



## Araştırma Makalesi • Research Article

### Students' Autonomy, Relatedness and English Language Competencies in Their Cognitive Domains

#### Öğrencilerin Bilişsel Alanlarındaki İngilizce Beceri, Özerklik ve İlişkili Olma Durumları Arasındaki İlişki

Hakan Aydoğan<sup>a,\*</sup>

<sup>a</sup> Dr., Çilesiz Mah. Damla Sokak, Miran Park Sitesi, 11/9, 44090, Malatya/Türkiye.  
ORCID: 0000-0002-7906-6955

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#### ÖZ

Bu çalışmanın amacı İngilizcenin Yabancı Dil Olarak Öğretimine ilişkin birtakım değişkenler (EFL) ve temel psikolojik ihtiyaçlar arasındaki (özerklik, beceri ve iltililik) arasındaki ilişkiyi irdelemektir. Buna ek olarak, yukarıda adı geçen değişkenlerdeki cinsiyet farklılıkları da incelenmiştir. Örneklem 90'ı kız ve 65'i erkek olmak üzere toplamda bir Türk Devlet üniversitesinin farklı bölümlerinde öğrenim gören 155 öğrenciyi kapsamıştır. Katılımcıların İngilizce beceri düzeyleri de dâhil olmak üzere katılımcıların İngilizce yetenek ve becerileri onların ihtiyaçları ile pozitif ilişki içerisinde görülmüştür. Öğrencilerin Türkçe ve İngilizce gramer zorluk düzeyleri ile ilgili düşünceleri, onların temel psikolojik ihtiyaçları ile negatif ilişki içerisinde görülmüştür. İstatistiksel olarak, gerek İngilizcenin Yabancı Dil Olarak Öğrenimi değişkenleri için olsun gerekse temel psikolojik ihtiyaçlar için olsun aralarında istatistiksel olarak anlamlı cinsiyet farklılıklarına rastlanmamıştır. Katılımcılar İngilizce dilbilgisi, Türkçe gramere göre öğrenilmesi ve kullanılması daha güç bulmuşlardır. Alanla ilgili ilerde yapılabilecek araştırmalar için önerilerde bulunulmuş ve pratik bazı çıkarımlarda bulunulmuştur.

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#### ABSTRACT

The aim of this paper is to examine the relationships between some variables relevant to EFL and the basic psychological needs (autonomy, competence and relatedness). Additionally, gender differences in EFL variables and the three basic needs were investigated. The sample consisted of 155 Turkish students (90 females and 65 males) in different departments of a public university. English skills and knowledge, as well as participants' level of English competencies, were in positive relationships with these needs. Turkish and English grammar difficulty was in negative relationships with the basic psychological needs. There were no statistically significant gender differences either in EFL variables or in the basic needs. Students found English grammar more difficult to use and learn compared to Turkish grammar. Further research suggestions and practical implications were discussed.

## 1. Introduction

Learning and teaching English as a foreign language (EFL) is a specific and complex educational context. It comprises an interplay of personality, motivational, cognitive, affective (emotional) and behavioral influences. Some authors identified the following sources of students' motivation to learn English: family members who spoke English and have positive attitudes toward this language; good English teachers; students' positive attitudes towards English; books

and other teaching materials of a good quality; taking English courses not only at school/university but also in private institutions; a competitive classroom atmosphere; living in multi-cultural environment; opportunities for traveling to Western countries; interacting with foreign tourists and participating in various English clubs (Al-Mahrooqi and Denman, 2014).

A great familiarity with English vocabulary and grammar is not enough to communicate in this language in a relatively

\* Sorumlu yazar/Corresponding author.  
e-posta: aydoganh@hotmail.com

spontaneous way. One should regularly practice oral and written communication, especially with English native speakers. English grammar is estimated as an aspect of this language which is moderately to very difficult to learn for those whose main foreign language is (or should be) English (Al-Mekhlafi and Nagaratnam, 2011). English pronunciation could also be one of the most difficult linguistic segments to master (Gilakjani and Ahmadi, 2011). Of course, students should be properly motivated to learn, use and practice English in order to master it.

Hence, motivation plays an important role in learning a foreign/second language and in educational processes in general (Anjomshoa and Sadighi, 2015). One of the most investigated approaches to motivation is self-determination theory (SDT). It highlights the mechanisms of behavioral self-regulation and basic psychological needs which are the basis for personality integration and self-motivation (Ryan and Deci, 2000). Academic motivation is highly influenced by self-regulation because students need not only to learn course materials but also to learn how to motivate themselves and how to be persistent in their academic/school efforts. Needs direct and maintain the desired behavior while leading to desired and acceptable outcomes (or, in the learning/studying environment, to a better academic performance and more positive attitudes towards subject matters and courses). Therefore, basic psychological needs are regarded as facilitators of motivation (Ryan et al., 2009). As emerged from SDT, these needs are autonomy (the perception of freedom and having various choices), competence (being good at what one usually does, the feeling of accomplishment and capability), and relatedness (having good relationships with others, full of mutual support and care). The linkage of autonomy support and perceived competence with intrinsic motivation was found in lots of research (e.g. Guay et al., 2001; Vallerand et al., 1997).

An example of autonomy is students' perception of having the freedom to choose topics for their projects or to learn something at a pace that is suitable for them. An example of competence is students' sense of self-confidence during learning and taking exams. Finally, an example of relatedness is collaborative learning or helping other peers to master lessons in a particular academic course.

The degree of learners' autonomy could be influenced by the following factors: students' goals and needs (short-term vs long-term), support (weak vs strong), choice (depend on something/somebody vs be independent), learning strategies (ineffective vs effective), emotional climate (uncomfortable vs comfortable), self-esteem (low vs high), as well as learners' attitudes and their motivation (negative and short term vs positive and long-term), as were listed by Pichugova et al. (2016). Students whose needs for autonomy, competence and relatedness are supported by teachers and other students are more engaged in their studies (Niemić and Ryan, 2009). One's need for competence is closely linked to his/her sense of self-efficacy and the capability of surmounting challenging tasks (Minnaert et al., 2007). It is one of the cognitive needs whereas relatedness belongs to social needs.

It is important that every student should be connected to his/her learning community that can lead to better personal and academic success (Riley, 2016). It seems that students'

autonomy is also in positive correlation with their academic achievements (Feri et al., 2016). Finally, students' feeling of self-competence lead to a better school performance (Marshik et al., 2017). Satisfaction of the need for competence is in a moderate relationship with relatedness (Hofer and Busch, 2011). Autonomy is usually in low to moderate correlations with competence and relatedness (Adie et al., 2008; Sheldon and Filak, 2008). To the knowledge of the author of this study, gender differences in the basic human needs were not investigated up until now.

The purpose of this study is to investigate the relationships between the basic human needs (autonomy, competence and relatedness) and English language competencies (along with English and Turkish grammar degree of difficulty). Additionally, we were interested in gender differences in autonomy, competence and relatedness and in differences between English and Turkish grammar degree of difficulty. So far, there have been no studies examining such relationships and differences carried out in Turkey.

On the basis of the purpose of the present study, the following research questions were formulated:

- (i) Are there statistically significant relationships among EFL variables (English skills and knowledge, levels of English competencies, English grammar degree of difficulty and Turkish grammar degree of difficulty)?
- (ii) Do EFL variables significantly correlate with the basic psychological needs?
- (iii) Are there statistically significant gender differences in EFL variables and the three basic psychological needs?
- (iv) Do participants estimate English grammar as more difficult to learn and use, compared to Turkish grammar? Is this difference statistically significant?

## 2. Methodology

### 2.1. Participants

The total of 155 Turkish students participated in the present study. They were recruited from the Marmaris Tourism Department of Muğla Sıtkı Koçman University. There were 90 females (58.1% of the whole sample) and 65 males (41.9%). Students' mean age was  $M = 21.05$  and the standard deviation of their age was  $SD = 2.37$ . The youngest participant was 18 while the oldest one was 27 years old.

**Table 1.** The Frequencies of Participants by Their Level of English Competencies

Levels of English proficiency	f	%
A1	35	22.6
A2	13	8.4
B1	7	4.5
B2	35	22.6
C1	14	9.0
C2	51	32.9

As was shown in Table 1, English competencies of most participants ( $N = 51$ , or 32.9% of the total sample) were in accordance with the level C2 (very advanced). Next, the level B2 (upper intermediate) and A1 (elementary) were reported by 35 participants each (22.6%). English competencies of 14 respondents (9%) were those of the level C1 (pre-advanced), whereas 13 participants reported the

level A2 (8.4%). At the end, English competencies of the rest of the participants ( $N = 7$ , i.e. 4.5% of the total sample) were those typical of the level B1 (low intermediate and intermediate).

## 2.2. Instruments

Firstly, respondents were asked (within the administered instrument) to provide their gender, age and estimates of their English skills and knowledge ("How would you estimate your English language skills and knowledge?" The answering options were: 1 - very poor, 2 - poor, 3 - good, 4 - very good, and 5 - excellent). Then, their level of English competencies was recorded (A1 - elementary; A2 - pre-intermediate; B1 - low intermediate and intermediate; B2 - upper intermediate; C1 - pre-advanced; and C2 - advanced and very advanced), on the basis of their scores of English proficiency tests they had taken before. Thirdly, we asked students to estimate the degree of difficulty with regard to Turkish and English grammar ("In your opinion, how difficult is the grammar of your mother tongue/English?") The answering options were ranged from 1 - "not difficult at all" to 5 - "absolutely difficult to learn and use").

Finally, the *Basic psychological needs scale* was administered. The authentic English form of this scale was used and participants could easily understand every item (statement). This scale was designed by Deci and Ryan (2000) and consists of 21 items accompanied by the seven-point Likert scale (1 - "not at all true", 4 - "somewhat true", and 7 - "very true"). According to its authors, this scale has very good psychometric properties (first of all, validity and reliability) and is used worldwide to examine the basic psychological needs. This scale encompasses three subscales: *Autonomy* (items: 1, 4, 8, 11, 14, 17; and 20, e. g. "I generally feel free to express my ideas and opinions"), *Competence* (items: 3, 5, 10, 13, 15, and 19; e. g. "People I know tell me I am good at what I do"), and *Relatedness* (2, 6, 7, 9, 12, 16, 18, and 21; e. g. "I really like the people I interact with"). They are used for measuring the three basic psychological needs, within the framework of Self-determination theory. Cronbach's alpha coefficients were employed in order to test the internal consistency of these subscales as well as the whole scale. All of them were very high, as follows:  $\alpha = .95$  (Autonomy),  $\alpha = .96$  (Competence),  $\alpha = .97$  (Relatedness), and  $\alpha = .99$  (the Basic psychological needs scale).

## 2.3. Research Procedure and Data Processing

The instrument was administered to participants with instructions how to respond in a valid manner ("Please, be honest and answer quickly, so your answers could be valid and reliable"). It took them approximately 15 minutes to complete the process of responding. The next step was making a database while coding participants' answers. The third step included statistical analyses. For these purposes, SPSS for Win (ver.23) was used. Three procedures that belong to inferential statistical techniques were conducted. The first one was correlational analysis the second was *t*-test for independent samples, whereas the last one was paired-samples *t*-test. Some parametric statistical procedures were chosen because they are more accurate and their tests have more strength compared to the nonparametric ones. Hence, Pearson's coefficient of correlation and *t*-tests were applied

instead of Spearman's rho coefficient, Mann-Whitney U test, and Wilcoxon test (and similar nonparametric procedures). During the whole research procedure, the researcher stuck to ethical rules/standards of conduct in educational research.

## 3. Results

In order to take a broader look at the obtained results, descriptive statistical values were displayed (Table 2).

**Table 2.** Descriptive Statistical Values of the EFL Variables and Motivation

Variables	N	Min	Max	M	SD
English skills and knowledge	155	1	5	3.15	1.24
Level of English competencies	155	1	6	3.86	1.96
Turkish grammar degree of difficulty	155	1	5	1.97	0.96
English grammar degree of difficulty	155	1	5	2.50	1.41
Autonomy	155	1	6	4.81	1.52
Competence	155	1	6	4.79	1.51
Relatedness	155	1.75	6.50	4.81	1.61

As was shown in Table 2, participants estimated their English skills and knowledge as above the average ( $M = 3.15$ ). Their level of English competencies is somewhere between B1 and B2 (pre-intermediate, intermediate, and upper intermediate) because the arithmetic mean of this scale was  $M = 3.86$ . According to participants, Turkish grammar degree of difficulty is low ( $M = 1.97$ ) and English grammar degree of difficulty is low to moderate ( $M = 2.50$ ).

All three psychological needs of participants were met in an above the average degree:  $M = 4.81$  (autonomy),  $M = 4.79$  (competence), and  $M = 4.81$  (relatedness).

**Table 3.** Correlations among EFL Variables

	English skills and knowledge	Level of English competencies	Turkish grammar degree of difficulty	English grammar degree of difficulty
English skills and knowledge	1	.904	-.362	-.691
Level of English competencies		1	-.280	-.739
Turkish grammar degree of difficulty			1	.339
English grammar degree of difficulty				1

Note: All coefficients were statistically significant at the level .001.

English skills and knowledge, estimated by our participants, was in a strong, positive, and statistically significant correlation with their level of English competencies ( $r = .904$ ,  $p < .001$ , see Table 3). As was expected, English grammar degree of difficulty was in negative and statistically significant correlations with English skills and knowledge ( $r = -.691$ ,  $p < .001$ ) as well as with participants' level of English competencies ( $r = -.739$ ,  $p < .001$ ). These were strong relationships. Turkish grammar degree of difficulty

was in a moderate, positive and statistically significant correlation with English grammar degree of difficulty ( $r = .339, p < .001$ ). Interestingly, Turkish grammar degree of difficulty was in statistically significant correlation with participants' English skills and knowledge ( $r = -.362, p < .001$ ) and their level of English competencies ( $r = -.280, p < .001$ ). The first relationship was moderate; the second one was low while both of them were negative.

Referring to the figures displayed in Table 4, English skills and knowledge were in strong, positive and statistically significant relationships with autonomy ( $r = .808, p < .001$ ), competence ( $r = .811, p < .001$ ) and relatedness ( $r = .829, p < .001$ ). Similar results were obtained for respondents' level of English competencies (expressed as a numeric scale). This variable was in strong, positive and statistically significant correlations with autonomy ( $r = .910, p < .001$ ), competence ( $r = .889, p < .001$ ) and relatedness ( $r = .888, p < .001$ ).

**Table 4.** The Relationships between EFL Variables and the Basic Psychological Needs

	Autonomy	Competence	Relatedness
English skills and knowledge	.808	.811	.829
Level of English competencies	.910	.889	.888
Turkish grammar degree of difficulty	-.315	-.371	-.387
English grammar degree of difficulty	-.762	-.801	-.807

Note: All correlational coefficients were statistically significant at the level .001.

On the other hand, Turkish grammar degree of difficulty was in negative and statistically significant correlations with the three basic psychological needs ( $r = -.315, r = -.371, and r = -.387$ , respectively). These coefficients indicated moderate relationships. A similar pattern of findings was obtained with regard to English grammar degree of difficulty; however, these correlational coefficients were large ( $r = -.762, r = -.801, and r = -.807$ , respectively).

**Table 5.** Gender Differences in EFL Variables

Variables	Gender	N	M	SD	t	df	p
English skills and knowledge	Male	65	3.29	1.14	1.228	153	.221
	Female	90	3.04	1.31			
Level of English competencies	Male	65	4.08	1.92	1.186	153	.238
	Female	90	3.70	1.97			
Turkish grammar degree of difficulty	Male	65	1.95	1.02	-1.153	153	.878
	Female	90	1.98	0.91			
English grammar degree of difficulty	Male	65	2.42	1.37	-1.657	153	.512
	Female	90	2.57	1.45			

It was also of our interest to examine the gender differences in EFL-related variables and in the three basic needs. The results of  $t$ -tests for independent samples were shown above (Table 6).

As was displayed in Table 5, males reported slightly higher English skills and knowledge ( $M = 3.29$  vs  $M = 3.04$ ) and level of English competencies ( $M = 4.08$  vs  $M = 3.70$ ), compared to females. However, the differences between their arithmetic means were not statistically significant:  $t(153) = 1.228, p > .05$  (English skills and knowledge) and  $t(153) = 1.186, p > .05$  (Level of English competencies).

In contrast, females reported somewhat higher degree of difficulty when estimating Turkish grammar ( $M = 1.98$  vs  $M = 1.95$ ) as well as English grammar ( $M = 2.57$  vs  $M = 2.42$ ). Yet these findings were not statistically significant ( $t(153) = -0.153$  and  $t(153) = -0.657$ , respectively; for both of them:  $p > .05$ ).

**Table 6.** Gender Differences in the Basic Psychological Needs

Variables	Gender	N	M	SD	t	df	p
Autonomy	Males	65	5.00	1.53	1.268	153	.207
	Females	90	4.68	1.50			
Competence	Males	65	4.98	1.56	1.413	153	.160
	Females	90	4.64	1.46			
Relatedness	Males	65	4.97	1.69	1.028	153	.305
	Females	90	4.70	1.55			

By looking at Table 6, it can be noticed that males had somehow higher estimates of the satisfaction with regard to autonomy ( $M = 5.00$  vs  $M = 4.68$ ), competence ( $M = 4.98$  vs  $M = 4.64$ ), and relatedness ( $M = 4.97$  vs  $M = 4.70$ ). However, these differences were not enough large to be statistically significant. Therefore, there were no gender differences in: autonomy ( $t(153) = 1.268, p > .05$ ), competence ( $t(153) = 1.413, p > .05$ ), and relatedness ( $t(153) = 1.028, p > .05$ ).

The statistical significance of the differences between Turkish and English grammar degree of difficulty was assessed by using  $t$ -test for paired samples (Table 7).

**Table 7.** Differences between Turkish and English Grammar Degree of Difficulty

Variables	N	M	SD	t	df	P
Turkish grammar degree of difficulty	155	1.97	0.96	-4.725	154	.000
English grammar degree of difficulty		2.50	1.41			

As was expected, participants estimated English grammar learning and usage as more difficult compared to Turkish grammar ( $M = 2.50$  vs  $M = 1.97$ , Table 7). This difference was statistically significant ( $t(154) = -4.725, p < .001$ ).

#### 4. Discussion

The four variables relevant to the EFL context and explored in this research (English skills and knowledge, level of English competencies, English grammar degree of difficulty and Turkish grammar degree of difficulty) were in statistically significant correlations with each other. Turkish students' levels of English competencies were linked to their subjective estimates of their English knowledge and skills. These two variables were in negative correlations with Turkish and English grammar degree of difficulty. This result means that if students' English competencies go up, the perceived degree of grammar difficulty decreases. Additionally, participants estimated English grammar as moderately to very difficult, which is in accordance with the findings obtained in the Al-Mekhlafi's and Nagaratnam's study (2011).

Autonomy, competence and relatedness, as the basic needs, were in mutual positive and statistically significant correlations. These results were not shown because they are usual findings in studies where this scale was applied. Hence, the perception of freedom was in positive relationships with one's feeling of self-efficacy and his/her perception of social

support and connection with others. Some other authors got similar results (Adie et al., 2008; Hofer and Busch, 2011; Sheldon and Filak, 2008).

Furthermore, all basic psychological needs were in positive relationships with English skills, knowledge and competencies. Hence, autonomous, competent and socially fulfilled students reported a higher level of English competencies and achievements. These findings are connecting EFL variables with the basic psychological needs and point to the importance of motivation in EFL context. Similar findings were obtained in studies conducted by Feri et al. (2016), Marshik et al. (2017), as well as by Riley (2016).

Gender differences in the EFL and motivational variables, as were already written, were not statistically significant. However, males tended to give greater estimates of their English skills, knowledge and competencies as well as of their degree of the basic needs satisfaction. This tendency was not so strong and that is why gender differences were not statistically significant.

At the end, English grammar was estimated as more complex compared to Turkish grammar. Despite the fact that Turkish is not simple to learn, English is a foreign language to Turkish students and this influenced their estimates of its difficulty. English and Turkish grammar degrees of difficulty were correlated to each other. This correlation implied that their shared variance was 11.49%. The variance was calculated by squaring the appropriate coefficient of correlation (i.e.  $r = .339$ ) in order to obtain the coefficient of determination. The last step in this calculation process was multiplying the coefficient of determination by 100. This proportion of variance is probably due to the complexity of grammar in general (in a linguistic sense). Hence, it appeared that a number of students had problems while learning and using grammar rules no matter what the language (mother tongue or a foreign one) is this grammar belongs to.

There were several shortcomings of this study. Three of them were highlighted. The first one was associated with sample size and the specific population from which it was drawn (i.e. elementary and high school EFL students should also be taken into consideration). The second limitation (shortcoming) involved acquiescence bias (i.e. participants' tendencies to agree with statements, regardless of their contents). These two methodological weaknesses are typical for social studies. The third important shortcoming was students' subjective estimate of their English language skills and knowledge. Although this (self-report) approach is widely used in various studies, it does not always depict the real situation (picture) of students' competencies. Hence, objective measures should be used in order to obtain more realistic and valid results (for example, as we did while determining students' levels of English proficiency).

Some practical implications of this article are: 1) if students do not satisfy their basic needs (autonomy, competence, and relatedness), they will have lower academic achievements; 2) males and females have approximately equal levels of autonomy, competence and relatedness; and 3) English grammar is perceived as moderately to very difficult by both males and females; 4) English competencies do not differ by gender (i.e. males and females reported almost equal levels of English skills and knowledge).

Overall, the answer to the first, second, third and last research questions was positive (because these findings were statistically significant), whereas the answer to the fourth research question was negative (gender differences were statistically non-significant).

## 5. Conclusion

To conclude, motivation plays an important role in the English as a foreign language context. Students should feel autonomous, competent and socially connected to other classmates in order to achieve positive educational outcomes. Autonomy means that they have the opportunity to choose among some alternatives related to the process of education. Competence encompasses someone's perception of himself/ herself as a skillful individual. Relatedness includes being part of social networks, maintaining social interactions and working with others on same tasks (collaboration).

English (and all other) teachers should be aware of students' basic needs as well as of their other needs (e.g. self-esteem, cognitive needs, self-actualization, need for success, etc.). Intrinsic and extrinsic motivators have a significant impact on students' performance and satisfaction with school subjects, relationships and grades. Thus, teachers have to ask their students about their aspirations, tendencies, expectations, satisfaction, etc.

We should also highlight that teachers have their own needs as well and students should understand them in order to establish positive and mutually supportive relationships with them. Of course, the last reflexion is not a direct (straightaway) conclusion based on the findings of this study; however, the author of this article had the professional need to include this flow of thinking. In other words, he underlined the importance of examining teachers' perspective in terms of their basic psychological (and professional) needs.

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