



## Investigating the relation between pre-service EFL teachers' epistemic cognition, instructional preferences and perceived engagement beliefs

Arif Sariçoban<sup>a 1</sup> , Özkan Kırmızı<sup>b</sup> 

<sup>a</sup> Selçuk University, Konya, Turkey  
<sup>b</sup> Karabük University, Karabük, Turkey

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### Abstract

The aim of the present study is to see potential correlations between and among pre-service EFL teachers' epistemological cognitions, perceived engagement levels, and instructional preferences. To this end, 149 pre-service teachers were surveyed. Within the context of the study, three data collection methods were used within the scope of the study. The first one is the *Epistemic Beliefs Scale*, developed by Chan and Elliot (2004). It is a 30 Likert-type scale. The second tool was the *Instructional Preference Questionnaire*. This scale was based on Chan and Elliott (2004) and it included 30 items. The third scale was *Teacher Engagement Scale*, which was developed by Klassen et al (2013). Correlation and regression analyses were used to analyse the data. The findings indicated that teacher engagement plays an important role in EFL teachers' instructional preferences. Particularly, as for the correlation between the sub-dimensions of epistemological beliefs and instructional preferences, it was observed that the *ability to learn* and *source of knowledge* dimensions was influential on transmission-based teaching.

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**Keywords:** epistemic cognition, instructional preferences, perceived engagement beliefs, pre-service EFL teachers

## 1. Introduction

A huge body of research indicates that epistemic cognitions guide teachers' behaviors and attitudes towards issues in classroom context, have an influence on teachers' beliefs about the nature of knowledge and knowing, and play significant roles in determining their instructional choices (Brownlee, 2003; Chan & Elliott, 2004; Cheng et al., 2009; Olafson & Schraw, 2006). In particular, there are studies that indicate that teachers with sophisticated epistemic beliefs opt more for a student-centered constructivist approach to teaching and those with lower level of epistemic beliefs tend to prefer more teacher-centered transmission based methods (Sinatra & Kardash, 2004; Yadav & Koehler, 2007). What is more, Sosu and Gray (2012) reported that teachers who have a sound level of epistemic beliefs also

<sup>1</sup> Corresponding author: Özkan Kırmızı  
E-mail address: [ozkankirmizi@karabuk.edu.tr](mailto:ozkankirmizi@karabuk.edu.tr)

perform better in strategy use and providing students with more opportunities in developing problem-solving abilities and discussion skills.

Moreover, teacher engagement is also an area of interest within the context of teacher education and teacher development. According to Yin et al (2017), teacher engagement is dependent upon teacher motivation in the workplace. In general, teacher engagement beliefs tend to positively correlate with teacher motivation and have an influence on educational issues like teacher commitment or classroom achievement (Yin et al., 2017).

Instructional preferences, or teaching approaches, involve the significance of the role of students or teachers (Chan and Elliott, 2004). It is possible to group instructional preferences as traditional (transmission-based) and constructivist preferences or approaches. Learners in constructivist classes tend to learn how to construct knowledge and how to arrive at knowledge. They tend to perform better in terms of problem-solving, have more positive attitudes to learning and teaching and tend to have better academic achievement levels (Schunk, 2015). On the other hand, traditional approaches may fail to equip learners to overcome problems and construct knowledge. There are numerous factors affecting instructional preferences. These variables may be correlated with epistemological beliefs or teacher engagement. Hence, the present study aims to see potential correlations between and among epistemological beliefs, teacher engagement, and instructional preferences.

### *1.1. Epistemic cognition*

According to Greene and Yu (2016), epistemic cognition refers to the “ability to construct, evaluate, and use knowledge” by drawing on one’s “dispositions, beliefs, and skills [to] determine what [is] actually known versus what one believes, doubts, or distrusts” (p. 46). This means that epistemic cognition covers individuals’ cognitive consideration as they are engaged in knowledge and truth. As such, teachers’ epistemic cognition assumes great importance in that not only are teachers engaged in a cognitive job, but also, and more importantly, teachers’ cognitions affect how they conduct their activities.

There is a number of definitions of epistemic cognition. For example, Mason & Bromme (2010) defined epistemic cognition as “individual representations (beliefs) about knowledge and knowing” (p. 1). According to Hofer and Bendixen (2012), epistemic cognition is the “ability to construct, evaluate, and use knowledge” by drawing on one’s “dispositions, beliefs, and skills [to] determine what [is] actually known versus what one believes, doubts, or distrusts” (p. 46). According to Buehl and Fives (2016), epistemic cognition of teachers are about how teachers conceptualize knowledge, the process of knowing, and the construction of that knowledge. Such cognitions are formed as a consequence of teachers’ mental systems that arise from their previous experiences or current epistemic beliefs (Fives et al., 2017). Therefore, epistemic cognition refers to perceptions of teachers in terms of what knowledge is and how knowledge is attained (Bendixen & Feucht, 2010).

### *1.2. Teacher engagement*

The term teacher engagement, or work engagement, is about to what extent teachers allocate their motivational sources to their work (Christian et al. 2011). The terms teacher engagement may also imply a state of energy, dedication, and absorption at work (Schaufeli et al., 2002). According to Van Beek et al. (2012), work engagement entails a high degree of passion and involvement in the job. Hence, as was suggested by Klassen et al. (2013), understanding teachers’ engagement might provide insights into the psychological processes they go through for effective instruction. In the present study, we stick to Klassen et al’s (2012b) conceptualization of the term, which involves emotional, cognitive, and social engagement.

Yerdelen et al (2018) suggest that “teacher engagement is an international issue” (p.1) as the number of teachers stepping down from the job is declining due to low level of professional engagement. The research shows that teachers tend to stay in the job as they are highly engaged (Klassen et al., 2012b). On the other hand, engaged teachers are more likely to take active roles in workplace and make contributions to the school life. According to Bakker and Bal (2010), engaged teachers are of help both to themselves and to their school environments by, for example, providing support for other colleagues. There has been a surge in the interest paid to teacher engagement due to three fundamental reasons (Klassen et al., 2012a). First of all, teacher engagement is an important determiner of learning outcomes and the efficiency of the teaching and learning process, indicating that the more the teacher is engaged the more willing students are to participate. (Roth et al., 2007). The next one is that teacher engagement plays a crucial role in handling stressful situations, which may lead to quitting you position. This means that teachers act as mediators (Han, Yin, & Wang, 2016).

An important construct in teacher research, teacher engagement has been linked to self-efficacy (Llorens, et al, 2007; Simbula et al., 2011; Skaalvik & Skaalvik, 2014). Research has also linked teacher engagement to Bandura’s social cognitive theory. Noughabi et al (2020) pointed out that cognitive, emotional, and social aspects of L2 teachers’ engagement levels have not been satisfactorily analysed.

### *1.3. Instructional preferences*

In relation to instructional preferences, the recent trend has been to shift to a student-centered constructivist teaching rather than teacher-centered teaching (Yenice, 2015). Instructional preferences are so central in language teaching that they can either enhance or inhibit student learning (e.g. Dilekli & Tezci, 2016; Gibbs & Coffey, 2004). Students that have been taught through student-centered approach tend to have more insight.

Although there are overlaps, teaching approaches have been grouped slightly differently in literature. For example, Trigwell et al (2005) categorized them as teacher-centered and student-centered approaches. Another grouping was offered by Chang and Elliott (2004), who put them in two groups as constructivist and traditional teaching concepts. In teacher-centered approach, transmission of knowledge is important whereas in constructivist approach collaboration is at the forefront. In constructivist classes, teachers are supposed to provide innovations, enable inferences and collaboration on the part of students (Gopnik & Wellman, 2012). Teachers are also expected to assign more opportunities for students to take responsibility (Schunk, 2015).

### *1.4. Literature review*

In this part, we tried to include relevant studies in epistemic cognitions of teachers and teacher candidates, teacher engagement, and teaching approaches.

Research on teachers’ epistemic cognitions have been examined in terms of their relation to their work with regard to how they plan their lessons, how they decide on what to teach, or what instructional strategies to implement. For example, Sosu and Gray (2012) found that in one-year period, there were remarkable changes in pre-service teachers’ epistemic cognitions. They also found that the only sub-dimension that predicted teaching competence was source of knowledge.

In a recent study, Ferguson and Lunn Brownlee (2018) specifically worked on the relation between certainty of knowledge in terms of teaching. They found that pre-service teachers’ conceptions as to teaching were influenced by their beliefs on certainty of knowledge.

Other studies confirmed the relation between empiricist beliefs and knowledge transmission approach where students are spoon-fed (Olafson & Schraw, 2006). In empiricist approach, the teacher is viewed as the provider and transmitter of knowledge and the extent to which students effectively take in this knowledge is generally determined by how well knowledge is transferred (Maggioni & Parkinson, 2008). However, there are also studies that link constructivist beliefs to personal knowledge construction and that emphasize the role of students in the process (Walker et al., 2012).

Research on teacher engagement is burgeoning. Teacher engagement has been linked to a number of factors ranging from job satisfaction to perceived self-efficacy (Li, et al. 2019; Perera et al. 2018; Salanova et al. 2010; Topchyan and Woehler 2020; Upadyaya et al. 2016). Upadyaya et al's (2016) study linked engagement with decreased burnout and increased life satisfaction. Teaching experience has also been found to be a relevant factor for teacher engagement, with more experienced teachers being more engaged (Daniels et al. 2017). As for L2 teacher engagement, one line of research focused on L2 teachers' engagement with research (Wyatt & Dikilitaş, 2016).

Another path in L2 teacher engagement research linked it to teacher emotions (Benesch, 2018). Literature also indicates that teacher engagement is negatively correlated with burnout (Hakanen et al., 2006; Tavis, 2006). It was also linked to teacher motivation. The study conducted by Yin et al. (2016) found that teacher engagement is a significant mediator influencing mastery, ability-approach and work-avoidance goals. What is more, there are also studies that link teacher engagement with classroom achievement (Bakker and Bal, 2010). Other researchers have also reported a positive correlation between engagement beliefs and teacher commitment (Hakanen et al., 2006; Yin et al., 2016)

As can be seen, the construct of teacher engagement has been studied in relation to various constructs from different perspective. However, there are very few studies that focus on the relation between pre-service EFL teachers' epistemic beliefs, teaching approaches, and instructional preferences.

As such, the present study aims to shed light into the potential connection between them. The following research questions have been formulated for the purpose of the present study:

1. What are the perceptions of pre-service EFL teachers' epistemological beliefs, teacher engagement, and instructional preferences?
2. What are the correlations between and among teacher engagement sub-dimensions and instructional preferences sub-dimensions?
3. What are the correlations between and among sub-dimensions of epistemological beliefs and instructional preferences?
4. Which sub-dimensions of teacher engagement predict constructivist instructional preferences?
5. Do male and female participants differ in terms of their epistemological beliefs, teacher engagement, and instructional preferences?

## **2. Method**

Aiming to measure the relation between pre-service EFL teachers' epistemic cognition, instructional preferences and engagement, the present study is a correlational one. The dependent variable is L2 teacher' instructional preferences and the independent variables are epistemic cognition and engagement.

### *2.1. Participants and procedure*

The present study was conducted with 149 pre-service EFL teachers. Table 1 give information about the participants. The number of male participants is 37 (24,7%) and the number of female participants is

112 (74,7%). The number of participants in the 1<sup>st</sup> grade is 34, the 2<sup>nd</sup> grade 42, 3<sup>rd</sup> grade 44 and the number of 4<sup>th</sup> grade participants is 29.

**Table 1.** Distribution of participants

	Gender		Total	
	Female	Male		
Grade				
	1. grade	22 (14.66%)	12 (8%)	34 (22.66%)
	2. grade	36 (24%)	6 (4%)	42 (28%)
	3. grade	35 (23.33%)	9 (6%)	44 (29.3%)
	4. grade	19 (12.6%)	10 (6.66%)	29 (19.33%)
Total		112 (74.7%).	37 (24.7)	149

## 2.2. Instruments

Three questionnaires have been used within the scope of the present study: (1) epistemic belief scale, (2) instructional preference scale, and (3) teacher engagement scale.

(1) *Epistemic beliefs scale*: This scale was developed by Chan and Elliot (2002, 2004). They based it on the 63-item *Epistemological Belief Questionnaire* designed by Schommer (1990). This scale consists of four sub-dimensions, notably *authority/expert knowledge (11 items)*, *innate/fixe ability (8 items)*, *learning effort/process (5 items)*, and *certainty of knowledge (6 items)*. The original scale consists of 30 items. The items are organized in the form of five-point Likert-type scale (ranging from 5= Strongly agree to 1=Strongly disagree). However, the literature offers that a shorter version of this can be used (DeBacker et al., 2008). Therefore, for ease of use, the short version was preferred in the study. The short version produced the same sub-dimensions. The reliability level was calculated as .539, indicating a moderate level of reliability.

In order to check the construct validity for *epistemic beliefs scale*, confirmatory factor analysis (CFA) was conducted. The results produced four factors, and the total variance explained by these factors was 49.99%. The factor loadings for the first factor (Ability to learn) ranged between .478 and .997. The factor loadings for the items in the second factor (source of knowledge) ranged between .451 and .715. The factor loadings for the items in the third factor (certainty knowledge) ranged between .721 and .985. Lastly, the factor loadings for the fourth sub-dimension (learning process) ranged between .484 and .814.

(2) *Instructional preference questionnaire*: With this questionnaire, the study measured constructivist and transmission-based teaching preferences. The original scale was prepared by Chan and Elliott (2004) and it included 30 items. However, literature indicated that the shortened version can be used (Sosu & Gray, 2012). Therefore, in the present study the version with 11 items, the short version, was used. All items are 5- point Likert items (1=strongly disagree to 5=strongly agree). In order to check the construct validity for *instructional preferences questionnaire*, CFA was conducted. Results indicated that two of the items in constructivist dimension turned out to form another factor, and one of the items in transmission approach was lower than .30. So, these three items were excluded from the analysis. The corrected analysis indicated that the variance explained was 59.20%. The factor loadings for constructivist dimension ranged between .573 and .822. The factor loadings for transmission approach

alternated between .603 and .954. Having excluded the items with low factor loadings, the Cronbach's alpha level of the remaining eight items was calculated as .646. This is an acceptable level of reliability.

(3) *Teacher engagement scale*: The third data collection tool used in the present study was the teacher engagement scale, developed by Klassen et al (2013) based on the Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2003), which is the most widely used measure across professions (Shuck, 2011). It includes 16 items and 4 factors: (1) *emotional engagement*, (2) *cognitive engagement*, (3) *social engagement: students*, and (4) *social engagement: colleagues*. The scale is seven-point Likert scale (0 = Never, 6 = Always). The Turkish version of the questionnaire was also validated by Yerdelen et al. (2018). CFA was conducted to see the construct validity of the tool and the results indicated that the KMO value was .858, a high value indicating that factor analysis can be conducted. Almost all the factor loadings were over .500. The total variance explained by the factors was 66.11%. And the Cronbach's alpha value was calculated as .90, a high level of reliability.

### 3. Results

As can be seen from Table 2, in terms of *epistemological beliefs*, the highest mean score belongs to that of learning process (M=3,47). However, it is still low, and participants seem to be undecided about their beliefs on learning process. The lowest sub-dimension as for epistemological beliefs is *ability to learn* (M=3,04). This shows that the participants do not value the innate aspect of learning.

As for *teacher engagement*, the general mean score is 5,68, indicating that the participants value almost all types of engagement. The most rated one in this category is *social engagement: students* (M=6,25), followed by *cognitive engagement* (M=6,11). *Emotional engagement* was the lowest (M=5,45) among the other sub-dimensions of teacher engagement. Finally, when it comes to *instructional preferences*, it can be seen that the participants value *constructivist principles* (M=4,34) more than *transmission-based principles* (M=2,57).

Regarding pre-service L2 teachers' engagement levels, the study found them to be rather high. The most rated sub-dimension was *social engagement with students*, implying that pre-service L2 teachers are willing to show warmth to their students and they will be aware of their students' feelings as well as care about problems of their students. The self-reports of pre-service L2 teachers regarding *cognitive engagement* were also high. This shows that pre-service L2 teachers will try to do their best in terms of paying attention. Finally, regarding *instructional preferences*, the findings indicated that the pre-service EFL teachers in the present study opted more for constructivist teaching strategies (M=4,34) rather than transmission-based teaching strategies (M=2,57).<sup>7</sup>

**Table 2.** Descriptive statistics regarding the variables in the study

	Sub-dimensions	Min	Max	M	SD
Epistemological beliefs	ability to learn	1	5	3.04	2.12416
	sources of knowledge	1	5	3.47	2.37092
	certainty knowledge	1	5	3.47	1.83764
	learning process	1	5	3.84	2.04441
Teacher engagement	emotional engagement	1	6	5.45	2.98923
	cognitive engagement	1	6	6.11	3.35800
	social engagement: students	1	6	6.25	3.02444
	social engagement: colleagues	1	6	5.64	3.41682
Instructional preferences	constructivist	1	5	4.34	2.50796
	transmission-based	1	5	2.57	2.75443

*Correlations between engagement and instructional preferences*

The results of the correlation analysis between the sub-dimensions of teacher engagement and instructional preferences are presented in Table 3. As can be understood from Table 3, there are positive and moderate to high correlation between the sub-dimensions of engagement and instructional preferences. Dimensions like *cognitive engagement* ( $r = .26, p < .01$ ), *social engagement with students* ( $r = .36, p < .01$ ), and *social engagement with colleagues* ( $r = .41, p < .01$ ) with *constructivist instructional preferences*. The highest correlation was seen between interaction with colleagues and constructivism. Actually, this finding endorses one of the most important components of constructivist approach, especially Vygotsky's social constructivist, which is the importance of the social environment in the construction of knowledge.

**Table 3.** The correlations between the sub-dimensions of teacher engagement and instructional preferences

	Emotional	Cognitive	Social eng: students	Social eng: colleagues	Constructivist	Transmission
Emotional		.653**	.518**	.460**	.171*	.117
Cognitive			.712**	.574**	.265**	-.047
Social eng: students				.653**	.367**	-.047
Social eng: colleagues					.413**	.048
Constructivist						.022

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

*Correlation between epistemological beliefs and instructional preferences*

The results of the correlation analysis between epistemological beliefs and instructional preferences are presented in Table 4. The findings indicate that there are positive correlations between *ability to learn* ( $r = .32, p < .01$ ), *source of knowledge* ( $r = .26, p < .01$ ), and *certainty knowledge* ( $r = .20, p < .01$ ) and transmission-based teaching.

**Table 4.** Correlation analysis between epistemological beliefs instructional preferences

	Constructivist	Transmission	Ability	Source of know	Certainty	Learning pro
Constructivist		.022	-.054	.017	-.026	.105
Transmission			.322**	.262**	.207*	.077
Ability				.120	.082	-.041
Source of know					.278**	-.004
Certainty						.001

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

*Effect of epistemic beliefs on instructional preference*

First of all, the multicollinearity values were calculated as ranging from 1,020 to 1,098, indicating that there is no multicollinearity among the independent variables. The regression analysis indicated that the

variables of epistemological beliefs do not predict constructivist instructional preferences. However, some degree of predictive power was found among epistemological beliefs and transmission-based teaching ( $F=6,78$ ,  $p < .001$ ,  $R^2 = .14$ ) These figures indicate that epistemological beliefs account for only 14% of instructional preferences. The results are presented in Table 5. As can be understood from the table, the two variables that predict transmission-based teaching are *ability to learn* ( $\beta = .37$ ,  $p < .05$ ) and *source of knowledge* ( $\beta = .23$ ,  $p < .05$ ).

**Table 5.** The results of regression analysis between the sub-dimensions of epistemological beliefs and transmission-based teaching

	B	Std. Error	Beta	t	Sig.
Ability to learn	.373	.103	.285	3.612	.000
Source of knowledge	.230	.097	.194	2.367	.019
Certainty knowledge	.168	.125	.110	1.346	.180
Learning process	.111	.107	.081	1.030	.305

a. Dependent Variable: Transmission-based teaching

### *Effect of teacher engagement on instructional preferences*

In order to see the effects of teacher engagement on instructional preferences, step-wise regression analysis was conducted. The results indicated that engagement has rather weak predictive value on constructivist teaching preferences ( $F = 8,17$ ,  $p < .05$ ,  $R^2 = .16$ ). This shows that L2 teacher engagement explains only 16% of the constructivist principles. Table 6 presents the results as to the step-wise multiple regression. We can understand from this table that the only predictor of constructivist teaching was *social engagement: colleagues* ( $\beta = .235$ ,  $p < .05$ ). As for the predictive power of teacher engagement and transmission-based teaching, the regression analysis found that none of the subdimensions of teacher engagement predicted transmission-based teaching principles. The reason why the significance levels for emotional engagement, cognitive engagement, and social engagement with students might be the reason that the participants of the present study are considered novice teachers with insufficient instructional experiences. Particularly, as for the emotional engagement the novice teachers are usually believed to have high emotional levels due to anxiety. Thus, they may have low level of cognitive and social engagement with students.

**Table 6.** Step-wise regression results concerning teacher engagement and constructivist instructional preferences

	B	Std. Error	Beta	t	Sig.
Emotional engagement	-.057	.086	-.066	-.660	.511
Cognitive engagement	-.014	.094	-.019	-.153	.879
Social engagement: students	.170	.100	.206	1.698	.092
Social engagement: colleagues	.235	.076	.317	3.088	.002

a. Dependent Variable: Constructivist teaching

### *Gender differences*

To see whether there are gender differences in terms of the variables of the study, T-test was run. The results are presented in Table 7. Table 7 indicates that according to male pre-service EFL teachers learning how to learn is more important than acquiring facts ( $p. 002 < .005$ ). In a similar vein, male pre-service EFL teachers also believe that understanding course material is more important than acquiring facts ( $p. 003 < .005$ ). It can be said that male pre-service EFL teachers value learning how to learn more than the acquisition of facts. On the other hand, female pre-service EFL teachers believe that every child

is unique ( $p. 003 < .005$ ). Female pre-service EFL teachers also believe that they would pay more attention to their work and they would be empathetic to their students.

**Table 7.** Gender differences

Items	gender	N	Mean	Std. D	t	p
1. Knowing how to learn is more important than just acquiring facts.	female	112	3.7857	.92443	-3.139	.002
	male	37	4.2973	.61756		
2. Understanding course materials and thinking process are more important than acquiring facts	female	112	3.5804	.90681	-3.025	.003
	male	37	4.0811	.75933		
3. Every child is unique and deserves an education tailored to his or her particular needs	female	112	4.6216	.58859	1.966	.051
	male	37	4.3514	1.03323		
4. Learning means students have ample opportunities to explore, discuss and express their ideas	female	112	4.4324	.59729	2.494	.014
	male	37	4.1351	.71345		
5. While teaching I will pay a lot of attention to my work.	female	112	5.9375	1.02475	1.982	.049
	male	37	5.4595	1.83477		
6. In class, I will be empathetic towards my students	female	112	6.5625	.66821	2.905	.004
	male	37	6.0811	1.32032		

#### 4. Discussion

The present study was designed to measure the relationship between and among pre-service EFL teacher engagement, epistemic cognitions, and instructional preferences. In the first place, as for epistemic cognitions the participants in the present study were undecided about all the sub-dimensions of epistemic cognition. As to *ability to learn*, for example, the participants do not believe that our learning abilities come from birth, nor do they believe that one can do a lot to become smarter. When it comes to teacher engagement, the study found that the pre-service EFL teachers in the present study have relatively high levels of perceived engagement. The most rated category here was *social engagement with students*. Pre-service L2 teachers believe that they are going to show warmth to their prospective students, be aware of their students' feelings, and care about problems of their students. Finally, the pre-service EFL teachers in the present study favored constructivist instructional preferences.

The present study stressed the role of constructivist teaching strategies. This may be in line with some research in the literature. However, there are also studies that report the dominance of the teacher. For example, Janfeshan (2017) and Mardali et al. (2019) reported that Iranian EFL emphasized teachers' role in the instruction process rather than students, which the authors attributed to the exam-based culture and traditional teaching in Iran.

One variable that stood out within the scope of the present study was *teacher engagement*. Almost all dimensions of L2 teacher engagement, namely cognitive engagement, social engagement with students and social engagement with colleagues, correlated with constructivist teaching methods. The highest correlation was found between social engagement with colleagues. This clearly indicates the role of professional interaction in teachers' decisions. As for the predictive power of the sub-dimensions of L2 teacher engagement, it was found that the *social engagement with colleagues* dimension was the most important determiner of constructivist teaching choices.

As for the development of teacher engagement over time, research indicates that transferring new knowledge into the depository of teacher engagement beliefs may be a little demanding (Harper-Hill, 2020). The role of teacher agency is emphasized in mobilizing teacher engagement (Gurney and Liyanage 2016). Stronger agency on the part of teachers paves the way for better integration of new

material into their own lives and environments (Keogh et al. 2012). Therefore, future studies may focus on the relation between EFL teacher agency and engagement.

Literature indicates that epistemic beliefs are changeable over time through instruction (Conley et al. 2004; Kienhues et al., 2008; Sosu and Gray, 2012; Tanase & Wang, 2010). To be more specific, Sosu and Gray (2012) reported improvements in pre-service EFL teachers' beliefs about ability, sources of knowledge, certainty knowledge and learning process and attributed this to the fact that pre-service EFL teachers see a variety of alternative theories and approaches and this enables them to develop more sophisticated EBs. The present study also found that the effort sub-dimension of EBs play a role in the determination of instructional preferences. In this case, teacher education programs should pay special attention to EBs of pre-service EFL teachers.

The findings of the present study emphasized the role of teacher engagement in instructional preferences. Teacher engagement is closely related with teacher commitment (Hakanen et al., 2006; Yin et al., 2016; Yin et al., 2017), joy and emotions. In a sense, they can be seen as part of the psychological lives of L2 teachers. Although the present study did not foreground the emotional aspects of teacher engagement, the teacher engagement beliefs in general were influential on instructional preferences. This brings to mind the concept of positive psychology. Recently, researchers have emphasized the role of positive psychology in teachers lives (Dewaele & MacIntyre, 2014; Gabryś-Barker and Gałajds, 2016; Dewaele & Dewaele, 2017; Macintyre et al, 2019; Dewaele et al., 2019). Therefore, teacher education programs should pay special attention to positive psychology of teacher candidates and provide changes for them to see how they can achieve positive emotions and a high level of engagement.

## 5. Conclusions

To conclude, the present study indicated that the correlation between teacher engagement beliefs and teaching approaches tends to be more powerful than the correlation between EBs and instructional preferences. This shows the role of engagement beliefs. As was indicated by Yin et al. (2017), among many others, the construct of teacher engagement is synonymous to efforts exerted by teachers in the instruction process and they joy obtained from it. Moreover, they also have a social aspect, which were found to highly correlate with constructivist teaching approaches in the present study. As such, the present study can be said to have stressed the role of sociocultural role of teachers' lives.

Some four decades ago, Bandura (1986) viewed beliefs, or cognitions, as a bunch of personal values that have been internalized by people and that determine their behaviors and decisions. Likewise, literature shows that teachers' conceptualizations of teaching are crucial components of their careers (Borg, 2006) as teachers' pedagogical decisions and practices are derived mainly from their EBs (Cheng et al., 2009). The present study also underscored the role of epistemic cognitions and instructional preferences. However, the present study was conducted with pre-service EFL teachers. Future studies can focus on the relation between and among epistemic beliefs, engagement, and instructional preferences with in-service teachers.

## 6. Ethics Committee Approval

The author(s) confirm(s) that the study does not need ethics committee approval according to the research integrity rules in their country (Date of Confirmation: 21.01.2021).

## References

- Bakker, A. B., & Bal, P. M. (2010). Weekly work engagement and performance: A study among starting teachers. *Journal of Occupational and Organizational Psychology*, 83(11), 189–206.
- Bandura, A. (1986). *Social Foundations of Thought and Action. A Social Cognitive Theory*. Prentice Hall, Englewoods Cliffs, NJ.

- Bendixen, L. D., & Feucht, F. C. (2010). Personal epistemology in the classroom: What does research and theory tell us and where do we need to go next? In L. D. Bendixen & F. C. Feucht (Eds.), *Personal epistemology in the classroom: Theory, research, and educational implications* (pp. 555–586). New York, NY: Cambridge University Press.
- Benesch, S. (2018). Emotions as agency: Feeling rules, emotion labor, and English language teachers' decision-making. *System*, 79, 60–69.
- Borg, S. (2006). *Teacher cognition and language education: Research and practice*. London: Continuum.
- Brownlee, J. (2003). Changes in primary school teachers' beliefs about knowing: A longitudinal study. *Asia-Pacific Journal of Teacher Education*, 31(1), 87–98.
- Buehl, M. M., & Fives, H. (2016). The role of epistemic cognition in teacher learning and praxis. In J. A. Greene, W. A. Sandoval & I. Bråten (Eds.), *Handbook of Epistemic Cognition* (pp. 247-265). New York, NY: Routledge
- 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(8), 817-831.
- Cheng, M. M. H., Chan, K-W., Tang, S. Y. F., & Cheng, A. Y. N. (2009). Pre-service teacher education students' epistemological beliefs and their conceptions of teaching. *Teaching and Teacher Education*, 25, 319–327.
- Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology*, 64, 89–136.
- Conley, A. M., Pintrich, P. R., Vekiri, I., & Harrison, D. (2004). Changes in epistemological beliefs in elementary science students. *Contemporary Educational Psychology*, 29, 186–204.
- Daniels, L. M., Radil, A. I., & Goegan, L. D. (2017). Combinations of personal responsibility: Differences on pre-service and practicing teachers' efficacy, engagement, classroom goal structures and wellbeing. *Frontiers in Psychology*, 8, 906–918.
- DeBacker, T. K., Crowson, H. M., Beesley, A. D., Thoma, S. J., & Hestevold, N. L. (2008). The challenge of measuring epistemic beliefs: An analysis of three self-report instruments. *The Journal of Experimental Education*, 76(3), 281–312.
- Dewaele, J.-M., & MacIntyre, P. D. (2014). The two faces of Janus? Anxiety and enjoyment in the foreign language classroom. *Studies in Second Language Learning and Teaching*, 4, 237–274.
- Dewaele, J.-M. & Dewaele, L. (2017). The dynamic interactions in foreign language classroom anxiety and foreign language enjoyment of pupils aged 12 to 18: A pseudo-longitudinal investigation. *Journal of the European Second Language Association*, 1, 12–22.
- Dewaele, J.M. Chen, X., Padilla, A.M. & Lake, J. (2019). The Flowering of Positive Psychology in Foreign Language Teaching and Acquisition Research, *Frontiers in Psychology*, 10, 1-13.
- Dilekli, Y. & Tezci, E. (2016). The relationship among teachers' classroom practices for teaching thinking skills, teachers' self-efficacy towards teaching thinking skills and teachers' teaching styles. *Thinking Skills and Creativity*, 21, 144-151.

- Ferguson, L.E. & Brownlee, J.L. (2018). An Investigation of Preservice Teachers' Beliefs about the Certainty of Teaching Knowledge, *Australian Journal of Teacher Education* 43(1), 94-111.
- Fives, H., Barnes, N., Buehl, M. M., Mascadri, J., & Ziegler, N. (2017). Teachers' epistemic cognition in classroom assessment. *Educational Psychologist*, 52(4), 1-14. 270-283.
- Gabryś-Barker, D, & Gałajda, D. (2016). *Positive Psychology Perspectives on Foreign Language Learning and Teaching*, Springer.
- Gopnik, A. & Wellman, H. M. (2012). Reconstructing constructivism: Causal models, Bayesian learning mechanisms, and the theory. *Psychological Bulletin*, 138(6), 1085-1108.
- Greene, J. A.; & Yu, S. B. (2016). Educating critical thinkers: The role of epistemic cognition. *Policy Insights from the Behavioral and Brain Sciences*, 3(1), 45–53.
- Gurney, L., and I. Liyanage. (2016). EAL Teacher Agency: Implications for Participation in Professional Development. *International Journal of Pedagogies and Learning* 11(1), 49–59.
- Hakanen, J. J., Schaufeli, W. B., & Ahola, K. (2008). The Job Demands-Resources model: A three-year cross-lagged study of burnout, depression, commitment, and work engagement. *Work & Stress*, 22(3), 224–241.
- Hakanen, J.J., Bakker, A.B. & Schaufeli, W.B. (2006). Burnout and Engagement among Teachers. *Journal of School Psychology* 43, 495–513.
- Han, J., Yin, H., & Wang, W. (2016). The effect of tertiary teachers' goal orientations for teaching on their commitment: The mediating role of teacher engagement. *Educational Psychology*, 36(3), 526–547.
- Harper-Hill, K., Beamish, W. Hay, S., Kerr, J., Zelenko, O. & Whelan, M. (2020). Teacher engagement in professional learning: what makes the difference to teacher practice? *Studies in Continuing Education*, <https://doi.org/10.1080/0158037X.2020.1781611>
- Hofer, B. K., & Bendixen, L. D. (2012). Personal epistemology: Theory, research, and future directions. In K. R. Harris, S. Graham, & T. Urdan (Eds.), *APA educational psychology handbook: Vol. 1. Theories, constructs, and critical issues* (pp. 227–256). Washington, DC: American Psychological Association
- Janfeshan, K. (2017). Iranian EFL teachers' beliefs about how to teach English grammar. *Porto Alegre*, 8(2), 335–354.
- Keogh, J., S. Garvis, D. Pedergast, and P. Diamond. (2012). Self-determination Using Agency, Efficacy, and Resilience (AER) to Counter Novice Teachers' Experiences of Intensification. *Australian Journal of Teacher Education* 37(8): 46–65.
- Kienhues, D., Bromme, R., & Stahl, E. (2008). Changing epistemological beliefs: The unexpected impact of a short-term intervention. *British Journal of Educational Psychology*, 78, 545–565.
- Klassen, R. M., Aldhafri, S., Mansfield, C. F., Purwanto, E., Siu, A. F., Wong, M. W., & Woods McConney, A. (2012a). Teachers' engagement at work: An international validation study. *The Journal of Experimental Education*, 80(4), 317–337.
- Klassen, R. M., Perry, N. E., & Frenzel, A. C. (2012b). Teachers' relatedness with students: An underemphasized aspect of teachers' basic psychological needs. *Journal of Educational Psychology*, 104, 150–165.

- Klassen, R. M., Yerdelen, S., & Durksen, T. L. (2013). Measuring teacher engagement: Development of the engaged teachers scale (ETS). *Frontline Learning Research*, 1, 33–52.
- Li, R., Liu, H., Chen, Y., & Yao, M. (2019). Teacher engagement and self-efficacy: The mediating role of continuing professional development and moderating role of teaching experience. *Current Psychology*.
- Llorens, S., Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2007). Does a positive gain spiral of resources, efficacy beliefs and engagement exist? *Computers in Human Behavior*, 23, 825–841.
- Macintyre, P.D., Gregersen, T. & Mercer, S. (2019). Setting an Agenda for Positive Psychology in SLA: Theory, Practice, and Research, *Modern Language Journal*, 103(1), 262-274.
- Maggioni, L., & Parkinson, M. M. (2008). The role of teacher epistemic cognition, epistemic beliefs, and calibration in instruction. *Educational Psychology Review*, 20(4), 445–461.
- Mardali, J., Siyyari, M., & Lu, X. (2019). English teachers' beliefs and practices in teaching vocabulary: The case of teaching experiences. *Cogent Education*, 6(1), 1–33.
- Mason, L., & Bromme, R. (2010). Situating and relating epistemological beliefs into metacognition: Studies on beliefs about knowledge and knowing. *Metacognition Learning*, 5, 1–6.
- Noughabi, M.A., Reza, Amirian, S.M.R., Adel, S.M.R. & Zareian, G. (2020). The Association of Experienced in-service EFL teachers' immunity with engagement, emotions, and autonomy, *Current Psychology*, <https://doi.org/10.1007/s12144-020-01066-8>.
- Olafson, L., & Schraw, G. (2006). Teachers' beliefs and practices within and across domains. *International Journal of Educational Research*, 45, 71–84.
- Perera, H. N., Granziera, H., & McIlveen, P. (2018). Profiles of teacher personality and relations with teacher self-efficacy, work engagement, and job satisfaction. *Personality and Individual Differences*, 120, 171–178.
- Roth, G., Assor, A., Kanat-Maymon, Y., & Kaplan, H. (2007). Autonomous motivation for teaching: How self-determined teaching may lead to self-determined learning. *Journal of Educational Psychology*, 99(4), 761–774.
- Salanova, M., Schaufeli, W. B., Xanthopoulou, D., & Bakker, A. B. (2010). The gain spiral of resources and work engagement. In A. Bakker & M. Leiter (Eds.), *Work engagement: Recent developments in theory and research* (pp. 118–131). New York: Psychology Press.
- Schaufeli, W. B., Salanova, M., González-romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3(1), 71–92.
- Schaufeli, W. B., & Bakker, A. B. (2003). *Test manual for the Utrecht work engagement scale*. Unpublished manuscript, Utrecht University, The Netherlands.
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66, 701–716.
- Schommer, M. (1990). Effects of beliefs about the nature of knowledge on comprehension. *Journal of Educational Psychology*, 82(3), 498–504.
- Shuck, B. (2011). Four emerging perspectives of employee engagement: An integrative literature review. *Human Resource Development Review*, 10, 304–328.

- Schunk, D. H. (2015). *Learning Theories: An Educational Perspective*. Pearson Education.
- Simbula, S., Guglielmi, D., & Schaufeli, W. B. (2011). A three-wave study of job resources, self-efficacy, and work engagement among Italian schoolteachers. *European Journal of Work and Organizational Psychology*, 20(3), 285–304.
- Sinatra, G. M., & Kardash, C. (2004). Teacher candidates' epistemological beliefs, dispositions, and views on teaching as persuasion. *Contemporary Educational Psychology*, 29(4), 483–498.
- Skaalvik, E. M., & Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: Relations with teacher engagement, job satisfaction, and emotional exhaustion. *Psychological Reports*, 114(1), 68–77.
- Sosu, E.M. & Gray, D.S. (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.
- Tanase, M., & Wang, J. (2010). Initial epistemological beliefs transformation in one teacher education classroom: Case study of four preservice teachers. *Teaching and Teacher Education*, 26, 1238–1248.
- Taris, T. W. (2006). Is there a relationship between burnout and objective performance? A critical review of 16 studies. *Work & Stress*, 20(4), 316–334.
- Topchyan, R., & Woehler, C. (2020). Do teacher status, gender, and years of teaching experience impact job satisfaction and work engagement? *Education and Urban Society*, <https://doi.org/10.1177/0013124520926161>
- 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
- Upadyaya, K., Vartiainen, M., & Salmela-Aro, K. (2016). From job demands and resources to work engagement, burnout, life satisfaction, depressive symptoms, and occupational health. *Burnout Research*, 3, 101–108.
- Van Beek, I., Qiao, H., Schaufeli, W. B., Taris, T., & Schreurs, B. H. J. (2012). For fun, love, or money: What drives workaholic, engaged, and burned-out employees at work. *Applied Psychology: An International Review*, 61(1), 30–55
- Walker, S., Brownlee, J., Whiteford, C., Exely, B., & Woods, A. (2012). A longitudinal study of change in preservice teachers' personal epistemologies. *Australian Journal of Teacher Education*, 37(5), 24–35.
- Wyatt, M., & Dikilitaş, K. (2016). English language teachers becoming more efficacious through research engagement at their Turkish university. *Educational Action Research*, 24(4), 550–570
- Yadav, A., & Koehler, M. (2007). The role of epistemological beliefs in preservice teachers' interpretation of video cases of early-grade literacy instruction. *Journal of Technology and Teacher Education*, 15(3), 335–361
- Yenice, N. (2015). An analysis of science student teachers' epistemological beliefs and metacognitive perceptions about the nature of science. *Educational Sciences: Theory & Practice*, 6, 1623-1636.
- Yerdelen, S. Durksen, T. & Klassen, R. M. (2018): An international validation of the engaged teacher scale, *Teachers and Teaching*, 24(6), 673–689. <https://doi.org/10.1080/13540602.2018.1457024>.
- Yin, H, W Wang, and J Han. (2016). Chinese Undergraduates' Perceptions of Teaching Quality, Approaches to Studying and Course Satisfaction. *Higher Education* 71(1): 1–19.

Yin, H., Han, J. & Lu, G. (2017): Chinese tertiary teachers' goal orientations for teaching and teaching approaches: the mediation of teacher engagement, *Teaching in Higher Education*, 22(7), 766-784.

## İngilizce öğretmeni adaylarının epistemik bilişleri, işe tutulmaları ve öğretim tercihleri arasındaki ilişkinin incelenmesi

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### Özet

Bu çalışmanın amacı, İngilizce öğretmeni adaylarının epistemik bilişleri, işe tutulmaları (engagement) ve öğretim tercihleri arasındaki olası korelasyonları incelemektir. Bu amaçla, 149 İngilizce öğretmeni adayı taranmıştır. Çalışma kapsamında üç tane veri toplama aracı kullanılmıştır. Bunlardan ilki, Chan ve Elliot (2004) tarafından geliştirilen *Öğretmenlerin Epistemik İnançları* anketidir. Bu anket 30 maddeden oluşan bir ankettir. İkinci veri toplama aracı, *Öğretme Tercihleri Anketi*'dir. Bu anket Chan ve Elliot'un (2004) çalışmasına dayanarak hazırlanmıştır ve 30 maddeden oluşmaktadır. Üçüncü veri toplama aracı, Klassen ve diğerleri (2013) tarafından geliştirilen *Öğretmen İşe Tutulma Ölçeği*'dir. Çalışmanın bulguları işe tutulma boyutunun öğretim tercihlerinde önemli bir rol oynadığını göstermektedir. Özellikle, epistemolojik inançlar, öğretime ilişkin tercihlerin alt boyutlarına gelince *öğrenme yetisinin ve bilginin kaynağı* alt boyutlarının aktarım temelli öğretimde etkili olduğu görülmüştür.

*Anahtar sözcükler:* Epistemik biliş, öğretme tercihleri, algılanan işe tutulma inançları, İngilizce öğretmen adayları

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### AUTHOR BIODATA

Dr. Arif SARIÇOBAN worked as an associate professor of ELT at Hacettepe University for 20 years and currently works at the Department of ELL at Selçuk University as a full professor. Dr. Sarıçoban the editor-in-chief for an international journal.

Dr. Özkan KIRMIZI works as an associate professor at English Language and Literature Department at Karabuk University. He completed his Ph.D at Hacettepe University, English Language and Teaching Department. His interest areas include L2 teacher education and pedagogical content knowledge