFL teachers' epistemological beliefs and teaching-learning conceptions.

Table 23.

The Relationship between pre-service EFL teachers' epistemological beliefs and teaching-learning conceptions

	Learning process/Expert knowledge	Innate-Fixed Ability	Learning effort	Certainty knowledge	Constructivist conception	Traditional conception
Learning process/Expert knowledge	1					
Innate-Fixed Ability	-,107*	1				
Learning effort	,412*	,040	1			
Certainty knowledge	-,072	,371*	,234*	1		
Constructivist conception	,430*	-,251*	,217*	-,261*	1	
Traditional conception	-,201*	,466*	,081	,489*	-,480*	1

*p<.05

The results indicate that the highest correlations are between certainty knowledge and traditional conception *(r=,49)*, followed by innate-fixed ability and traditional conception *(r=,47)* and learning process/expert knowledge and constructivist conception *(r=,43).* In addition, learning effort and constructivist conception are significantly correlated *(r=,22).* On the other hand, there is a negative and significant correlation between certainty knowledge and constructivist conception *(r=-,26)*, innate-fixed ability and constructivist conception *(r=-,25)*, and learning process/expert knowledge and traditional conception *(r=-,20).* The results show that the more traditional conception the pre-service teachers adopt, the more they believe that knowledge is certain and learning ability is fixed at birth. Similarly, pre-service teachers favouring the constructivist conception believe that learning requires process and effort and the information given by experts should be questioned.

4.4.2. The Relationship between pre-service EFL teachers' epistemological beliefs and sense of self-efficacy

The relationship between pre-service EFL teachers' epistemological beliefs and sense of self-efficacy is presented in Table 24.

Table 24.

The Relationship between pre-service EFL teachers' epistemological beliefs and sense of self-efficacy

	Learning process/Expert knowledge	Innate/Fixed ability	Learning effort	Certainty knowledge	Efficacy for classroom management	Efficacy for student engagement	Efficacy for instructional strategies
Learning process/Expert knowledge	1						
Innate-Fixed Ability	-,107*	1					
Learning effort	,412**	,040	1				
Certainty knowledge	-,072	,371**	,234**	1			
Efficacy for classroom management	**,182***	**-,009**	**,020**	**-,077**	1		
Efficacy for student engagement	**,317***	**-,125***	**,197***	**-,107***	,538*	1	
Efficacy for instructional strategies	**,171***	**,030**	**,128***	**-,022**	,570*	,689*	1

*p<.05

Learning process/expert knowledge and efficacy for student engagement has the highest significant correlation *(r=,32).* Another significant correlation is between efficacy for student engagement and learning effort *(r=,20).* However, efficacy for student engagement is negatively correlated with innate/fixed ability *(r=,13)* and certainty knowledge *(r=,11).* Besides this, efficacy for instructional strategies is seen

significantly correlated with learning process/expert knowledge *(r=,18)* and also correlated with learning effort *(r=,13).* The results reveal that the more efficacious in student engagement the pre-service teachers are, the more they believe in the importance of the learning process, learning effort, and questioning the information given by experts, and the less they believe that learning ability is inborn and knowledge is certain. Similarly, pre-service teachers who are efficacious in instructional strategies believe that the learning process and effort made to learn are important.

4.4.3. The Relationship between pre-service EFL teachers' teaching-learning conceptions and sense of self-efficacy

Table 25. shows the relationship between pre-service EFL teachers' teaching-learning conceptions and sense of self-efficacy

Table 25.

The Relationship between pre-service EFL teachers' teaching-learning conceptions and sense of self-efficacy

	Constructivist conception	Traditional conception	Efficacy for classroom management	Efficacy for student engagement	Efficacy for instructional strategies
Constructivist conception	1				
Traditional conception	-,480*	1			
Efficacy for classroom management	**,202***	**-,013**	1		
Efficacy for student engagement	**,376***	**-,107***	,538*	1	
Efficacy for instructional strategies	**,253***	**-,011**	,570*	,689*	1

*p<.05

The results indicate that the highest correlations are between constructivist conception and efficacy for student engagement *(r=,38)*, followed by constructivist conception and efficacy for instructional strategies *(r=,25)*, constructivist conception, and efficacy for classroom management *(r=,20)*. On the other hand, traditional conception and efficacy for student engagement are correlated in a negative way *(r=,11)*. The results show that pre-service teachers who adopt constructivist conception are more efficacious in student engagement, instructional strategies, and classroom management.

4.5. Findings Related to the Fourth Research Question

The fourth research question aimed to highlight whether in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy are related to each other. To test this, Pearson correlation coefficient analyses were conducted.

4.5.1. The Relationship between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions

Correlations between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions were calculated using Pearson Correlation Analysis as seen in Table 26.

Table 26.

The Relationship between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions

	Learning process/ Expert knowledge	Innate/Fixed ability	Learning effort	Certainty knowledge	Constructivist conception	Traditional conception
Learning process/Expert knowledge	1					
Innate/Fixed ability	-,044	1				
Learning effort	,301*	,057	1			
Certainty knowledge	,098	,394*	,388*	1		
Constructivist conception	**,462***	**-,178***	**,058**	**-,118**	1	
Traditional conception	**-,173***	**,369***	**,122**	**,429***	-,488*	1

*p<.05

The results show that the highest significant correlation is between the learning process/expert knowledge and constructivist conception *(r=,46).* This is followed by the correlations between certainty knowledge and traditional conception *(r=,43)* and innate/fixed ability and traditional conception *(r=,37).* There is also a correlation between innate/fixed ability and constructivist conception *(r=,18),* however; this is a negative correlation. Besides this, the learning process/expert knowledge is negatively correlated with traditional conception *(r=,17).* The results show that in-service teachers holding constructivist conception believe that the learning process and making effort to learn is more important than learning itself, and we should question the certainty knowledge. In addition, in-service teachers who hold traditional conceptions believe that there is a truth that cannot be changed, and we have an inborn ability to learn that cannot be improved with effort.

4.5.2. The Relationship between in-service EFL teachers' epistemological beliefs and sense of self-efficacy

Table 27. shows the relationship between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions.Table 27.

Table 27.

The Relationship between in-service EFL teachers' epistemological beliefs and sense of self-efficacy

	Learning process/Expert knowledge	Innate/Fixed ability	Learning effort	Certainty knowledge	Efficacy for classroom management	Efficacy for student engagement	Efficacy for instructional strategies
Learning process/Expert knowledge	1						
Innate-Fixed Ability	-0,044	1					
Learning effort	,301*	0,057	1				
Certainty knowledge	0,098	,394*	,388*	1			
Efficacy for classroom management	**,207***	**-0,107**	**0,131**	**0,039**	1		
Efficacy for student engagement	**,159***	**-0,026**	**,172***	**0,072**	,667*	1	
Efficacy for instructional strategies	**0,121**	**-0,033**	**,155***	**0,07**	,664*	,716*	1

*p<.05

The results indicate that there is a significant correlation between the learning process/expert knowledge and efficacy for classroom management *(r=,21).* Another correlation is between the learning process/expert knowledge and efficacy for student engagement *(r=,16).* Learning effort significantly correlates with efficacy for student

engagement *(r=,17)* and efficacy for instructional strategies *(r=,16).* The results show that in-service teachers have a higher level of efficacy for classroom management and student engagement when they believe in the importance of the learning process and learning how to learn. Similarly, the more efficacious in student engagement and instructional strategies the in-service teachers are, the more they believe that learning requires making effort.

4.5.3. The Relationship between in-service EFL teachers' teaching-learning conceptions and sense of self-efficacy

The Relationship between in-service EFL teachers' teaching-learning conceptions and sense of self-efficacy is presented in Table 28.

Table 28.

The Relationship between in-service EFL teachers' teaching-learning conceptions and sense of self-efficacy

	Constructivist conception	Traditional conception	Efficacy for classroom management	Efficacy for student engagement	Efficacy for instructional strategies
Constructivist conception	1				
Traditional conception	-,488*	1			
Efficacy for classroom management	**,293***	**-,064**	1		
Efficacy for student engagement	**,352***	**-,106**	,667*	1	
Efficacy for instructional strategies	**,290***	**,009**	,664*	,716*	1

*p<.05

When the correlation results are analysed, it is seen that constructivist conception is correlated with all three dimensions of sense of self-efficacy. The highest correlation is found with efficacy for student engagement *(r=,35)* followed by efficacy for classroom management *(r=, 29)* and efficacy for instructional strategies *(r=,29).* The results show that when in-service teachers adopt constructivist conception, they feel efficacious in student engagement, classroom management, and instructional strategies.

4.6. Findings Related to the Fifth Research Question

4.6.1. The effects of pre-service and in-service EFL teachers' epistemological beliefs on their teaching-learning conceptions

The first multiple regression analysis was run to find out the effect of pre-service and in-service EFL teachers' epistemological beliefs on teaching-learning conception. The effects of epistemological beliefs on teaching-learning conception were analysed for every dimension separately.

4.6.1.1. The effects of pre-service EFL teachers' epistemological beliefs on constructivist conception (dimension 1)

Constructivist conception was the dependent variable of the analysis while epistemological beliefs were the independent ones. R^2 explains how much variability in the dependent variable are predicted by the independent variables. In the current study, R^2 was found .27, which means the variables share 27% variance. In addition, the results showed that learning process/expert knowledge, certainty knowledge and innate-fixed ability have affected their constructivist conception (R=0,517; R^2=0,26; F (4, 369) =33,698; p<.05).

Table 29. displays the unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the slope with t values.

Table 29.

The effects of pre-service EFL teachers' epistemological beliefs on constructivist conception (dimension 1)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	40,98	2,63		15,60	,000*
Learning process/Expert knowledge	0,39	0,06	0,35	6,92	,000*
Innate-Fixed Ability	-0,15	0,05	-0,14	-2,89	,004*
Learning effort	0,22	0,09	0,13	2,55	,011*
Certainty knowledge	-0,35	0,08	-0,22	-4,30	,000*

a. Dependent Variable: Constructivist conception *p<.05

The results display that learning process/expert knowledge (ß=.35, p<.05), certainty knowledge (ß=-.22, p<.05), innate-fixed ability (ß=-.14, p<,05) and learning effort (ß=.13, p<,05) made the significant contribution to pre-service EFL teachers' constructivist conception. However, while learning process/expert knowledge and learning effort positively contributed, certainty knowledge and innate-fixed ability negatively contributed to constructivist conception. The results reveal that pre-service teachers who believe that ability to learn is flexible and can be developed after birth rather than being fixed at birth and that learning is a process requiring effort prefer a constructivist approach. Similarly, they prefer the same approach when they believe that knowledge is not certain. All these results show that pre-service teachers' epistemological beliefs affect their constructivist conception.

4.6.1.2. The effects of in-service EFL teachers' epistemological beliefs on constructivist conception (dimension 1)

The dependent variable of the analysis was the constructivist conception, and the independent variables were epistemological beliefs. In the current study, R2 was found .25, which means the variables share 25% variance. In addition, the results showed that

learning process/expert has affected in-service teachers' constructivist conception (R=0,502; R^2=0,25; F (4, 187) =15,713; p<.05).

The unstandardized regression coefficients and associated standard errors, standardized coefficients and significance of the effects of in-service EFL teachers' epistemological beliefs on constructivist conception are shown in Table 30.

Table 30.

The effects of in-service EFL teachers' epistemological beliefs on constructivist conception (dimension 1)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	34,05	3,74		9,11	,000*
Learning process/Expert knowledge	0,57	0,08	0,48	7,20	,000*
Innate-Fixed Ability	-0,12	0,07	-0,11	-1,63	,106
Learning effort	-0,06	0,12	-0,04	-0,53	,597
Certainty knowledge	-0,15	0,11	-0,11	-1,41	,160

a. Dependent Variable: Constructivist conception *p<.05

The results show that only learning process/expert knowledge made a significant contribution to in-service EFL teachers' constructivist conception (ß=.48, p<.05). This suggests that those who believe that learning is a process and it requires the rejection of expert knowledge transferred to students by teachers, adopt a student-centred approach.

4.6.1.3. The effects of pre-service EFL teachers' epistemological beliefs on traditional conception (dimension 2)

Traditional conception was the dependent variable of the analysis while epistemological beliefs were the independent ones. R^2 was found .35, which means the variables share 35 % variance. In addition, the results showed that learning process/expert knowledge, certainty knowledge and innate-fixed ability have affected their traditional conception (R=0,596; R^2=0,35; F (4, 369) =33,698; p<.05). The

unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the effects of pre-service EFL teachers' epistemological beliefs on traditional conception are shown in Table 31.

Table 31.

The effects of pre-service EFL teachers' epistemological beliefs on traditional conception (dimension 2)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	24,12	4,68		5,15	,000*
Learning process/Expert knowledge	-0,35	0,10	-0,17	-3,52	,000*
Innate/Fixed ability	0,66	0,09	0,32	7,03	,000*
Learning effort	0,18	0,15	0,06	1,15	,252
Certainty knowledge	1,06	0,14	0,35	7,38	,000*

a. Dependent Variable: Traditional conception *p<.05

The results show that certainty knowledge (ß=-.32, p<.05), innate-fixed ability (ß=.32, p<,05), and learning process/expert knowledge (ß=-.17, p<.05) made the significant contribution to pre-service EFL teachers' conception. However, while innate-fixed ability and certainty knowledge positively contributed, learning process/expert knowledge negatively contributed to traditional conception. Believing that knowledge is certain, learning ability is fixed at birth, and information given by experts should be accepted without questioning results in adopting a transmission-based approach.

4.6.1.4. The effects of in-service EFL teachers' epistemological beliefs on traditional conception (dimension 2)

The dependent variable of the analysis was the traditional conception, and the independent variables were epistemological beliefs. In the current study, R^2 was found .27, which means the variables share 27% variance. In addition, the results showed that

learning process/expert has affected in-service teachers' traditional conception (R=0,521; R^2=0,27; F (4, 187) =17,421; p<.05).

The unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the effects of in-service EFL teachers' epistemological beliefs on traditional conception are shown in Table 32.

Table 32.

The effects of in-service EFL teachers' epistemological beliefs on traditional conception (dimension 2)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	38,14	7,76		4,92	,000*
Learning process/Expert knowledge	-0,52	0,16	-0,21	-3,18	,002*
Innate/Fixed ability	0,48	0,15	0,22	3,22	,002*
Learning effort	0,13	0,25	0,04	0,52	,604
Certainty knowledge	1,03	0,22	0,35	4,71	,000*

a. Dependent Variable: Traditional conception *p<.05

The results show that certainty knowledge (ß=-.35, p<.05), innate-fixed ability (ß=.22, p<,05), and learning process/expert knowledge (ß=-.21, p<.05) made the significant contribution to in-service EFL teachers' conception. However, while innate-fixed ability and certainty knowledge positively contributed, learning process/expert knowledge negatively contributed to traditional conception. The belief in certainty knowledge, innate learning ability, and expert knowledge results in adopting a teacher-centred, transmission-based approach.

4.6.2. The effects of pre-service and in-service EFL teachers' epistemological beliefs on their sense of self-efficacy

The second multiple regression analysis was run to find out the effects of pre-service and in-service EFL teachers' epistemological beliefs on their sense of self-

efficacy. The effects of epistemological beliefs on sense of self-efficacy was analysed for every dimension separately.

4.6.2.1. The effects of pre-service EFL teachers' epistemological beliefs on efficacy for classroom management (dimension 1)

Efficacy for classroom management was the dependent variable of the analysis while epistemological beliefs were the independent ones. In the current study, R^2 was found .03, which means the variables share 3% variance. In addition, the results showed that learning process/expert knowledge, certainty knowledge and innate-fixed ability have affected their constructivist conception (R=0,201; R^2=0,03; F (4, 369) =3,894; p<.05).

Table 33. displays the unstandardized regression coefficients and associated standard errors, standardized coefficients and significance of the slope with t values.

Table 33.

The effects of pre-service EFL teachers' epistemological beliefs on efficacy for classroom management (dimension 1)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	23,79	2,38		9,99	,000*
Learning process/Expert knowledge	0,18	0,05	0,20	3,53	,000*
Innate/Fixed ability	0,03	0,05	0,04	0,71	,476
Learning effort	-0,07	0,08	-0,05	-0,85	,396
Certainty knowledge	-0,08	0,07	-0,07	-1,15	,251

a. Dependent Variable: Efficacy for classroom management *p<.05

The results show that only learning process/expert knowledge made a significant contribution to pre-service EFL teachers' efficacy for classroom management (ß=.20, p<.05). This suggests that pre-service teachers' beliefs in the learning process result in efficacy for classroom management.

4.6.2.2. The effects of in-service EFL teachers' epistemological beliefs on efficacy for classroom management (dimension 1)

The dependent variable of the analysis was efficacy for classroom management, and the independent variables were epistemological beliefs. R^2 was found .04, which means the variables share 4% variance. In addition, the results showed that learning process/expert has affected in-service teachers' traditional conception (R=0,245; R^2=0,04; F (4, 187) =2,985; p<.05).

The unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the effects of in-service EFL teachers' epistemological beliefs on efficacy for classroom management are shown in Table 34.

Table 34.

The effects of in-service EFL teachers' epistemological beliefs on efficacy for classroom management (dimension 1)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	24,02	3,46		6,94	,000*
Learning process/Expert knowledge	0,17	0,07	0,18	2,38	,018*
Innate/Fixed ability	-0,10	0,07	-0,12	-1,54	,126
Learning effort	0,10	0,11	0,07	0,85	,399
Certainty knowledge	0,05	0,10	0,04	0,50	,616

a. Dependent Variable: Efficacy for classroom management *p<.05

The results show that only learning process/expert knowledge made a significant contribution to in-service EFL teachers' efficacy for classroom management (ß=.18,

p<.05). In-service teachers' beliefs in the learning process affects how efficacious they are in classroom management.

4.6.2.3. The effects of pre-service EFL teachers' epistemological beliefs on efficacy for student engagement (dimension 2)

Efficacy for student engagement was the dependent variable of the analysis while epistemological beliefs were the independent ones. In the current study, R^2 was found .11, which means the variables share 11% variance. In addition, the results showed that learning process/expert knowledge, certainty knowledge and innate-fixed ability have affected their constructivist conception (R=0,350; R^2=0,11; F (4, 369) =12,840; p<.05).

Table 35. displays the unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the slope with t values.

Table 35.

The effects of pre-service EFL teachers' epistemological beliefs on efficacy for student engagement (dimension 2)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	22,09	2,01		11,00	,000*
Learning process/Expert knowledge	0,20	0,04	0,26	4,68	,000*
Innate/Fixed ability	-0,05	0,04	-0,07	-1,30	,196
Learning effort	0,14	0,07	0,12	2,07	,039*
Certainty knowledge	-0,10	0,06	-0,09	-1,65	,099

a. Dependent Variable: Efficacy for classroom management *p<.05

According to the results of the regression analysis, it is seen that learning process/expert knowledge (ß=.26, p<.05) and learning effort (ß=.12, p<.05) made a significant contribution to pre-service EFL teachers' efficacy for student engagement. Pre-service teachers' beliefs in the learning process and learning effort affect how efficacious they are in engaging students into lessons.

4.6.2.4. The effects of in-service EFL teachers' epistemological beliefs on efficacy for student engagement (dimension 2)

The dependent variable of the analysis was efficacy for student engagement, and the independent variables were epistemological beliefs. R^2 was found .02, which means the variables share 2% variance. In addition, the results showed that learning process/expert has affected in-service teachers' traditional conception (R=0,208; R^2=0,02; F (4, 187) =2,124; p<.05).

The unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the effects of in-service EFL teachers' epistemological beliefs on efficacy for student engagement are shown in Table 36.

Table 36.

The effects of in-service EFL teachers' epistemological beliefs on efficacy for student engagement (dimension 2)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	22,74	3,32		6,85	,000*
Learning process/Expert knowledge	0,11	0,07	0,12	1,55	,124
Innate/Fixed ability	-0,03	0,06	-0,04	-0,49	,624
Learning effort	0,17	0,11	0,13	1,59	,115
Certainty knowledge	0,03	0,09	0,03	0,30	,765

a. Dependent Variable: Efficacy for classroom management *p<.05

When the results were examined, it was seen that in-service EFL teachers' epistemological beliefs did not have any significant contribution to efficacy for student engagement, which means their epistemological beliefs do not affect their efficacy level in student engagement.

4.6.2.5. The effects of pre-service EFL teachers' epistemological beliefs on efficacy for instructional strategies (dimension 3)

Efficacy for instructional strategies was the dependent variable of the analysis while epistemological beliefs were the independent ones. In the current study, R^2 was found .03, which means the variables share 3% variance. In addition, the results showed that the learning process/expert knowledge, certainty knowledge, and innate-fixed ability have affected their constructivist conception (R=0,193; R^2=0,03; F (4, 369) =3,585; p<.05).

Table 37. displays the unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the slope with t values.

Table 37.

The effects of pre-service EFL teachers' epistemological beliefs on efficacy for instructional strategies (dimension 3)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	24,10	2,17		11,09	,000*
Learning process/Expert knowledge	0,11	0,05	0,14	2,46	,014*
Innate/Fixed ability	0,05	0,04	0,06	1,11	,266
Learning effort	0,10	0,07	0,08	1,37	,172
Certainty knowledge	-0,06	0,07	-0,05	-0,94	,350

a. Dependent Variable: Efficacy for classroom management *p<.05

The results show that only learning process/expert knowledge made a significant contribution to pre-service EFL teachers' efficacy for instructional strategies (ß=.14, p<.05). In other words, pre-service teachers' beliefs in the importance of learning taking place in process and questioning expert knowledge affect how efficacious they are in instructional strategies.

4.6.2.6. The effects of in-service EFL teachers' epistemological beliefs on efficacy for instructional strategies (dimension 3)

The dependent variable of the analysis was efficacy for instructional strategies, and the independent variables were epistemological beliefs. R^2 was found .01, which means the variables share 1% variance. In addition, the results showed that learning process/expert has affected in-service teachers' traditional conception (R=0,180; R^2=0,01; F (4, 187) =1,564; p<.05)

The unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the effects of in-service EFL teachers' epistemological beliefs on efficacy for instructional strategies are shown in Table 38.

Table 38.

The effects of in-service EFL teachers' epistemological beliefs on efficacy for instructional strategies (dimension 3)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	25,84	3,47		7,44	,000*
Learning process/Expert knowledge	0,08	0,07	0,08	1,05	,297
Innate/Fixed ability	-0,04	0,07	-0,05	-0,64	,521
Learning effort	0,17	0,11	0,12	1,47	,143
Certainty knowledge	0,04	0,10	0,04	0,42	,679

a. Dependent Variable: Efficacy for classroom management *p<.05

The results show that in-service EFL teachers' epistemological beliefs did not have any significant effects on efficacy for instructional strategies.

4.7. Findings Related to the Sixth Research Question

4.7.1. The effects of pre-service EFL teachers' teaching-learning conceptions on their sense of self-efficacy

The last multiple regression analysis was run to find out the effect of pre-service EFL teachers' teaching-learning conceptions on their sense of self-efficacy. The effects of teaching-learning conceptions on sense of self-efficacy was analysed for every dimension separately.

4.7.1.1. The effects of pre-service EFL teachers' teaching-learning conceptions on efficacy for classroom management (dimension 1)

Efficacy for classroom management was the dependent variable of the analysis while teaching-learning conceptions were the independent ones. In the current study, R^2 was found .05, which means the variables share 5% variance. In addition, the results showed that constructivist conception has affected their efficacy for classroom management (R=0,224; R^2=0,05; F (2, 371) =9,800; p<.05).

Table 39. displays the unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the slope with t values.

Table 39.

The effects of pre-service EFL teachers' teaching-learning conceptions on efficacy for classroom management (dimension 1)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	17,05	3,05		5,59	,000*
Constructivist conception	0,20	0,05	0,26	4,42	,000*
Traditional conception	0,05	0,02	0,11	1,90	,058

a. Dependent Variable: Efficacy for classroom management *p<.05

The results show that only constructivist conception made a significant contribution to pre-service EFL teachers' efficacy for classroom management (ß=.26,

p<.05), which means adopting a constructivist conception affects pre-service teachers' efficacy for classroom management.

4.7.1.2. The effects of in-service EFL teachers' teaching-learning conceptions on efficacy for classroom management (dimension 1)

The dependent variable of the analysis was efficacy for classroom management, and the independent variables were teaching-learning conceptions. R^2 was found .08, which means the variables share 8% variance. In addition, the results showed that constructivist conception has affected in-service teachers' efficacy for classroom management (R=0,307; R^2=0,08; F (2, 189) =9,808; p<.05).

The unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the effects of teaching-learning conceptions on efficacy for classroom management are shown in Table 40.

Table 40.

The effects of in-service EFL teachers' teaching-learning conceptions on efficacy for classroom management (dimension 1)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	15,10	4,31		3,50	,001*
Constructivist conception	0,28	0,07	0,34	4,33	,000*
Traditional conception	0,04	0,03	0,10	1,31	,191

a. Dependent Variable: Efficacy for classroom management *p<.05

The results show that only the constructivist conception made a significant contribution to in-service EFL teachers' efficacy for classroom management (ß=.34, p<.05). This means in-service teachers' efficacy level for classroom management is affected by their teaching-learning conceptions when they adopt the constructivist approach.

4.7.1.3. The effects of pre-service EFL teachers' teaching-learning conceptions on efficacy for student engagement (dimension 2)

Efficacy for student engagement was the dependent variable of the analysis while teaching-learning conceptions were the independent ones. In the current study, R^2 was found .14, which means the variables share 14% variance. In addition, the results showed that constructivist conception has affected their efficacy for student engagement (R=0,386; R^2=0,14; F (3, 369) =32,417; p<.05).

Table 41. displays the unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the slope with t values.

Table 41.

The effects of pre-service EFL teachers' teaching-learning conceptions on efficacy for student engagement (dimension 2)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	13,36	2,55		5,25	,000*
Constructivist conception	0,30	0,04	0,42	7,74	,000*
Traditional conception	0,04	0,02	0,10	1,76	,079

a. Dependent Variable: Efficacy for student engagement *p<.05

When the results were examined, it was seen that only the constructivist conception made a significant contribution to pre-service EFL teachers' efficacy for student engagement (ß=.42, p<.05). When pre-service teachers favour constructivist conception, their efficacy level for student engagement is positively affected.

4.7.1.4. The effects of in-service EFL teachers' teaching-learning conceptions on efficacy for student engagement (dimension 2)

The dependent variable of the analysis was efficacy for student engagement, and the independent variables were teaching-learning conceptions. R^2 was found .12, which means the variables share 12% variance. In addition, the results showed that

constructivist conception has affected in-service teachers' efficacy for classroom management (R=0,359; R^2=0,12; F (2, 189) =14,023; p<.05).

The unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the effects of teaching-learning conceptions on efficacy for student engagement are shown in Table 42.

Table 42.

The effects of in-service EFL teachers' teaching-learning conceptions on efficacy for student engagement (dimension 2)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	12,72	4,02		3,16	,002*
Constructivist conception	0,31	0,06	0,39	5,06	,000*
Traditional conception	0,03	0,03	0,09	1,10	,273

a. Dependent Variable: Efficacy for student engagement *p<.05

The results show that only the constructivist conception made a significant contribution to in-service EFL teachers' efficacy for student engagement (ß=.39, p<.05). In other words, there is a cause-effect relationship between constructivist conception and efficacy for student engagement dimensions. In-service teachers' level of efficacy for student engagement is affected by the constructivist conception they adopt.

4.7.1.5. The effects of pre-service EFL teachers' teaching-learning conceptions on efficacy for instructional strategies (dimension 3)

Efficacy for instructional strategies was the dependent variable of the analysis while teaching-learning conceptions were the independent ones. In the current study, R^2 was found .08, which means the variables share 8% variance. In addition, the results showed that constructivist conception has affected their efficacy for instructional strategies (R=0,282; R^2=0,08; F (4, 369) =16,063; p<.05).

Table 43. displays the unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the slope with t values.

Table 43.

The effects of pre-service EFL teachers' teaching-learning conceptions on efficacy for instructional strategies (dimension 3)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	16,19	2,74		5,92	,000*
Constructivist conception	0,23	0,04	0,32	5,66	,000*
Traditional conception	0,05	0,02	0,14	2,53	,012*

a. Dependent Variable: Efficacy for instructional strategies *p<.05

The results show that only the constructivist conception made a significant contribution to pre-service EFL teachers' efficacy for instructional strategies (ß=.32, p<.05).

4.7.1.6. The effects of in-service EFL teachers' teaching-learning conceptions on efficacy for instructional strategies (dimension 3)

The dependent variable of the analysis was efficacy for instructional strategies, and the independent variables were teaching-learning conceptions. R^2 was found .11, which means the variables share 11% variance. In addition, the results showed that constructivist conception has affected in-service teachers' efficacy for instructional strategies (R=0,338; R^2=0,11; F (2, 189) =12,191; p<.05).

The unstandardized regression coefficients and associated standard errors, standardized coefficients, and significance of the effects of teaching-learning conceptions on efficacy for student engagement are shown in Table 44.

Table 44.

The effects of in-service EFL teachers' teaching-learning conceptions on efficacy for instructional strategies (dimension 3)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	11,86	4,22		2,81	,005*
Constructivist conception	0,32	0,06	0,39	4,94	,000*
Traditional conception	0,08	0,03	0,20	2,53	,012*

a. Dependent Variable: Efficacy for instructional strategies *p<.05

The results show that only constructivist conception made a significant contribution to in-service EFL teachers' efficacy for instructional strategies (ß=.39, p<.05), which means there is a cause-effect relationship between constructivist conception and efficacy for instructional strategies.

4.8. Findings Related to the Seventh Research Question

The seventh research question aimed to highlight whether there is a significant difference between pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy. By means of the Independent Samples t-Test analysis, pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy were compared.

4.8.1. The difference between pre-service and in-service EFL teachers' epistemological beliefs

The difference between pre-service and in-service EFL teachers' epistemological beliefs is presented in Table 45.

Table 45.

The difference between pre-service and in-service EFL teachers' epistemological beliefs

	Group	N	X̄	S	sd	t	p
Learning process/Expert knowledge	pre-service teachers	374	42,90	4,65	564	-,82	,415
	in-service teachers	192	43,23	4,10			
Innate-Fixed Ability	pre-service teachers	374	20,54	4,76	564	-3,24	,001
	in-service teachers	192	21,90	4,68			
Learning effort	pre-service teachers	374	18,16	3,09	564	-1,22	,221
	in-service teachers	192	18,49	2,88			
Certainty knowledge	pre-service teachers	374	14,93	3,22	564	-5,07	,000
	in-service teachers	192	16,42	3,44			

*p<.05

When the results of the t-Test analysis are examined, it is seen that there is a significant difference between pre-service and in-service EFL teachers' epistemological beliefs on two dimensions. There is a significant difference between pre-service and in-service EFL teachers' epistemological beliefs regarding innate-fixed ability dimension (t (564) =-3,24, p<.05) and certainty knowledge dimension (t (564) =-5,07, p<.05). The results show that in-service teachers (X̄=21,90) scored higher than pre-service teachers (X̄= 20,54) on the innate-fixed ability dimension. Similarly, in-service teachers (X̄=16,42) scored higher than pre-service teachers (X̄= 14,93) on the certainty knowledge dimension. There is no significant difference between pre-service and in-service EFL teachers' epistemological beliefs regarding the learning process/expert knowledge dimension (t (564) =-,82, p<.05) and learning effort dimension (t (564) =-1,22, p<.05).

4.8.2. The difference between pre-service and in-service EFL teachers' teaching-learning conceptions

The difference between pre-service and in-service EFL teachers' teaching-learning conceptions is presented in Table 46.

Table 46.

The difference between pre-service and in-service EFL teachers' teaching-learning conceptions

	Group	N	X̄	S	sd	t	p
Constructivist conception	pre-service teachers	374	53,26	5,21	564	2,08	,038
	in-service teachers	192	52,32	4,85			
Traditional conception	pre-service teachers	374	41,70	9,89	564	-4,40	,000
	in-service teachers	192	45,61	10,21			

*p<.05

As shown in Table 30, the t-Test analysis indicates a significant difference between pre-service and in-service EFL teachers' teaching-learning conceptions. There is a significant difference between pre-service and in-service EFL teachers' teaching-learning conceptions regarding constructivist conception dimension (t (564) =2,08, p<.05) and traditional conception dimension (t (564) =-4,40, p<.05). The results show that pre-service teachers (X̄=53,26) scored higher than in-service teachers (X̄=52,32) on the constructivist conception dimension. In addition, in-service teachers (X̄=45,61) scored higher than pre-service teachers (X̄=41,70) on the traditional conception dimension.

4.8.3. The difference between pre-service and in-service EFL teachers' sense of self-efficacy

The difference between pre-service and in-service EFL teachers' sense of self-efficacy is presented in Table 47.

Table 47.

The difference between pre-service and in-service EFL teachers' sense of self-efficacy

	Group	N	X̄	S	sd	t	p
Efficacy for classroom management	pre-service teachers	374	29,72	4,13	564	-5,81	,000
	in-service teachers	192	31,83	4,01			
Efficacy for student engagement	pre-service teachers	374	30,55	3,64	564	,62	,536
	in-service teachers	192	30,34	3,81			
Efficacy for instructional strategies	pre-service teachers	374	30,82	3,76	564	-3,29	,001
	in-service teachers	192	31,93	3,97			

*p<.05

When the results of the t-Test analysis are examined, it is seen that there is a significant difference between pre-service and in-service EFL teachers' sense of self-efficacy on two dimensions. There is a significant difference between pre-service and in-service EFL teachers' beliefs regarding efficacy for classroom management dimension (t (564) =-5,81, p<.05) and efficacy for instructional strategies dimension (t (564) =-3,29, p<.05). The results show that in-service teachers (X̄=31,83) scored higher than pre-service teachers (X̄= 29,72) on efficacy for the classroom management dimension. Similarly, in-service teachers (X̄=31,93) scored higher than pre-service teachers (X̄= 30,82) on efficacy for instructional strategies dimension. There is no significant difference between pre-service and in-service EFL teachers' beliefs regarding efficacy for student engagement dimension (t (564) =-,62, p<.05).

4.9. Qualitative Findings

Qualitative data were based on open-ended questions voluntarily answered by 19 in-service and 42 pre-service teachers. After familiarizing herself with the data by reading all responses given by the participants, the researcher generated initial codes and searched for the themes. The process of defining and naming the themes was completed after reviewing the potential themes. To make the data as reliable and transparent as possible, the researcher consulted two colleagues who hold Ph.D. degrees in English Language Teaching throughout the analysis of the qualitative data.

4.9.1. Qualitative Findings from Pre-service Teachers

Theme 1: Learning ability

Table 48.

Frequencies and Ratios by Codes under Theme 1 for Pre-Service Teachers

Theme 1	**Codes**	**Participants**	
		n*	**%**
	inborn and can be developed after birth	19	46,3
	inborn	13	31,7
Learning ability	after birth	9	22
	TOTAL	**41**	**100**

* n: number of participants that mentioned each category at least once

Table 48 shows the codes that emerged within the answers given by pre-service teachers to the question related to learning ability. 19 pre-service teachers stated that learning ability is inborn and can be developed after birth. 13 of the pre-service teachers believed that learning ability is inborn, and the rest of the pre-service teachers (n: 9) believed that learning ability is developed after birth. The following extracts exemplify these opinions respectively;

> *"I think it is both inborn and can be developed after birth. We have genetically determined abilities, but these can be developed with the effects of the environment."* (Pre-service teacher 3)
>
> *"It is an inborn ability. People imitate the others around them, and start to learn by repetition as of birth."* (Pre-service teacher 4)
>
> *"It is developed after birth because our learning style changes according to our social differences."* (Pre-service teacher 34)

Theme 2: The importance of reaching information on your own

Table 49.

Frequencies and Ratios by Codes under Theme 2 for Pre-Service Teachers

Theme 2	**Codes**	**Participants**	
		n*	**%**
The importance of reaching information on your own	permanence	25	62,5
	usefulness	15	37,5
	TOTAL	**40**	**100**

* n: number of participants that mentioned each category at least once

The pre-service teachers were asked about the more valuable one; getting the information produced by the experts or reaching the information on your own, the second theme emerged as the importance of reaching information on your own. All of the in-service teachers mentioned the importance of reaching information on your own with 2 different points Most of the pre-service teachers (n: 25) believed in the permanence of information when reached by oneself and 15 of the pre-service teachers mentioned the usefulness of the information when reached by oneself. The opinions of in-service teachers about The importance of reaching information on your own are exemplified respectively in the following excerpts;

> *"I believe in lifelong learning, so knowing how to know is a great advantage."* (Pre-service teacher 19)
>
> *"If the student can learn on her/his own, the information s/he reaches will be more useful because s/he needs to learn."* (Pre-service teacher 32)

Theme 3: Learning Effort

Table 50.

Frequencies and Ratios by Codes under Theme 3 for Pre-Service Teachers

Theme 3	**Codes**	**Participants**	
		n*	**%**
Learning effort	requires a lot of effort	18	29,5
	depends on the topic	18	29,5
	depends on desire/interest	10	16,4
	depends on ability	9	14,8
	depends on the techniques used	3	4,9
	depends on readiness	3	4,9
	TOTAL	**61**	**100**

* n: number of participants that mentioned each category at least once

Table 50. shows the codes related to Theme 3 Learning effort. 18 of the pre-service teachers believed that learning requires a lot of effort. The other codes that emerged within the same theme depend on the topic (n: 18), depends on desire/interest (n: 10), depends on ability (n: 9), depends on the techniques used (n: 3), and depends on readiness (n: 3). The opinions of pre-service teachers about learning effort are exemplified respectively in the following excerpts;

> *"It is not easy to process the input we take without making a great effort."* (Pre-service teacher 25)
>
> *"Learning theoretical and scientific things requires time and effort, but we can easily learn things to be used in our daily lives, so it depends on the topic."* (Pre-service teacher 19)
>
> *"Some of the factors affecting the learning effort are interest and desire to learn."* (Pre-service teacher 8)
>
> *"It does not require a lot of effort all the time. It depends on the students' ability."* (Pre-service teacher 34)

Theme 4: Certainty Knowledge

Table 51.

Frequencies and Ratios by Codes under Theme 4 for Pre-Service Teachers

Theme 4	**Codes**	**Participants**	
		n*	**%**
Certainty knowledge	Uncertain	32	78
	Certain	9	22
	TOTAL	**41**	**100**

* n: number of participants that mentioned each category at least once

When the pre-service teachers were asked about the certainty knowledge, 32 of them stated that is uncertain, and 9 of them stated that it is certain. Here are the two extracts that exemplify these codes;

> *"I think it is certain because I always trust science and it can reach the knowledge by questioning."* (Pre-service teacher 3)
>
> *"I do not believe in certainty knowledge because the universe is eternal and new things are being discovered every day, so the thesis can be refuted."* (Pre-service teacher 10)

Theme 5: Knowledge Constructed by Students

Table 52.

Frequencies and Ratios by Codes under Theme 5 for Pre-Service Teachers

Theme 5	**Codes**	**Participants**	
		n*	**%**
Knowledge constructed by students	Possible through interaction	36	87,8
	Possible if guided well	5	12,2
	TOTAL	**41**	**100**

* n: number of participants that mentioned each category at least once

Table 52. shows that pre-service teachers believed that it is possible for students to construct the knowledge themselves. Two codes emerged within this theme. 36 of the students believed that the construction of knowledge by students is possible through interaction, and 5 of them stated that it is possible if the students are guided well. The following extracts exemplify these opinions:

> *"I believe in the power of interaction and peer education. If the necessary conditions are provided, knowledge can be constructed by students."* (Pre-service teacher 1)
>
> *"If the teacher supports, informs about the process and motivates the students, they can construct the knowledge."* (Pre-service teacher 21)

Theme 6: Effectiveness of Transferring Information to Students

Table 53.

Frequencies and Ratios by Codes under Theme 6 for Pre-Service Teachers

Theme 6	**Codes**	**Participants**	
		n*	**%**
Effectiveness of transferring information to students	Learning occurs with repetition and practice	22	55
	Not enough for learning	12	30
	Learning occurs with repetition	6	15
	TOTAL	**40**	**100**

* n: number of participants that mentioned each category at least once

The Theme Effectiveness of transferring information to students comprises of 3 codes emerged with the answers of the pre-service teachers. 22 of the pre-service teachers stated that learning occurs with repetition and practice. 11 of the pre-service teachers believed that transferring information is not enough for learning. 6 of them believed that learning occurs with repetition. The following extracts respectively exemplify the beliefs held by pre-service teachers about the effectiveness of transferring information to students:

"When the practice is combined with repetition, it helps to learn things better." (Pre-service teacher 35)

"Repetition and practice is not enough for learning. The students should be active in the learning process." (Pre-service teacher 41)

"Repetition is the most important factor in learning. It reinforces and helps the information to be permanent. (Pre-service teacher 37)

"This leads to memorizing not learning." (Pre-service teacher 34)

Theme 7: Classroom Management

Table 54.

Frequencies and Ratios by Codes under Theme 7 for Pre-Service Teachers

Theme 7	**Codes**	**Participants**	
		n*	**%**
Classroom management	Very successful	14	33,3
	Moderately	15	35,7
	Have some difficulties	13	31
	TOTAL	**42**	**100**

* n: number of participants that mentioned each category at least once

Table 54 shows 3 different codes emerging within the Theme 7 Classroom management. 14 of the pre-service teachers stated that they are very successful in classroom management. Similarly, 15 of them are moderately good at classroom management, and 13 of them stated that managing the classroom can sometimes be difficult. The following extracts exemplify these:

"I think that I am really good at classroom management. I try to learn the interests of problematic students, and I change the techniques that I use considering the individual differences." (Pre-service teacher 8)

"I try to manage and most of the time I can. However, I try to talk to the parents when I cannot." (Pre-service teacher 34)

"I have difficulties doing this. I try not to hurt them, but they do not care me. I sometimes do not know what to do." (Pre-service teacher 13)

Theme 8: Student Engagement

Table 55.

Frequencies and Ratios by Codes under Theme 8 for Pre-Service Teachers

Theme 8	**Codes**	**Participants**	
		n*	**%**
Student engagement	Very successful	26	61,9
	Moderately	14	33,3
	Have some difficulties	2	4,8
	TOTAL	**42**	**100**

* n: number of participants that mentioned each category at least once

Theme 8 Student engagement comprises of 3 codes that emerged with the answers of the pre-service teachers. 26 of the pre-service teachers are very successful in student engagement. 14 of them stated that they are moderately successful, and 2 of them have some difficulties in engaging students. The following extracts respectively show how successful the pre-service teachers are:

> *"I can effectively engage the students in the lesson. I try different techniques based on their interests and I communicate with parents to achieve student engagment."* (Pre-service teacher 34)
>
> *"I often manage to do this by letting them to collaborate with the others, finding their interests and encouraging them."* (Pre-service teacher 38)
>
> *"I think it is really hard to engage students. I always have some difficulties."* (Pre-service teacher 15)

Theme 9: Use of Instructional Strategies

Table 56.

Frequencies and Ratios by Codes under Theme 9 for Pre-Service Teachers

Theme 9	**Codes**	**Participants**	
		n*	**%**
Use of instructional strategies	Very successful	29	69
	Moderately	11	26,2
	Have some difficulties	2	4,8
	TOTAL	**42**	**100**

* n: number of participants that mentioned each category at least once

The pre-service teachers were asked about how successful they are to use instructional strategies. Table 56. shows the codes related to Theme 9 Use of instructional strategies. 29 of the pre-service teachers stated that they use instructional strategies successfully while 3 of them use instructional strategies moderately. 1 of them stated that it is difficult to use instructional strategies. The following extracts exemplify these opinions respectively;

> *"I believe that I am really successful in using instructional strategies. I consider their levels, interests, and expectations. I use different strategies."* (Pre-service teacher 37)
>
> *"I am good at using instructional strategies moderately. I try to use several techniques."* (Pre-service teacher 35)
>
> *"I have some difficulties using different strategies. It requires a lot of effort."* (Pre-service teacher 22)

4.9.2 Qualitative Findings from In-service Teachers

Theme 1: Learning ability

Table 57.

Frequencies and Ratios by Codes under Theme 1 for In-Service Teachers

Theme 1	**Codes**	**Participants**	
		n*	**%**
Learning ability	inborn and can be developed after birth	13	68,4
	inborn	4	21,1
	after birth	2	10,5
	TOTAL	**19**	**100**

* n: number of participants that mentioned each category at least once

Firstly, in-service teachers were asked about the sources of learning ability. As shown in Table 57., 13 of the in-service teachers believed that language ability is both inborn and can be developed after birth. 4 of the in-service teachers stated that learning ability is inborn, while 2 of them believed that it is developed after birth. The following extracts respectively exemplify the beliefs hold by in-service teachers about the source of learning ability:

> *"Most of the learning ability is inborn, but it can be developed after birth within the factors like family, environment and some others."* (In-service Teacher 13)
>
> *"I think learning ability is inborn to a great extent. We cannot improve the capacity that we brought when we were born."* (In-service Teacher 9)
>
> *"Learning ability is gained after birth because if someone tries very hard, s/he can succeed in the courses that s/he has failed before."* (In-service Teacher 5)

Theme 2: The importance of reaching information on your own

Table 58.

Frequencies and Ratios by Codes under Theme 2 for In-Service Teachers

Theme 2	**Codes**	**Participants**	
		n*	**%**
The importance of reaching information on your own	permanence	11	57,9
	usefulness	5	26,3
	creativity	2	10,5
	effort	1	5,3
	TOTAL	**19**	**100**

* n: number of participants that mentioned each category at least once

When the in-service teachers were asked about the more valuable one; getting the information produced by the experts or reaching the information on your own, the second theme emerged as the importance of reaching information on your own. All of the in-service teachers mentioned the importance of reaching information on your own with different points emphasized, which led 5 different codes to emerge. 11 of the in-service teachers believed the permanence of information when reached by oneself. 5 of them stated that the information is more useful if you reach it on your own. The other codes mentioned by the in-service teachers about the importance of reaching information on your own were creativity and effort. The following extracts respectively show what participants stated about the importance of reaching information on your own:

> *"When someone learns the information with her/his own effort, this information becomes permanent and life-long."* (In-service teacher 4)
>
> *"The information is more useful when you need it and learn it on your own."* (In-service teacher 11)
>
> *"Getting the information produced by the experts ends up our creativity, so reaching the information on your own is more valuable."* (In-service teacher 13)
>
> *"Reaching the information on your own is more valuable because it requires effort."* (In-service teacher 15)

Theme 3: Learning Effort

Table 59.

Frequencies and Ratios by Codes under Theme 3 for In-Service Teachers

Theme 3	**Codes**	**Participants**	
		n*	**%**
Learning effort	depends on ability	8	38,1
	depends on desire	5	23,8
	requires a lot of effort	5	23,8
	depends on the techniques used	2	9,5
	depends on readiness	1	4,8
	TOTAL	**21**	**100**

* n: number of participants that mentioned each category at least once

Table 59. presents the codes emerged under the Theme Learning effort. 8 of the in-service teachers believed that learning effort depends on ability while 5 others believed that it depends on desire. Another code is about the great effort required for learning. 2 of the in-service teachers stated that learning effort depends on the techniques used and 1 of them mentioned that learning effort depends on readiness. The opinions of in-service teachers about learning effort are exemplified respectively in the following excerpts;

> *"If you have this specific ability to learn the verbal things for example, you learn them with little effort, so it depends on ability."* (In-service teacher 19)
>
> *"If the thing we will learn is among our interests, learning does not require a lot of effort"* (In-service teacher 5)
>
> *"Effort is the most important factor in the learning process. If one makes a great effort, s/he can learn the things easily."* (In-service teacher 17)
>
> *"Everyone can learn anything by using the correct techniques."* (In-service teacher 2)
>
> *"Readiness affects the effort in learning, so learning does not always require a lot of effort."* (In-service teacher 7)

Theme 4: Certainty Knowledge

Table 60.

Frequencies and Ratios by Codes under Theme 4 for In-Service Teachers

Theme 4	**Codes**	**Participants**	
		n*	**%**
	Uncertain	14	73,7
Certainty knowledge	Certain	5	26,3
	TOTAL	**19**	**100**

* n: number of participants that mentioned each category at least once

Theme 4 emerged with the answers of the in-service teachers to the question "Do you believe in the certainty knowledge and that experts can reach certain information about everything". While 14 of the in-service teachers stated that it cannot be certain, 5 of them stated that knowledge is certain. The following extracts exemplify these opinions respectively;

> *"I do not believe in the certainty knowledge because thanks to the developing technology and experiments, certain knowledge can be claimed as uncertain."* (In-service teacher 1)
>
> *"I believe in the certainty knowledge; we can reach it by trial and error."* (In-service teacher 7)

Theme 5: Knowledge Constructed by Students

Table 61.

Frequencies and Ratios by Codes under Theme 5 for In-Service Teachers

Theme 5	**Codes**	**Participants**	
		n*	**%**
	Possible through interaction	14	73,7
Knowledge constructed	Very hard	5	26,3
by students	**TOTAL**	**19**	**100**

* n: number of participants that mentioned each category at least once

When the in-service teachers were asked about the way to reach knowledge, two themes emerged. One is Knowledge constructed by students and the other one is Effectiveness of transferring information to students. 2 codes found within Theme 5 are possible through interaction mentioned by 14 in-service teachers, very hard (to construct knowledge by students) stated by 5 in-service teachers Here are three extracts that exemplify these respectively:

> *"The students can construct knowledge themselves through interacting with the others."* (In-service teacher 10)
>
> *"They can construct the knowledge by learning from and helping each other. Each student has different intelligence types and perspectives, so they can complete each other with the guidance of the teacher."* (In-service teacher 19)
>
> *"It can be constructed by the students, but it is very hard with our education system because of the inability of teachers, classroom environment and students' readiness level"* (In-service teacher 14)

Theme 6: Effectiveness of Transferring Information to Students

Table 62.

Frequencies and Ratios by Codes under Theme 6 for In-Service Teachers

Theme 6	**Codes**	**Participants**	
		n*	**%**
Effectiveness of transferring information to students	Learning occurs with repetition and practice	12	63,2
	Learning occurs with repetition	4	21
	Learning does not occur	3	15,8
	TOTAL	**19**	**100**

* n: number of participants that mentioned each category at least once

Table 62. shows the Theme 6 Effectiveness of transferring information to students which emerged with the answers of the question related to the way to reach knowledge. 12 of the in-service teachers believed that learning occurs with repetition and practice. 4 of the in-service teachers stated that learning occurs with repetition while 3 of them stated that learning does not occur. The following extracts respectively show how the opinions of in-service teachers differ:

"They can learn the transferred information better thorough repetition and practice, and these make the information permanent and learnt quickly." (In-service teacher 12)

"The information that is repeated is not forgotten" (In-service teacher 2)

"First of all, the information is not learnt but memorized when it is transferred. For this reason, instead of transferring, we should show the way to reach information and make the students use it." (In-service teacher 19)

Theme 7: Classroom Management

Table 63.

Frequencies and Ratios by Codes under Theme 7 for In-Service Teachers

Theme	**Codes**	**Participants**	
		n*	**%**
Classroom Management	Very successful	10	52,6
	Moderately	8	42,1
	Have some difficulties	1	5,2
	TOTAL	**19**	**100**

* n: number of participants that mentioned each category at least once

Table 63. shows 3 different codes emerging within the Theme 7 Classroom management. 10 of the in-service teachers stated that they are very successful in classroom management.8 of them are moderately good at classroom management and 1 of them has some difficulties while managing the classroom. The following extracts exemplify these:

"I can manage the classroom very well. I talk to the students, find out the reason of the problem and look for the solutions with them" (In-service teacher 18)

"I can successfully manage by using a variety of activities. When I feel that they are getting bored, I change the activity and the classroom atmosphere as well." (In-service teacher 17)

"I believe that I am good at managing the classroom even if it is really hard sometimes. I cannot say I am very successful, but I can mostly manage by giving

responsibilities to the problematic students like cleaning the board, making an announcement, etc." (In-service teacher 13)

"Since my classrooms are very crowded, I have difficulty to do this and I give (-) and (+) to manage their behaviours." (In-service teacher 15)

Theme 8: Student Engagement

Table 64.

Frequencies and Ratios by Codes under Theme 8 for In-Service Teachers

Theme	**Codes**	**Participants**	
		n*	**%**
Student Engagement	Very successful	12	63,1
	Moderately	6	31,6
	Have some difficulties	1	5,3
	TOTAL	**19**	**100**

* n: number of participants that mentioned each category at least once

Table 64. shows the Theme 8 Student Engagement which emerged with the answers of the question related to how successful the in-service teachers are while engaging students. 12 of the in-service teachers are very successful in classroom management. 6 of them stated that they are moderately successful and 1 of them has some difficulties in engaging students. The following extracts respectively show how successful the in-service teachers are:

"I try very hard and manage to engage the students successfully by using a variety of techniques or materials after I learn what motivates them." (In-service teacher 18)

"In order to understand why the student is not interested in the lesson, I talk to the students and learn what is the problem. By doing so, I sometimes can find solutions to engage them in the lesson." (In-service teacher 12)

"I believe that I can mostly attract their attention by using games in my lessons. But of course, it may not work all the time" (In-service teacher 16)

"Since the unsuccessful students have learned helplessness, it is not easy to achieve student engagement." (In-service teacher 19)

Theme 9: Use of Instructional Strategies

Table 65.

Frequencies and Ratios by Codes under Theme 9 for In-Service Teachers

Theme 9	**Codes**	**Participants**	
		n*	**%**
Use of instructional strategies	Very successful	15	78,9
	Moderately	3	15,8
	Have some difficulties	1	5,3
	TOTAL	**19**	**100**

* n: number of participants that mentioned each category at least once

Table 65. shows the codes related to Theme 9 Use of instructional strategies. 15 of the in-service teachers stated that they use instructional strategies successfully while 3 of them use instructional strategies moderately. 1 of them stated that it is difficult to use instructional strategies. The following extracts exemplify these opinions respectively;

> *"Using different instructional strategies always help to conduct lessons effectively, and I always manage to do it."* (In-service teacher 18)
>
> *"When I conduct my lessons in a traditional way, no one listens or participates, so I try to use various instructional strategies, and change them often."* (In-service teacher 19)
>
> *" I cannot use different instructional techniques because the classes are very crowded and I mostly try to manage the classroom."* (In-service teacher 15)

CHAPTER V

DISCUSSION

5.1. Introduction

This chapter presents the discussion of findings from the qualitative and quantitative data in the light of relevant literature. The chapter is organized according to the research questions.

Section 5.2 presents the pre-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy (research question 1; *What are the pre-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy?*).

Section 5.3 presents the in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy (research question 2; *What are the in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy?*).

Section 5.4. presents the relationship between pre-service EFL teachers' epistemological beliefs and teaching-learning conceptions, epistemological beliefs and sense of self-efficacy, teaching-learning conceptions and sense of self-efficacy (research question 3; *Is there a relationship between pre-service EFL teachers' epistemological beliefs and teaching-learning conceptions, epistemological beliefs and sense of self-efficacy, teaching-learning conceptions and sense of self-efficacy?*).

Section 5.5. presents the relationship between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions, epistemological beliefs and sense of self-efficacy, teaching-learning conceptions and sense of self-efficacy (research question 4; *Is there a relationship between in-service teachers' EFL epistemological beliefs and teaching-learning conceptions, epistemological beliefs and sense of self-efficacy, teaching-learning conceptions and sense of self-efficacy?*).

Section 5.6. presents the effects of pre-service and in-service EFL teachers' epistemological beliefs on their teaching-learning conceptions and their sense of self efficacy. (research question 5; *Is there an effect of pre-service and in-service EFL teachers' epistemological beliefs on their teaching-learning conceptions? their sense of self-efficacy?*).

Section 5.7. presents the effects of pre-service and in-service EFL teachers' teaching-learning conceptions on their sense of self-efficacy (research question 6; *Is there an effect of pre-service and in-service EFL teachers' teaching-learning conceptions on their sense of self-efficacy?*).

Section 5.8. presents the differences between pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy? (research question 7; *Is there a significant difference between pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy?*).

5.2. Pre-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy

Pre-service EFL teachers' epistemological beliefs

According to the descriptive statistics utilized to examine pre-service EFL teachers' epistemological beliefs, it is seen that the mean score for learning process/expert knowledge (dimension 1) is 3,90. The mean score for the items related to innate-fixed ability (dimension 2) is 2,56. The mean score is 3,63 for the items related to learning effort, and the mean score for certainty knowledge (dimension 4) is 2,48. These results show that pre-service teachers have relatively more sophisticated beliefs in a learning process/expert knowledge and learning effort dimensions, which means learning process and knowing how to learn is more important, and learning is possible through putting an effort.

When the qualitative findings are examined, it is found that 46,3 % of the pre-service teachers believe that learning ability is inborn and can be developed after birth. When they were asked about the more valuable one; getting the information produced by the experts or reaching the information on your own, all of the pre-service teachers believe in the importance of reaching information on your own stating 2 different reasons. Pre-service teachers were also asked whether learning requires effort and what it depends on. They all believe in learning effort; however, they state different criteria for learning efforts like the topic, desire, ability, techniques used, and readiness. When they were asked whether knowledge is certain or not, 78% of them stated that is uncertain while 22 % of them stated that is certain. The results obtained from qualitative data show that pre-service teachers mostly believe in learning effort, learning process,

uncertain knowledge, and learning ability which is inborn and can be developed after birth. These results are also in line with the quantitative results.

These results are very similar to the results found by Yalçın (2019) who investigated pre-service EFL teachers' epistemological beliefs found that pre-service teachers believed in learning effort and uncertainty knowledge, which are also in line with the results of the current study. The results found by Pan and Yelken (2016) also show that pre-service EFL teachers hold sophisticated epistemological beliefs which correspond to the learning process/expert knowledge and learning effort in the current study.

The results of the current study contradict the results found by Ismail (2017). He explored the relationship between pre-service EFL teachers' epistemological beliefs and their assessment orientations using Schommer's Epistemological Beliefs Questionnaire. In-service teachers hold naïve epistemological beliefs on "source of knowledge", "certainty of knowledge", "structure of knowledge" and "control of knowledge" dimensions, while they hold sophisticated beliefs on only the "speed of knowledge acquisition" dimension. The reason of this contradiction can be the differences in contexts, scales, and a total number of participants.

This current study has similar results with the study conducted by Kırmızı and Irgatoğlu (2021) found that pre-service EFL teachers do not believe that their abilities are fixed at birth and have doubts about whether scientists reach the truth if they try hard. Pre-service EFL teachers partially agree that knowing how to learn is more important, and they disagree with the items in the authority category.

The results of the current study contradict the results of the study conducted by Rakıcıoğlu (2005). She stated that knowledge is certain, and learning is quick and fixed at birth for pre-service EFL teachers. The reason can be the fact that Rakıcıoğlu (2005) conducted her study with pre-service teachers from all four grades mostly consisting of Freshman students, while all the pre-service teachers are senior students in the current study. Perry (1977), King and Kitchener (1994) and Schommer (1997) state that the more variety the students' educational experiences show and their grade level goes up, the more sophisticated epistemological beliefs they hold. The scale used by Rakıcıoğlu (2005) is also different from the scale used in this study.

The results are also different from the results found by Ketabi et al. (2014) who stated that pre-service EFL teachers mostly believe in innate/fixed ability and certainty knowledge. These different results might have resulted from the fact that language

teachers in Iran do not have enough autonomy to make decisions or conduct any kind of classroom action research or reflective teaching (Ketabi et al., 2014).

From the results, it can be concluded that pre-service teachers hold various epistemological beliefs. However, they hold more sophisticated beliefs in the learning process/expert knowledge and learning effort dimensions. In other words, they believe that the learning process and learning how to learn is more important than information transferred by experts and they also believe that putting an effort is necessary for learning.

Pre-service EFL teachers' teaching-learning conceptions

The quantitative results show that the mean score for constructivist conception is 4,43, while it is 2,3 for traditional conception. The qualitative findings show that 87,8 % of the pre-service teachers believe in the knowledge constructed by students if there is interaction and 12,2 % believe that students can construct knowledge if they are guided well. When they were asked whether students can learn if the information is transferred to students by the teacher, only 30% of pre-service teachers state that this is not enough for learning. This result contradicts the quantitative findings showing a huge difference between constructivist conception (4,43) and traditional conception (2,3). This can be resulting from the difference between what teachers believe and what they actually do in the classroom. Some studies (Çalışır-Gerem & Yangın-Ekşi, 2019; Farrell & Lim, 2005; Ng & Farrell, 2003; Uztosun, 2013) suggest that teachers' beliefs about language learning might be different from their actual classroom practice. Although the mean score of constructivist conception is very high compared to traditional conception in the current study, a relatively small number of teachers believe that information transfer is not enough for learning, which is consistent with constructivist conception.

The results of the current study are in line with the results of the study conducted by Yalçın (2019) who found that pre-service EFL teachers preferred student and problem centred curriculum design orientations (constructivist conception of teachers) most and subject-centred curriculum design orientations (traditional conception of teachers) least. Another study having similar results with the current study was conducted by Sarıçoban and Kırmızı (2021) who found that pre-service EFL teachers use constructivist teaching strategies (M=4,34) rather than transmission-based (traditional) teaching strategies (M=2,57).

On the other hand, these results contradict the results found by Ketabi et al. (2014). They found that pre-service EFL teachers tended to endorse traditional conceptions about (M= 4.73) rather than constructivist conceptions (M= 3.86). Ketabi et al. (2014) state that Iranian English teachers ignore focusing on four skills but prepare students for the final exam which is in multiple-choice format and consists of questions based on grammar, vocabulary, and reading comprehension. All the participants in this study were reported to have informal teaching experience. Besides these informal teaching experiences that can shape the pre-service teachers' beliefs, we can also talk about the effects of their own language learning experiences on their beliefs (Lortie, 1975) about teaching-learning conceptions as teacher candidates.

The results show that although pre-service teachers favour constructivist conception more than traditional one, their statements about traditional conception reveal that they also use some techniques peculiar to traditional, teacher-centred conception.

Pre-service EFL teachers' sense of self-efficacy

The quantitative results indicate that the mean score of efficacy for classroom management is 3,71. The mean score for the items related to efficacy for student engagement is 3,81 and the mean score of efficacy for instructional strategies is 3,85. Supporting these results, qualitative findings indicate that 33,3% of the pre-service teachers feel very efficacious, 35,7% feel moderately efficacious and 31% feel less efficacious in classroom management. 61,9% of the pre-service teachers believe that they feel very efficacious, 33,3 % feel moderately efficacious and 4,8% feel less efficacious in student engagement. Finally, in terms of using instructional strategies, 69% of the pre-service teachers feel very efficacious, 26,2% feel moderately efficacious and 4,8% feel less efficacious in classroom management.

These results support the results of the study by Dağlıoğlu (2013) investigating the differences in perceived self-efficacy and pedagogical beliefs of pre-service English teachers found that the self-efficacy levels of pre-service English teachers considering the instructional strategies, classroom management and student engagement factors were high. The results showed that the participants had the highest mean score in instructional strategies and the lowest mean score in student engagement.

Similarly, Dolgun (2016) conducted a study investigating pre-service and in-service EFL teachers' levels of self-efficacy beliefs in terms of instructional strategies,

student engagement, and classroom management. She found that self-efficacy beliefs of pre-service EFL teachers are relatively high. The highest mean score was found for instructional strategies, which is also the case in the current study, while the lowest mean score belonged to student engagement.

The results reveal that pre-service teachers feel efficacious in instructional strategies most. It is followed by student engagement while they feel least efficacious in classroom management.

5.3. In-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy

In-service EFL teachers' epistemological beliefs

According to the results of the quantitative findings, the mean score of learning process/expert knowledge is 3,93. The mean score for the items related to innate-fixed ability is 2,73 and it is 3,69 for the items related to learning effort. For certainty knowledge, the mean score is 2,73. These results show that in-service teachers have relatively more sophisticated beliefs in the learning process/expert knowledge and learning effort dimensions like pre-service teachers. They value the learning process, knowing how to learn, making an effort to learn.

Qualitative findings show that 68,4 % of the in-service teachers believed that learning ability is inborn and can be developed after birth. When they were asked about the more valuable one; getting the information produced by the experts or reaching the information on your own, all of them opted for reaching the information on your own stating different reasons. They all believed in the importance of learning effort depending on different criteria. Finally, 73,7 % of the in-service teachers stated that knowledge is uncertain while 26,3 % of them uttered the opposite.

The study conducted by Öner (2019) examined the relationship between English teachers' epistemological beliefs and teaching styles. The results indicated that in-service teachers hold sophisticated beliefs on "learning effort" and "learning ability" while they have naïve beliefs on "certainty knowledge" dimensions. These results are supported by the results of the current study. Similarly, Soleimani (2020) conducting a study investigating the impact of teachers' epistemological beliefs on their teaching styles found that EFL teachers' predominant epistemological belief is the learning process. The results of the current study are in line with these results.

It can be concluded that in-service teachers just like pre-service teachers hold various epistemological beliefs. They hold more sophisticated beliefs in the learning process/expert knowledge and learning effort dimensions than certainty knowledge and innate-fixed ability. They hold the belief that learning takes place in a process and expert knowledge should be questioned. They also believe that learning requires effort.

In-service EFL teachers' teaching-learning conceptions

The mean score for the items related to constructivist conception was found as 4,36 while it was 2,53 for the items related to traditional conception. The qualitative findings also reveal that 73,7 % of the in-service teachers believe that students can construct their knowledge through interaction while 26,3 % found it very hard. While the majority of the teachers believe in constructivist conception according to the findings described above, their views contradict their answers related to the effectiveness of transferring information to students. 63,2 % of them state that learning occurs with repetition and practice and 21 % believe that learning occurs with repetition, which is an indicator of traditional conception. The reason for this contradiction can be the belief in theory but the difference in practice (Çalışır-Gerem & Yangın-Ekşi, 2019; Farrell & Lim, 2005; Ng & Farrell, 2003; Uztosun, 2013).

These results are in line with the results obtained from the study conducted by Tavakoli et al, (2015). They found that EFL teachers were more inclined towards constructivist conception rather than traditional conception. Moreover, Zabihi and Khodabakhsh (2017) in their study found that EFL teachers believed in constructivist conception rather than traditional conception. Mardiha and Alibakhshi (2020) conducted a study investigating teachers' epistemological beliefs and conceptions of teaching and learning. They also found that teachers mostly adopt constructivist conceptions although they also have positive beliefs about traditional conception.

Kaymakamoğlu (2017) explored the in-service EFL teachers' beliefs, perceived practice, and actual classroom practice in relation teacher-centred and learner-centred teaching, and she found that most of the teachers adopted learner-centred teaching in their classrooms. These results are also supported with the results of the current study. The results of the study conducted by Doğan (2020) also indicate that English teachers use communicative teaching practices more than non-communicative practices in the classroom. The use of communicative practices and adopting a learner -centred approach are the signs of having a constructivist conception.

The results of the current study support the results of another study showing that EFL teachers mostly practice the facilitator style of teaching which is the indicator of student-centred and constructive practices of teaching (Soleimani, 2020). Öner (2019) also found that the facilitator model was favoured by in-service teachers most. The facilitator model was also adopted by the in-service teachers participated in the study conducted by Özdemir (2020). Grasha (1996) points out that facilitator teachers have students explore options, let them take responsibility and actions independently, which are also included among the characteristics of constructivist conception.

From the results, it can be concluded that in-service teachers mostly hold constructivist beliefs as teaching-learning conception. However, it can be concluded from their statements that they also use the strategies of traditional conceptions.

In-service EFL teachers' sense of self-efficacy

As for the sense of self-efficacy, the mean score of the efficacy for classroom management was found to be 3,97. The mean score for the items related to efficacy for student engagement is 3,79 and the mean score is 3,99 for the items related to efficacy for instructional strategies. According to the qualitative findings, 52,6 % of the in-service teachers feel very efficacious, 42,1 % feel moderately efficacious and 5,3% feel less efficacious in classroom management. 63,1% of the in-service teachers feel very efficacious, 31,6% feel moderately efficacious and 5,3% feel less efficacious in student engagement. Finally, in terms of using instructional strategies 78,9% of the in-service teachers feel very efficacious, 15,8% feel moderately efficacious and 5,3% feel less efficacious in classroom management.

Eslami and Fatahi (2008) used the Teacher Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001) to examine the efficacy beliefs of non-native English speaking Iranian EFL teachers found that The mean scores of the three subscales indicate that the EFL teachers in Iran rated themselves as more efficacious in instructional strategies than in managing the class and engaging students interactively. Similarly, Taşçı (2019) found that in-service teachers had high self-efficacy scores. The results showed that the participants had the highest mean score in instructional strategies, while they had the lowest mean score in student engagement. İlgör (2019) investigated the relationship between English language teachers' professional identity perceptions and self-efficacy beliefs, and found that the highest mean was for instructional strategies domain while the lowest rated domain chosen by the teachers

was classroom management. The study conducted by Yılmaz (2020) investigated the relationship between teachers' mindsets and their perceived self-efficacy beliefs, and the results showed that in-service teachers felt most efficacious in instructional strategies and least efficacious in student engagement.

Taşer (2015) explored the predictors of Turkish EFL instructors' self-efficacy beliefs at the tertiary level. When the mean scores of each sub-scale were examined, it was found that the highest mean score belonged to classroom management, while student engagement has the lowest mean score. The results of the study conducted by Can (2019) showed that in-service EFL teachers had a rather high level of self-efficacy. Classroom management was the category in which instructors reported themselves as most efficacious, and they felt least positive about using instructional strategies.

The results of the research conducted by Doğan (2020) to determine the relationship between the levels of English teachers' self-efficacy beliefs and their classroom practices indicate that the levels of English teachers' self-efficacy beliefs were quite high. English teachers were relatively more self-efficacious in student engagement compared to instructional strategies and classroom management, and self-efficacy related to classroom management had the lowest mean score.

The results of all these studies are supported by the results of the current study in terms of in-service teachers' high levels of sense of self-efficacy; however, there are differences in the mean scores of sub-scales. Most of the studies and the current study showed that in-service teachers felt slightly more efficacious in instructional strategies compared to student engagement and classroom management sub-scales. The qualitative findings also support these results. Most of the in-service teachers state that they use a variety of instructional strategies in their lessons, while they have difficulties in engaging students and managing the classroom.

The results reveal that in-service teachers have high levels of efficacy in all dimensions. They feel efficacious in instructional strategies most, which is followed by student engagement and classroom management.

5.4. The relationship between pre-service EFL teachers' epistemological beliefs and teaching-learning conceptions, epistemological beliefs and sense of self-efficacy, teaching-learning conceptions and sense of self-efficacy

The relationship between pre-service EFL teachers' epistemological beliefs and teaching-learning conceptions

The results of the Pearson correlation coefficient analysis showed the relationship between pre-service EFL teachers' epistemological beliefs and teaching-learning conceptions. The results indicate that there are high correlations between certainty knowledge and traditional conception, followed by innate-fixed ability and traditional conception. These results confirm Ketabi et al. (2013) who examined the relationship between 92 Iranian pre-service EFL teachers' epistemological beliefs and their conceptions of teaching and learning. The results also indicated that there is a significant positive correlation between traditional conceptions of teaching and learning and the participants' innate/fixed ability beliefs and certainty knowledge. These results are similar to the results found by Sarıçoban and Kırmızı (2021) who conducted a study to see potential correlations between and among 149 pre-service EFL teachers' epistemological cognitions, perceived engagement levels, and instructional preferences in the Turkish context. The findings indicate that there are positive correlations between the source of knowledge and certainty knowledge and transmission-based teaching (traditional conception). The results of the current study support the results of the study conducted by Yalçın (2019) who found that there was a significant relationship between "There is only a single truth" (certainty knowledge) sub-dimension of epistemological beliefs and subject centred curriculum design orientations which means a traditional conception of teachers having the expert knowledge (Ornstein & Hunkins, 1993), and there is a significant relationship between "There is only a single truth" sub-dimension and expert/formal authority teaching style.

Another result of the correlation analysis of this research showed high correlations between learning process/expert knowledge and constructivist conception, followed by learning effort and constructivist conception. On the other hand, there is a negative and significant correlation between certainty knowledge and constructivist conception, innate-fixed ability and constructivist conception, and learning process/expert knowledge and traditional conception, which also confirms by the results found by Ketabi et al. (2013) that there was a significant positive correlation between

pre-service teachers' constructivist teaching conceptions and their Learning Effort/Process as well as a negative correlation between constructivist conceptions and two epistemological beliefs, i.e. Innate/Fixed Ability and Certainty Knowledge. The findings also support the results found by Yalçın (2019). He found a positive relationship between "Learning depends on effort" sub-dimension of epistemological beliefs and student and problem centred curriculum design orientations. The results of the current study are also similar to the results found by Kırmızı and Irgatoğlu (2021). They found significant positive correlations between the effort dimension and student- and student–teacher interaction approaches.

Lortie (1975) states that prospective teachers mostly unconsciously internalize the teaching models of their teachers during the many years when they were students, which is called 'apprenticeship of observation'. Learning prospective teachers' epistemological beliefs and the relationship between their epistemological beliefs and teaching-learning conceptions is crucial in order to change their perspectives as they developed their apprenticeship of observation. Since the views of a prospective teacher can be changed when s/he gets help to develop new behaviour by being modelled (Korthagen, 2004), to learn her/his epistemological beliefs can be the first step to start with.

The results show that there is a relationship between traditional conception and two dimensions of epistemological beliefs which are certainty knowledge and innate-fixed ability. In other words, the more pre-service teachers believe is transmission-based teaching, the more they believe that we hold certain knowledge and our ability to learn is fixed at birth. The results also reveal that there is a relationship between constructivist conception and two dimensions; learning process/expert knowledge and learning effort, which shows that pre-service teachers' belief in constructivist conception is related to their belief in the learning process and learning effort.

<u>The relationship between pre-service EFL teachers' epistemological beliefs and sense of self-efficacy</u>

The findings indicate that there is a significant correlation between learning process/expert knowledge and efficacy for student engagement, and there is a significant correlation between efficacy for student engagement and learning effort. This means the more efficacious in student engagement the pre-service teachers are, the more they believe that knowledge is get by learning to learn, and by making effort to

learn. These results confirm the results found by Rakıcıoğlu (2005) who investigated the relationship between the epistemological beliefs and the teacher-efficacy beliefs held by pre-service EFL teachers. She found that Innate Ability Factor is in a negative and significant correlation with Teaching Efficacy, which means if you believe that learning is not an inborn ability but can be developed after birth with effort, you are more efficacious in teaching.

Efficacy for student engagement is negatively correlated with innate/fixed ability and certainty knowledge. This result is also in line with the results by Rakıcıoğlu (2005) that there was a significant negative correlation between Teaching Efficacy and two factors of Epistemological Beliefs Questionnaire; Authority Quick Learning and Certain Knowledge, which means the more pre-service teachers believe in acquiring knowledge from authority, the less they believe in their teaching efficacy.

Besides this, efficacy for instructional strategies is significantly correlated with learning process/expert knowledge and also correlated with learning effort. This result is also supported by the results that Teaching Efficacy was found to be negatively correlated with Authority-Quick Learning, Certain Knowledge, and Innate Ability factors Rakıcıoğlu (2005).

The positive relationship between efficacy for student engagement and two dimensions of epistemological beliefs; learning process/expert knowledge and learning effort and negative relationship between efficacy for student engagement and other two dimensions; innate/fixed ability and certainty knowledge reveal that pre-service teachers' efficacy level in student engagement increases belief in the learning process and learning effort increase when their belief in the learning process and learning effort increase. And also their efficacy level in student engagement decreases when their belief in certain knowledge and inborn learning ability increases. The results also indicate that the pre-service teachers have higher levels of efficacy in instructional strategies when they believe that the knowledge is not certain, and it can be acquired by effort. In other words, the more they believe in knowledge that is certain and inborn, the less efficacious they think they are in terms of instruction.

The relationship between pre-service EFL teachers' teaching-learning conceptions and sense of self-efficacy

The relationship between pre-service EFL teachers' teaching-learning conceptions and sense of self-efficacy was found with Pearson correlation coefficient

analysis. The results indicate that the highest correlations are between constructivist conception and efficacy for student engagement, followed by constructivist conception and efficacy for instructional strategies, constructivist conception, and efficacy for classroom management. Although there are no studies that examined the relationship between pre-service EFL teachers' teaching-learning conceptions and sense of self-efficacy specifically, the results of a study conducted in Israel are supported by these findings.

Wertheim and Leyser (2002) examined 191 Israeli prospective teachers' efficacy beliefs and choices of differentiated instructional strategies needed for effective teaching in diverse and inclusive classrooms. The results of this study indicate that there are low but statistically significant, positive correlations between personal teacher efficacy and each of the instructional categories for the willingness to use and perceived effectiveness. This means the higher the sense of personal self-efficacy, the more preservice teachers were willing to use a variety of instructional approaches that support the learning of students with diverse educational needs. A variety of instructional approaches in this context includes frequently use individualized and diagnostic teaching strategies; implement a variety of behaviour management techniques and communicate with parents, professionals, students, which also reflect the characteristics of constructive teaching concepts. The results of another study conducted by Gerges (2001) in the USA to identify and describe the relationship between the teacher efficacy of 32 pre-service teachers and the extent to which they vary their instructional practices showed that there were not any significant correlations between the variables of instructional variation and preservice teachers' sense of teaching-efficacy. The findings of our study contradicts this result. The reason can be the fact that the number of the participant is not high enough to represent the whole population, and the instruments used to collect data are different in these studies.

On the other hand, traditional conception and efficacy for student engagement is correlated in a negative way. This result also supports the aforementioned results that there are high correlations between constructivist conception and efficacy for student engagement since traditional and constructivist conceptions have converse practices in student engagement.

Bandura (1997) suggests that efficacy beliefs can be shaped during early learning, so learning pre-service teachers' self-efficacy beliefs and the relationship between pre-service EFL teachers' teaching-learning conceptions and sense of self-

efficacy is necessary to make the necessary intervention in shaping their efficacy beliefs, which also affects the teaching-learning conceptions of pre-service teachers. Woolfolk & Hoy (2000) claims that efficacy beliefs are resistant to change when they are established. Therefore, learning the self-efficacy beliefs of pre-service teachers' is important.

It can be concluded from the results that the more constructivist conception pre-service teachers adopt, the more efficacious they are in terms of student engagement, instructional strategies, and classroom management. On the other hand, the results show that the more traditional conception pre-service teachers adopt, the less efficacious they are in terms of student engagement.

5.5. The relationship between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions, epistemological beliefs and sense of self-efficacy, teaching-learning conceptions, and sense of self-efficacy

The relationship between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions

The findings indicate that there is a significant correlation between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions. The highest significant correlation is between the learning process/expert knowledge and constructivist conception followed by the correlations between certainty knowledge and traditional conception and the correlations between innate/fixed ability and traditional conception. There is also a negative correlation between innate/fixed ability and constructivist conception. This means the more constructivist conception in-service teachers hold, the less they hold the idea that we have an inborn ability to learn which cannot be changed later on. Besides this, the learning process/expert knowledge is negatively correlated with traditional conception, which means the more traditional conception in-service teachers hold, the less they hold the idea that learning depends on the effort we make.

All these results support the studies conducted by Öner (2019), Mardiha and Alibakhshi (2020), and Soleimani (2020). Öner (2019) investigated the relationship between 347 English teachers' epistemological beliefs and teaching styles in the Turkish context, and he found a correlation between English teachers' epistemological beliefs and teaching styles. Mardiha and Alibakhshi (2020) also explored the correlation

between 120 Iranian EFL teachers' epistemological beliefs and their conceptions of teaching and learning. The results show that the correlation between the teachers' epistemological beliefs and conceptions of teaching and learning is significant. Similarly, Soleimani (2020) conducted a study in the Iranian context and investigated 200 Iranian English language teachers' epistemological beliefs, teaching styles, and possible relationships between epistemological beliefs and teaching styles. The results indicated a significant relationship between the two variables. Although all these research showed a correlation between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions, they did not give information about the relationship between each subscale.

Korthagen's (2004) ideas that teachers' actions are determined by their beliefs about learning and teaching support the findings of this study indicating the significant correlation between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions. There are other researchers who believe that it is important to understand teacher beliefs and ideas in order to understand teacher behaviour (Clark, 1986; Pajares, 1992).

The results show that in-service teachers who have traditional conceptions believe that there is a truth that cannot be changed, and we have an inborn ability to learn that cannot be improved with effort. In addition, in-service teachers holding constructivist conception believe that the learning process and making effort to learn is more important than learning itself, and we should question the certainty knowledge. The negative correlation between innate/fixed ability and constructivist conception shows that the more constructivist conception in-service teachers hold, the less they hold the idea that we have an inborn ability to learn which cannot be changed later on. Besides this, the negative correlation between the learning process/expert knowledge and traditional conception indicates that the more traditional conception in-service teachers hold, the less they hold the idea that learning depends on the effort we make.

The relationship between in-service EFL teachers' epistemological beliefs and sense of self-efficacy

Pearson correlation coefficient analysis was used to find the relationship between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions. The results indicate that there is a significant correlation between learning process/expert knowledge and efficacy for classroom management and efficacy for

student engagement. Besides this, learning effort significantly correlates with efficacy for student engagement and efficacy for instructional strategies. There are no studies that examined the relationship between in-service EFL teachers' epistemological beliefs and sense of self-efficacy specifically; however, a study conducted by Yılmaz (2020) aims to reveal the relationship between 151 EFL teachers' mindsets and their perceived self-efficacy beliefs. The result indicates that if the teachers' self-efficacy beliefs in classroom management and instructional strategies scores increase, their mindset scores also increase showing that they have growth mindsets. This result confirms the idea that learning effort correlates with efficacy for instructional strategies, and learning process/expert knowledge correlates with efficacy for classroom management because teachers with growth mindsets believe that making effort in the learning process is important, and student mistakes are part of the learning process (Lee, 1996).

The significant correlation between learning process/expert knowledge and two dimensions; efficacy for classroom management and efficacy for student engagement show that in-service teachers have a higher level of efficacy for classroom management and student engagement when they believe in the importance of learning process and learning how to learn. Similarly, the significant correlation between learning effort and two dimensions; efficacy for student engagement and efficacy for instructional strategies reveal the relationship between the belief in the importance of learning effort and being more efficacious in engaging students and using instructional strategies.

The relationship between in-service EFL teachers' teaching-learning conceptions and sense of self-efficacy

When the correlation results are analysed, it is seen that constructivist conception is correlated with all three dimensions of sense of self-efficacy. The highest correlation is found with efficacy for student engagement followed by efficacy for classroom management and efficacy for instructional strategies. These results confirm the results found by Doğan (2020) who investigated the relationship between the levels of 152 English teachers' self-efficacy beliefs and their classroom practices. Classroom activities are divided into two categories 'communicative teaching practices' which corresponds to constructivist conception and 'non-communicative teaching practices' which corresponds to traditional conception in our study. The results indicated that there was a positive relationship between the English teachers' self-efficacy perceptions and communicative teaching practices they employed in the classroom.

These results also support the results of the research conducted by Choi and Lee (2017) who explored the relationship between 190 in-service teachers' self-efficacy and teaching practices in South Korea. They also specified teaching practices as 'communicative teaching practices' which focus on contextualized L2 communication and student interaction, with a goal of developing communicative competence, and 'non-communicative teaching practices' which refer to practices that emphasize grammar rules and translation/reading skills in a teacher-centred manner. They found that each of the three efficacy sub-scales was significantly correlated with communicative teaching. Higher efficacy beliefs in classroom management, student engagement, and instructional strategies are likely to lead teachers to employ communicative teaching.

Bandura (1997) supporting the positive effects of self-efficacy in the way teachers teach and manage the classroom states that teachers having high self-efficacy believe that if they make an effort to teach, they can manage to teach even when working with the most difficult students, instruct them and influence their performance.

However, the results of the current study indicate that there is no correlation between any of the dimensions of self-efficacy and traditional conception. Teachers who feel less capable in classroom management, student engagement, and instructional strategies are more prone to use traditional teaching strategies. The results are in line with two studies conducted by Doğan (2020) and Choi and Lee (2017). Both studies indicate that there is no significant relationship between self-efficacy beliefs of English teachers and non-communicative teaching practices employed in the classroom.

The results show that the more efficacious the in-service teachers are the more constructivist conception they adopt. On the other hand, there is no relationship between holding a traditional conception and being efficacious in classroom management, student engagement and instructional strategies.

5.6. The effects of pre-service and in-service EFL teachers' epistemological beliefs on their teaching-learning conceptions and their sense of self-efficacy

The effects of pre-service and in-service EFL teachers' epistemological beliefs on their teaching-learning conceptions

When the effect of pre-service and in-service EFL teachers' epistemological beliefs on teaching-learning conception was investigated, constructivist conception and

traditional conception were the dependent variables of the analysis separately, and epistemological beliefs were the independent ones. The results display that learning process/expert knowledge, certainty knowledge, innate-fixed ability, and learning effort made a significant contribution to pre-service EFL teachers' constructivist conception. However, while learning process/expert knowledge and learning effort positively contributed, certainty knowledge and innate-fixed ability negatively contributed to constructivist conception. The results also show that only learning process/expert knowledge made a significant contribution to in-service EFL teachers' constructivist conception. Other dimensions do not have an effect on in-service teachers' teaching-learning conceptions.

When traditional conception was the dependent variable of the analysis, and epistemological beliefs were the independent ones, certainty knowledge, and innate-fixed ability made a positive and significant contribution, and learning process/expert knowledge made a negative and significant contribution to pre-service and in-service EFL teachers' traditional conception.

These results support the results of the studies conducted by Donmoyer (2001) stating that epistemological beliefs determine how a teacher reacts in a classroom, by Schraw and Olafson (2003) who found that teachers' beliefs predict the pedagogical outcomes, by Cheng et al. (2009) who suggest that teachers' sophisticated epistemological beliefs have effects on designing activities that motivate critical thinking and learners' engagement, and by Sosu and Gray (2012) who investigated the epistemic beliefs in teachers' behaviours and their instructional preferences. They employed regression analyses and results showed that teachers' epistemic beliefs significantly predicted teachers' instructional preferences. Teachers who believed in learning effort tended to adopt a constructivist approach.

Öner (2019) found that EFL teachers' epistemological beliefs affect their teaching styles. Similarly, Soleimani (2020) investigated English language teachers' epistemological beliefs, teaching styles and possible relationships between EB and teaching styles. The results supported by the current study showed that epistemological beliefs significantly accounted for the changes in teaching styles. The results of this current study are in line with the results of two studies. Kırmızı and Irgatoğlu (2021) investigated the relation between pre-service EFL teachers' epistemological beliefs and their approaches to teaching, and they found that the learning effort dimension predicts teaching approaches of pre-service teachers. Sarıçoban & Kırmızı (2021) found that

although dimensions of epistemological beliefs do not predict constructivist conception, the ability to learn and source of knowledge predict transmission-based teaching. The instruments used in this study were the same as the ones used in the current study; however, the number of the participants were far less than the participants in the current study and only a small amount of them were senior ELT students, which can be the explanation of the contradictory results.

From the results, it can be concluded that the pre-service teachers believing that the ability to learn is flexible and can be developed after birth rather than fixed at birth prefer a constructivist approach. Similarly, they prefer the same approach when they believe that learning is a process. For the in-service teachers, those who believe that learning is a process which requires the rejection of expert knowledge transferred to students by teachers, adopt a student-centred approach. The results also show that believing that knowledge is certain and learning ability is fixed at birth results in adopting a teacher-centred, transmission-based approach while questioning the expert knowledge and accepting that learning requires process results in adopting a student-centred, constructive approach.

The effects of pre-service and in-service EFL teachers' epistemological beliefs on their sense of self-efficacy

When efficacy for classroom management was the dependent variable of the analysis, and epistemological beliefs were the independent ones, only learning process/expert knowledge made a significant contribution to pre-service and in-service EFL teachers' efficacy for classroom management. When efficacy for student engagement and instructional strategies were the dependent variable of the analysis separately, and epistemological beliefs were the independent ones, learning process/expert knowledge and learning effort made a significant contribution to pre-service EFL teachers' efficacy for student engagement and instructional strategies. However, in-service EFL teachers' epistemological beliefs did not have any significant contribution to efficacy for student engagement and instructional strategies.

Yılmaz-Tüzün and Topçu (2008) investigated the relationships among pre-service teachers' epistemological beliefs, epistemological world views, and self-efficacy beliefs. They found that the Innate Ability dimension of epistemological beliefs was found to have a significant (negative) relationship with self-efficacy, which means the less pre-service teachers believed in Innate Ability, the more they felt confident about

their science teaching. Pre-service teachers assume that they can teach science effectively when they accept students' learning ability can be developed by teachers' effective teaching practices and is not fixed at birth. This result supports that belief in the learning process results in a high self-efficacy level.

The results reveal that if pre-service and in-service teachers do not believe in the certainty of expert knowledge, but the learning process, they feel more efficacious in managing the classroom. Pre-service teachers' beliefs in learning taking place with effort and in a process contribute to their success in engaging students and using instructional strategies. However, in-service teachers' efficacy in student engagement and instructional strategies is not affected by their epistemological beliefs.

5.7. The effects of pre-service and in-service EFL teachers' teaching-learning conceptions on their sense of self-efficacy

When efficacy for classroom management, student engagement and instructional strategies were the dependent variable of the analysis separately, and teaching-learning conceptions were the independent ones, only constructivist conception made a significant contribution to pre-service and in-service EFL teachers' efficacy for classroom management, student engagement, and instructional strategies.

Özdemir (2020) explored whether self-efficacy for student engagement, classroom management, and instructional strategies could predict teaching styles. She found that both efficacy in student engagement and instructional strategies were significant predictors of facilitator teaching style which has common characteristics with constructivist conception. Choi and Lee (2017) also explored the relationship between teachers' self-efficacy and teaching practices. They found that the three efficacy predictors together contributed to using communication-focused practices. When the results of all these studies are considered, it can be concluded that constructivist conception both affects and is affected by the self-efficacy levels of service and in-service teachers.

The results show that if pre-service and in-service teachers adopt a student-centred approach, their level of self-efficacy in classroom management, student engagement and instructional strategies increase. However, traditional conception does not have any effects on the self-efficacy levels of pre-service and in-service teachers.

5.8. The differences between pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy

While epistemological beliefs, teaching-learning conceptions and sense of self-efficacy have been investigated in the related literature, there has been lack of interest in the comparison between pre-service and in-service teachers, particularly in language teaching. Therefore, this study focused on the comparison of two groups in order to enhance understanding of the difference.

When the results of the t-Test analysis are examined, it is seen that there is a significant difference between pre-service and in-service EFL teachers' epistemological beliefs on innate-fixed ability and certainty knowledge dimensions. The results show that in-service teachers scored higher than pre-service teachers on innate-fixed ability and certainty knowledge dimensions.

There are a number of studies conducted to learn pre-service and in-service teachers' epistemological beliefs separately for two groups. However, to the best of the researcher's knowledge, there has been no study that examines the comparison of two groups in terms of epistemological beliefs. Therefore, the discussions of the two groups are made separately.

Most of the studies conducted with pre-service teachers show that they are more inclined to the belief that learning requires a process and knowledge is not certain and cannot be learned if transferred from experts to students. Learning process/expert knowledge and learning effort (Pan & Yelken, 2016), learning effort, and uncertainty knowledge (Yalçın, 2019) are the dimensions pre-service teachers mostly hold sophisticated beliefs on. However, the current study has different results from some other studies. Innate/fixed ability and certainty knowledge (Ketabi et al., 2014) and control of knowledge (Ismail, 2017) are the dimensions pre-service teachers mostly hold sophisticated beliefs on.

There is a significant difference between pre-service and in-service EFL teachers' teaching-learning conceptions regarding the constructivist conception dimension and traditional conception dimension. The results show that pre-service teachers scored higher than in-service teachers on the constructivist conception dimension. In addition, in-service teachers scored higher than pre-service teachers on the traditional conception dimension. According to the results of the study conducted by Rakıcıoğlu (2005), pre-service teachers believe that knowledge is certain, and learning

is quick and fixed at birth. In-service teachers hold sophisticated beliefs on learning effort and learning ability (Öner, 2019) and learning process (Soleimani, 2020) dimensions.

Despite a number of studies investigating the teaching and learning conceptions of pre-service and in-service EFL teachers separately, there is a limited number of studies comparing the teaching and learning conceptions of both groups. Metruk (2020) investigated the Slovak pre-service and in-service EFL teachers' perceptions of a good and effective language teacher. The results indicated that pre-service teachers favoured traditional teaching more than in-service teachers. The results of the current study contradict these results. The reason can be the different contexts, the number of participants which is very low (74 pre-service teachers and 63 in-service teachers) in the study conducted with Slovak participants, and the different aims of the studies.

When the literature reviewed, it has been found that the studies conducted to find out the teaching-learning conceptions or teaching styles of the pre-service teachers indicate that pre-service teachers mostly favour constructivist teaching (Sarıçoban & Kırmızı, 2021) and student and problem centred curriculum (Yalçın, 2019). The results of a study conducted in Iran (Ketabi et al., 2014) indicate that pre-service teachers tended to endorse traditional conceptions rather than constructivist conceptions, which was explained by the researcher as ignoring the focus on four skills but on grammar, vocabulary, and reading comprehension while teaching English.

Similarly, the results of the studies conducted in EFL context with in-service teachers show that they are more inclined towards constructivist conception (Mardiha & Alibakhshi, 2020; Tavakoli et al, 2015; Zabihi & Khodabakhsh, 2017), learner-centred teaching (Kaymakamoğlu, 2017), communicative teaching practices (Doğan, 2020) and facilitator style of teaching which is the indicator of student-centred approach (Öner, 2019; Özdemir, 2020; Soleimani, 2020).

There is a significant difference between pre-service and in-service EFL teachers' sense of self-efficacy on classroom management and efficacy for instructional strategies dimensions. The results show that in-service teachers scored higher than pre-service teachers on efficacy for classroom management dimension. Similarly, in-service teachers scored higher than pre-service teachers on efficacy for instructional strategies dimension.

On the difference between pre-service and in-service teachers' sense of self-efficacy, there are only a few studies conducted in the EFL context. The current study

supports the results found by Ekizler (2003) who explored the relationship between pre-service and in-service teachers' levels of self-efficacy and teaching concerns. The findings indicate that in-service teachers' efficacy level in relation to instructional strategies and classroom management was significantly higher than the pre-service teachers' efficacy in relation to instructional strategies and classroom management. There was also a significant difference between pre-service and in-service EFL teachers concerning student engagement although no significant difference between pre-service and in-service EFL teachers' efficacy for student engagement was found in the current study. The reason why there is no significant difference between pre-service and in-service EFL teachers' efficacy for student engagement can be the fact that student engagement is believed to be a more advanced task for teachers because it requires the discovery of strategies to achieve in a gradual development (Tschannen Moran & Hoy, 2007).

This current study does not support the findings of Dolgun (2016) who investigated pre-service and in-service EFL teachers' levels of self-efficacy beliefs. Analysis of data indicated that although pre-service teachers have higher overall self-efficacy scores than in-service teachers, there is no statistically meaningful difference. The different results may stem from the number of participants in both groups; 105 in-service teachers and 75 pre-service teachers.

In a similar vein, there is a discrepancy between the findings of the current study and the study conducted by Üstünbaş (2020) who examined teacher self-efficacy and metacognitive awareness of preservice and in-service English language teachers. She found no significant difference between the two groups in their self-efficacy beliefs. The small number of participants; 96 pre-service EFL teachers and 53 English lecturers might be the reason for the contrasting results.

The results show that in-service teachers hold the beliefs that knowledge is certain and learning ability is fixed at birth more than pre-service teachers. They also favour traditional conception more than pre-service teachers while pre-service teachers adopt the constructivist conception more than in-service teachers. In addition, the results indicate that in-service teachers are more efficacious in classroom management and instructional strategies than pre-service teachers.

Overall, discussion about the difference between pre-service and in-service teachers in their epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy could not be sufficiently related to existing research since there is a lack of research. However, a comparison of the pre-service and in-service language teachers, which is neglected in the related literature could lead to a need for further research.

CHAPTER VI

CONCLUSION

6.1. Introduction

This chapter presents conclusions drawn from the findings of the study. Besides, the implications that the study has provided and the limitations of the study is shared, and suggestions for further study is offered.

6.2. Conclusions

The current study aims to investigate the pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy, the relationship among these dimensions and the differences between pre-service and in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy. To do this, a correlational research design was used and the data was collected by employing four data collection tools; Epistemological Beliefs Questionnaire (EBQ), Teaching and Learning Conceptions Questionnaire (TLCQ), Teacher Sense of Efficacy Scale (TSES), and Open-Response Questions Form.

The study was conducted with two different groups of participants chosen based on the convenience sampling method. In the first group, the quantitative data was collected from 374 4th grade students studying at the English Language Teaching departments, and 42 4th grade students voluntarily accepted to answer the open-response questions. The second group consists of 192 in-service teachers working in state schools in Gaziantep province. 19 of the 192 in-service teachers were volunteer to answer the open-response questions. After the data collection procedure, the analysis of the quantitative data was utilized using descriptive statistical techniques, Pearson Correlation analysis, regression analysis and t-test. The qualitative data collected through open response questions was analysed with content analysis. The conclusion of the research is explained regarding each research question.

Research Question 1: What are the pre-service EFL teachers' epistemological beliefs, teaching-learning conceptions and sense of self-efficacy?

The findings of the study revealed that pre-service teachers have relatively more sophisticated beliefs in the learning process/expert knowledge and learning effort dimensions, which means learning process and knowing how to learn is more important, and learning is possible through putting an effort. Both qualitative and quantitative findings indicate that they adopt the constructivist conception more than the traditional conception. As for the sense of self-efficacy beliefs, the study revealed that pre-service teachers feel efficacious in instructional strategies, student engagement, and classroom management respectively.

Research Question 2: What are the in-service EFL teachers' epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy?

In-service teachers also have relatively more sophisticated beliefs in the learning process/expert knowledge and learning effort dimensions compared to certainty knowledge and innate-fixed ability dimensions. They give importance to the learning process, knowing how to learn, and learning effort. They also favour the constructivist conception more than the traditional conception according to the qualitative and quantitative findings. In-service teachers feel efficacious in terms of instructional strategies, student engagement, and classroom management respectively.

Research Question 3: Is there a relationship between pre-service EFL teachers' epistemological beliefs and teaching-learning conceptions, epistemological beliefs, and sense of self-efficacy, and teaching-learning conceptions and sense of self-efficacy?

The results indicate that there are high correlations between certainty knowledge and traditional conception, followed by innate-fixed ability and traditional conception of pre-service teachers. There is also a significant positive correlation between traditional conceptions of teaching and learning and the participants' innate/fixed ability beliefs and certainty knowledge. Correlation analysis showed high correlations between learning process/expert knowledge and constructivist conception, followed by learning effort and constructivist conception. On the other hand, there is a negative and significant correlation between certainty knowledge and constructivist conception, innate-fixed ability and constructivist conception, and learning process/expert knowledge and traditional conception.

There are high correlations between constructivist conception and efficacy for student engagement, followed by constructivist conception and efficacy for instructional strategies, constructivist conception and efficacy for classroom management. Traditional conception and efficacy for student engagement is correlated in a negative way.

Research Question 4: Is there a relationship between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions, epistemological beliefs and sense of self-efficacy and teaching-learning conceptions and sense of self-efficacy?

The results revealed that there is a significant correlation between in-service EFL teachers' epistemological beliefs and teaching-learning conceptions. The highest significant correlation is between the learning process/expert knowledge and constructivist conception followed by the correlations between certainty knowledge and traditional conception and the correlations between innate/fixed ability and traditional conception. There is also a negative correlation between innate/fixed ability and constructivist conception. Besides this, the learning process/expert knowledge is negatively correlated with traditional conception.

The results indicate that there is a significant correlation between learning process/expert knowledge and efficacy for classroom management and efficacy for student engagement. Learning effort significantly correlates with efficacy for student engagement and efficacy for instructional strategies. Constructivist conception is correlated with all three dimensions of the sense of self-efficacy. The highest correlation is found with efficacy for student engagement followed by efficacy for classroom management and efficacy for instructional strategies. There was a positive relationship between the English teachers' self-efficacy perceptions and communicative teaching practices they employed in the classroom.

Research Question 5: Is there an effect of pre-service and in-service EFL teachers' epistemological beliefs on their teaching-learning conceptions and on their sense of the self efficacy?

The results display that learning process/expert knowledge, certainty knowledge, innate-fixed ability, and learning effort made a significant contribution to pre-service EFL teachers' constructivist conception. However, while learning process/expert knowledge and learning effort positively contributed, certainty knowledge and innate-

fixed ability negatively contributed to constructivist conception. The results also show that only learning process/expert knowledge made a significant contribution to in-service EFL teachers' constructivist conception. Certainty knowledge and innate-fixed ability made a positive and significant contribution, and learning process/expert knowledge made a negative and significant contribution to pre-service and in-service EFL teachers' traditional conception.

Only learning process/expert knowledge made a significant contribution to pre-service and in-service EFL teachers' efficacy for classroom management. Learning process/expert knowledge and learning effort made a significant contribution to pre-service EFL teachers' efficacy for student engagement and instructional strategies.

Research Question 6: Is there an effect of pre-service and in-service EFL teachers' teaching-learning conceptions on their sense of self-efficacy?

Only constructivist conception made a significant contribution to pre-service and in-service EFL teachers' efficacy for classroom management, student engagement, and instructional strategies.

Research Question 7: Is there a significant difference between pre-service and in-service EFL teachers' epistemological beliefs teaching-learning conceptions and sense of self-efficacy?

There is a significant difference between pre-service and in-service EFL teachers' epistemological beliefs on innate-fixed ability and certainty knowledge dimensions. In-service teachers scored higher than pre-service teachers on innate-fixed ability and certainty knowledge dimensions.

There is also a significant difference between pre-service and in-service EFL teachers' teaching-learning conceptions regarding the constructivist conception dimension and traditional conception dimension. The results show that pre-service teachers scored higher than in-service teachers on the constructivist conception dimension. In addition, in-service teachers scored higher than pre-service teachers on the traditional conception dimension.

A significant difference was found between pre-service and in-service EFL teachers' sense of self-efficacy on classroom management and efficacy for instructional strategies dimensions. In-service teachers scored higher than pre-service teachers on efficacy for classroom management and instructional strategies dimensions.

6.3. Implications of the Study

When the findings are taken into consideration, the present study has some implications for the stakeholders of language teacher education. To start with, this study investigated the epistemological beliefs of pre-service and in-service teachers considering the importance of beliefs in teaching and learning. Exploring the teachers' beliefs play a crucial role to understand classroom practices, change, and learning to teach (Richardson, 1996) because teachers' beliefs determine their classroom behaviour and activities (Clark & Peterson, 1986; Pajares, 1992; Richardson, 1996). Epistemological beliefs indicating how individuals come to know also affect cognitive processes of thinking and reasoning (Hofer & Pintrich, 1997), and meta-cognitive activities (Schommer, 1990), and they should also be investigated in order to better understand the teaching and learning conceptions held by teachers (Chan & Elliot, 2004). Epistemological beliefs have been divided into two categories, 'sophisticated beliefs' and 'naïve beliefs' with respect to the four dimensions of epistemological beliefs. Teachers with sophisticated beliefs believe that ability to learn is not fixed or inborn but is acquired and improved with effort. On the contrary, teachers with naïve beliefs believe that knowledge is certain and transferred from an expert and that since learning ability is inborn, it cannot be improved with effort. The results of this study indicate that both pre-service and in-service teachers hold relatively more sophisticated beliefs in the learning process/expert knowledge and learning effort dimensions compared to certainty knowledge and innate-fixed ability dimensions.

One implication of this study is to explore the pre-service teachers' epistemological beliefs before they start the teacher training program in order to take further actions to change their beliefs. Although the literature shows that epistemological beliefs are changeable over time through instruction (Conley et al. 2004; Kienhues et al., 2008; Sosu and Gray, 2012; Tanase & Wang, 2010), the significant difference between pre-service and in-service EFL teachers' epistemological beliefs in this study show that in-service teachers scored higher than pre-service teachers on innate-fixed ability and certainty knowledge dimensions, which means in-service teachers' belief in the certainty knowledge delivered by the authority is stronger. These results show that, the teacher training in-service teachers received was not effective to change their beliefs or there are some other factors affecting their beliefs in a negative way. For these reasons, the epistemological beliefs of in-service teachers

should also be investigated in order to help them hold more sophisticated beliefs with some trainings.

According to the qualitative and quantitative findings, both groups favour the constructivist conception more than the traditional one. However, qualitative findings also show that both pre-service and in-service teachers favour strategies relying upon traditional conception. The results also show that pre-service teachers scored higher than in-service teachers on constructivist conception, while in-service teachers scored higher than pre-service teachers on the traditional conception dimension. The results indicate that there are high correlations between certainty knowledge and traditional conception, followed by innate-fixed ability and traditional conception. If we consider the results that there are high correlations between certainty knowledge and traditional conception, followed by innate-fixed ability and traditional conception, we should take actions in order to change their epistemological beliefs and accordingly their preferences on teaching-learning conceptions. The results also show that there are high correlations between learning process/expert knowledge and constructivist conception, followed by learning effort and constructivist conception of both pre-service and in-service teachers. While learning process/expert knowledge and learning effort positively contributed, certainty knowledge and innate-fixed ability negatively contributed to constructivist conception. Certainty knowledge and innate-fixed ability made a positive and significant contribution, and learning process/expert knowledge made a negative and significant contribution to pre-service and in-service EFL teachers' traditional conception. People who hold more sophisticated and relativistic beliefs also hold the belief that alternative solutions can be constructed to solve problems (Kitchener, 1983; King & Kitchener, 1994), which supports the result that sophisticated beliefs positively contribute to constructivist conception.

Therefore, another implication is on the development of pre-service and in-service EFL teachers' training which should make both groups aware of their epistemological beliefs and how epistemological beliefs influence their approaches to teaching and learning. Instead of raising teacher candidates as passive technicians who transmit knowledge produced by experts without questioning or create solutions for their own context (Kumaravadivelu, 2003), reflective teachers who produce knowledge and solve problems, and reflective practitioners who take the responsibility in school change and in their own professional development (Zeichner & Liston, 1996) should be raised with teacher education programs. For this reason, pre-service teacher education

programs should be designed in a way that even if pre-service teachers start the education program with naïve epistemological beliefs, they should end up with holding sophisticated beliefs that will be permanent when they become a novice and experienced teachers. Designing an effective training program is necessary because the biggest factor affecting the success of students is teacher quality (Darling-Hammond, 2000). It has been found that changing epistemological beliefs from naive to more sophisticated is possible through relational pedagogy which gives importance to students as knowers, their experiences, explicit reflections on their epistemological beliefs, and constructivist teaching and learning conceptions (Baxter-Magolda, 1996; Brownlee, 2004). In order to help pre-service teachers make their beliefs explicit, teacher training programs should be designed in a way that student-teachers should question, discuss, analyse, experience, reflect and evaluate instead of accepting everything delivered by the experts in the field. According to Richardson (1996) "beliefs are thought to drive actions; however, experiences and reflection on action may lead to changes in and/or additions to beliefs (p. 107). In-service teachers, on the other hand, should also be aware of their epistemological beliefs and encouraged to change their naïve beliefs and hold sophisticated ones. Since developing a system contributing to good teachers and good teaching should be considered on a preferential basis, changing the beliefs held by pre-service and in-service teachers should also be the first step to implement an effective education system. Therefore, in-service training should also focus on developing sophisticated epistemological beliefs and the constructivist approach because these trainings are effective to help teacher behaviour change in a positive way leading to long-term educational and institutional benefits (Hayes, 1995; 2000; Richards & Farrell, 2005). However, research conducted to evaluate the effectiveness of in-service trainings have revealed that in-service teachers found such trainings insufficient or irrelevant (Koç, 2016; Uysal, 2012; Uztosun, 2018). Therefore, such training should be designed after a detailed needs analysis.

The findings indicate significant positive correlations between the dimensions of self-efficacy; efficacy for instructional strategies, efficacy for student engagement, efficacy for classroom management, and two dimensions of epistemological beliefs; learning process/expert knowledge, learning effort. Efficacy dimensions, on the other hand, are negatively correlated with innate/fixed ability and certainty knowledge. These results also show how important to have sophisticated epistemological beliefs in order to be efficacious teachers or teacher candidates. Learning process/expert knowledge was

found to make a significant contribution to pre-service and in-service EFL teachers' efficacy for classroom management. Besides, learning process/expert knowledge and learning effort made a significant contribution to pre-service EFL teachers' efficacy for student engagement and instructional strategies. Teacher training and in-service training programs should aim to improve the efficacy levels of pre-service teachers and in-service teachers since high efficacy levels result in positive changes both in teachers and students. Constructivist conception was also found to make a significant contribution to pre-service and in-service EFL teachers' efficacy for classroom management, student engagement, and instructional strategies. For these reasons, in order to improve the efficacy levels of both pre-service and in-service teachers, a positive change in their epistemological beliefs should be aimed. This change will result in another change in self-efficacy of both groups. Since self-efficacy is developmental and can be learned (Chan,2007), training programs can help pre-service and in-service teachers develop their self-efficacy. When they have higher efficacy, they will have the tendency to be more open to new ideas, try new methods, and have more commitment to teaching (Cousins and Walker, 2008).

6.4. Suggestions for Future Research

Based on the findings of this study, it is suggested that future research should delve into epistemological beliefs, teaching-learning conceptions, and self-efficacy in English language teaching field. It should be noted that the analysis in this study is based on the self-reporting of pre-service and in-service teachers in the questionnaires and open-response questions forms. Further investigation using more qualitative data using observations or interviews is recommended. Through the observations, how teachers conduct the lesson, what kind of approaches they use, what techniques and strategies they make use of to manage the classroom and engage the students can be learnt, and this will give the researchers ideas about teachers' teaching-learning conceptions and self-efficacy levels. Interviews with teachers also give detailed information about their epistemological beliefs, teaching-learning conceptions, and sense of self-efficacy. Another suggestion is about the implementation of an instructional intervention to change or improve pre-service or in-service teachers' epistemological beliefs, teaching-learning conceptions, and self-efficacy in future research.

REFERENCES

Akbari, R., & Moradkhani, S. (2010). Iranian English Teachers' self-efficacy: Do Academic

Degree and Experience make a difference*? Pazhuhesh-e Zabanha-ye Khareji, 56,* 25-47.

Alagözlü, N. (2016). Pre-service EFL teachers' professional self-concept: English teaching efficacy, self-reported English proficiency and pedagogical strategies: A case study in Turkish context. *Procedia-Social and Behavioral Sciences, 232,* 196-200.

Aslan, E. (2013). The role of teacher efficacy over English language teaching. (311840). Master's thesis, Çağ University]. Council of Higher Education Thesis Center.

Ashton, P. T., & Webb, R. B. (1982). Teachers' sense of efficacy: Toward an ecological model. Paper presented at the annual meeting of the American Educational Research Association, New York.

Ashton, P. T. & Webb, R. B. (1986). Teacher Motivation and the Conditions of Teaching: A Call for Ecological Reform. *Journal of Thought, 21*(02): 43-60.

Atay, D. (2007). Beginning teacher efficacy and the practicum in an EFL context. *Teacher Development, 11*(2), 203-219.

Aypay, A. (2009). Öğretmen adayı öğrencilerin öğrenme ve öğretme hakkındaki epistemolojik inançları. VIII. Ulusal Sınıf Öğretmenliği Sempozyumu içinde (s. 540-550). Eskişehir: Eskişehir Osmangazi Üniversitesi.

Aypay, A. (2011). Turkish adaptation of the teaching and learning perceptions scale and the relationships between epistemological beliefs and teaching and learning conceptions. *Educational Sciences in Theory and Practice, 11*(1), 7-29.

Baloğlu, N. & Karadağ, E. (2008). Öğretmen yetkinliğinin tarihsel gelişimi ve Ohio öğretmen yetkinlik ölçeği: Türk kültürüne uyarlama, dil geçerliği ve faktör yapısının incelenmesi. *Kuram ve Uygulamada Eğitim Yönetimi, 56,* 571-606.

Bandura, A. (1989). Human agency in Social Cognitive Theory. *American Psychologist, 44* (9), 1175-1184.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), Encylopedia of Human

Behaviour (Vol.4, pp.71-81). Academic Press. (Reprinted in H. Friedman [Ed.], Encyclopedia of mental health. San Diego: Academic Press, 1998).

Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman and Company.

Bandura, A. (1998). Teacher self-efficacy scale. Available online at: http://www.coe.ohiostate.edu/ahoy/researchinstruments.htm#Ban

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*(1), 1-26.

Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science, 1*(2), 164-180.

Barbara K. Hofer (2004) Epistemological Understanding as a Metacognitive Process: Thinking Aloud During Online Searching. *Educational Psychologist, 39*(1), 43-55, DOI: 10.1207/s15326985ep3901_5

Baxter Magolda, M. B. (1987). The affective dimension of learning: Faculty-student relationships that enhance intellectual development. *College Student Journal, 21*, 46-58.

Baxter Magolda, M. B. (1992). Knowing and reasoning in college: Gender-related patterns in students' intellectual development. Jossey Bass.

Baxter Magolda, M. B. (1996). Cognitive learning and personal development: a false dichotomy. *About Campus, 1*(3), 16-21.

Behjoo, B. M. (2013). The relationship among self-efficacy, academic self-efficacy, problem solving skills and foreign language achievement. (339110). [Master's thesis, Hacettepe University]. Council of Higher Education Thesis Center.

Belenky, M. F., Clinchy, B. M., Goldberger, N. R., & Tarule, J. M. (1986). Women's ways of knowing: The development of self-voice and mind. Basic Books.

Bonwell, C., & Eison, J. A. (1991). Active learning: Creating excitement in the classroom. http://www.ntlf.com/ html/lib/bib/gi-gdig.html

Borton, W. (1991). Empowering teachers and students in a restructuring school: A teacher efficacy interaction model and the effect on reading outcomes. Paper presented at the annual Meeting of the American Educational Research Association, Chicago.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101.

Brown, I., Jr., & Inouye, D. K. (1978). Learned Helplessness through Modelling: The role of Perceived Similarity in Competence. *Journal of Personality and Social Psychology, 36*, 900-908.

Brownlee, J. (2004). An investigation of teache education students' epistemological beliefs: developing a relational model of teaching. *Research in Education, 72,* 1-18.

Burns, A. (1996). Starting all over again: From teaching adults to teaching beginners. In D. Freeman & J. C. Richards. (Eds.), Teacher learning in language teaching (pp. 154-177). Cambridge University Press.

Busch, D. (2010). Pre-service teacher beliefs about language learning: The second language acquisition course as an agent for change. *Language Teaching Research, 4*(3), 318-337. http://dx.doi.org/10.1177/1362168810365239

Büyüköztürk, Ş. (2019). Sosyal bilimler için veri analizi el kitabı. Pegem.

Can, S. (2019). University preparatory school instructors' self-efficacy beliefs. (567521). [Doctoral Dissertation, Middle East Technical University University]. Council of Higher Education Thesis Center.

Cam, A., Topcu, M. S., Sulun, Y., Guven, G., & Arabacioglu, S. (2012). Translation and validation of the Epistemic Belief Inventory with Turkish pre-service teachers. *Educational Research and Evaluation, 18*(5), 441-458.

Canbay, O. & Beceren, S. (2012). Conceptions of Teaching Held by the Instructors in English Language Teaching Departments. *Turkish Online Journal of Qualitative Inquiry, 3*(3)

Caprara, G.V., Barbranelli, C., Steca, P., Malone, P.S. (2006). Teachers' Self-Efficacy Beliefs as Determinants of Job Satisfaction and Students' Academic Achievement: A Study at the School Level. *Journal of School Psychology, 44 (6),* 473-490.

Clark, C., & Peterson, P. (1986). Teachers' thought processes. In M. Wittrock (Ed.), Handbook of research on teaching (3rd edition, pp. 255-296). Macmillan.

Clinchy, B. M. (2002). Revisiting Women's Way of Knowing. In B. K. Hofer & P. R. Pintrich (Eds.), *Personal epistemology: The psychology of beliefs about knowledge and knowing* (pp. 63–87). Lawrence Erlbaum Associates Publishers.

Chacon, C. T. (2005). Teachers' perceived efficacy among English as a foreign language teachers in middle schools in Venezuela. *Teaching and Teacher Education, 21*, 257−272.

Chan, K. W. (2000), 'Teacher Education Students' Epistemological Beliefs: cultural perspectives on learning and teaching', paper presented at the AARE conference 'Towards an Optimistic Future', Sydney, 4–7 December, pp. 1–15.

Chan, K. (2004). Preservice Teachers' Epistemological Beliefs and Conceptions about Teaching and Learning: Cultural Implications for Research in Teacher Education. *Australian Journal of Teacher Education, 29*(1). http://dx.doi.org/10.14221/ajte.2004v29n1.1

Chan, K. W., & Elliott, R. G. (2000). Exploratory study of epistemological beliefs of Hong Kong teacher education students: Resolving conceptual and empirical issues. *Asia Pacific Journal of Teacher Education, 28*(3), 225-234.

Chan, K. W., & Elliott, R. G. (2002). Exploratory study of Hong Kong teacher education students' epistemological beliefs: Cultural perspectives and implications on beliefs research. *Contemporary Educational Psychology, 27*, 392-414.

Chan, K. W., & Elliott, R. G. (2004). Relational analysis of personal epistemology and conceptions about teaching and learning. *Teaching and Teacher Education, 20*, 817-831.

Cheng, M. M. H., Chan, K. W., Tang, S. Y. F., & Cheng, A. Y. N. (2009). Preservice teacher education students' epistemological beliefs and their conceptions of teaching. *Teaching and Teacher Education, 25*(2), 319–327.

Choi, S. (2000). Teachers Beliefs about Communicative Language Teaching and their Classroom Teaching Practices. *English Teaching, 55*(4), 3-32.

Choi, E., & Lee, J (2016). Investigating the relationship of target language proficiency and self-efficacy among non-native EFL teachers. *System, 58*, 4963.

Choi, E., & Lee, J (2017). EFL teachers' self-efficacy and teaching practices. *ELT Journal Volume 72*(2), 175-186.

Clements, D. H., & Battista, M. T. (1990). Constructivist learning and teaching. *Arithmetic Teacher, 38*(1), 34-35.

Clifford, K. E. (1992). Thinking in outdoor inquiry. ERIC digest. ERIC Development Team. www.eric.ed.gov.

Cohen, D. K. (1988). Teaching Practice: Plus Qa Change. East Lansing: Michigan State University, *National Center for Research on Teacher Education. Issue Paper 88*-3.

Coladarci, T. (1992). Teachers' Sense of Efficacy and Commitment to Teaching. *Journal of Experimental Education, 60*(4), 323–337.

Cousins, J. B., & Walker, C. A. (2000). Predictors of educators‟ valuing of systemic inquiry in schools. *Canadian Journal of Program Evaluation (Special Issue)*, 25–53.

Creswell, J. W., & Creswell, J. D. (2017). Research design: Qualitative, quantitative, and mixed methods approaches. Sage. Retrieved from http://www.drbrambedkarcollege.ac.in/sites/default/files/research-design-ceil.pdf

Crook, C. (2016). The predictive relationship between specific teacher characteristics and the perceived sense of teacher self-efficacy of non-native English speaking teachers of English as a foreign language in rural Thailand. (Unpublished doctoral dissertation) Liberty University, Lynchburg, VA, USA.

Çakıroğlu, J. & Çakıroğlu, E. (2002). Pre-service teacher efficacy beliefs regarding science teaching: A comparison of USA and Turkey. A paper presented at the annual meeting of the National Association of Research in Science Teaching, New Orleans.

Çalışır-Gerem, T. & Yangın-Ekşi, G. (2019). Teachers' declared beliefs and actual classroom practices: A case study with five EFL teachers. *ELT Research Journal, 8*(1), 22-41.

Çapa, Y., Çakıroğlu. J. & Sarıkaya, H. (2005). The Development and Validation of a Turkish Version of the Teachers‟ Sense of Efficacy Scale. *Education and Science, 30*(137), 74-81.

Dağlıoğlu, Ö. (2013). An investigation of the differences in perceived self-efficacy and pedagogical beliefs of pre-service English teachers from different universities. (370429). [Master's thesis, Başkent University]. Council of Higher Education Thesis Center.

Darling-Hammond, L. (2000). Teacher Quality and Student Achievement: A Review of State Policy Evidence. *Education Policy Analysis Archives, 8*(1), 1-44.

Dellinger, A. B., Bobbett, J. J., Olivier, D. F., & Ellett, C. D. (2008). Measuring teachers' self-efficacy beliefs: Development and use of the TEBS Self. *Teaching and Teacher Education, 24*(3), 751-766.

Dere, Y. (2017). An investigation of the relationship between epistemological and language learning beliefs. (505515). [Master's thesis, Çukurova University]. Council of Higher Education Thesis Center.

Deryakulu, D., & Büyüköztürk, Ş. (2002). Epistemolojik inanç ölçeğinin geçerlik ve güvenirlik çalışması. *Eğitim Araştırmaları, 8*, 111-125.

Deryakulu, D., & Büyüköztürk, Ş. (2005). Epistemolojik inanç ölçeğinin faktör yapısının yeniden incelenmesi: Cinsiyet ve öğrenim görülen program türüne göre epistemolojik inançların karşılaştırılması. *Eğitim Araştırmaları, 18*, 57-70.

Dewey, J. (1897). My pedagogic creed. *The School Journal, 54*(3), 77–80.

Doğan, Ç. (2020). The relationship between English teachers' self-efficacy beliefs and their classroom practices: A Southeastern case from Turkey. (628733). [Master's thesis, Gaziantep University]. Council of Higher Education Thesis Center.

Dolgun, H. (2016). A profile of pre-service and in-service EFL teachers' self-efficacy beliefs. (421497). [Master's thesis, Antalya University]. Council of Higher Education Thesis Center.

Dolgun, H., & Caner, M. (2019). Self-efficacy belief profiles of pre-service and in service EFL teachers. *Journal of Mehmet Akif Ersoy University Faculty of Education* (48), 602-623.

Donmoyer, R. (2001). Paradigm talk reconsidered. In V. Richardson (Ed.), Handbook of research on teaching, (4th ed., pp. 174– 197). Washington, D.C.: American Education Research Association.

Duffin, L. C., French, B. F., & Patrick, H. (2012). The teachers' sense of efficacy scale:

Confirming the factor structure with beginning pre-service teachers. *Teaching and Teacher Education, 28*(6), 827-834.

Dweck,C.S.,& Leggett,E.L.(1988).Asocial-cognitive approach to motivation and personality. *Psychol. Rev. 95*(2), 256–273.

Dörnyei, Z. (2007). Research methods in applied linguistics. Oxford University Press.

Ekizler, F. (2013). The relationship between teaching concerns and self-efficacy levels of pre and in-service EFL teachers. (357114). [Master's thesis, Pamukkale University]. Council of Higher Education Thesis Center.

Ercan Demirel, E. (2017). Investigating pre-service EFL teachers' self-efficacy beliefs. *Selcuk University Social Sciences Institute Journal*, (38), 221-232.

Esen, G. (2012). Englısh language teachers' general and professional sense of self-efficacy: Mersin profile. (319627). [Master's thesis, Mersin University]. Council of Higher Education Thesis Center.

Eslami, R. Z. & Fatahi, A. (2008). Teachers' Sense of Self-Efficacy, English Proficiency, and Instructional Strategies: A Study of Nonnative EFL Teachers in Iran. *TESL-EJ, 4(11),*1-19.

Evans, E. D. & Tribble, M. (1986). Perceived Teaching Problems, Self-Efficacy, and Commitment to Teaching among Preservice Teachers. *Journal of Educational Research, 80*(2), 81-85. http://dx.doi.org/10.1080/00220671.1986.10885728

Farrell, T.S.C. & Lim, P.C.P. (2005). Conceptions of grammar teaching: A case study of teacher' beliefs and classroom practices. *TESL-EJ, 9*(2), 1-13.

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (1993). How to design and evaluate research in education. McGraw-Hill.

Gerges, G. (2001). Factors influencing pre-service teachers‟ variation in use of instructional methods: Why is teacher efficacy not a significant contributor. *Teacher Education Quarterly, 4,* 71-87.

Gibson, S., & Dembo, M. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76,* 569-582.

Grasha, A. (1996). Teaching with style. Alliance Publishers.

Guskey, T. R. (1982). The Influence of Change in Instructional Effectiveness upon the Affective Characteristics of Teachers. Annual Meeting of the American Educational Research Association. New York, NY.

Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education, 4*(1), 63–69.

Gürol, A., Altunbaş, S. & Karaaslan, N. (2010). Öğretmen adaylarının öz yeterlik inançları ve epistemolojik inançları üzerine bir çalışma. *e-Journal of New World Sciences Academy, 5*(3), 1396-1404.

Han, I., Shin, W. S. & Ko, Y. (2017) The effect of student teaching experience and teacher beliefs on pre-service teachers' self-efficacy and intention to use technology in teaching, *Teachers and Teaching, 23*(7), 829-842, DOI: 10.1080/13540602.2017.1322057

Hayes, D. (1995). In-service teacher development: Some basic principles. *ELT Journal, 49*(3), 252–61.

Hayes, D. (2000). Cascade training and teachers' professional development. *ELT Journal, 54*(2), 135–45.

Heidari, F., Nourmohammedi, E. & Nowrouzi, H. (2012). On the Relationship between Iranian EFL Teachers' Self-efficacy Beliefs and Their Teaching Styles. *International Journal of Linguistics Vol. 4*(3), 536-550.

Hofer, B. K., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of educational research, 67*(1), 88-140.

Hofer, B. K. (2001). Personal epistemology research: Implications for learning and teaching.*Educational Psychology Review, 13*(4), 353-383.

Howard, B. C., McGee, S., Schwartz, N., & Purcell, S. (2000). The experience of constructivism: transforming teacher epistemology. *Journal of Research on Computing in Education, 32*(4), 455-465.

Huberman, M., & Miles, M. B. (2002). The qualitative researcher's companion. Sage.

İlgör, B. (2019). The relationship between English teachers' professıonal identity perceptions and self-efficacy beliefs. (581870). [Master's thesis, Bursa Uludağ University]. Council of Higher Education Thesis Center.

İnceçay, G., & Dollar, Y. K. (2012). Classroom management, self-efficacy and readiness of Turkish pre-service English teachers. *ELT Research Journal, 1*(3), 189-198.

Ismail, A. A. M. (2017). EFL Teachers' Epistemological Beliefs and Their Assessment Orientations. *International Journal of Applied Linguistics & English Literature, 6*(1), 100-114.

Jabbarifar, T. (2011). The Importance Of Self-Efficacy And Foreign Language Learning In The 21st Century. *Journal of International Education Research, 7*(4), 117–126.

Jehng, J. C. J. (1991). The nature of epistemological beliefs about learning. [Doctoral dissertation, University of Illinois at Urbana-Champaign].

Jehng, J. C. J., Johnson, S. D., & Anderson, R. C. (1993). Schooling and students' epistemological beliefs about learning. *Contemporary Educational Psychology, 18*, 23-35.

Johnson, K.E. (1992). The relationship between teachers' beliefs and practices during literacy instruction for non-native speakers of English. *Journal of Reading Behavior, 14*(1), 83-108.

Kahsay, T. M. (2019). EFL Students' Epistemological Beliefs and Use of Cognitive and Metacognitive Strategies in Bahir Dar University. *International Journal of Foreign Language Teaching & Research 7*(28), 69-83.

Karakaş. M. (2016). An examination of pre-service ELT teachers' sense of selfefficacy, emotional Intelligence and teacher knowledge as constituents of teacher identity construction (443536). [Doctoral dissertation, Çanakkale Onsekiz Mart University]. Council of Higher Education Thesis Center.

Kaymakamoğlu, S. E. (2017). Teachers' Beliefs, Perceived Practice and Actual Classroom Practice in Relation to Traditional (Teacher-Centered) and Constructivist (Learner-Centered) Teaching. *Journal of Education and Learning. 7*(1) 29-37.

Kern, R. G. (1995). Students' and teachers' beliefs about language learning. Foreign Language

Annals, 28(1), 71-92. http://dx.doi.org/10.1111/j.1944-9720.1995.tb00770.x

Ketabi, S., Reza, Z. & Momene, G. (2014). Pre-service English teachers' epistemological beliefs and their conceptions of teaching. *International Journal of Research Studies in Psychology. 3*(1), 3-12.

Kırmızı, Ö. & Irgatoğlu, A. (2021). An Investigation of the Relation between Pre-service EFL Teachers' Epistemological Cognition and Teaching Approaches. *Manisa Celal Bayar University Journal of Social Sciences, 19* (2); 217-232.

Kızılgüneş, B., Tekkaya, C., & Sungur, S. (2009). Modeling the relations among students' epistemological beliefs, motivation, learning approach, and achievement. *The Journal of Educational Research, 102*(4), 243-255.

Kimav A. U. (2010). An exploration of burnout and individual and collective teacher efficacy in a Turkish state university. [Master's thesis, Afyon Kocatepe University]. Council of Higher Education Thesis Center.

King, P. M., & Kitchener, K. S. (1994). Developing reflective judgment: Understanding and promoting intellectual growth and critical thinking in adolescents and adults. Jossey-Bass.

Kitchener, R. F. (1981). The nature and scope of genetic epistemology. *Philosophy of Science, 48*(3), 400-415.

Kitchener, K. S., & King, P, M. (1981). Reflective judgment: Concepts of justification and their relationship to age and education. *Journal of Applied Developmental Psychology, 2,* 89-116.

Kitchener, K. S., King, P. M., Wood, P. K., & Davison, M. L. (1989). Sequentiality and consistency in the development of reflective judgment: A six-year longitudinal study. *Journal of Applied Developmental Psychology, 10*, 73-95.

Kitchener, K. S., Lynch, C. L., Fischer, K. W., & Wood, P. K. (1993). Developmental range of reflective judgment: The effect of contextual support and practice on developmental stage. *Developmental Psychology, 29*(5), 893-906.

Koç, E. M. (2016). A General investigation of the in-service training of English language teachers at elementary schools in Turkey. *International Electronic Journal of Elementary Education, 8*(3), 455-46.

Kohonen, V. (1992). Experiential language learning: Second language learning as cooperative learner education. In D. Nunan (Ed.), Collaborative Language Learning and Teaching. Cambridge: Cambridge University Press.

Kotbaş, E. (2018). Relationshıp among English language self efficacy, academic achievement and goal orientation of English as foreign language (EFL) pre-servıice teachers. (502234). [Master's thesis, Dokuz Eylül University]. Council of Higher Education Thesis Center.

Kuhn, D. (1991). The skills of argument. Cambridge University Press.Kumaravadivelu, B. (2003). Beyond methods macro strategies for language teaching. Yale University Press.

Mack , N., Woodsong, C., Macqueen, K., M., Guest, G., & Namey, E. (2005). Qualitative Research Methods: A Data Collector's Field Guide. Family Health International.

Mackey, A. & Gass, M. S. (2005). Second language research: Methodology and Design. Lawrence Erlbaum Associates.

Mardiha, M. S. & Alibakhshi, G. (2020). Teachers' personal espistemological beliefs and their conceptions of teaching and learning: A correlational study. *Cogent Education. 7*(1), 1763230, DOI: 10.1080/2331186X.2020.1763230

Marashi, H., & Azizi Nassab, F. (2018). EFL teachers' language proficiency, classroom management, and self-efficacy. *International Journal of Foreign Language Teaching & Research, 6*(22), 89-102.

Meighan, R., & Meighan, J. (1990). Alternative roles for learners with particular reference to learners as democratic explorers in teacher education courses. *The School Field, 1*(1), 61-77.

Metruk, R. (2020). Qualities of a good and effective teacher: Slovak EFL pre-service and in-service teachers' perspectives. *Journal of Language and Education. 6*(3), 80-93.

Mızrak, P. (2019). An exploratory study on the relationship between teacher burnout and teacher self-efficacy among English language instructors. (575636). [Master's thesis, Bolu Abant İzzet Baysal University]. Council of Higher Education Thesis Center.

Miskel, C., McDonald, D., & Bloom, S. (1983). Structural and expectancy linkages within schools and organizational effectiveness. *Educational Administration Quarterly, 19*, 49−82.

Munis, M. E. (2017). The relationship between university students' epistemological and foreign language learning beliefs. (480477). [Master's thesis, Çukurova University]. Council of Higher Education Thesis Center.

Nayebi-Limoodehi, R. & Abrorreza, T. (2014). A study of epistemological beliefs of EFL learners across gender and educational level. *International Journal of Research Studies in Psychology. 3*(3), 17-28.

Ng, E.K.J., & Farrell, T.S.C. (2003). Do teachers‟ beliefs of grammar teaching match their classroom practices? A Singapore case study. In D. Deterding, A. Brown & E. L. Low (Eds.), English in Singapore: Research on grammar (pp. 128-137). McGraw Hill.

Olafson, L., & Schraw, G. (2006). Teachers' beliefs and practices within and across domains. *International Journal of Educational Research, 45*, 71 –84.

Onbaşı, M. (2014). EFL instructors' self-efficacy in relation to student achievement and student perception of instructors' efficacy in teaching writing. (372331). [Master's thesis, Marmara University]. Council of Higher Education Thesis Center.

Ornstein, A. C., & Hunkins, F. (1993). Curriculum foundations: Principles and theory In USA: Library of Congress Cataloging-in-Publication Data.

Öner, U. (2019). Investigation of the relationship between epistemological beliefs and teaching styles of English teachers (Izmir sample) (547084). [Master's thesis, Afyon Kocatepe University]. Council of Higher Education Thesis Center.

Özdemir, M. (2020). The relationship between EFL instructors' self-efficacy beliefs and their teaching styles. (630204). [Master's thesis, Ufuk University]. Council of Higher Education Thesis Center.

Özder, H. (2011). Self-efficacy beliefs of novice teachers and their performance in the classroom. *Australian Journal of Teacher Education, 36*(5), 1-15.

Pajares, M. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research, 62*(3), 307-332.

Pajares, M.F. (2002). Overview of social cognitive theory and of self-efficacy. Retrieved http:// www.emory.edu/EDUCATION/mfp/eff.html

Pajares, F., & Schunk, D. H. (2001). Self-beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement. In R. J. Riding & S. G. Rayner (Eds.), International

Perspectives on Individual Differences: Vol 2. Self Perception (pp. 239-266). Ablex Publishing.

Pan, V. L. & Yelken, T. Y. (2016). Examining preservice English language teachers' epistemological beliefs and study processes in terms of various variables. *The Journal of International Social Research, 45*(9), 650-662.

Paulsen, M. B., & Feldman, K. A. (1999). Student motivation and epistemological beliefs. *New directions for teaching and learning, 1999*(78), 17-25.

Peacock, M. (2001). Pre-service ESL teachers' beliefs about second language learning: A longitudinal study. *System, 29*(2), 177-195. http://dx.doi.org/10.1016/S0346-251X(01)00010-0

Perry, W. G. (l970). Forms of intellectual and ethical development in the college years: A scheme. Holt, Rinehart and Winston.

Perry, W. G. (1981). Cognitive and ethical growth: The making of meaning. In A. Chickering (Ed.), The modern American college (pp. 76-116). Jossey-Bass.

Phan, NTT., & Locke, T. (2015). Sources of self-efficacy of Vietnamese EFL teachers: A qualitative study. *Teaching and Teacher Education 52*, 73-82.

Piaget, J. (1950). *Introduction a l'epistemologie genetique.* Presses Univ. de France.

Piaget, J. (1953). The origins of intelligence in children. Basic Books

Piaget, J. (1970). The science of education and the psychology of the child. Basic Books.

Prawat, R. S. (1992). Teachers' Beliefs about Teaching and Learning: A Constructivist Perspective. *American Journal of Education, 100* (3), 354-395.

Rakıcıoğlu, A. Ş. (2005). The relatıonship between epistemological beliefs and teacher efficacy beliefs of English language teaching trainees. (188023). [Master's thesis, Abant İzzet Baysal University]. Council of Higher Education Thesis Center.

Roeser, R., Arbreton, A., & Anderman, E. (1993). Teacher characteristics and their effects on student motivation across the school year. Paper presented at the annual meeting of the American Educational Research Association, Atlanta.

Ryan, M. P. (1984a). Conceptions of prose coherence: Individual differences in epistemological standards. *Journal of Educational Psychology, 76*(6), 1226-1238.

Ryan, M. P. (1984b). Monitoring text comprehension: Individual differences in epistemological standards. *Journal of Educational Psychology, 76*(2), 249-258.

Richards, J. (2006). Communicative Language Teaching Today. Singapore: SEAMEO

Regional Language Centre. Richards, J., & Rodgers, T. (2001). Approaches and Methods in Language Teaching (p. 204). Cambridge University Press.

Richards, J. C., & Lockhart, C. (1996). Reflective teaching in second language classrooms.

Cambridge University Press.

Richards, J. C., & Farrell, T. S. C. (2005). Professional development for language teachers. Cambridge University Press.

Richardson, V. (1996). The role of attitudes and beliefs in learning to teach. In J. Sikula (ed.), Handbook of Research on Teacher Education (2nd ed., pp. 102−119). Macmillan.

Sabokrouh, F. (2014). The Effect of EFL Teachers' Attitude towards English Language and English Language Proficiency on Their Sense of Efficacy. *English Language Teaching 7*(1):66-74 DOI: 10.5539/elt.v7n1p66

Sarıçoban, A. & Kırmızı, Ö. (2021). Investigating the relation between pre-service EFL teachers' epistemic cognition, instructional preferences and perceived engagement beliefs, *Journal of Language and Linguistic Studies, 17*(Special issue 2), 979-993.

Sayed, M. M. & Goudarz, A. (2020). Teachers' personal epistemological beliefs and their conceptions of teaching and learning: A correlational study, *Cogent Education, 7*(1), 1763230, DOI: 10.1080/2331186X.2020.1763230

Schoenfeld, A. (1983). Beyond the purely cognitive: Belief systems, social cognitions, and metacognitions as driving forces in intellectual performance. *Cogn. Sci. 7*(4), 329–363. Schoenfeld, A. H. (1985). Mathematical Problem Solving, Academic Press.

Schommer, M. (1990). Effects of beliefs about the nature of knowledge on comprehension. *Journal of Educational Psychology, 82,* 498-504.

Schommer, M. (1992). Predictors of epistemological beliefs: Comparing adults with only a secondary education to adults with post-secondary education. Paper presented at the meeting of the Mid-Western American Educational Research Association, Chicago.

Schommer, M. (1993a). Comparisons of beliefs about the nature of knowledge and learning among postsecondary students. Research in Higher Education, 34(3), 355370.

Schommer, M. (1993b). Epistemological development and academic performance among secondary students. *Journal of Educational Psychology, 85*(3), 406-411.

Schommer, M. (1994b). Synthesizing epistemological belief research: Tentative understandings and provocative confusions. *Educational Psychology Review, 6*(4), 293- 319.

Schommer, M., Crouse, A., & Rhodes, N. (1992). Epistemological beliefs and mathematical text comprehension: Believing it is simple does not make it so. *Journal of Educational Psychology, 82,* 435-443.

Schommer, M, & Dunnell, P. A. (1994). A comparison of epistemological beliefs between gifted and non-gifted high school students. *Roeper Press, 16*(3), 207-210.

Schommer, M., & Walker, K. (1995). Are epistemological beliefs similar across domains? *Journal of Educational Psychology, 87*(3), 424-432.

Schommer-Aikins, M. (2004). Explaining the epistemological belief system: Introducing the embedded systemic model and coordinated research approach. *Educational Psychologist, 39*(1), 19-29.

Schommer-Aikins, M., & Easter, M. (2008). Epistemological beliefs' contributions to study strategies of Asian Americans and European Americans. *Journal of Educational Psychology, 100*(4), 920.

Schraw, G., Bendixen, L.D., & Dunkle, M.E. (2002). Development and validation of the epistemic belief inventory (EBI). In B.K. Hofer & P.R. Pintrich (Eds.), Personal epistemology: The psychology of beliefs about knowledge and knowing (pp. 261–275). Lawrence Erlbaum Associates.

Serin, N. (2019). Self-efficacy beliefs of English language teachers: to be or not to be a nonnative speaker. (560246). [Master's thesis, Bahçeşehir University]. Council of Higher Education Thesis Center.

Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology, 99*(3), 611-625.

Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education, 26*(4), 1059-1069.

Smith, D. B. (1996). Teacher decision making in the adult ESL classroom. In D. Freeman &

J.C. Richards. (Eds.), Teacher learning in language teaching (pp. 197-216). Cambridge University Press.

Soleimani, N. (2020). ELT teachers' epistemological beliefs and dominant teaching style: a mixed method research. *Soleimani Asian-Pacific Journal of Second and Foreign Language Education. 5*(12), https://doi.org/10.1186/s40862-020-00094-y

Sosu, E., & Gray, D. (2012). Investigating change in epistemic beliefs: An evaluation of the impact of student teachers' beliefs on instructional preference and teaching competence. *International Journal of Educational Research, 53*, 80 –92.

Stein, M. K., & Wang, M. C. (1988). Teacher development and school improvement: the process of teacher change. *Teaching and Teacher Education, 4*, 171–187.

Stewart, T., Allen, K., & Bai, H. (2010). Service-learning and pre-internship teacher efficacy: A comparison of two designs. In J. Keshen, B. Moely, & B. Holland (Eds.), Research for what?

Sünger, M. (2007). An analysis of effiacy beliefs, epistemologıcal beliefs and attitudes towards science in preservice elementary science teachers and secondary science teachers. (201693). [Master's thesis, Middle East Technical University]. Council of Higher Education Thesis Center.

Swars, S.L. (2005). Examining perceptions of mathematics teaching effectiveness among elementary preservice teachers with differing levels of mathematics teacher efficacy. *Journal of Instructional Psychology, 32 (2),* 139-147.

Şahin, F. E., & Atay, D. (2010). Sense of efficacy from student teaching to the induction year. *Procedia-Social and Behavioral Sciences, 2*(2), 337-341.

Şekerci, S. A. (2011). Self-efficacy levels of prep-school instructors and its predictors. [Master's thesis, Middle East Technical University]. Council of Higher Education Thesis Center.

Tanriverdi, B. (2012). Pre-service teachers' epistemological beliefs and approaches to learning. *Procedia Social and Behavioral Sciences*, 46, 2635-2642.

Taşçı, Ç. (2019). A multivariable examination of the relationships between efl instructors' self-efficacy beliefs and motivation in higher education. (548274). [Doctoral Dissertation, Middle East Technical University]. Council of Higher Education Thesis Center.

Taşer, D. (2015). Predictors of university EFL instructors' self-efficacy beliefs in Turkey. (399819). [Doctoral Dissertation, Middle East Technical University]. Council of Higher Education Thesis Center.

Tavakoli, M., Zabihi, R. & Ghadiri, M. (2015). Adopting a Mixed Methods Approach to Assessing Foreign Language Teachers' Teaching/Learning Conceptions and Their Language Teaching Biases. *Curr Psychol 34*:791–802 DOI 10.1007/s12144-014-9291-9.

Tella, A. (2008). Teacher Variables as Predictors of Academic Achievement of Primary School Pupils Mathematics. *International Electronic Journal of Elementary Education*, 1, 16-33.

Topkaya, E. & Yavuz, A. (2011). Democratic Values and Tecahre Self-efficacy Perceptions: A Case of Pre-service English Language Teachers in Turkey. *Australian Journal of Teacher Education, 36*(8) 32-49.

Trigwell, K., Prosser, M., & Ginns, P. (2005). Phenomenographic pedagogy and a revised Approaches to Teaching Inventory. *Higher Education Research and Development, 24*(4), 349-360.

Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*, 202–248.

Tschannen-Moran, M., & Woolfolk-Hoy, A. (2001). Teacher-efficacy: Capturing an elusive construct. Teaching and Teacher Education, 17, 783–805.

Tschannen-Moran, M., & Woolfolk Hoy, A. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education, 23,* 944-956.

Tsigilis N, Grammatikopoulos V., & Koustelios A. (2007). Applicability of the Teachers' Sense of Efficacy Scale to educators teaching innovative programs. *International Journal of Educational Management, 21*(7), 634-642.

Uysal, H. H. (2012). Evaluation of an in-service training program for primary-school language teachers in Turkey. *Australian Journal of Teacher Education 37*(7), 14–29.

Uztosun, M. S. (2013). An interpretive study into elementary school English teachers' beliefs and practices in Turkey. *Turkish Online Journal of Qualitative Inquiry, 4*, 20-33.

Uztosun, M. S. (2018). In-service teacher education in Turkey: English language teachers' perspectives. *Professional Development in Education, 44* (4), 557-569.

Ülkümen, H.A. (2013). The predictors of English language preparatory school instructors' self-efficacy beliefs [Master's thesis, Middle East Technical University]. Council of Higher Education Thesis Center.

Üredi, L. (2006). İlköğretim I. ve II. Kademe Öğretmenlerinin Öğretim Stili Tercihlerine Göre Öğretmenlik Mesleğine İlişkin Algılarının İncelenmesi. (187743). [Doctoral Dissertation, Marmara University]. Council of Higher Education Thesis Center.

Üstünbaş, Ü. (2020). Pre-service and in-service English language teachers' self-efficacy beliefs and metacognitive awareness. (618878). [Doctoral Dissertation, Hacettepe University]. Council of Higher Education Thesis Center.

Vygotsky, L.S. (1962). Thought and language. Cambridge. MIT Press.

Vygotsky, L.S. (1978). Mind in society: the development of higher psychological processes. Harvard University Press.

Watkins, D. (1998). A cross-cultural look at perceptions of good teaching: Asia and the West. In J. J. F. Forest (Ed.), University teaching: International perspectives (pp. 19-34). New York: Garland Publishing Inc.

Wertheim, C., & Leyser, Y. (2002). Efficacy beliefs, background variables, and differentiated instruction of Israeli pre-service teachers. *Journal of Educational Research, 96*(1), 54–63.

Wood, D., Bruner, J., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Child Psychiatry*, 17, 89−100.

Wood, P., & Kardash, C. (2002). Critical elements in the design and analysis of studies of epistemology. In Personal epistemology: The psychology of beliefs about knowledge and knowing, Edited by: Hofer, B. K. and Pintrich, P. R. 231–260. Lawrence Erlbaum Associates.

Yalçın, F. (2019). The relationship between epistemological beliefs, curriculum design orientations and teaching styles of pre-service English teachers. (586149). [Master's thesis, Bolu Abant İzzet Baysal University]. Council of Higher Education Thesis Center.

Yılmaz, A. (2020). An investigation into the relationship between English preparatory teachers' mindsets and their self-efficacy beliefs. (640496). [Master's thesis, İstanbul Sabahattin Zaim University]. Council of Higher Education Thesis Center.

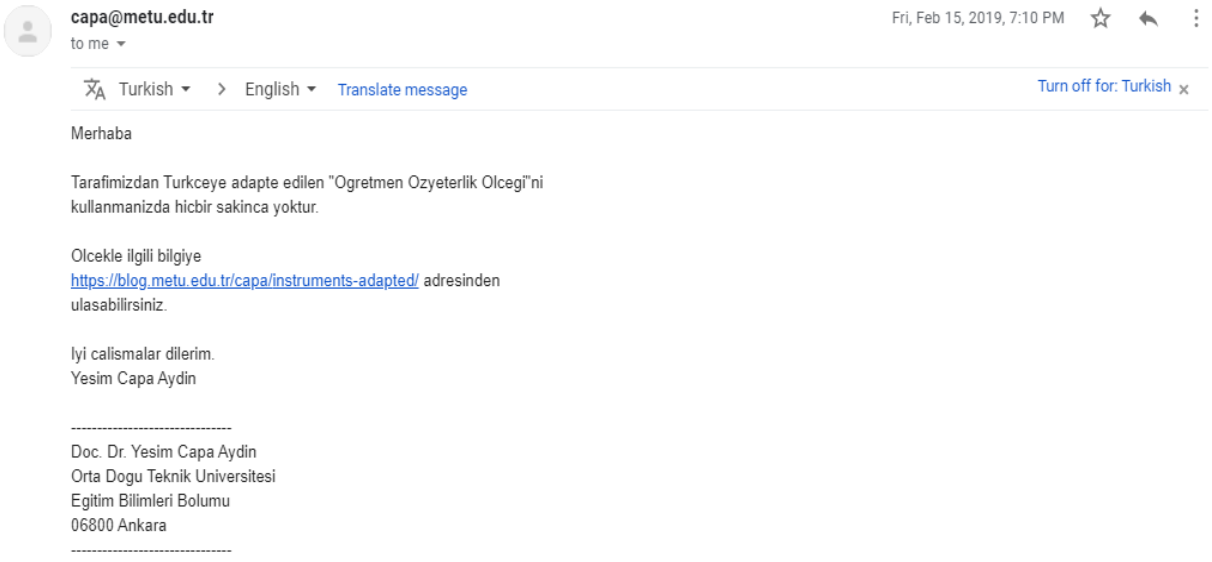
Yilmaz-Tuzun, O. & Topcu, M. S. (2008) Relationships among Preservice Science Teachers' Epistemological Beliefs, Epistemological World Views, and Self-efficacy Beliefs, *International Journal of Science Education, 30*(1), 65-85, DOI: 10.1080/09500690601185113

Yılmaz, H. & Sahin, S. (2011). Pre-Service teachers' Epistemological beliefs and Conceptions of Teaching. *Australian Journal of Teacher Education.* 36 (1), 73-85.

Zabihi, R. & Khodabakhsh, M. (2017). L2 Teachers' Traditional versus Constructivist Teaching/Learning Conceptions and Teacher Burnout. *Curr Psychol 38*:347–353.

Zeichner, K. M. & Liston, D. P. (1996). Reflective teaching: An introduction. Lawrence Erlbaum Associates Publishers.

Appendix 2. Permissions obtained for the usage of the Teachers' Sense of Self-Efficacy Scale



capa@metu.edu.tr Fri, Feb 15, 2019, 7:10 PM

to me

Turkish › English Translate message Turn off for: Turkish

Merhaba

Tarafimizdan Turkceye adapte edilen "Ogretmen Ozyeterlik Olcegi"ni kullanmanizda hicbir sakinca yoktur.

Olcekle ilgili bilgiye https://blog.metu.edu.tr/capa/instruments-adapted/ adresinden ulasabilirsiniz.

Iyi calismalar dilerim.
Yesim Capa Aydin

Doc. Dr. Yesim Capa Aydin
Orta Dogu Teknik Universitesi
Egitim Bilimleri Bolumu
06800 Ankara

Appendix 3. Epistemological Beliefs Questionnaire

Sevgili öğretmenler ve öğretmen adayları,

Bu veri toplama aracı sizlerin epistemolojik inanç, öğrenme-öğretme yaklaşımları ve öz-yeterlik seviyelerinizin belirlenmesi amacıyla hazırlanmıştır. Anket sonuçlarından kişisel amaçlar için yararlanılmayacağından forma isim yazmanıza gerek yoktur. Siz değerli katılımcıların anket sorularını içtenlikle cevaplaması, araştırmanın sağlıklı sonuç vermesi açısından büyük önem taşımaktadır. Katılım gönüllülük esasına bağlı olup dilediğinizde çekilebilirsiniz.

Yardım ve katkılarınız için teşekkür ederim.

Şeyma YILDIRIM
Çukurova Üniversitesi
Sosyal Bilimler Enstitüsü
Doktora Öğrencisi

1. Cinsiyetiniz Kadın_____ Erkek_____
2. Yaşınız _____
3. Öğrenim Durumunuz Lisans öğrencisi_____ Lisans mezunu_____
   Yüksek lisans mezunu _____ Doktora mezunu _____
4. Lisans programından mezun olduğunuz /olacağınız üniversitenin adı

   _____
5. Meslekteki kıdem yılınız 0-5_____ 5-10____ 10 ve üzeri_____

Appendix 3. Epistemological Beliefs Questionnaire (continued)

EPİSTEMOLOJİK İNANÇLAR ÖLÇEĞİ					
Aşağıda epistemolojik inançlar hakkında bazı görüşlere yer verilmektedir. Lütfen her ifadeyi dikkatle okuyunuz. İfadelere katılma derecenizi uygun seçeneği işaretleyerek gösteriniz.	Hiç katılmıyorum (1)	Katılmıyorum (2)	Kararsızım (3)	Katılıyorum (4)	Çok Katılıyorum (5)
1. Yetenek doğuştan belirlenmiş olduğundan, daha akıllı olmak için yapabileceğin çok fazla bir şey yoktur.	1	2	3	4	5
2. Kişi çok çalışmazsa az öğrenir.	1	2	3	4	5
3. Bilimsel bilgi kesindir ve değişmez.	1	2	3	4	5
4. Herkes nasıl öğreneceğini öğrenmeye gereksinim duyar.	1	2	3	4	5
5. Alan uzmanları ne söylerlerse söylesinler şüphe duymam.	1	2	3	4	5
6. Eğer insanlar bir şeyi hemen anlayamazlarsa, çabalamayı sürdürmelidirler.	1	2	3	4	5
7. Okula "ortalama" bir yetenekle başlayan öğrenciler okul hayatları boyunca "ortalama" bir öğrenci olarak kalırlar.	1	2	3	4	5
8. Bir kişi yeterince çok çabalarsa, dersin özünü anlar.	1	2	3	4	5
9. Akıllılık yanıtları bilmek değil, fakat yanıtları nasıl bulacağını bilmektir.	1	2	3	4	5
10. Nasıl öğreneceğini bilmek, kişinin sahip olduğu özelliklerinden daha önemlidir.	1	2	3	4	5
11. Alanında uzman kişilerin verdikleri öneriler bile sık sık sorgulanmalıdır.	1	2	3	4	5
12. Bilgi edinme sürecini ve derslerin özünü anlamak bilgi edinmekten daha önemlidir.	1	2	3	4	5
13. Öğretmenlerin/ders verenlerin benim bildiğimden çok daha fazlasını bildiklerinin oldukça farkındayım ve kendi yargılarıma güvenmek yerine onların söylediklerinin daha önemli olduğuna katılıyorum.	1	2	3	4	5
14. İnsanlar bilgi yerine anlama sürecine odaklanırlarsa, daha iyi öğrenirler.	1	2	3	4	5
15. Bir şeyi öğrenmek gerçekten uzun zaman ve çaba ister.	1	2	3	4	5

Appendix 3. Epistemological Beliefs Questionnaire (continued)

16. Ne kadar öğreneceğini en çok gösterdiğin çaba belirler.	1	2	3	4	5
17. Bilim adamları yeterince çok çabalarlarsa, neredeyse her konudaki gerçekleri bulabilirler.	1	2	3	4	5
18. Gerçekten akıllı olan öğrenciler, okulda başarılı olmak için çok fazla çalışmak zorunda kalmazlar.	1	2	3	4	5
19. Öğrenme yeteneği doğuştan getirilir.	1	2	3	4	5
20. Bazen ders kitaplarında otoritelerin yazdıkları bilgilere inanmıyorum.	1	2	3	4	5
21. Öğrenme yeteneklerimiz doğuştan belirlenmiştir.	1	2	3	4	5
22. Alanında uzman kişilerin gerçekte ne kadar bildikleri hakkında sık sık düşünürüm.	1	2	3	4	5
23. Bazı insanlar iyi öğreniciler olarak doğarlar, diğerleri sınırlı yetenekleri içinde sıkışıp kalırlar.	1	2	3	4	5
24. Benim bildiğimden farklı bir şey söyleseler dahi yine de alan uzmanlarına inanıyorum.	1	2	3	4	5
25. Bazı çocuklar bazı dersleri/konuları öğrenmede doğuştan yeteneksizdirler.	1	2	3	4	5
26. Bilim adamları araştırmayı sürdürürlerse eninde sonunda gerçekleri bulacaklardır.	1	2	3	4	5
27. İlerlemek çok fazla çalışma ister.	1	2	3	4	5
28. Herhangi biri yeterince çok çalışırsa, zor kavramları/konuları anlayabilir.	1	2	3	4	5
29. Tüm öğrenme durumlarına uygulanabilecek bir öğrenme yöntemi olabileceğine inanıyorum.	1	2	3	4	5
30. Bir kişinin doğuştan getirdiği yeteneği onun yapabileceklerini sınırlandırır.	1	2	3	4	5

Appendix 4. Teaching-Learning Conceptions Questionnaire

ÖĞRETME - ÖĞRENME ANLAYIŞLARI ÖLÇEĞİ					
Aşağıda öğretme ve öğrenme hakkında bazı görüşlere yer verilmektedir. Lütfen her ifadeyi dikkatle okuyunuz. İfadelere katılma derecenizi uygun seçeneği işaretleyerek gösteriniz.	Hiç katılmıyorum (1)	Katılmıyorum (2)	Kararsızım (3)	Katılıyorum (4)	Çok Katılıyorum (5)
1. Bir öğretmen için öğrencilerinin hislerini anlamak önemlidir.	1	2	3	4	5
2. Öğretim, öğrencileri bilgiyi keşfetmeye cesaretlendirmek değil, öğrencilere doğru ve tam bilgi sağlamaktır.	1	2	3	4	5
3. Öğrenme demek, öğrencilerin keşfetmek, tartışmak ve düşüncelerini ifade etmek için bol fırsatlara sahip olmaları demektir.	1	2	3	4	5
4. İyi sınıflar öğrencileri düşünmeye ve birbirleriyle etkileşmeye teşvik edecek demokratik ve özgür bir atmosfere sahiptir.	1	2	3	4	5
5. Öğrenme, öğretmenin öğrettiklerini hatırlamak demektir.	1	2	3	4	5
6. Etkili öğretim, öğrencileri daha fazla tartışmaları ve etkinliklere katılmaları için cesaretlendirir.	1	2	3	4	5
7. Öğretme için geleneksel ders verme yöntemi en iyi yöntemdir. Çünkü daha fazla bilgi içermektedir.	1	2	3	4	5
8. Öğretme, basitçe ders konularını anlatmak, sunmak ve açıklamaktır.	1	2	3	4	5
9. İyi öğretim, sınıfta en çok öğretmen konuştuğunda oluşur.	1	2	3	4	5
10. Öğrenme, aslında tekrar ve uygulamadan oluşur.	1	2	3	4	5
11. Öğrencilerin fikirleri önemlidir ve bu fikirler üzerinde dikkatle	1	2	3	4	5

Appendix 4. Teaching-Learning Conceptions Questionnaire (continued)

12. Öğretmenler öğrencilerin yaptıkları şeyler üzerinde daima kontrol sahibi olmalıdırlar.	1	2	3	4	5
13. Bir öğretmenin başlıca görevi öğrencilere bilgi vermek, onlara tekrarlar ve uygulamalar yaptırmak ve ne hatırladıklarını test etmektir.	1	2	3	4	5
14. Ders süresince öğrencilerin ilgisini ders kitapları üzerinde tutmak önemlidir.	1	2	3	4	5
15. Her çocuk biriciktir ya da özeldir ve kendi özel gereksinimlerine uygun bir eğitim alma hakkına sahiptir.	1	2	3	4	5
16. İyi öğrenciler derste sessiz olurlar ve öğretmenin öğrettiklerini takip ederler.	1	2	3	4	5
17. Öğretimin odağı bilgi alışverişi değil, öğrencilerin kendi deneyimleri ile bilgiyi yapılandırmalarına yardım etmektir.	1	2	3	4	5
18. En iyisi öğretmenlerin sınıfta olabildiği kadar çok otorite uygulamalarıdır.	1	2	3	4	5
19. Farklı öğrencilere farklı amaçlar ve beklentiler uygulanmalıdır.	1	2	3	4	5
20. Öğrenme esas olarak, olabildiği kadar çok bilgiyi özümlemeyi içerir.	1	2	3	4	5
21. Öğrencilerin kontrol altında tutulmaları için daima azarlanmaları gerekir.	1	2	3	4	5
22. İyi öğretmenler, yanıtları kendi başlarına düşünüp bulmaları için öğrencilerini daima cesaretlendirirler.	1	2	3	4	5
23. Bir öğretmenin görevi, öğrencilerin yanlış öğrendikleri kavramları kendi kendilerine düzeltmelerini sağlamak değil, öğretmenin hemen düzeltmesidir.	1	2	3	4	5
24. Öğrenciler kontrol altına alınmadıkça, öğrenme gerçekleşemez.	1	2	3	4	5
25. İyi öğretmenler daima öğrencilerinin kendilerini önemli hissetmelerini sağlarlar.	1	2	3	4	5
26. Öğretmeyi öğrenmek, basitçe ders anlatanların fikirlerini sorgulamadan uygulamak demektir.	1	2	3	4	5
27. Bir şeyi daha sonra hatırlayabildiğimde onu gerçekten öğrenmişimdir.	1	2	3	4	5
28. Öğretim, öğrenciler arasındaki bireysel farklılıklara uyacak kadar esnek olmalıdır.	1	2	3	4	5
29. Bir öğretmenin başlıca rolü, öğrencilere bilgi aktarmaktır.	1	2	3	4	5
30. Öğrencilere fikirlerini ifade etmeleri için pek çok fırsat verilmelidir.	1	2	3	4	5

Appendix 5. Teacher Sense of Self-Efficacy Scale

ÖĞRETMEN ÖZYETERLİK ÖLÇEĞİ					
Aşağıda öğretmen özyeterliği hakkında bazı görüşlere yer verilmektedir. Lütfen her ifadeyi dikkatle okuyunuz. İfadelere katılma derecenizi uygun seçeneği işaretleyerek gösteriniz.	Yetersiz (1)	Çok az yeterli (2)	Biraz yeterli (3)	Oldukça yeterli (4)	Çok yeterli (5)
1. Çalışması zor öğrencilere ulaşmayı ne kadar başarabilirsiniz?	1	2	3	4	5
2. Öğrencilerin eleştirel düşünmelerini ne kadar sağlayabilirsiniz?	1	2	3	4	5
3. Sınıfta dersi olumsuz yönde etkileyen davranışları kontrol etmeyi ne kadar sağlayabilirsiniz?	1	2	3	4	5
4. Derslere az ilgi gösteren öğrencileri motive etmeyi ne kadar sağlayabilirsiniz?	1	2	3	4	5
5. Öğrenci davranışlarıyla ilgili beklentilerinizi ne kadar açık ortaya koyabilirsiniz?	1	2	3	4	5
6. Öğrencileri okulda başarılı olabileceklerine inandırmayı ne kadar sağlayabilirsiniz?	1	2	3	4	5
7. Öğrencilerin zor sorularına ne kadar iyi cevap verebilirsiniz?	1	2	3	4	5
8. Sınıfta yapılan etkinliklerin düzenli yürümesini ne kadar iyi sağlayabilirsiniz?	1	2	3	4	5
9. Öğrencilerin öğrenmeye değer vermelerini ne kadar sağlayabilirsiniz?	1	2	3	4	5
10. Öğrettiklerinizin öğrenciler tarafından kavranıp kavranmadığını ne kadar iyi değerlendirebilirsiniz?	1	2	3	4	5
11. Öğrencilerinizi iyi bir şekilde değerlendirmesine olanak sağlayacak soruları ne ölçüde hazırlayabilirsiniz?	1	2	3	4	5
12. Öğrencilerin yaratıcılığının gelişmesine ne kadar yardımcı olabilirsiniz?	1	2	3	4	5
13. Öğrencilerin sınıf kurallarına uymalarını ne kadar sağlayabilirsiniz?	1	2	3	4	5
14. Başarısız bir öğrencinin dersi daha iyi anlamasını ne kadar					

Appendix 5. Teacher Sense of Self-Efficacy Scale (continued)

13. Öğrencilerin sınıf kurallarına uymalarını ne kadar sağlayabilirsiniz?	1	2	3	4	5
14. Başarısız bir öğrencinin dersi daha iyi anlamasını ne kadar sağlayabilirsiniz?	1	2	3	4	5
15. Dersi olumsuz yönde etkileyen ya da derste gürültü yapan öğrencileri ne kadar yatıştırabilirsiniz?	1	2	3	4	5
16. Farklı öğrenci gruplarına uygun sınıf yönetim sistemi ne kadar iyi oluşturabilirsiniz?	1	2	3	4	5
17. Derslerin her bir öğrencinin seviyesine uygun olmasını ne kadar sağlayabilirsiniz?	1	2	3	4	5
18. Farklı değerlendirme yöntemlerini ne kadar kullanabilirsiniz?	1	2	3	4	5
19. Birkaç problemli öğrencinin derse zarar vermesini ne kadar iyi engelleyebilirsiniz?	1	2	3	4	5
20. Öğrencilerin kafası karıştığında ne kadar alternatif açıklama ya da örnek sağlayabilirsiniz?	1	2	3	4	5
21.Sizi hiçe sayan davranışlar gösteren öğrencilerle ne kadar iyi baş edebilirsiniz?	1	2	3	4	5
22. Çocuklarının okulda başarılı olmalarına yardımcı olmaları için ailelere ne kadar destek olabilirsiniz?	1	2	3	4	5
23. Sınıfta farklı öğretim yöntemlerini ne kadar iyi uygulayabilirsiniz?	1	2	3	4	5
24. Çok yetenekli öğrencilere uygun öğrenme ortamını ne kadar sağlayabilirsiniz?	1	2	3	4	5

Appendix 6. Open-Response Questions Form

Sevgili öğretmenler ve öğretmen adayları,

Aşağıda sizlerin epistemolojik inanç, öğrenme-öğretme yaklaşımları ve öz-yeterlik seviyelerinizin belirlenmesi amacıyla hazırlanmış olan soruları içtenlikle cevaplamanız beklenmektedir. Yardım ve katkılarınız için teşekkür ederim.

Şeyma YILDIRIM

Çukurova Üniversitesi

İngiliz Dili Eğitimi

Doktora Öğrencisi

1. Size göre öğrenme yeteneği doğuştan getirdiğimiz bir özellik midir yoksa sonradan edindiğimiz bir özellik midir? Lütfen nedenlerini belirterek açıklayınız. .....
2. Size göre daha değerli olan, otoriteden edinilen bilgiye sahip olmak mıdır yoksa bilgiyi nasıl öğreneceğini öğrenmek midir? Lütfen nedenlerini belirterek açıklayınız. .....
3. Size göre bir şeyi öğrenmek ne kadar çaba gerektirir? Lütfen nedenlerini belirterek açıklayınız. .....
4. Bilginin kesinliğine ve bilim adamları ya da alan uzmanlarının her konuda gerçek bilgiye ulaşabileceğine inanır mısınız? Lütfen nedenlerini belirterek açıklayınız. .....

Appendix 6. Open-Response Questions Form (continued)

6. Size göre öğrenciler öğretmenin aktardığı bilgiyi tekrar edip uygulama yaparsa öğrenme gerçekleşir mi? Lütfen nedenlerini belirterek açıklayınız. .....

7. Sınıfta problem yaratan öğrencilerin davranışlarını kontrol etmeyi ne kadar iyi sağlayabilirsiniz? Bunu sağlayabilmek için neler yaparsınız? .....

8. Başarısız ve ilgisiz öğrencilerin başarı ve ilgilerini artırmayı ne kadar iyi sağlayabilirsiniz? Bunu sağlayabilmek için neler yaparsınız? .....

9. Sınıfta farklı öğretim yöntemleri kullanarak öğrencilerin öğrettiklerinizi kavramasını ne kadar iyi sağlayabilirsiniz? Bunu sağlayabilmek için neler yaparsınız? .....

Appendix 7. Permission obtained from Gaziantep Provincial Directorate of National Education

T.C.
GAZİANTEP VALİLİĞİ
İl Milli Eğitim Müdürlüğü

Sayı : 34659092-605.01-E.22468475 13/11/2019
Konu : Araştırma İzin Talebi
(Şeyma YILDIRIM)

VALİLİK MAKAMINA

İlgi: Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Müdürlüğünün 11.11.2019 tarihli ve 42256 sayılı yazısı.

Çukurova Üniversitesi Sosyal Bilimler Enstitüsü İngiliz Dili Eğitimi Anabilim Dalı Doktora Öğrencisi Şeyma YILDIRIM'ın Dr. Öğr Üyesi Adnan BİÇER'in danışmanlığında Yürümüğü "Öğretmen Adayları ve Öğretmenlerin Epistemolojik İnançları, Öğrenme-Öğretme Anlayışları ve Öz- Yeterlikleri" konulu anket uygulama isteği kapsamında, İlimiz Şahinbey ve Şehitkamil ilçesinde bulunan ilk ve ortaokullarda görev yapan ingilizce öğretmenlerine yönelik araştırma çalışma isteği, ilgi yazıda belirtilmektedir.

Bu kapsamda Çukurova Üniversitesi Sosyal Bilimler Enstitüsü İngiliz Dili Eğitimi Anabilim Dalı Doktora Öğrencisi Şeyma YILDIRIM'ın Dr. Öğr Üyesi Adnan BİÇER'in danışmanlığında anket uygulama isteği, Bakanlığımız Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 22.08.2017 tarihli ve 12607291 (2017/25) sayılı genelgesi kapsamında değerlendirilmiş olup; araştırmacının, araştırmasının bitiminden itibaren 15 gün içerisinde araştırma sonuçlarını 2 kopya halinde CD içerisinde Müdürlüğümüze bildirmesi şartıyla, İlimiz Şahinbey ve Şehitkamil ilçesinde bulunan ilk ve ortaokullarda görev yapan ingilizce öğretmenlerine anket uygulama isteği eğitim öğretimi aksatmayacak şekilde gönüllülük esasına göre uygulanması, Müdürlüğümüz Ar-Ge bürosu bünyesinde oluşturulan komisyonun uygunluk raporu doğrultusunda uygun mütalaa edilmektedir.

Makamınızca da uygun görüldüğü takdirde; Olurlarınıza arz ederim.

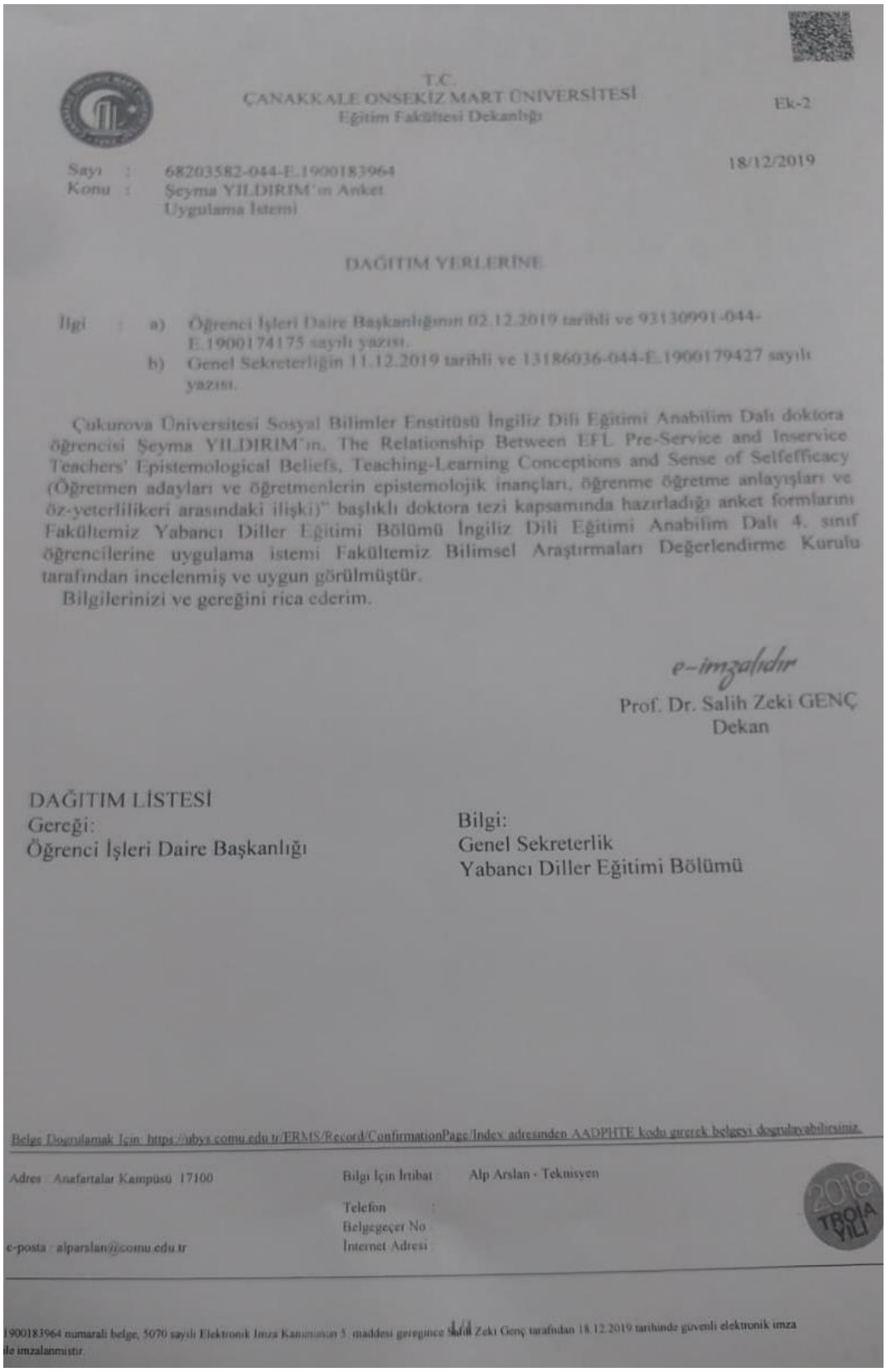
Cengiz METE
İl Milli Eğitim Müdürü

OLUR

Rızvan EROĞLU
Vali a.
Vali Yardımcısı

Adres: Gaziantep Valiliği İl Milli Eğitim Müdürlüğü
Elektronik Ağ: www.gaziantep.meb.gov.tr
e-posta: gaziantep@meb.gov.tr
Bilgi için: M.Ç.Yet M. A. TİRYAKİOĞLU
Mem S.AYYILDIZ Dah.4450
Tel: 0 (342) 231 10 38
Faks: 0 (342) 232 24 10
Bu evrak güvenli elektronik imza ile imzalanmıştır. https://evraksorgu.meb.gov.tr adresinden 0da3-7278-3cc6-b914-9484 kodu ile teyit edilebilir.

Appendix 8. Permission obtained from Çanakkale 18 Mart University



T.C.
ÇANAKKALE ONSEKİZ MART ÜNİVERSİTESİ
Eğitim Fakültesi Dekanlığı

Ek-2

Sayı : 68203582-044-E.1900183964
Konu : Şeyma YILDIRIM'ın Anket Uygulama İstemi

18/12/2019

DAĞITIM YERLERİNE

İlgi : a) Öğrenci İşleri Daire Başkanlığının 02.12.2019 tarihli ve 93130991-044-E.1900174175 sayılı yazısı.
b) Genel Sekreterliğin 11.12.2019 tarihli ve 13186036-044-E.1900179427 sayılı yazısı.

Çukurova Üniversitesi Sosyal Bilimler Enstitüsü İngiliz Dili Eğitimi Anabilim Dalı doktora öğrencisi Şeyma YILDIRIM'ın, The Relationship Between EFL Pre-Service and Inservice Teachers' Epistemological Beliefs, Teaching-Learning Conceptions and Sense of Selfefficacy (Öğretmen adayları ve öğretmenlerin epistemolojik inançları, öğrenme öğretme anlayışları ve öz-yeterlilikeri arasındaki ilişki)" başlıklı doktora tezi kapsamında hazırladığı anket formlarını Fakültemiz Yabancı Diller Eğitimi Bölümü İngiliz Dili Eğitimi Anabilim Dalı 4. sınıf öğrencilerine uygulama istemi Fakültemiz Bilimsel Araştırmaları Değerlendirme Kurulu tarafından incelenmiş ve uygun görülmüştür.
Bilgilerinizi ve gereğini rica ederim.

e-imzalıdır
Prof. Dr. Salih Zeki GENÇ
Dekan

DAĞITIM LİSTESİ
Gereği:
Öğrenci İşleri Daire Başkanlığı

Bilgi:
Genel Sekreterlik
Yabancı Diller Eğitimi Bölümü

Belge Doğrulamak İçin: https://ubys.comu.edu.tr/ERMS/Record/ConfirmationPage/Index adresinden AADPHTE kodu girerek belgeyi doğrulayabilirsiniz.

Adres : Anafartalar Kampüsü 17100
e-posta : alparslan@comu.edu.tr
Bilgi İçin İrtibat : Alp Arslan - Teknisyen
Telefon :
Belgegeçer No :
İnternet Adresi :

2018 TROİA YILI

1900183964 numaralı belge, 5070 sayılı Elektronik İmza Kanununun 5. maddesi gereğince Salih Zeki Genç tarafından 18.12.2019 tarihinde güvenli elektronik imza ile imzalanmıştır.

1/1

Appendix 9. Permission obtained from Çukurova University

T.C.
EĞİTİM FAKÜLTESİ DEKANLIĞI
Yabancı Diller Eğitimi Bölüm Başkanlığı

Sayı : 54767575-044/
Konu : Uygulama İzni (Şeyma YILDIRIM)

EĞİTİM FAKÜLTESİ DEKANLIĞINA

İlgi : 91770517 - 28/11/2019 tarihli, 171669 sayılı ve "Uygulama İzni (Şeyma YILDIRIM)" konulu yazı,

İngiliz Dili Eğitimi Anabilim Dalı doktora öğrencisi Şeyma YILDIRIM'ın, danışmanı Dr. Öğr. Üyesi Adnan BİÇER yönetiminde hazırladığı "The relationship between EFL pre-service and inservice teachers' epistemological beliefs, teaching-learning conceptions and sense of selfefficacy (Öğretmen adayları ve öğretmenlerin epistemolojik inançları, öğrenme-öğretme anlayışları ve özyeterlilikleri arasındaki ilişki)" başlıklı çalışmasının uygulamasını İngilizce Öğretmenliği programı 4. Sınıf öğrencileriyle uygulama yapma isteği uygun bulunmuştur.
Gereğini arz ederim.

e-imzalıdır
Prof.Dr. Tahir BALCI
Bölüm Başkanı

Adres:Çukurova Üniversitesi Eğitim Fakültesi 01330 Balcalı, Sarıçam / Adana
Telefon:0 (322) 338 60 55 Faks:0 (322) 338 64 60
e-Posta:ef@cu.edu.tr Elektronik Ağ:www.cu.edu.tr
Bilgi için: Sana GÖK
Unvanı: İdari Büro Görevlisi
Tel No: 0 (322) 338 60 55

Appendix 10. Permission obtained from Gaziantep University



evrak Tarih ve Sayısı: 20/05/2019-27929

T.C.
GAZİANTEP ÜNİVERSİTESİ
Yabancı Diller Eğitimi Bölüm Başkanlığı

Sayı :48959558/604.01.02/
Konu :Anket Uygulama İzni

GAZİANTEP EĞİTİM FAKÜLTESİ DEKANLIĞINA

Çukurva Üniversitesi Sosyal Bilimler Enstitüsü İngiliz Dili Eğitimi Anabilim Dalı Doktora öğrencisi Şeyma YILDIRIM'ın ekte belirtilen çalışmasını Bölümümüz İngilizce Öğretmenliği 4.sınıf öğrencileriyle uygulama yapması uygundur.
Gereğini bilgilerinize arz ederim.

Doç.Dr. F.Filiz Y.TILFARLIOĞLU
Yabancı Diller Eğitimi Bölümü Başkanı

EK :
1 Adet Yazı

16/05/2019 : S.ARICAK

Gaziantep Üniversitesi Gaziantep Eğitim Fakültesi
Tel: 0 (342) 360 45 72
Fax: 0 (342) 317 37 79
e-Posta :
egtfakdek@gantep.edu.tr

Bu belge 5070 sayılı Elektronik İmza Kanununun 5. Maddesi gereğince güvenli elektronik imza ile imzalanmıştır.

1 / 1

Appendix 11. Permission obtained from Hatay Mustafa Kemal University

Üzerinde doküman numarası bulunmayan dokümanlar kontrolsüz dokümandır.

HATAY MUSTAFA KEMAL ÜNİVERSİTESİ
SOSYAL VE BEŞERİ BİLİMLER BİLİMSEL ARAŞTIRMA VE YAYIN ETİĞİ KURULU
KARARLARI

TOPLANTI TARİHİ	TOPLANTI SAYISI	KARAR NO	SAYFA NO
13.06.2019	08	03	1

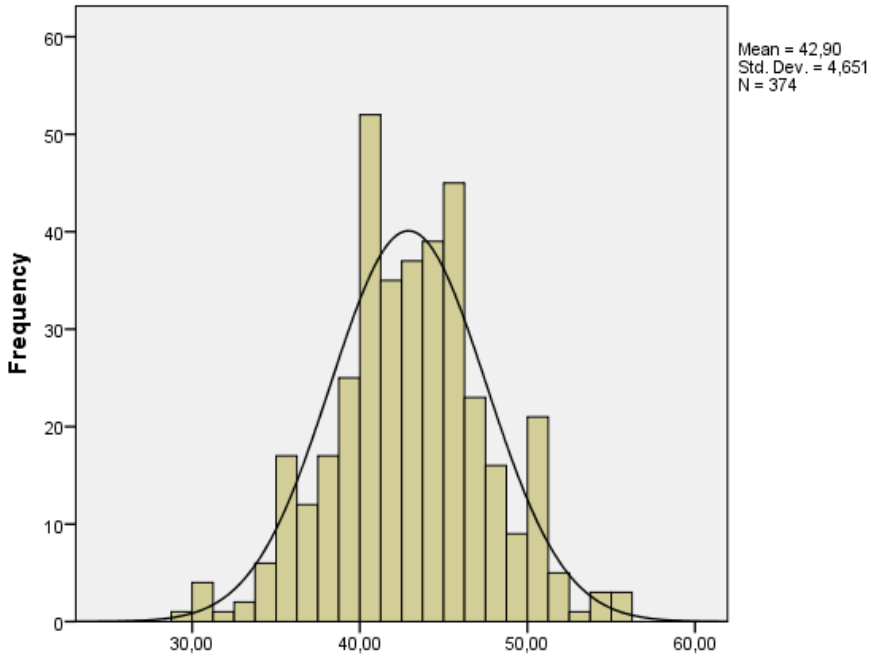
Üniversitemiz Sosyal ve Beşeri Bilimler Bilimsel Araştırma ve Yayın Etiği Kurulu 13.06.2019 tarihinde Başkan Prof. Dr. Seval YAVUZ başkanlığında toplanarak aşağıdaki kararları almıştır.

KARAR-3: Çukurova Üniversitesi öğretim üyesi Dr. Öğr. Üyesi Adnan BİÇER koordinatörlüğünde Şeyma YILDIRIM tarafından gerçekleştirilecek olan **"The Relationship Between EFL Pre-Service and Inservice Teachers' Epistemological Beliefs, Teaching-Learning Conceptions and Sense of Selfefficacy (Öğretmen Adayları ve Öğretmenlerin Epistemolojik İnançları, Öğrenme Öğretme Anlayışları ve Öz-Yeterlilikleri Arasındaki İlişki)"** başlıklı tez çalışması için uygulanacak anket formu Yükseköğretim Kurumları Bilimsel Araştırma ve Yayın Etiği Yönergesi kapsamında değerlendirilmiş olup, anket formuna "katılım gönüllülük esasına bağlı olup dilediğinizde çekilebilirsiniz" ibaresinin eklenmesi suretiyle uygulanmasının uygun olduğuna oybirliğiyle karar verilmiştir.

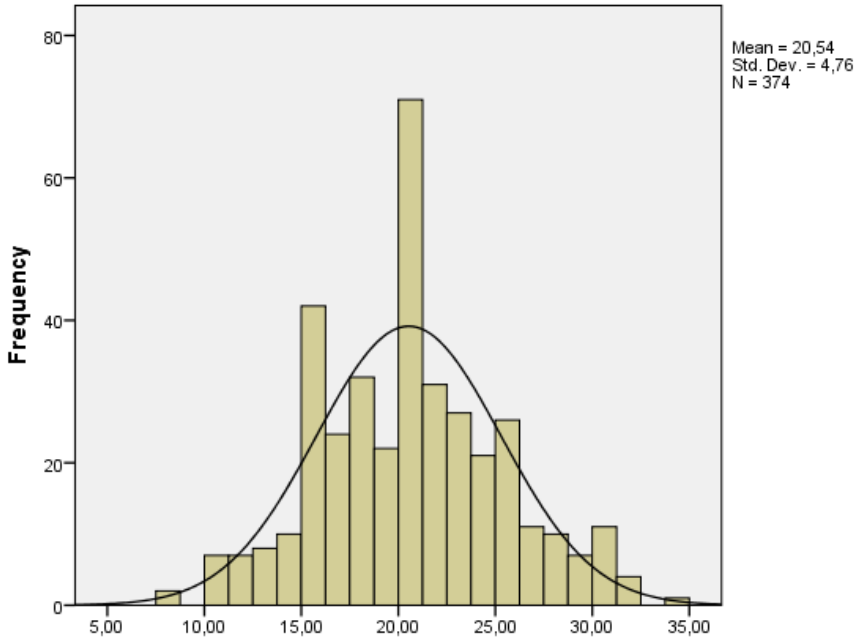
İMZA Prof. Dr. Seval YAVUZ Başkan		
İMZA Prof. Dr. Mehmet ÖZBİRECİKLİ Bşk.Yrd.	İZİNLİ Prof. Dr. Jale ÖZTÜRK ÜYE	İZİNLİ Prof. Dr. Hatice PAMİR ÜYE
İMZA Prof. Dr. Melis MİNİSKER ÜYE	İMZA Prof. Dr. Murat TEK ÜYE	İMZA Prof. Dr. Tülin URAL ÜYE

Appendix 12. Histograms for Sub-Scales of Epistemological Beliefs Scale for Pre-service Teachers

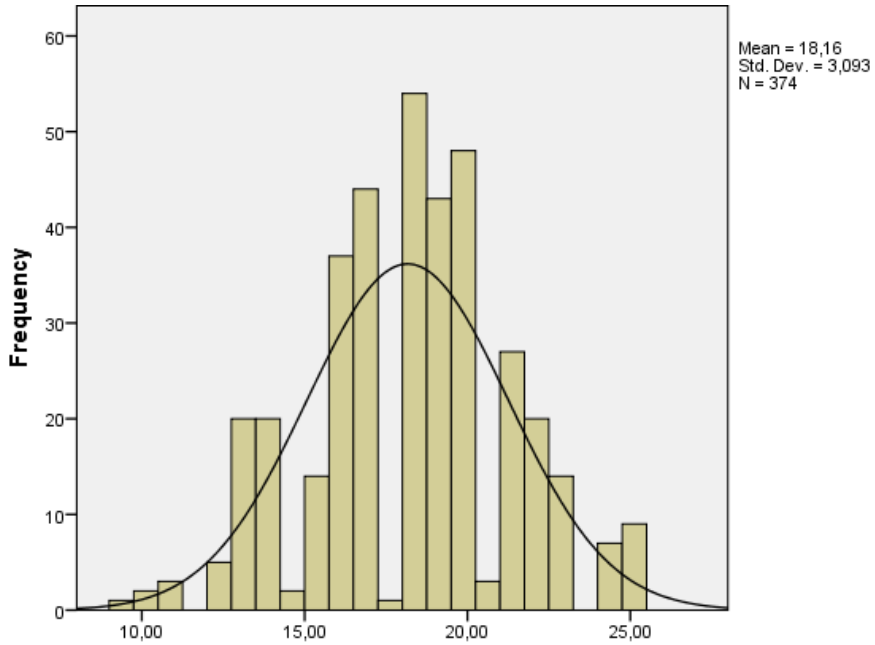
Learning Process/Expert Knowledge Sub-Scale



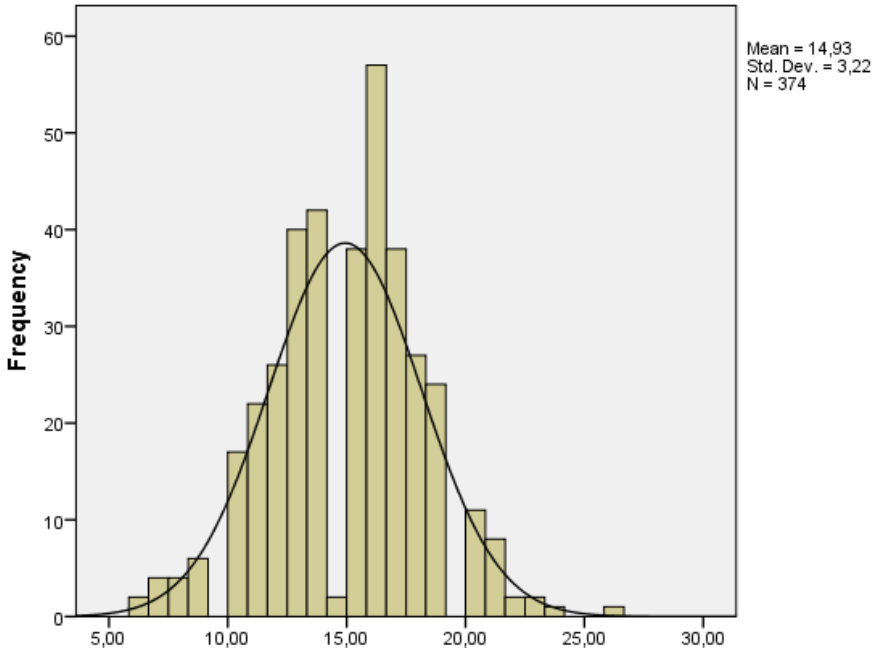
Innate/Fixed Ability Sub-Scale



Learning Effort Sub-Scale

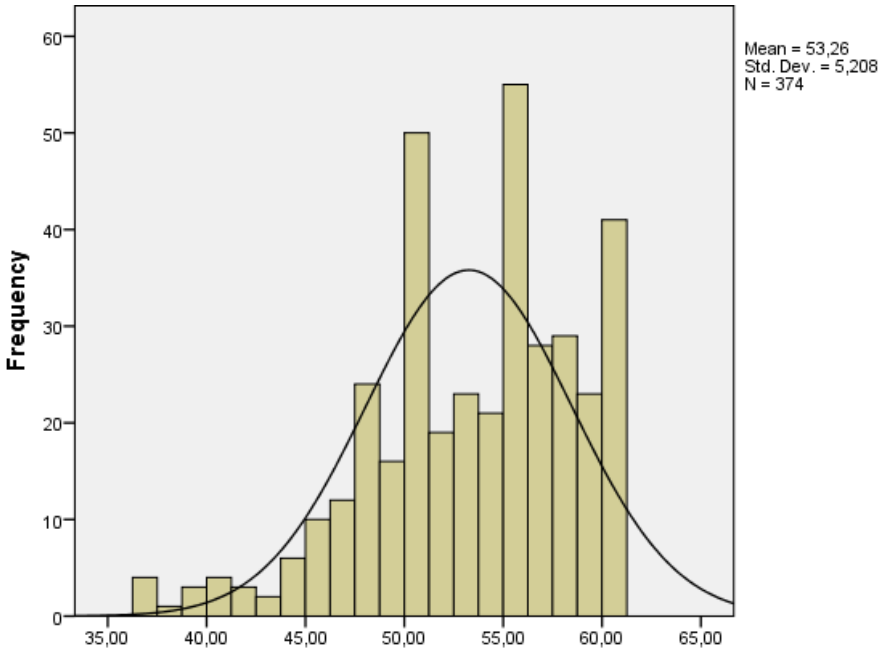


Certainty Knowledge Sub-Scale

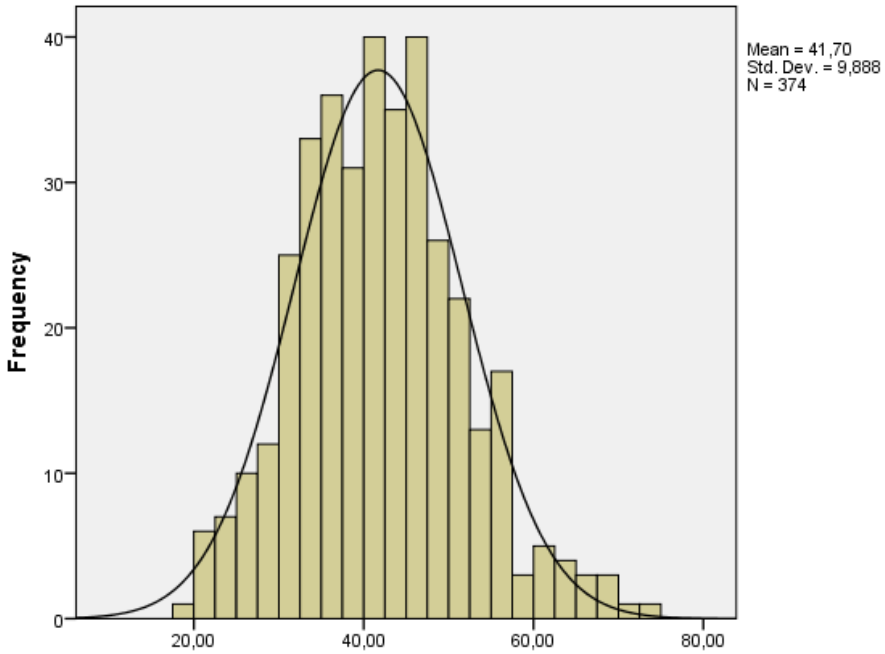


Appendix 13. Histograms for Sub-Scales of Teaching-Learning Conceptions Scale for Pre-service Teachers

Constructivist Conception Sub-Scale

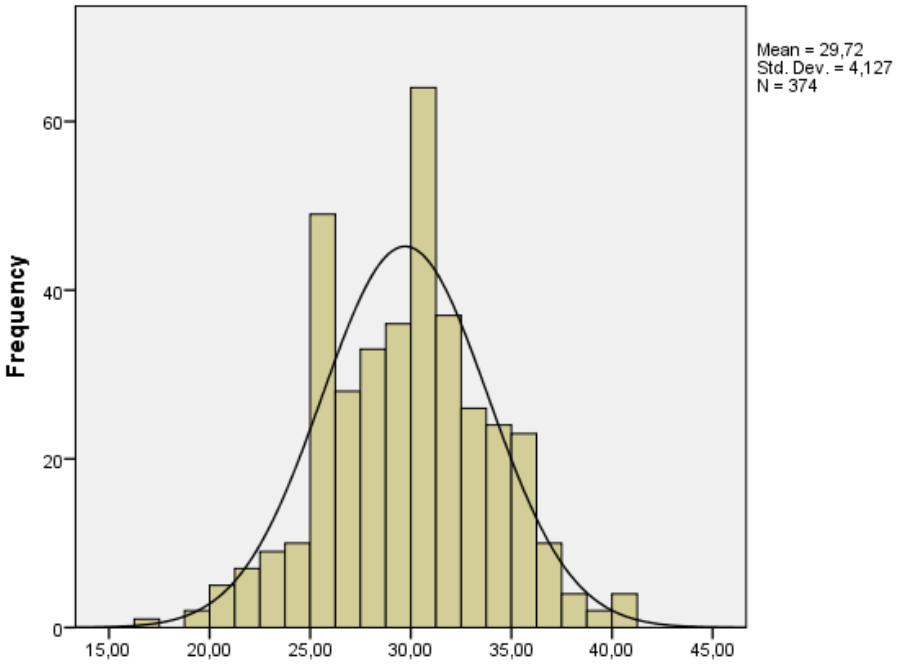


Traditional Conception Sub-Scale

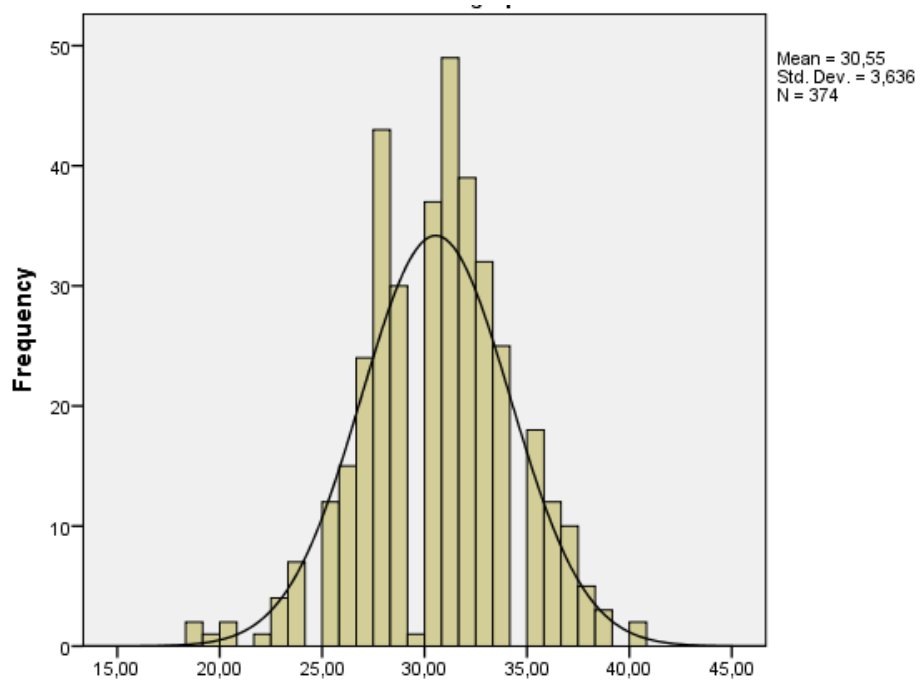


Appendix 14. Histograms for Sub-Scales of Sense of Self-Efficacy Scale for Pre-service Teachers

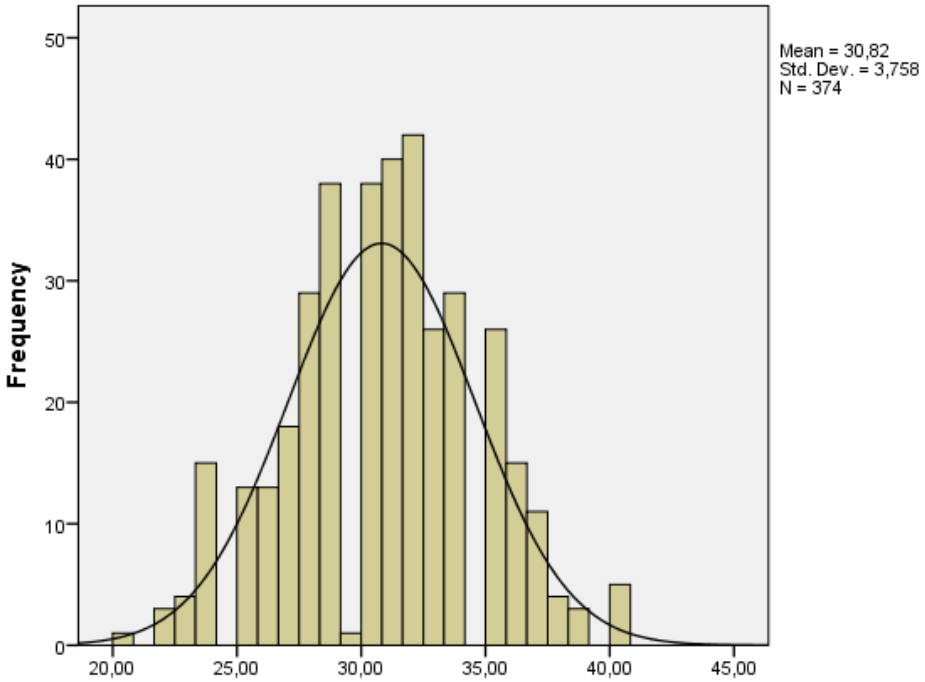
Classroom Management Sub-Scale



Student Engagement Sub-Scale

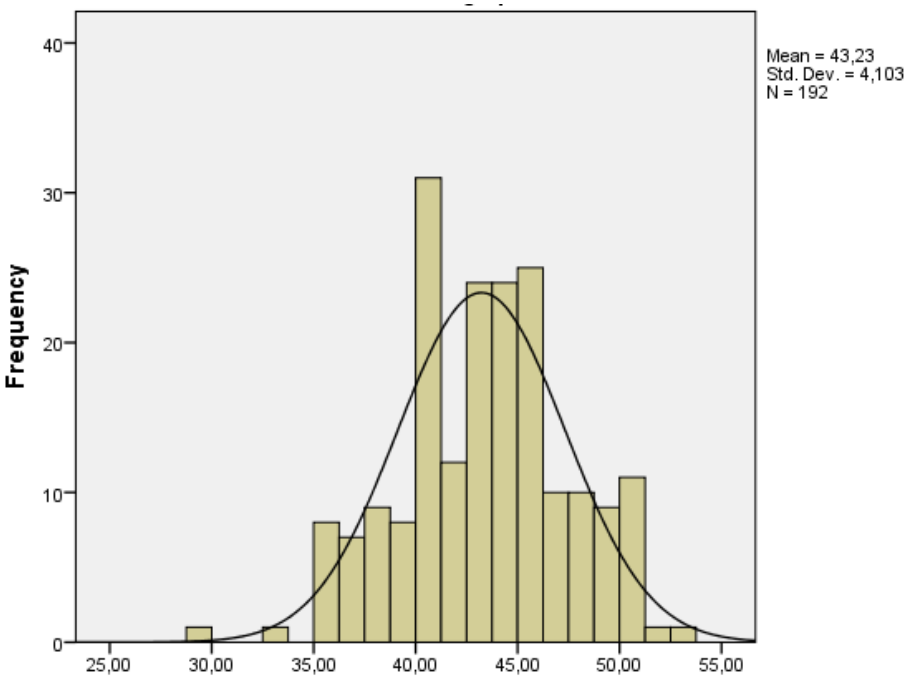


Instructional Strategies Sub-Scale

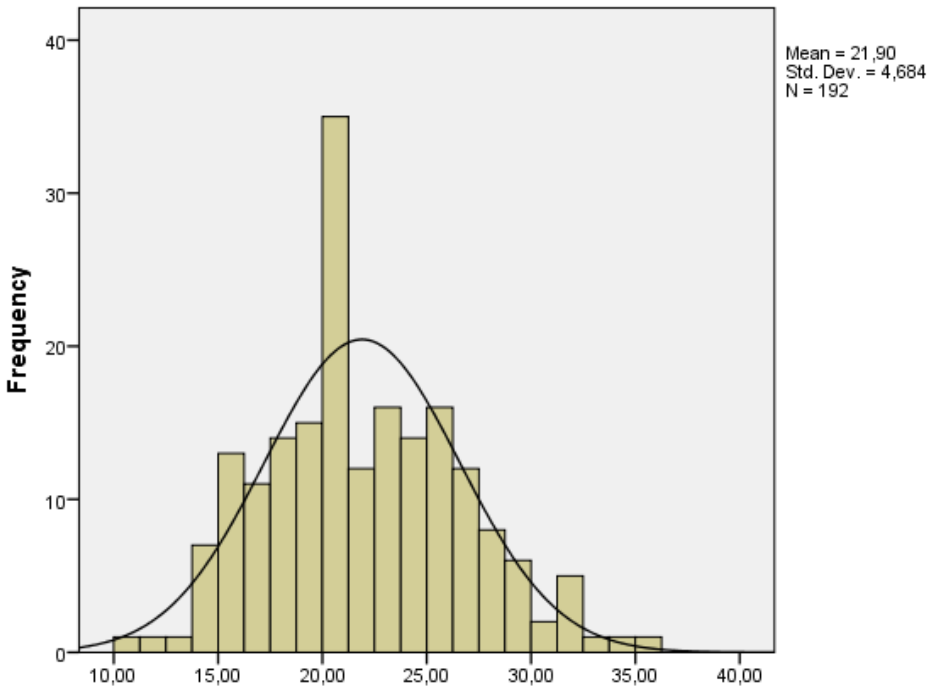


Appendix 15. Histograms for Sub-Scales of Epistemological Beliefs Scale for In-service Teachers

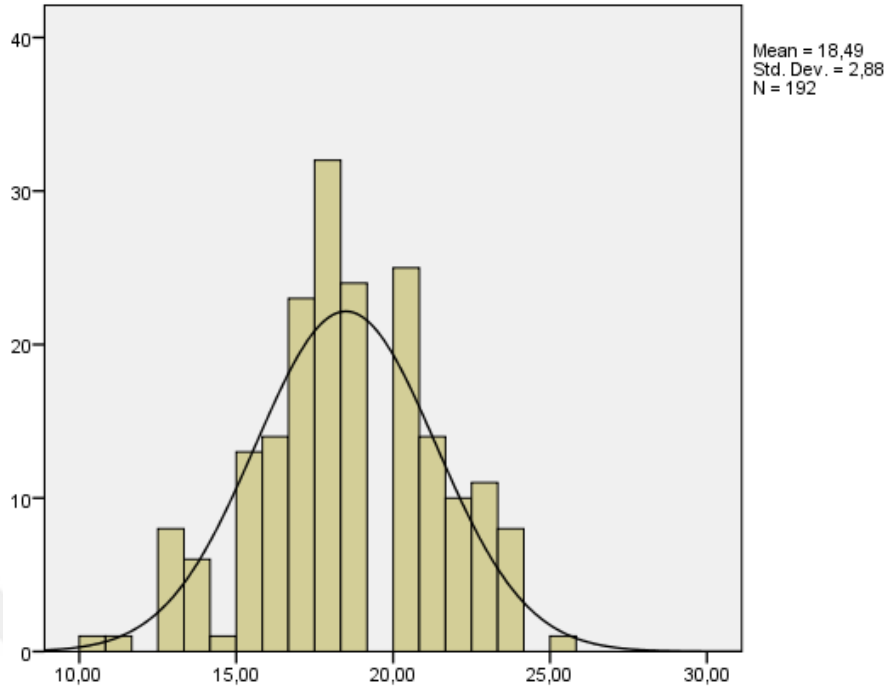
Learning Process/Expert Knowledge Sub-Scale



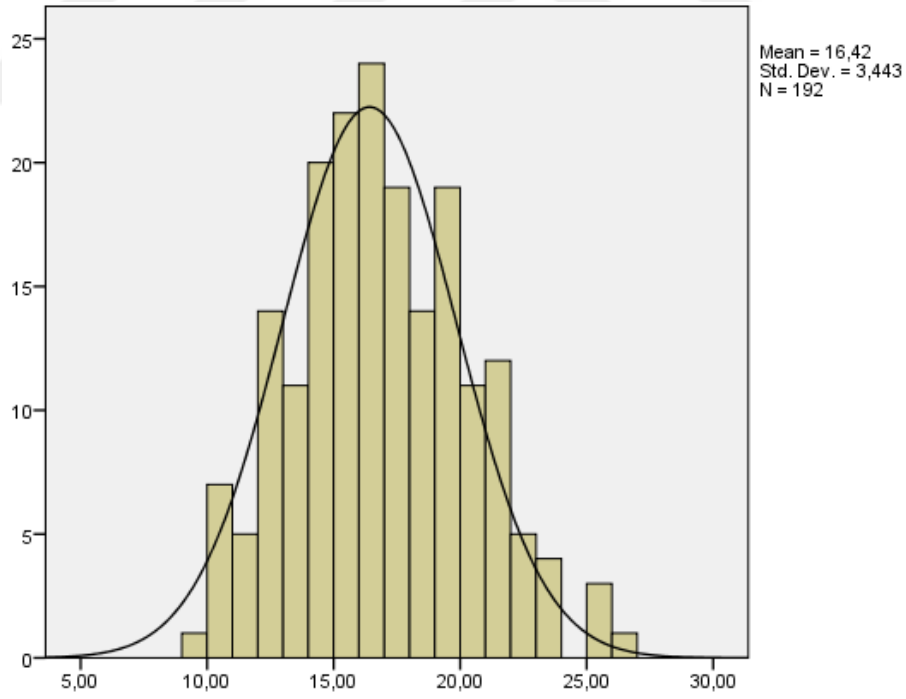
Innate/Fixed Ability Sub-Scale



Learning Effort Sub-Scale

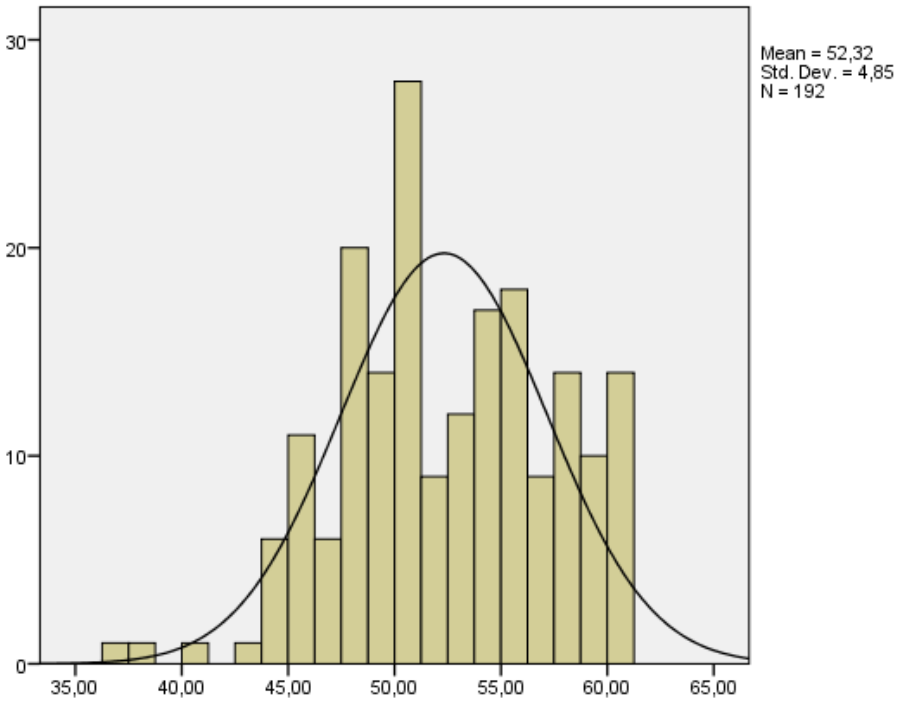


Certainty Knowledge Sub-Scale

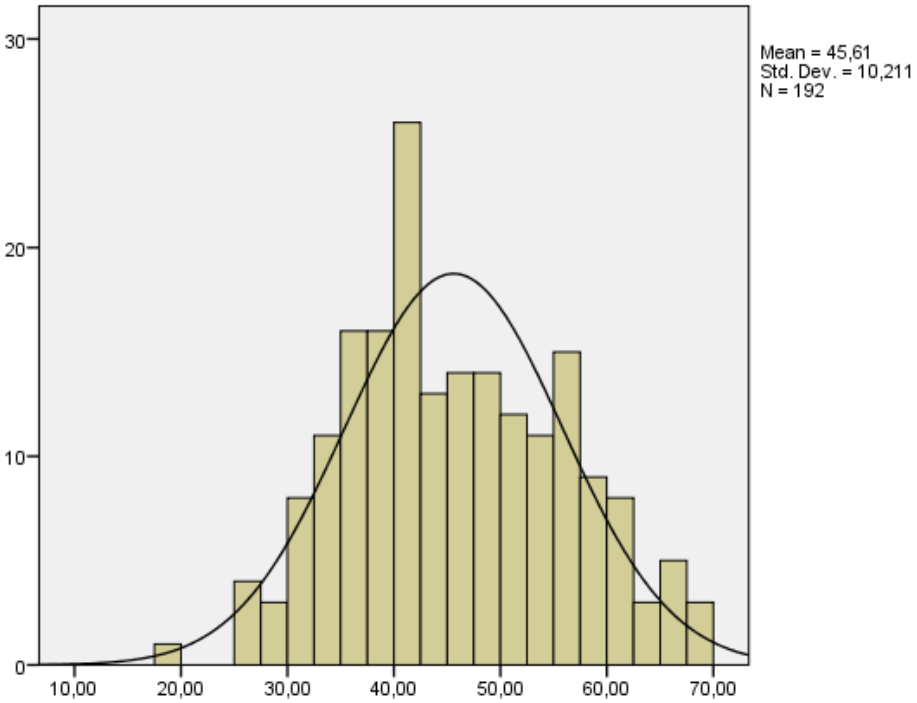


Appendix 16. Histograms for Sub-Scales of Teaching-Learning Conceptions Scale for Pre-service Teachers

Constructivist Conception Sub-Scale

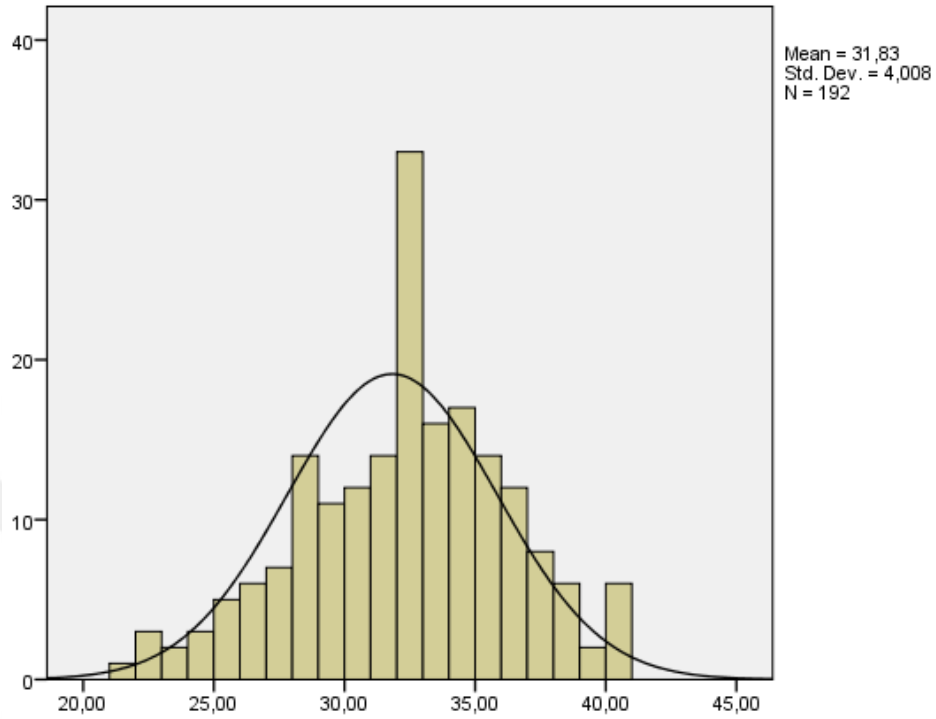


Traditional Conception Sub-Scale

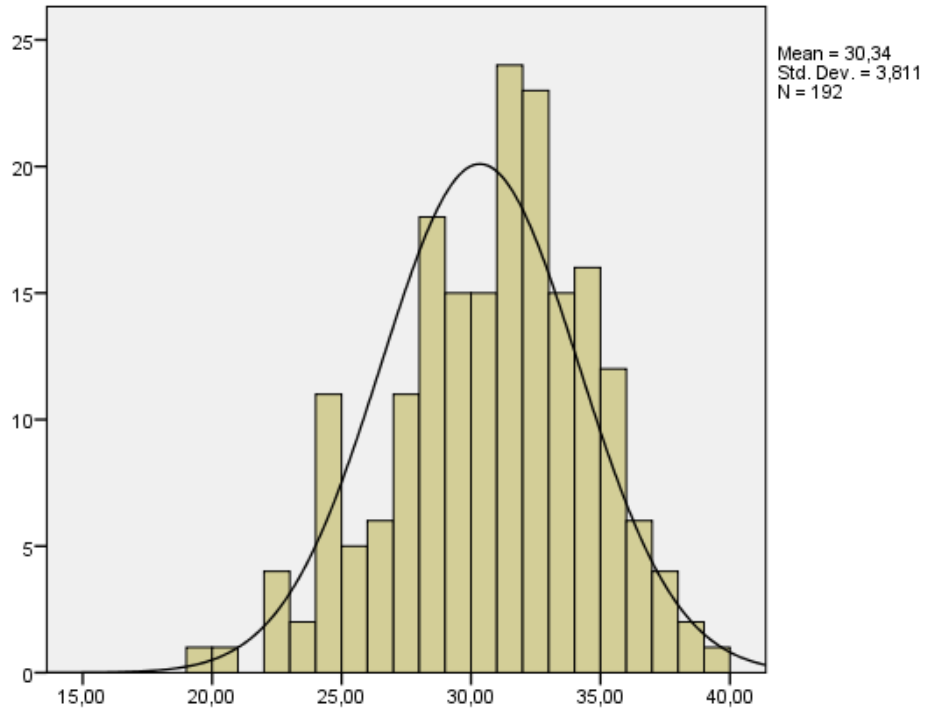


Appendix 17. Histograms for Sub-Scales of Sense of Self-Efficacy Scale for Pre-service Teachers

Classroom Management Sub-Scale



Student Engagement Sub-Scale



Instructional Strategies Sub-Scale

