

Code Switching Beliefs of Learners of Turkish as a Foreign Language: A Scale Development Study

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Abstract

The aim of this study is to develop a scale related to code switching beliefs of learners of Turkish as a foreign language (TFL). The 38-item *Code Switching Beliefs of the Learners of Turkish as a Foreign Language Scale* was piloted with 301 students who were learning C1-level Turkish at Harran University TMER (Turkish Language Center) and İstanbul Aydın University TMER. Based on the data obtained, an exploratory and confirmatory factor analysis was conducted and the finalized 17-item scale comprised the subdimensions of *code switching in the learning-teaching process*, *code switching by frequency*, *code switching by reasons* and *code switching in the family and social environment*. The total variance explained by this scale was calculated as 49.393% and the internal consistency value was .77. Thus, a functional scale is thought to have been developed to serve the purpose of the study.

Keywords: Code switching beliefs, Turkish language, scale development.

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Introduction

The concept of bilingualism has been commonly viewed as “the ability to regularly use two or more languages in daily life” (Grosjean, 2008, p. 10), which has been gaining increasing popularity. However, acquiring this quality entails multidimensional usages of languages. Individuals who have a relationship with two or more languages are able to translate from the other language(s) (usually from the native language) to the target language, whether they are communicatively advanced language users or users at the beginner level. The process of switching to better-known language units such as words, phrases or sentences is preferred in order to fill the gaps in use and manipulate the meaning in the desired way, which is called “code switching”.

Code switching is defined as “the simultaneous and alternating shift between two or more languages during communication” (Grosjean, 1982, p. 145), and “transition from one language to another within the same discourse” (Numan & Carter, 2001, p. 275). Cook (2008, p. 174), on the other hand, defines code switching as “switching from one language to another in the middle of the speech when both speakers speak the same languages”, by drawing attention to the person being addressed as well. These transitions should take place without violating the grammatical rules of the language used (Romaine, 1989, p. 112; Poplack, 1980, p. 613).

Poplack (1980, pp. 613-616) describes three types of code switching in speech performance, each characterized by different levels of components and reflecting proficiency degrees in both languages. These are called *inter-sentential switching*, *tag-switching* and *intra-sentential switching*, which are schematized as follows:

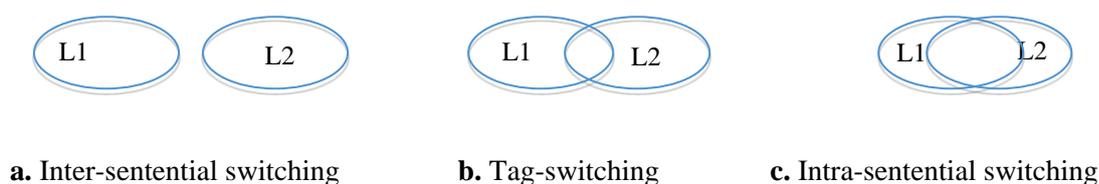


Figure 1. Types of code switching (Poplack, 1980, p. 615)

Inter-sentential switching includes substitutions at sentence or sentence boundaries. *Tag-switching* means adding words anywhere within the confines of a sentence or speech. *Intra-sentential switching* refers to a language change in terms of words or phrases in a sentence (Romaine, 1989, p. 112). Cook (2008, p. 176) states that in normal conversations between bilinguals, the scope of code switching consists of 84% simple word change, 10% word category change and 6% sentence change. Cook also lists the reasons for switching the code as follows (2008, p. 176):

- Reporting someone else’s speech
- Using digressions

- Highlighting specific information
- Switching to a topic that is more appropriate for a specific language
- Changing the speaker's role
- Specifying of the subject
- Selecting a person to direct the conversation at
- Incompetence/ignorance in a specific form of language.
- Demonstrating the social role of the speaker

In foreign language learning environments, there are many debates about allowing the use of the first/mother tongue of the students, which bring up some questions such as “Should it be allowed, or banned?”, “To what degree it should be allowed?”. Sert (2005) states that in foreign language learning environments, there are approaches that strictly adhere to the rules of the language learned, prohibiting the use of a language other than the target language, as well as approaches that believe in the benefit of the use of the mother tongue, especially at the beginning level. The first focuses on slowing down the learning of the new language and the possibility that the receiver may not have the competence of the language used in the code switching process of the source when communicating in the target language. In the second, code switching is believed to bridge the known to the unknown and to support continuity in communication. Elridge (1996, p. 311) argues that code switching may provide short-term benefits to the second language learner, but may prevent long-term acquisition; therefore, disallowing the option of code switchings will speed up language development. Similarly, Sarıçoban (2010), Turnbull (2001) and Krashen & Terrell (1983) point out that changing the code may cause some problems depending on the frequency of use. However, there is a copious amount of research that reveals that bilingualism allows learners to benefit from their native language experiences and that it is an effective way to understand the new language better (Cook, 2008; Çelik, 2008; Macaro, 2001; Anton & Dicamilla, 1999; Van Lier 1995; Auerbach, 1993; Atkinson, 1987). Prodromou (2002, p. 8) emphasizes the versatility of mother tongue use in second/foreign language classes. Since the priority in the target language is to attain and maintain the highest level of interaction, code switching can be a facilitator in enhancing interaction. However, using it without a clear justification can be useless or may prevent learning.

Hundreds of thousands of foreign nationals both from around the world and living in Turkey are trying to learn Turkish, which is an international language. Most of them are Syrian students who took refuge in Turkey because of the war in their country. Considering the Common European Framework of Reference for Languages, which connects the structuring of a language to

communicative ability, ensuring optimal communication with these students is closely related to their beliefs in the Turkish language.

The effect of belief on learning is undeniable. Beliefs that include positive or negative thoughts about something being learned by an individual shape cognitive, affective and psychomotor responses to learning. Code switching beliefs of Turkish language learners are also important in this regard. Identifying code switching beliefs, both in the social environment and teaching-learning environment, can be a guide in terms of providing insights into learning paths and methods, functionalizing learning, and supporting the subsequent learning processes. Therefore, there is a need for a measurement tool for the code switching beliefs of TFL learners both in determining the purpose of language use and in improving the quality of learning-teaching process. Examining the related literature reveals that scale development studies for code switching beliefs are mostly focused on learners of English (see Coşkun-Yaşar and Yıldız, 2018; Horasan, 2014; Mahmutoğlu & Kıcıır, 2013; Kayaoğlu, 2012). Currently, no code switching scale on the beliefs of those who learn TFL in Turkey is available. Considering the language problems experienced by TFL learners, the need for the current study is evident. Thus, the primary purpose of this study is to develop a scale for the code switching beliefs of the TFL learners.

Method

This is a scale development study. The stages of the process of developing the *Code Switching Beliefs of the Learners of Turkish as a Foreign Language Scale* and the characteristics of the study group are presented below.

Study group

The study group for the validity and reliability studies of the *Code Switching Beliefs of the Learners of Turkish as a Foreign Language Scale* was composed of 301 foreign learners of C1-level Turkish at Harran University TÖMER and İstanbul Aydın University TÖMER in the 2018-2019 academic year. The characteristics of the group according to gender, age and national demographic variables are presented in the table below.

Table 1. Demographic characteristics of the study group

Institution	Gender		Age				Nationality		
	F	M	18	19	20	21	Syria	Iraq	Sudan
Harran University TÖMER	98	64	42	73	30	17	160	2	-
Istanbul Aydın University TÖMER	82	57	29	64	32	14	129	6	4
Subtotal	180	121	71	137	62	31	289	8	4
Total	301		301				301		

The study group consisted of 301 participants aged between 18 and 21 years. 180 of them (59.8%) were female and 121 (40.2%) were male. 96% (f = 289) of the participants stated that they were from Syria, 2.7% (f = 8) from Iraq, and 1.3% (f = 4) from Sudan.

Developing the Code Switching Beliefs of the Learners of Turkish as a Foreign Language Scale

The aim of this study is to develop a scale related to the code switching beliefs of the learners of TFL. For this purpose, three lecturers teaching TFL were interviewed about code switching and students learning Turkish were observed. However, since there was no previous scale studies on code switching beliefs of those who learn TFL, scale development studies for code switching beliefs of those who learn other languages (especially English) (Coşkun-Yaşar and Yıldız, 2018; Horasan, 2014; Mahmutoğlu and Kıcıır, 2013; Kayaoğlu, 2012) were examined. Based on the information obtained from interviews, observations and literature review, a pool of items was created. Then, expert opinions were obtained from three faculty members teaching TFL. In line with the expert opinions, the necessary changes were made to the items, and items that were not deemed appropriate were removed, which produced a pool of 38 items. It was decided that the scale would serve the study purpose in the form of a Likert-type with “1” indicating the lowest, and “5” indicating the highest for each item, to be chosen by the participants. The final form was presented to 301 foreign university students learning Turkish in Turkey.

Data analysis

SPSS 25 and LISREL 8.8 statistical programs were used to analyze the data. The data analysis process was carried out in two steps. In the first step, exploratory factor analysis was used to determine the factor structure as an indicator of the construct validity. In the exploratory factor analysis performed by using the principal components factorization technique, maximum variability (Varimax) was applied as a rotation. Items with factor loadings below .40 were excluded from the analysis. In addition, .32 value was used to determine overlapping items (Çokluk, Şekercioğlu and Büyüköztürk, 2012; Tabachnick and Fidell, 2013). In determining the factor structure of the scale, eigen values, scree plot and the amount of variance explained by the factor were examined. In addition, Cronbach Alpha internal consistency coefficient was examined for the reliability analysis of the scale, and the reliability analyses were performed. In the second step, confirmatory factor analysis was used to confirm the factor structure of the scale. Confirmatory factor analysis and exploratory factor analysis were performed on the same dataset. The main reasons for this were the small number of participants, access difficulties, and costly data collection. The ratio of chi-square to degree of freedom (χ^2/df), Root Mean Square Error of Approximation (RMSEA), comparative fit index (CFI), goodness of fit index (GFI), square root of Standardized Root Mean Residual (SRMR) and non-

normed fit index (NNFI) were considered in evaluating model fit for confirmatory factor analysis (Çokluk, Şekercioğlu and Büyüköztürk, 2010; Hooper, Coughlan and Mullen, 2008; Kline, 2005).

Results

Exploratory Factor Analysis Results

Exploratory factor analysis was performed to determine factor structure as part of the construct validation of the scale. Prior to factor analysis, Kaiser-Meyer-Olkin and Bartlett tests were run to determine whether the data were suitable for factor analysis (Çokluk, Şekercioğlu and Büyüköztürk, 2012). It was found that the analyses were statistically significant ($\chi^2 = 3770.725$, $sd = 703$, $p < .001$) and the Kaiser-Meyer-Olkin value was .708 for the whole Code Switching Beliefs Scale (38 items). Statistically significant Bartlett test results and a .60 and higher Kaiser-Meyer-Olkin value (Ho, 2014; Tabachnick and Fidell, 2013), indicate that the data structure is appropriate and the sample size is sufficient for factor analysis. These results indicated that the exploratory factor analysis process could be started.

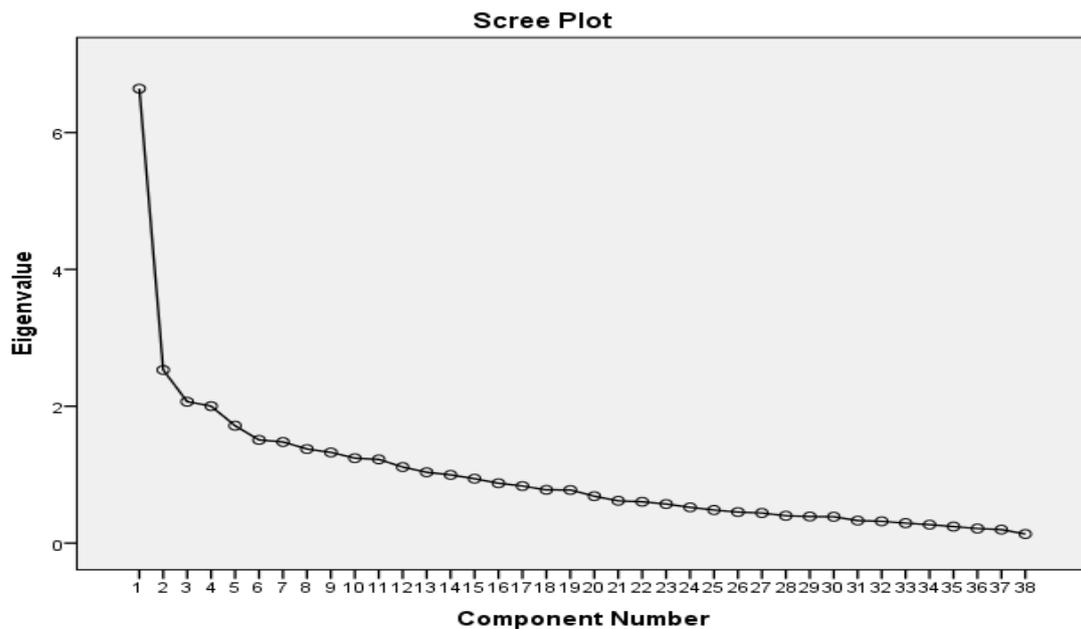


Figure 2. Scree plot for the scale

In order to examine the factor structure of the scale, the exploratory factor analysis and principal component analysis were used as a factorization technique. Eigen value of 1 and above is taken as a criterion. In addition, the scree plot of the scale was examined in order to determine the factor structure of the scale. The results of the factor analysis showed that the 38-item scale had a structure of 13 factors with an eigenvalue of more than 1, explaining 66.297% of the total variance. The eigenvalues of the scale ranged between 1.028 and 6.642. When the scree plot of the scale given in Figure 2 is examined, it is clear that the scale has a structure with four factors. The significant decrease

in eigenvalue after the fourth factor also supports this result. Similarly, the contribution of other factors to variance decreases after this factor (Çokluk, Şekercioğlu and Büyüköztürk, 2012). These results confirm that the scale has four factors.

Table 2. Factor structure and factor loads of the scale

Factor	Item	Item Loads Related to Factors					
		1	2	3	4	h^2	r
Learning-teaching process	Lessons will be more efficient if instructors explain the important parts of the subject in English or another common language.	.730				.589	.578
	If the instructors use both Turkish and English in the lessons, the learning will be more effective.	.708				.531	.461
	In the classroom activities, both Turkish and English or another common language can be used.	.625				.415	.441
	Materials in English or another common language should be used to improve the quality of the courses.	.597				.432	.405
	The lack of Turkish vocabulary to associate the words /phrases in the language with the lessons causes code switching.	.554				.434	.469
According to frequency	I often switch to my native language when I speak Turkish.		.876			.777	.691
	I often switch to my native language when writing Turkish.		.868			.771	.723
	When writing Turkish, I take care not to switch to my native language or another language.		.685			.528	.489
According to the reasons	Not being able to match the native language word / phrase with Turkish causes code switching.			.673		.498	.377
	Addressing people or audiences of different nationalities leads to code switching.			.582		.385	.289
	Code switching can take place to attract the attention of a person or people.			.580		.454	.380
	Code switching can take place when a specific point of a subject is to be emphasized and the content is to be emphasized.			.558		.426	.372
	Code switching may occur when habitual words / phrases of the native language are used unconsciously while speaking or writing in Turkish.			.553		.427	.340
Family and social environment	Spending more time communicating with Turks or people who speak Turkish will improve Turkish-speaking skills.				.684	.537	.359
	If the language used with friends is not Turkish, code switching occurs more frequently.				.676	.509	.272
	The use of Turkish in school and native language in the family causes code switching to become a habit.				.488	.362	.276
	Communicating in writing with Turks or Turkish speaking people (e-mail, Whatsapp, Facebook, Instagram, Twitter, etc.) improves Turkish writing skills.				.483	.320	.291
Explained Variance (%)			14.52	13.50	11.44	9.96	49.40
Eigen value			3.77	1.86	1.50	1.27	
Internal consistency (α) value			.71	.79	.60	.50	.77

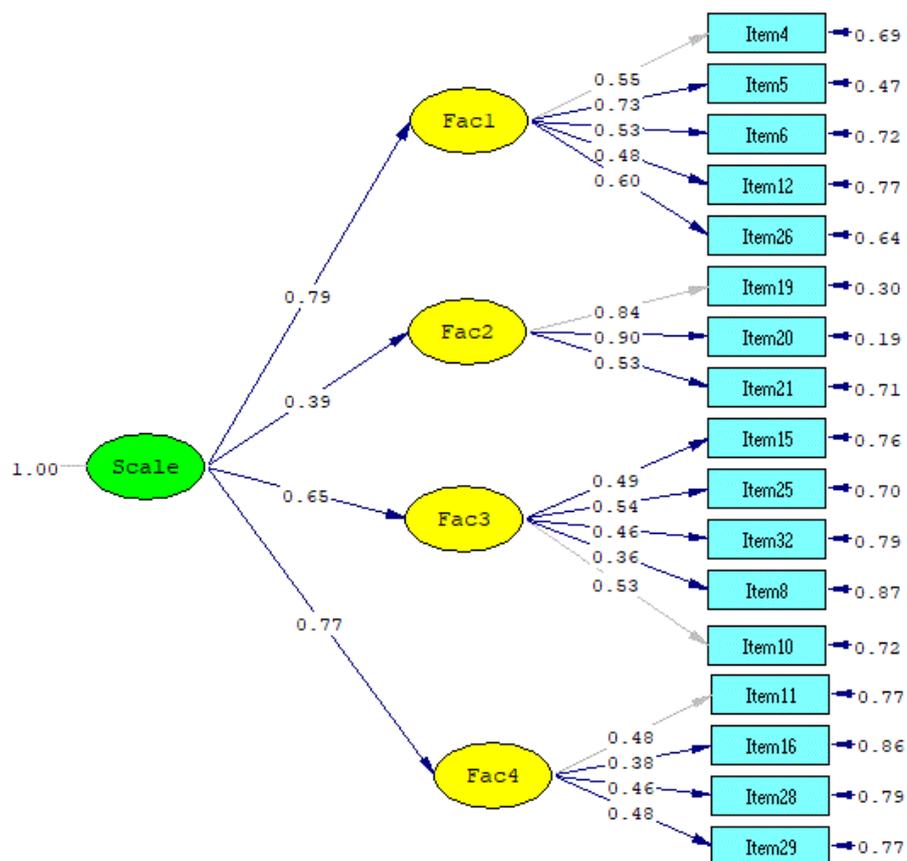
Note. h^2 = Factor common variance, r = Item total correlation values

When the factor loadings of the scale were examined, it was seen that although the load values for all items were above .32, which was accepted as a criterion, some items had a factor load of .32 and above for more than one factor (Çokluk, Şekercioğlu & Büyüköztürk, 2012; Tabachnick & Fidell,

2013). The factor analysis was renewed each time by excluding these items in order. The factor analysis revealed that the four-factor structure of the scale consisting of 17 items with an eigenvalue of more than 1 explained 49.393% of the total variance. The results of the analysis included five items with an eigenvalue of 3.772 and explaining 14.524% of the total variance. Factor loads of these substances ranged from .554 to .730. The second factor exhibited a three-item structure with item loads between .685 and .876. The contribution of this factor to the total variance was found to be 13.497% and its eigenvalue as 1.855. The third factor explained 11.442% of the total variance and its eigenvalue was found to be 1,500. These factor loads consisted of five items ranging from .553 to .673. The last factor explained 9.960% of the total variance and its eigenvalue was found to be 1.269. Factor loads of the items in these dimensions vary between .483 and .684. The factor structure and factor loadings of the scale are given in Table 2.

Confirmatory Factor Analysis Results

A confirmatory factor analysis was performed to test the structure of 17 items obtained by the exploratory factor analysis. The standardized factor load values for the confirmatory factor analysis are given with the path diagram presented in Figure 3.



Chi-Square=226.74, df=115, P-value=0.00000, RMSEA=0.057

Figure 3. Path diagram of the scale

The path diagram presented in Figure 3 is the original image obtained with the LISREL program. As this program supports eight character lengths in visual labeling, the name of the scale and the name of the factors are not placed on the visual. Therefore, the word Scale refers to the general structure of the word “Code Switching Beliefs of Learners of TFL Scale”, FAC1 refers to the factor of “Teaching-learning process”, FAC2 is the factor of “According to the frequency”, FAC3 is the factor of “According to the reasons”, and FAC4 is the factor of “Family and social environment.” The results of the analysis showed that the scale consisting of 17 items and four sub-factors produced an acceptable fit value. When the fit indexes were examined, χ^2 value was found to be 226.74 ($p < .001$) and significant. The ratio of this value to the degree of freedom was calculated as 1.971 (226.74/115). The ratio of χ^2 to the degree of freedom being less than 2 is defined as perfect fit (Kline, 2005). The other fit indexes were found to be follows: RMSEA= .057, CFI= .91, NNFI= .90, GFI= .92, and SRMR= .062. Considering the findings obtained, RMSEA and SRMR values of .08 and below indicate good fit, whereas CFI, NNFI, IFI and GFI values of .90 and above indicate acceptable fit (Hooper, Coughlan and Mullen, 2008; Kline, 2005).

Reliability Analysis and Inter-Factor Correlation Results

The internal consistency coefficient (Cronbach's alpha) was examined to find out the reliability of the *Code Switching Beliefs of Learners of TFL Scale*. Internal consistency value of code switching in the “Learning-teaching process, ”dimension which is the first factor of the scale, was found to be .71, “According to the Frequency” code switching dimension (the second factor) was .79 “According to the Reasons” code switching dimension (the third factor) was .60, and finally the “According to the Family and Social Environment” as the fourth factor was found to be .51. In addition, the analysis results showed that the internal consistency value for the whole scale was .77. In general, internal consistency value of .70 and above is considered as good reliability level in the related literature (Büyüköztürk, 2010). However, it is stated that this limit may go down as low as .50 and that internal consistencies above this value can be considered as an acceptable reliability level even though it is low (Howard, 2019; Kalaycı, 2006). The results of the reliability analysis of the scale are given in Table 3.

Table 3. Relationship between factors of the scale

Scales	1	2	3	4	5
Teaching-LearningProcess	1	.260**	.316**	.382**	.756**
According to the Frequency		1	.263**	.195**	.607**
According to the Reasons			1	.270**	.695**
According to the Family and Social Environment				1	.650**
Scale total score					1

** $p < .001$

Finally, the correlation values between the subdimensions of the scale were examined. The correlation analysis results show that there is a positive and significant relationship between the subdimensions of the scale. Ignoring the correlations with the scale total score, the strongest correlation is between the “code switching according to the family and social environment” and the “code switching in the teaching-learning process.” In addition, all the subdimensions have a strong correlation with the total score of the scale. The correlation coefficients between the subdimensions range from .195 to .392. The correlation results between the subdimensions of the scale are given in Table 3.

Conclusion, Discussion and Suggestions

This study aimed to develop a scale to determine the code switching beliefs of the learners of TFL. First, a pool of items was formed by interviews, observations and literature review. Then, the items were converted into a draft form consisting of 38 items. This draft form was used to collect data from 301 students studying Turkish at C1 level at Harran University TÖMER and Istanbul Aydın University TÖMER, and the validity and reliability analyses of the scale were conducted on the basis of these data.

Based on the results of exploratory and confirmatory factor analysis conducted to determine the construct validity, a 17-item scale consisting of the *code switching in the teaching-learning process*, *code switching according to frequency*, *code switching according to reasons*, and *code switching in the family and social environments* subdimensions were obtained. The subdimension related to the “clarity of the learning-teaching process” and the subdimension related to the “effectiveness of the learning-teaching” reported in the study of Coşkun-Yaşar and Yıldız (2018) are similar to the “code switching in the learning-teaching process” subdimension of this study. Their subdimensions labeled as “code switching regarding the use of language skills” and “code switching due to psychological factors” are interspersed throughout all subdimensions of the current study.

No item on the scale is reverse-scored. When the total score is calculated on the scale, the Likert-type value of the option marked for each item is summed up. Therefore, the lowest score that can be obtained from the scale is 17 and the highest score is 85. As the total score approaches the lowest score, the participants’ code switching beliefs in learning TFL decrease, and their code switching beliefs in learning TFL increase as it approaches the highest score.

This scale, which was developed by administering it with TFL learners, can be used to find out whether code switches take place during the learning-teaching processor in the immediate social environment such as family, whether they occur depending on various reasons, or how often code switching occurs. Accordingly, TFL teachers can design extra activities or create additional learning environments to enhance their instruction. Furthermore, by using this developed scale, further research

can be conducted on the relationship of code switching beliefs with variables such as academic achievement, attitude, anxiety, and self-efficacy.

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