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English as a Foreign Language Instructors' Cognitions on Language Learning Processes and Factors Affecting Those Cognitions *

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Abstract

'Teacher' is among the most influential variables in educational achievements, and 'actions' of a teacher are powerful indicators of this influence. Since the actions are assumed to be the reflections of certain cognitions, 'teacher cognition' becomes a significant variable to study in educational research. In this sense, this quantitative study aims to investigate EFL instructors' language learning cognitions regarding linguistic aptitude, priorities in language learning, and good language learners as well as to identify factors influencing those cognitions. The participants consisted of 606 EFL instructors teaching in 15 different higher education institutions in Ankara, Turkey. The data were collected through a cross-sectional inventory and analyzed through descriptive and inferential statistics. The descriptive results indicated that the participants tended to adopt an *interactionist* perspective emphasizing the significance of the environment around individuals learning a language; a *performance-oriented* approach focusing on real-life functions of language skills and areas; and a slight orientation to *legislative* learners who can create their own rules and decide on their own priorities. The inferential analyses revealed that the participants' cognitions on certain aspects differed in relation to age, teaching experience, and academic background. The findings obtained from this study offer implications for teachers as well as other stakeholders in the contexts of both pre-service and in-service teacher education.

Keywords

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Introduction

In the past forty years, there has been a growing interest in research on teacher cognition, which encompasses what teachers think of, know about, believe in, and understand from an educational issue as well as its relationship to classroom practices. Following this movement, research on language teacher cognition started to appear in 1990s and clustered around the two main research

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areas: (a) student teachers' cognitions and pre-service years and (b) practicing teachers' cognitions and in-service years.

In the context of pre-service teacher education, many researchers intended to understand and describe the cognitions of pre-service language teachers on certain pedagogical and methodological aspects (Farrell, 2001; Johnson, 1992; Linek, Nelson, Sampson, Zeek, Mohr, and Hughes, 1999; Maloch *et al*., 2003; Numrich, 1996; Warford and Reeves, 2003; Williamson and Hardman, 1995; Wray, 1993), while some others emphasized the cognitive development of student teachers as an impact or a result of teacher education programs or training courses (Almarza, 1996; Arıoğul, 2007; Cabaroglu & Roberts, 2000; Florio-Ruane & Lensmire, 1990; Gomez, 1990; Grisham, 2000; Johnson,1994; Maloch *et al*., 2003; Mattheoudakis, 2007; Peacock, 2001; Yook, 2010).

On the other hand, a considerable number of researchers, adopting a constructivist perspective, attached importance to 'prior beliefs' that student teachers bring to their pre-service education. According to Borg (2006), "prospective teachers' prior language learning experiences establish cognitions about learning and language learning which form the basis of their initial conceptualization of second language teaching during teacher education" (p. 54). In this regard, it is probable that prospective teachers hold previously-constructed beliefs about language learning and teaching (Decker & Rimm-Kaufman, 2008; Urmston, 2003). Occasionally, those perceptions might be inappropriate or unrealistic (Brookhart & Freeman, 1992) or so deeply-rooted that they remain unchanged (Powell, 1992; Tatto, 1998; Wubbels, 1992). In a similar vein, Gupta (2004) claimed that it is complicated to alter trainees' prior beliefs in language education and well-developed theories of teaching and learning, since they spend several years observing teachers and practicing language. As El-Okda (2005) asserted, such pre-existing beliefs brought to methodology courses by student teachers might be conflicting as well as culture-specific. Other additional confirmations about the fact that prior learning experiences shape teachers' beliefs of teaching were presented in the studies of Bailey *et al.* (1996); Borg, (2005); Erkmen (2010); Ertmer and Ottenbreit-Leftwich (2010); Farrell (2006); Pennington and Urmston (1998); Richards and Pennington (1998); Urmston (2003); Warford and Reeves (2003); and Yook (2010).

As for the second group, a range of foci have been identified when analyzing studies done with in-service language teachers. A great majority of the research conducted in the context of in-service teaching intended to explore teachers' cognitions pertaining to general pedagogy of language teaching such as instructional approaches and teaching principles (Choi, 2008; Delgado, 2008; Doğruer, Meneviş, & Eyyam, 2010; Mangubhai, Marland, Dashwood and Son, 2004); instructional planning and decision-making (Bigelow & Ranney, 2005; Tsang, 2004); instructional assessment (Chan, 2008; Mori, 2011; Yin, 2010); a specific language teaching method (Canh, 2011; Choi, 2000; Nishino, 2008); how to teach a specific language skill (Chou, 2008; Gupta, 2004; Kuzborska, 2011; Lau, 2007; McCutchen *et al*., 2002; Muchmore, 2001; Norman & Spencer, 2005; Poulson *et al*., 2001; Sifakis & Sougari, 2005; Y. Zhang, 2008); and grammar instruction (Andrews, 2001; Basturkmen, Loewen & Ellis, 2004; Burgess & Etherington, 2002; Burns & Knox, 2005; Chia, 2003; Ezzi, 2012; Gil & Carazzi, 2007; Hislam & Cajkler, 2005; Hong, 2012; Johnston & Goettsch, 2000; Ong, 2011; Paiva, 2011; Popko, 2005; Richards, Gallo, & Renandya, 2001; Soontornwipast, 2010). While those studies focused on what in-service language teachers believe, think, know, and do by investigating their cognitions sometimes together with their reported or observed practices, some others examined teachers' cognitions compared to their learners' beliefs (Cohen & Fass, 2001; Davis, 2003; Matsuura, Chiba, & Hilderbrandt, 2001; Schulz, 2001).

Teachers are active decision-makers who have an essential role in shaping classroom activities, and their behaviors are significantly affected and even controlled by their thought processes (Borg, 2006). Based on this assumption, understanding teacher cognition becomes fundamental to understand the process of teaching. Teacher cognition reflects such a complex as well as a dynamic system that it cannot be solely explained through one or two sources that might shape or contribute to this system. Instead, a variety of factors happen to form, develop, or wipe cognitions of teachers.

According to Borg (2003), teacher cognition has bidirectional relationships with professional coursework and classroom practice, and schooling and contextual factors have a direct influence on the formation of the cognitions. Hence, teachers' cognitions are constructed in diverse contexts through interactions with various elements in their environment. From those points forth, this study aimed to investigate, firstly language learning cognitions of EFL instructors teaching in higher education institutions and secondly the factors influencing those cognitions. The research questions were as follows: (1) What are the language learning cognitions of EFL instructors regarding linguistic aptitude, priorities in language learning, and good language learners?; (2) Do those cognitions change according to certain variables such as: age, teaching experience, academic background, and workplace?

The findings in this study are thought to be a good basis for the educational practices of teachers as well as professional development activities within pre-service and in-service contexts of EFL (English as a Foreign Language) or ESL (English as a Second Language) teaching. As tertiary level EFL teaching is the only setting that offers one to two-year intensive programs and EFL instructors are the principal players in foreign language teaching in Turkey, exploring their cognitions provides a better understanding of the status of EFL teaching in Turkish context. This awareness is expected to inform and guide possible innovations and educational policies, because this study has the potential to become a focus for initial teacher education and a reflection for ongoing teacher development.

Method

Rooted in the aforementioned purposes, this study is both a survey research, because it aimed to describe the existing situation by answering the question of 'what' in relation to conditions, characteristics, and perceptions of the participants, and at the same time a correlational research, because it aimed to explore the relationships among naturally existing variables.

Participants

The target population of the study was determined as the EFL instructors teaching in higher education institutions in Ankara. Considering the resources of the researchers, such as financing, time, transportation as well as the limitations placed upon research by institutions' permission procedures, it was decided to limit the study with the instructors teaching in Ankara. In data collection process, informed consent forms along with the data collection tool were distributed to all of the 1260 instructors in Ankara, but only 606 volunteer instructors were included based on their willingness. Accordingly, the participants consisted of 606 EFL instructors teaching at 15 different higher education institutions in Ankara and represented 5 state and 10 private universities. 51% of them were teaching at state universities, whereas the rest (49%) were from private institutions. The age of the participants ranged from 22 to 60 (M=33), and their teaching experiences ranged from 1 to 33 years (M=10). The higher education institutions represented by the participants and their percentages are presented in Table 1.

Data Collection Tool

The data were collected though a cross-sectional inventory, which was designed and administered by the researchers. When designing the inventory, previously conducted studies about the issue under investigation and other related resources in the literature were reviewed, and informal interviews were conducted with practicing EFL instructors. In particular, Horwitz' (1985) BALLI (Beliefs about Language Learning Inventory) and Sternberg and Wagner's (1991) MSG-TSI (Mental Self Government Theory Thinking Styles Inventory) were examined to adapt suitable items to the context of the current study. Based on those processes, an item pool consisting of 108 items was constructed. As an initial step to eliminate irrelevant items in the pool, three colleagues were consulted for expert opinion on the items. One of them was an Associate Professor working as teacher educator on teacher belief, and teacher autonomy at the Department of English Language Teaching at a public university; one of them was an in-service teacher trainer designing and implementing professional development activities for instructors at a public university and holding a PhD in the

field of Educational Administration; and one of them was an instructor holding a PhD in the field of Curriculum and Instruction and having more than 20 years of teaching experience in language teaching. As a result of their suggestions, the number of the items was reduced to 70. The first draft of the inventory was piloted with 55 EFL instructors teaching at Hacettepe University School of Foreign Languages. Instructors taking part in the pilot study were not included in the actual study. Based on the analyses (validity, reliability, and item analyses) done on the data obtained from the pilot study, 16 items were deleted from the scale. As a next step, getting approval from METU Human Subjects Ethics Committee on this 54-item inventory added to the validity of the scale. Another pilot study was conducted with 86 EFL instructors from various public and private universities (outside Ankara) in Turkey to confirm the decisions made as a result of the first pilot work. The results from both pilot studies were used to finalize the scope and the content of the inventory.

Table 1. Higher Education Institutions Represented by the Participants

Higher Education Institutions		*f*	%
State Universities	Ankara University	59	9.7
	Gazi University	41	8.4
	Hacettepe University	123	20.3
	METU	49	8.1
	Yıldırım Beyazıt University	36	5.9
Private Universities	Atılım University	64	10.6
	Başkent University	45	7.4
	Bilkent University	62	12.6
	Çankaya University	29	4.8
	İpek University	3	0.5
	TED University	20	4.1
	THK University	5	0.8
	TOBB ETU	29	4.8
	Turgut Özal University	21	3.5
	Ufuk University	20	4.1

A *Likert Scale* was adopted in the inventory to inquire the cognitions on language learning processes in five-level from *(1) Strongly Disagree* to *(5) Strongly Agree*. Each section of the inventory required the participants to read the items and simply mark the preferred choice across each statement. In order to establish the reliability of the measurement, open-ended items were avoided.

To assess whether the items that were summed to create the cognitions formed a reliable scale, Cronbach's alpha was computed. Accordingly, the alpha for the whole inventory was .89 and the alpha for the sub-categories ranged from .70 to .87 indicating adequate levels of reliability (see Table 2 for the values). Some sample items and the dimensions within the inventory are presented in Appendix 1.

Data Collection and Data Analysis

The data were collected through printed copies of the inventory on a voluntary basis during the visits to each institution at a specific time. Both descriptive and inferential statistics were used to analyze the quantitative data collected through closed-ended items. The responses were summarized in frequency distribution tables, and the findings were organized on the basis of means and standard deviations calculated for each item. Furthermore, inferential statistics, like *t*-tests, ANOVAs, and Pearson correlation coefficients were carried out to investigate whether the differences among the groups by background factors were statistically significant. When performing t-tests and ANOVAs, necessary assumptions such as homogeneity of variance, normal distribution and independence of observation were checked in advance. After ANOVAs, necessary multiple comparisons as 'post-hoc' tests were administered. The follow up test Dunnett C was conducted to evaluate the differences among the means. The reason for selecting Dunnett C was that the equal variances were not assumed.

The confidence levels of *t*-tests and ANOVAs were established as $p<.05$ or $p<.01$ based on a particular analysis in order to reduce Type I error.

Table 2. Reliability Analysis of the Dimensions

Language Learning Cognitions	Cronbach's Alpha	Number of Items
1. Linguistic Aptitude	.834	24
1.1. Innatist Perspective	.703	8
1.2. Interactionist Perspective	.822	16
1.2.1. Informal Context-oriented View	.727	8
1.2.2. Formal Context-oriented View	.791	8
2. Priorities in Language Learning	.738	12
2.1. Competence-oriented Approach	.792	6
2.2. Performance-oriented Approach	.773	6
3. Good Language Learners	.867	18
3.1. Executive Learner-oriented View	.842	6
3.2. Legislative Learner-oriented View	.753	6
3.3. Judicial Learner-oriented View	.846	6
Total	.894	54

Limitations of the Study

The major limitation is that the study is valid in the context of the higher education institutions in Ankara. As a result of the limited research time and resources, the sample of the study represents only the EFL instructors in Ankara. Although those 15 higher education institutions included in the study represented both private and state universities as well as old and newly-founded universities, the generalizability of the study is limited. Besides, the findings discussed are limited to the items and the dimensions included within the inventory. Finally, as in all survey studies, the findings depend on the self-reported data provided by the participants and lack in-depth investigations and observations.

Results

Descriptive Results

This section provides the results of descriptive analyses regarding the first research question that focused on the participants' cognitions in relation to linguistic aptitude, priorities in language learning, and good language learners.

Cognitions on Linguistic Aptitude

The first dimension of the first research question, linguistic aptitude, was investigated under two main categories: (a) *innatist* and (b) *interactionist* perspectives. As Table 3 displays, the mean values of the categories indicated that the participants were more inclined to *interactionist* perspective (M=3.82) compared to their tendencies towards *innatist* perspective (M=3.23). This finding indicated that participants tended to believe in the power of the interactions between the learner and the environment during a language learning process.

As for the items within *innatist* perspective, most of the participants seemed to think that: the capacity to learn a language is inborn in all humans (M=3.86); language skills are inherent in our genes (M=3.65); all people, regardless of intelligence, can learn to speak a language (M=3.61); and learning a language is like learning to walk (M=3.60). On the other hand, they rarely agreed that language competence is a result of 80% ability and 20% effort (M=2.64), and all people learn a language more or less in the same way (M=2.35).

Table 3. Cognitions on Linguistic Aptitude

Linguistic Aptitude	*M*	*SD*	*N*
1. Innatist perspective	3.23	.66	560
2. Interactionist perspective	3.82	.97	557
2.1. Informal (natural) context-oriented view	3.77	.56	557
2.2. Formal (created) context-oriented view	3.88	.58	589

Interactionist perspective was discussed under two views supporting either: (a) *informal (natural)* contexts or (b) *formal (created)* contexts. Although the participants seemed to favor both natural and created contexts, the mean values revealed a slight difference between *informal context-oriented* view (*M*=3.77) and *formal context-oriented* view (*M*=3.88). Accordingly, the participants seemed to be slightly in favor of the consciously created school/classroom environment (see Table 3).

Considering the participants' responses to the items representing *informal (natural) context-oriented* view, a great number the participants strongly agreed that: the more social connections the learners have, the better they learn a foreign language (*M*=4.36); it is better to learn a foreign language in a country where it is spoken as an official language (*M*=4.25); and learnability of a language depends on comprehensible input taken in sufficient quantities (*M*=4.10). Similarly, most of the participants seemed to think that learners construct their linguistic knowledge on the basis of societal background and interactional opportunities in real life (*M*=3.97) and language is learned subconsciously within a natural context (*M*=3.78).

Regarding the items representing *formal (created) context-oriented* view, the majority of the participants seemed to support that: linguistic competence is highly related to a positive and encouraging classroom atmosphere (*M*=4.17); improved teaching techniques makes the learners learn a language faster and to a greater degree (*M*=4.03); language learning occurs best when learners learn from each other by interacting freely (*M*=3.94); and the teacher's approach and attitude has the greatest influence on a learner's linguistic aptitude (*M*=3.87). Additionally, the participants tended to believe that school context, where language learning takes place, directly affects learners' language aptitude (*M*=3.80); a remarkable and intensive educational program has the central role in shaping learners' language learning (*M*=3.75); the quality of the materials used in class is the key factor to learn a language efficiently (*M*=3.74); and consciously created academic contexts facilitate a better process for language learning (*M*=3.66).

Cognitions on Priorities in Language Learning

The second dimension of the first research question, priorities in language learning, was investigated under two categories: (a) *competence-oriented* and (b) *performance-oriented* approaches. The mean values indicated that the participants were much more inclined to adopt a *performance-oriented* approach (*M*=3.60) than a *competence-oriented* approach (*M*=2.41). This finding could imply that the participants had a tendency to give more emphasis on doing something with the language, rather than knowing about the language (see Table 4).

Table 4. Cognitions on Priorities in Language Learning

Priorities in Language Learning	*M*	*SD*	*N*
Competence-oriented approach	2.41	.78	592
Performance-oriented approach	3.60	.73	587

In relation to the cognitions on *competence-oriented* approach, only some of the participants tended to believe that language proficiency means using language forms appropriately (*M*=3.06). All the other items in this dimension were rated more negatively by the participants, as they tended to disagree that: literary language is superior to spoken language (*M*=2.11); the basic indication of language proficiency is to be able to translate from one language into another easily (*M*=2.25); understanding grammatical rules of the target language is the primary goal of language learning (*M*=2.20); language learning requires a detailed presentation of consciously learned grammatical structures (*M*=2.39); and the preliminary skills to be developed are reading and writing (*M*=2.46).

As for the cognitions on *performance-oriented* approach, the participants mostly had the ideas that language proficiency is reflected best in real-life situations in which target language is used effectively (*M*=4.39) and language learning requires an intense exposure to spoken communication (*M*=4.08). Furthermore, they were into the importance of focusing on what to say rather than how to say it for language learners (*M*=3.63). On the other hand, only some of the participants had a tendency to agree that language learners need to master listening and speaking skills before they begin to read and write (*M*=3.02); and it is necessary to teach language learners speaking skills before they acquire grammar and vocabulary (*M*=2.92).

Cognitions on Good Language Learners

The last dimension, good language learners, was investigated under three categories: (a) *executive learner-oriented* view; (b) *legislative learner-oriented* view; and (c) *judicial learner-oriented* view. The mean values of all the three categories were highly close to each other. Still, the participants tended to favor *legislative* learners (*M*=4.17) a little more than *executive* (*M*=3.85) and *judicial* (*M*=4.02) learners (see Table 5). These points indicated that the participants did not give as many ratings to the type of learners who perform a task by following given instructions as they gave to the ones who can use their power to make their own plans and who can judge things or people.

Table 5. Cognitions on Good Language Learners

Good Language Learners	***M***	***SD***	***N***
Executive learner-oriented view	3.85	.73	581
Legislative learner-oriented view	4.17	.58	589
Judicial learner-oriented view	4.02	.67	579

Based on the ratings across *legislative learner-oriented* view, a great number participants were inclined to describe good language learners as the ones taking responsibility for their own learning (*M*=4.65); being more comfortable with activities that allow them to do things their own way (*M*=4.23); working better on language tasks that require creative strategies (*M*=4.22); and trying to learn a topic that they believe is important (*M*=4.19). In addition to those points, good language learners, for many participants, were *judicial learners* because they like projects enabling them to analyze, judge, and evaluate things and ideas (*M*=4.35) and are happier with activities in which they can review and compare different points of views (*M*=4.28). Compared to those two categories, *executive learner-oriented* view received fewer ratings, but there were participants labeling good language learners as the ones working better on tasks with clear instructions and established guidelines (*M*=4.16) and listening carefully to directives of their teachers (*M*=4.12).

Inferential Results

This section provides results of the inferential analyses as to the second research question investigating whether the cognitions varied significantly by certain variables. To answer this question, Pearson correlation coefficients, *t*-tests, and ANOVAs, were conducted and necessary assumptions were checked as the initial steps of the analyses. In order to test whether the distribution is normal, skewness and kurtosis values for each dimension within the scale were checked, and Kolmogorov-Smirnov and Shapiro-Wilk tests were computed. The skewness and kurtosis values were between +1 and -1, which could mean that the normality of the distribution was not violated (Tabachnick & Fidell, 2007), but Kolmogorov-Smirnov and Shapiro-Wilk tests were significant except for the first dimension (innatist perspective). These results indicated a distribution that differed from the normal distribution. Since the Kolmogorov-Smirnov and Shapiro-Wilk Tests are conservative tests, normality was examined by checking histograms, Q-Q Plots, and P-P Plots, and it was noticed that the normality assumption was not violated. Box plots were also examined to determine whether there were any outliers, and it was seen that were no serious outliers for the dimensions within the inventory, except for the informal and formal context-oriented views. In order to see the relationships between *age/ experience* and the three dimensions of the cognitions, Pearson correlation coefficients were conducted. For the first and the third dimensions, a p value of less than .008 (.05 / 6 = .008) was required for significance by using the Bonferroni approach to control Type I error across the 6 correlations. For the second dimension, a p value of less than .016 (.05 / 3 = .016) was required for significance based on the Bonferroni approach to control Type I error across the 3 correlations.

Differences in Cognitions by Age

The results of the correlational analyses regarding the first dimension indicated a negatively significant correlation only between age and formal context-oriented view, r (282) = -.18, having a small effect size. Accordingly, as the age level of the participants increased, the responses tended to reflect fewer orientations to formal (created) contexts, which could mean that the older participants seemed to disbelieve in the impact of consciously-created school/classroom environments on linguistic aptitude (see Table 6).

The results of the correlational analyses regarding the second dimension indicated a negatively significant correlation only between age and performance-oriented approach, r (373) = -.24, which revealed a small effect size. In view of that, the younger the participants were, the more they were into the performance-oriented approach, which could suggest that the younger participants prioritized the performance and communicative elements of the language rather than the knowledge and linguistic elements (see Table 6).

The results of the correlational analyses regarding the third dimension did not indicate any statistically significant correlations between age and cognitions on good language learners. This point showed that the age factor did not create any significant differences in the preferences of the participants with respect to good language learners' characteristics (see Table 6).

Table 6. Correlations between Age and Cognitions

Variable	Dimensions	*Pearson Corr.*	*Sig. (2-tailed)*	*N*
Age	Innatist perspective	-.14	.015	301
	Interactionist perspective (informal context)	-.10	.026	331
	Interactionist perspective (formal context)	-.18*	.003	284
	Competence-oriented approach	-.01	.806	377
	Performance-oriented approach	-.24*	.001	375
	Legislative learner-oriented view	-.07	.189	376
	Executive learner-oriented view	-.06	.270	372
	Judicial learner-oriented view	-.08	.118	370

Differences in Cognitions by Teaching Experience

Regarding the first dimension, the correlational analyses indicated a negatively significant correlation only between teaching experience and formal context-oriented view, r (283) = -.15, which had a small effect size. This finding indicated that as the participants' teaching experiences increased, they tended to reflect less formal context-oriented views, which could mean that the participants with more teaching experience seemed to undervalue the impact of consciously-created school/classroom environments on linguistic aptitude (see Table 7).

In relation to the second dimension, the results of the correlational analyses indicated a negatively significant correlation only between teaching experience and performance-oriented approach, r (374) = -.16, with a small effect size. Accordingly, as the participants became more experienced, they were disinclined to adopt a performance-oriented approach, which could imply that the participants having more teaching experience did not seem to see the language as a system of communicative elements and a vehicle for the realization of interpersonal relations (see Table 7).

As for the last dimension, none of the Pearson correlation coefficients indicated statistically significant correlations between teaching experience and cognitions on good language learners, which revealed that the experience factor did not create any significant differences in the preferences of the participants with respect to the characteristics of good language learners (see Table 7).

Table 7. Correlations between Teaching Experience and Cognitions

Variable	Dimensions	*Pearson Corr.*	*Sig. (2-tailed)*	*N*
Experience	Innatist perspective	-.13	.020	303
	Interactionist perspective (informal context)	-.11	.053	331
	Interactionist perspective (formal context)	-.15*	.007	285
	Competence-oriented approach	.01	.913	378
	Performance-oriented approach	-.16*	.002	376
	Legislative learner-oriented view	-.08	.131	376
	Executive learner-oriented view	-.02	.727	372
	Judicial learner-oriented view	-.12	.025	370

Differences in Cognitions by Home Institution

With the purpose of evaluating whether EFL instructors' language learning cognitions differ significantly by the type of the institutions they work at, independent-samples t-tests were conducted. For this analysis, they were divided into two groups: (a) participants employed at state universities and (b) participants teaching at private universities. The t-tests conducted to investigate whether the participants from a public institution reflected different language learning cognitions as opposed to the ones from a private institution were non-significant for all the dimensions. This finding could suggest that teaching at a private or state university did not create any difference in the language learning cognitions of the participants.

Differences in Cognitions by Undergraduate Education

In order to evaluate whether EFL instructors' cognitions change significantly according to the background variables from their undergraduate education, independent-samples t-tests and one-way ANOVAs were conducted.

As the initial point, an independent-samples t-test was performed to investigate whether the participants' fields of study at undergraduate education had a significant effect on their language learning cognitions. For this analysis, the participants were divided into two groups: (a) graduates of *Education Faculties* and (b) graduates of other faculties. The t-tests were significant for the following dimensions: competence-oriented approach, t(378.87)=-2.79, p=.006; legislative learner-oriented view, t(361.94)=2.01, p=.04; and judicial learner-oriented view, t(369.02)=2.03, p=.04.

As seen in Table 8, graduates of other departments (*M*=2.53) tended to adopt more competence-oriented approach as opposed to ELT graduates (*M*=2.30), which could mean that non-ELT graduates prioritized the linguistic elements of the language more than ELT graduates did. Furthermore, ELT graduates favored legislative learners (*M*=4.18) and judicial learners (*M*=4.03) more than the other participants did. This finding indicated that ELT graduates favored language learners who can take responsibility for their own learning and judge different points, things, and people.

Table 8. Differences in Cognitions by Study Field at Undergraduate Education *

Significant Dimensions	Study Field	*M*	*SD*	*N*
Competence-oriented approach	ELT	2.30	.78	188
$t(378.87)=-2.79$, $p=.006$	Non-ELT	2.53	.82	193
Legislative learner-oriented view	ELT	4.18	.49	187
$t(361.94)=2.01$, $p=.04$	Non-ELT	4.06	.62	192
Judicial learner-oriented view	ELT	4.03	.65	183
$t(369.02)=2.03$, $p=.04$	Non-ELT	3.88	.73	190

* Only the results indicating statistically significant differences are included.

As a further grouping, the participants were divided into five groups on the basis of their academic program at undergraduate education: (a) English Language Teaching (ELT); (b) English Language and Literature (ELL); (c) English Linguistics (LING); (d) American Culture and Literature (ACL); and (e) English Translation and Interpretation (ETI). In order to test the homogeneity of variance, Levene's test for each dimension was computed, and it was seen that the homogeneity of variance was not violated. The ANOVAs testing whether the group means on the dependent variables differ from each other were significant for: innatist perspective, $F(5,297)=2.96$, $p=.013$, $\eta^2=.047$; competence-oriented approach, $F(5,375)=2.95$, $p=.012$, $\eta^2=.038$; and performance-oriented approach, $F(5,373)=4.28$, $p=.001$, $\eta^2=.054$. The strength of the relationship assessed by η^2 was small with the factor accounting for approximately 4% to 5% of the variance of the dimensions in the dependent variable (see Table 9).

Table 9. Differences in Cognitions by Academic Program at Undergraduate Education *

Significant Dimensions	Academic Program	*M*	*SD*	*N*
Innatist perspective	(a) ELT	3.21	.64	187
F(5,297)=2.96, *p*=.013	(b) ELL	3.05	.65	99
	(c) LING	3.54	.74	36
	(d) ACL	3.31	.48	31
	(e) ETI	3.24	.68	20
Competence-oriented approach	(a) ELT	2.30	.78	188
F(5,375)=2.95, p=.012	(b) ELL	2.53	.80	99
	(c) LING	2.47	.70	37
	(d) ACL	2.80	.92	31
	(e) ETI	2.32	.88	20
Performance-oriented approach	(a) ELT	3.75	.73	187
F(5,373)=4.28, p=.001	(b) ELL	3.42	.71	99
	(c) LING	3.45	.63	36
	(d) ACL	4.07	.57	31
	(e) ETI	3.70	.87	20

* Only the results indicating statistically significant differences are included.
ELT=English Language Teaching; ELL=English Language and Literature; LING= Linguistics; ACL=American Culture and Literature; ETI=English Translation and Interpretation

Follow-up tests were conducted to evaluate pairwise differences among the means, and Dunnett's C test, which does not assume equal variances among the five groups, was used. For innatist perspective, there was a significant difference in the means between the graduates of ELL (*M*=3.05) and LING (*M*=3.54). This finding could mean that the participants holding a degree from the Department of Linguistics were more inclined to believe that linguistic aptitude is inborn and fixed in humans. For competence-oriented approach, there was a significant difference in the means between the graduates of ELT (*M*=2.30) and ACL (*M*=2.80). This point could indicate that the EFL instructors graduating from ELT departments did not seem to prioritize the linguistic elements of the language as much as the ACL graduates did. For *performance-oriented* approach, there was a significant difference in the means between the graduates of ACL (*M*=4.07) and ELL (*M*=3.42) or LING (*M*=3.45). This finding could reveal that the participants with a degree from the Department of American Culture and Literature tended to see the language as a vehicle for communication and interpersonal relations, as opposed to the graduates of ELL and LING (see Table 9).

Lastly, the participants graduating from the faculties other than education were grouped among themselves into two: the ones holding and not holding a pedagogical formation certificate. An independent-samples t-test was conducted to investigate whether the participants having a pedagogical formation certificate tended to reflect different language learning cognitions as opposed to the ones without a pedagogical formation certificate. The *t*-test was significant for only one dimension, legislative learner-oriented view, *t*(57.68)=2.23, *p*=.03. Accordingly, the participants having a pedagogical formation certificate (*M*=4.14) favored legislative learners more than the ones lacking a pedagogical formation certificate (*M*=3.90) did. This finding revealed that holding a pedagogical formation certificate created a difference only in preferences for legislative learners over other learners (see Table 10).

Table 10. Differences in Cognitions by Holding a Pedagogical Formation Certificate *

Significant Dimension	Pedagogical Formation	*M*	*SD*	*N*
Legislative learner-oriented view	Yes	4.14	.56	95
t(57.68)=2.23, *p*=.03	No	3.90	.60	98

* Only the results indicating statistically significant differences are included.

Differences in Cognitions by Graduate Education

An independent-samples t-test was conducted to investigate whether the participants holding a Master's degree reflected different language learning cognitions as opposed to the ones without a Master's degree. The *t*-test was significant for only one dimension: competence-oriented approach, $t(259.41)=-2.54$, $p=.01$. As displayed in Table 11, the participants who did not do a Master's ($M=2.55$) tended to adopt more competence-oriented approach by prioritizing the linguistic elements of the language than the ones holding a Master's degree ($M=2.32$) did.

Table 11. Differences in Cognitions by Holding a Master's Degree *

Significant Dimension	Holding a Master's Degree	*M*	*SD*	*N*
Competence-oriented approach	Yes	2.32	.75	241
$t(259.41)=-2.54$, $p=.01$	No	2.55	.87	140

*Only the results indicating statistically significant differences are included.

Finally, an independent-samples t-test was conducted to investigate whether the participants' fields of study at graduate education had a significant effect on their language learning cognitions. For this analysis, the participants were divided into two groups: participants holding a Master's degree in the field of education and outside the field of education. As the Levene's tests evaluating the assumption that the variances of the two groups are equal, did not indicate significant values except for the performance-oriented approach, $p=.005$, the homogeneity of variance was violated only for the dimension of performance-oriented approach. The *t*-tests were significant for two dimensions within the inventory: (a) competence-oriented approach, $t(182.39)=-1.90$, $p=.05$; and (b) legislative learner-oriented view, $t(185.34)=3.45$, $p=.001$. As shown in Table 11, the participants who did a Master's at the departments outside the field of education ($M=2.43$) tended to adopt more *competence-oriented* approach compared to the ones who did their Master's in the field of education ($M=2.23$). This finding could mean that the priority of the knowledge about the linguistic elements of the language was seemed to be agreed upon more by the participants holding a Master's degree outside the field of education. Furthermore, the participants having a Master's degree from education-related departments labeled *legislative learners* ($M=4.22$) as good language learners more than the other participants did ($M=3.95$). This finding could mean that the participants holding a Master's degree within the field of education tended to prefer language learners who can take responsibility for their own learning (see Table 12).

Table 12. Differences in Cognitions by Study Field at Graduate Education *

Significant Dimensions	Study Field	*M*	*SD*	*N*
Competence-oriented approach	Education	2.23	.72	133
$t(182.39)=-1.90$, $p=.05$	Non-education	2.43	.77	90
Legislative learner-oriented view	Education	4.22	.53	130
$t(185.34)=3.45$, $p=.001$	Non-education	3.95	.56	90

* Only the results indicating statistically significant differences are included.

Discussion, Conclusion and Suggestions

In relation to the first research question, it was seen that the participants did not reflect clear-cut or straightforward positions or orientations towards a particular dimension; instead, they had tendencies towards diverse perspectives and approaches at the same time. Similar cases were also stated in the literature, as teachers are usually claimed to adopt a combination of dichotomous approaches in teaching (Hong, 2012; Ong, 2011) or eclectic methods and techniques (Saengboon, 2012) rather than relying on a single way that could not work perfectly in all situations (Tantani, 2012).

Even so, there appeared some significant accumulations in particular aspects of the inventory. To exemplify for linguistic aptitude, the interactionist perspective received more ratings than the innatist perspective did, as the frequencies indicated. This finding revealed that EFL instructors were inclined to believe that language learning occurs through countless interactions between the learner and the environment, which takes a reference from Vygotsky's (1962) socio-cultural theory emphasizing the role of interaction and reflects Krashen's theory (1994) that interaction can enhance second language acquisition and fluency.

Regarding the sub-categories within the interactionist perspective, both informal (natural) contexts and formal (created) contexts were rated to be important factors on language learning aptitude in the responses of the participants even though they were slightly in favor of the formal context-oriented view. In this framework, it was predominantly believed that: the more social connections the learners have, the better they learn a foreign language (Long, 1985; Pica, 1996); it is better to learn a foreign language in a country where it is spoken as an official language (Vibulphol, 2004; Diab, 2009); and the learnability of a language depends on comprehensible input taken in sufficient quantities, which is consistent with the conceptual literature highlighting the critical role of comprehensible input for second language acquisition (Krashen, 1985; 1994).

In the matter of the *innatist* perspective, which presupposes that certain aspects of language are innate and hardwired (Gass & Selinker, 2008; Randall, 2007), even if most of the participants seemed to think that the capacity to learn a language is inborn in all humans, they also tended to disbelieve that all people learn a language more or less in the same way, and language competence is a result of 80% ability and 20% effort. The latter finding is fairly contradictory with the finding in Vibulphol's (2004) study, in which almost 90% of participants were inclined to admit that some people possess a special ability for learning foreign languages. This point was rated by more than half of the participants in Diab's (2009) study, as well. However in the current study, only one-fifth of the instructors were inclined to this point.

Nonetheless, most of the participants tended to believe that the capacity to learn a language is inborn in all humans; language skills are inherent in our genes; and learning a language is like learning to walk. Regarding a similar position, Gass and Selinker (2008) shed light on the concept, by claiming that it is innate for people to learn languages just like it is innate to ride a bike. As Lightbrown and Spada (1999) also state, "Chomsky argued that children are biologically programmed for language and that language develops in the child in just the same way that other biological functions develop" (p. 15). Consequently, it could mean that EFL instructors had parallel views on certain points with the conceptual literature putting forward that the innatist perspective has a mentalist orientation.

When the participants' cognitions on priorities in language learning were examined, it was seen that they were mostly on the side of performance-oriented approach, which was also highlighted as communication-oriented language teaching beliefs in Yook's (2010) dissertation. On the other hand, competence-oriented approach received fewer ratings, which is in opposition to the findings in the studies of Canh (2011); Chia (2003); Eisenstein-Ebsworth and Schweers (1997); and Soontornwipast (2010), whose participants reflected a tendency towards formal, explicit, conscious, and deductive instruction of grammar in language teaching as the competence-oriented approach usually suggests.

As stated before, some dimensions in the inventory did not receive straightforward ratings. For instance, the participant instructors both favored learners taking responsibility for their own learning and desired to have learners analyzing, evaluating, and judging the things and ideas; at the same time they were fond of learners listening carefully to directives of their teachers. These inclinations showed that the participants did not exhibit definite preferences about their learners' characteristics, which is emphasized in the literature as well. As learners learn through different ways, the way that works for a particular group might not work for others (Cohen & Dörnyei, 2002). Considering that every single learner has the right to be successful, teachers need to exhibit a wide repertoire of learning styles and characteristics, because successful learners, with predetermined overall characteristics, do not exist, and learners cannot be expected to be tied to one particular set of habits (Naiman, Fröhlich, Stern & Todesco, 1996).

As to the second research question, teachers' cognitions are shaped by a wide range of interacting factors (Borg, 2003). One of those factors, the *age* variable was interpreted to have impacts on certain aspects of cognitions, in contrast to Chan (2008), who claimed that the relationship between teacher belief and age was not statistically significant. As another variable, the *experience* factor suggested similar findings to the age factor. For instance, the more experienced or older the participants were, the less they were inclined to performance-oriented approach, which emphasizes the communicative elements of the language. In addition, as the age or teaching experience increased, the ratings for the formal context-oriented view decreased indicating that the younger EFL instructors supported consciously-created learning environments more. In a great number of papers, teaching experience is mentioned as an important factor affecting teachers' cognitions or practices (Akyel, 1997; Breen et al. 2001; Canh, 2011; Chan, 2008; Chia, 2003; Crookes & Arakaki, 1999; Cumming, 1990; Johnson, 2003; Johnston & Goettsch, 2000; Moini, 2009; Mok, 1994; Nishino, 2008; Nunan, 1992; Osam & Balbay, 2004; Seferoğlu, Korkmazgil, & Ölçü 2009; Richards, 1998; Richards, Li, & Tang, 1998; Tantani, 2012; Tsui, 2003; Westerman, 1991).

As the third variable, the workplace's effect (being a private/public institution) on cognitions was explored and the study did not put forward statistically significant effects of the workplace on teacher cognitions, as opposed to many papers attaching importance to the impact of working environment and setting (Borg, 1998c; Burns, 1996; Crookes & Arakaki, 1999; Davis, Konopak, & Readence, 1993; Farrell & Lim, 2005; Kang, 2008; H. Lee, 2006; Moini, 2009; Ng & Farrell; 2003; Pennington & Richards, 1997; Richards & Pennington, 1998; Spada & Massey, 1992; Tsui, 1996).

As one of the most central foci of investigation in some studies, educational background is claimed to be an important source of teacher cognition by Johnston and Goettsch (2000). Therefore, the impact of pre-service years was also explored in this study, and it was discovered that 'the field of study' at undergraduate education had a significant effect on the participants' language learning cognitions. Since the impact of pre-service years was observed in only some dimensions in the inventory, it could be interpreted that pre-service years created a limited effect on teachers' cognitions as justified by the previous literature (Bigelow & Ranney, 2005; Florio-Ruane & Lensmire, 1990; Hobbs, 2007; Kagan, 1992; Kunt & Özdemir, 2010; H. Lee, 2006; Nettle, 1998; Peacock, 2001; Pennington & Urmston, 1998; Richardson, 1996; Richards & Pennington, 1998; Urmston, 2003; Weinstein, 1990).

Finally, the impact of graduate education, which was not examined deeply as a significant variable in previous research, was also investigated within the scope of the current study and it was seen that participants' being engaged in a graduate education as well as their study fields had also influences on some dimensions of the participants' language learning cognitions.

In the study, it is not intended to criticize or misrepresent the instructors by uncovering their thoughts, beliefs, or knowledge; on the contrary, this study exists to be a valuable opportunity for them to reflect on. Through this reflection, they might question their potentially problematic understandings or perceptions about teaching or reinforce efficient teaching practices and pedagogies that work effectively in the classroom. Employing a reflective teaching approach might result in discovering new ideas as well as reshaping existing beliefs and thinking, because going through the findings of similar studies they might be able to look at what they do in the classroom, think about why they do it in that way and if it works, and focus on how to improve the way they do it to become even more effective in language teaching.

Both conceptual and empirical literature on teaching indicated that teachers' pedagogical beliefs, thinking, and knowledge influence their learners' learning and improvement, and the formation of those cognitions mostly occur during pre-service years. As student teachers' cognitive development should be considered in all planning and guiding phases of pre-service teacher education, the findings of the current study could also be utilized to reshape the current content and structure of teacher education programs.

Pre-service teacher education cannot be considered as the only source of preparing teachers for a life-long career and achieving personal and professional development. In-service years also play significant roles in teachers' development. Based on the findings obtained in this study, in-service teacher trainers could also consider acknowledging the significance of studying teacher cognition, because understanding how teachers' cognitions relate to certain practices might provide them with useful signs about teachers' orientations towards educational issues.

With regard to the methodology adopted in the study, an important and valid step was taken to examine self-reported cognitions of the participants. It is acceptable that eliciting cognitive inclinations of individuals through only a survey is a challenging task. Considering the complexity of studying teacher cognition, a qualitative aspect could be added to the current design as a follow-up study, and therefore an in-depth exploration could be ensured. To portray contextual realities better and more meaningfully, case studies form different teaching contexts could also be employed as a research design in further studies.

Significance of the Study for Education for the Future

The necessity of teaching foreign languages basically relies on the globalization phenomenon. Considering the context of Turkey, foreign language teaching has always been one of the top issues of education and will continue to be so. Speaking a foreign language is considered to be a necessity never losing its importance in the future, as well. In view of the 21st century skills and globalization and internationalization of education, English as a common language will be an inevitable element within the settings of multi-cultural and multi-lingual education. Therefore, all the research and development initiatives carried out on learning and teaching English will contribute to the education in the future. In particular, teachers are considered to be among the most significant factors that shape the achievement in language teaching. Focusing on teacher cognitions in relation to language learning processes, this study tried to shed lights on the underlying elements behind teaching habits developed by the actors who will take important roles in the education of new generations for the future.

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Appendix 1. Sample Items and Dimensions

Sample Item	Dimension
The capacity to learn a language is like learning to walk.	Innatist Perspective
Learning a language is like learning to walk.	Innatist Perspective
It is better to learn a language in a country where it is spoken as an official language.	Interactionist Perspective
Consciously created academic contexts facilitate a better process for language learning.	Interactionist Perspective
Language proficiency means using language forms appropriately.	Competence-oriented Appr.
The preliminary skills to be developed in language learning are reading and writing.	Competence-oriented Appr.
It is more important for language learners to focus on what they are trying to say than how to say it.	Performance-oriented Appr.
Language learners need to master listening and speaking skills before they begin to read and write.	Performance-oriented Appr.
Good language learners listen carefully to directives of their teachers.	Executive Learner Type
Good language learners work better on tasks with clear instructions and established guidelines.	Executive Learner Type
Good language learners take responsibility for their own learning.	Legislative Learner Type
Good language learners are more comfortable with activities that allow them to do things their own way.	Legislative Learner Type
Good language learners know to criticize the way the teachers teach.	Judicial Learner Type
Good language learners work better on language tasks that allow for their judgment.	Judicial Learner Type