



The Use of L1 in the Tertiary L2 Classroom: Code-switching Factors, Functions, and Attitudes in Turkey

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Abstract

Drawing on Macaro's (2001) personal theories on code-switching (CS), this study aims to investigate why, how, and to what extent EFL instructors switch to their L1 during L2 instruction in the under researched tertiary level Turkish English as a foreign language (EFL) context. As part of a larger project, the data analyzed in this study were collected from 155 EFL instructors from six state universities in Turkey by means of an online questionnaire. Filling the methodological gap for the given context and linguistic phenomenon, an explanatory factor analysis and a subsequent discriminant function analysis were performed, indicating the differentiated perspectives and practices with regard to CS, the factors triggering its use, and the functions attributed, along with participants' attitudes towards its pedagogical effectiveness. Additionally, the qualitatively analyzed textual data from the same instrument confirmed the quantitative findings, aligning with the corresponding literature. Having moved the personal theories on CS proposed by Macaro (2001) to the context in question, the results revealed that instructors' CS attitudes and perceptions are influential in determining how much L1 should be used in the L2 classrooms depending on linguistic, pedagogical, communicative, and learner-oriented factors and functions.

1 Introduction

Code-switching (CS) is described by scholars as “the systematic, alternating use of two or more languages in a single utterance or conversational exchange” (Levine, 2011, p.50). The reason why speakers switch codes might be explained through the fact that the speaker finds communicating via CS easier or more suitable within the linguistic or cultural context when compared to the use of one language all the time (Macaro, 2005).

CS has been widely investigated regarding its functions and the factors triggering its use when teaching or learning a foreign (FL) or second language (L2). However, there has been an ongoing debate concerning language alternation, its advantages and disadvantages. Some scholars suggest that its use depends on the advantages of L1 scaffolding the learning of an additional language as being the “language of thought”, while it has majorly been scrutinized, as it constrains the amount of TL in L2 instruction (Turnbull & Arnett, 2002). Motivated by such controversy, the current study aims to fill a gap regarding instructors' CS in tertiary level L2 classrooms in the under researched Turkish EFL context in an attempt to shed more light on the linguistic and pedagogical implications of CS, its functions, triggering factors, and instructors' attitudes towards its use.

2 Literature review

Considering FL contexts, endeavors to balance the amount of L1 in the FL classroom have given rise to several issues pertaining to how and why instructors' switch to their L1 (Littlewood & Yu, 2011). The views that the TL should be the dominant language in instruction have been mostly grounded on the fact that FL contexts are deprived of sufficient input and interaction opportunities for TL learners as compared to L2 contexts (Turnbull & Arnett, 2002).

Referred to as "the monolingual fallacy" (Phillipson, 1996), this perspective has been criticized drawing on the benefits of using the L1 as a pedagogical tool to scaffold learners in linguistic, cognitive, social, and affective ways (VanPatten & Williams, 2007). Several studies have documented the benefits of CS (Cook, 2001; Greggio & Gill, 2007; Macaro 2001, 2005; Sali, 2014; Ustunel & Seedhouse, 2005), yet supporting the view that the L2 should remain the main language of instruction due to the nature of FL contexts. Therefore, the discrepancy between these two perspectives on CS has always been addressed in the literature with an attempt to find ways to balance the use of L1 and L2 in FL classrooms drawing on the context-specific factors triggering CS, its functions, and instructors' attitudes towards using it as a pedagogical tool (Littlewood & Yu, 2011).

2.1 *Functions and factors for code-switching to L1*

CS to L1 as a "tactic" advocated by instructors has been explored concerning the factors for and functions of it in L2 and FL contexts through quantitative (Ahmad & Jusoff, 2009; Gulzar, 2010), qualitative (Anton & Dıcamilla, 1999; Greggio & Gill, 2007; Polio & Duff, 1994; Van der Walt, 2009), and mixed (Macaro, 1997; 2001; 2009; Sali, 2014) methodologies. Addressing the two broad questions as to why (triggering factors) and how (attributed functions) L1 is used in the L2 classroom, instructors' CS has been illuminated with a focus on classroom-internal and external variables in an attempt to determine its factors and functions.

Considering the classroom-internal variables, instructors' strategic use of CS has been reported to function as a tool addressing instructional, managerial, and socio-communicative requirements caused by the dynamics of the L2 classroom depending on linguistic, pedagogical, socio-cognitive, and affective needs of the learners (Littlewood & Yu, 2011). Therefore, instructors have been reported to switch to their L1 to access the curriculum, to construct and transmit linguistic knowledge to aid learner comprehension and task completion, and to provide corrective feedback, all with pedagogical concerns (Anton & Dıcamilla, 1999; Greggio & Gill, 2007; Gulzar, 2010; Kim & Elder, 2005; Macaro, 1997; Polio & Duff, 1994; Sali, 2014; Ustunel & Seedhouse, 2005; Van der Walt, 2009). The use of L1 has also facilitated in-class communication on managerial, socio-cognitive, and affective grounds. Instructors have reported the need to manage discipline, provide metalinguistic information to discuss target tasks with their students, socialize with them, and establish rapport through classroom talk in the L1 (Ustunel & Seedhouse, 2005). The linguistics distance between the L1 and L2 has also been a major reason why instructors need to switch to their L1 when teaching an L2 (Greggio & Gill, 2007).

In regard to classroom-external variables, curricular issues, such as time constraints, materials used, lesson contents and objectives, and learners' proficiency levels in the L2 have been widely identified as factors triggering the use of L1 (Gulzar, 2010; Greggio & Gill, 2007; Kim & Elder, 2005). For instance, Greggio and Gill (2007) reported that the need for higher amounts of L1 during L2 instruction within FL contexts inversely increases in accordance with learners' relative proficiency levels in the TL. Conversely, Duff and Polio (1990) posited that despite the difficulty of the content, over 70% of FL learners with varied proficiency levels could follow and comprehend L2 instruction in the TL.

2.2 *Instructors' beliefs and attitudes towards CS*

Notwithstanding the empirical evidence corroborating the substantial use of the TL, instructors have been reported to extensively switch to their L1 in FL contexts (Littlewood & Yu, 2011). Here, instructors' decision-making processes come into play as a crucial point underlining the ways and amount of CS to L1 preferred in L2 instruction.

One variable intertwining with instructors' decision-making processes towards how much L1 to use in the L2 classroom involves their self-perceived confidence and competence in the L2 to deliver the content in the TL (Gulzar, 2010; Littlewood & Yu, 2011). As teaching experience increases, this issue of TL confidence seems to disappear, which decreases the actual amount of L1 use and positive attitudes towards CS (Littlewood & Yu, 2011).

Macaro (1997, 2001, 2009) put forward a theory regarding how FL instructors interpret the events and environment around them in a way that reveal their beliefs, attitudes, and actions concerning their language use preferences. Having revealed that teachers found it impossible to completely eliminate L1 use in the FL classroom (Macaro, 1997), the participants were found to hold three personal theories regarding the use of CS in the FL classroom (Macaro, 2009), which constitute the theoretical framework of the current study.

2.3 *Theoretical framework: Instructors' personal theories on CS*

Macaro (2009) presents these theories upon a continuum for the use of the TL. On one end of this continuum is *the virtual position*, the ideology of which promotes the extensive use of the TL on the grounds that the use of the L1 contributes neither to the pedagogical nor the communicative purposes (Macaro, 2009). Towards the other end of this continuum, he defines *the maximal position*, which can be described as a mitigated version of *the virtual position*, which claims that TL competence may be developed with less effort through a judicious use of the L1. However, it is also pointed out that overuse of L1 may bring negative consequences on the learner language now that students have limited access to the TL (Macaro, 2009). The last theoretical position on this continuum is referred to as *the optimal position*, which involves the hypothesis that the use of L1 contributes to the learner language by "enhancing learning more than by sticking to the second language" (Macaro, 2009, p. 36). These theories were confirmed by a study (Macaro, 2001) with pre-service teachers. Accordingly, the study indicated that "teacher use of the L1 did not lead to the student use of the L1, and that teacher use of the L2 did not lead to student use of the L2" (Macaro, 2001, p. 545).

Consequently, on one hand, *the virtual position* is widely supported both in EFL and ESL contexts with an emphasis on the significance of the amount of TL as an invaluable resource provided by language instructors through their interactions with the learners. On the other hand, numerous studies have been conducted to convince the educators and curriculum designers about the important role of L1 in FL acquisition based on *the maximal* and *optimal positions*, which dominates the current literature on CS.

2.4 *CS and the Turkish EFL context*

The use of L1 in the Turkish EFL context has received limited attention in the broader literature. The empirical findings of the studies conducted in the Turkish EFL context supported the findings in the broader literature pertaining the functions and factors of CS, such as academic, managerial, and socio-communicative ones (Salı, 2014; Ustunel & Seedhouse, 2005), suggesting a judicious amount of systematic L1 use (Kafes, 2011) as Turkish EFL teachers/instructors take a pragmatic and practical position towards CS (Kayaoğlu, 2012) in line with Macaro's *maximal position* (2001).

The current study draws on Macaro's framework of personal theories (2001, 2009) to provide deeper insights into teachers' CS beliefs and attitudes as well as practices. Hence, EFL instructors' in-class experiences are considered to be of primary importance when analyzing their language preferences. Thus, the functions and factors triggering their CS may be revealed through their in-class

practices as an immediate reflection of their beliefs and attitudes. Given the contextual focus of the current study, the interplay between Turkish EFL instructors' personal theories (Macaro, 2001) and the classroom-internal and external variables for CS have remained an unaddressed issue, to the date of the study. On the methodological level, none of the studies conducted, regardless of their contextual focus, has reported established theories pertaining to what factors might underlie the CS phenomenon in EFL contexts through explanatory factor analysis and discriminant function analysis with qualitative triangulation techniques. Above all, the ongoing debate between monolingual (TL only) and bilingual approaches (inclusion of L1) to optimal FL instruction and the disputatious findings in the relevant literature (Kim & Elder, 2005) have called for further empirical studies focusing on the dynamics of CS in varied contexts with reference to instructors' code-choice behavior and awareness as to the amount they switch to their L1.

Therefore, the current study aims to fill this empirical gap in an attempt to determine the triggering factors for CS, its functions, and instructors' personal theories (Macaro, 2001) molding their code-choice behavior and the amount of L1 use in the tertiary level Turkish EFL context within a mixed methodology. Accordingly, as both constructivism and personal theories (Macaro, 2001, 2005, 2009) suggest, instructors are anticipated to shape their language preferences and CS practices in the classroom in compliance with their beliefs and attitudes towards CS.

With reference to the above-mentioned aims, the study addresses the following research questions:

1. What are the underlying factors and functions that affect instructors' use of the L1 in the L2 classroom?
2. Is there a relationship between instructors' CS practices and their reported CS amounts in the given EFL context in light of the underlying factors? In other words, can group membership regarding CS frequency be predicted depending on the underlying factors and functions for CS?
3. For which language skill do instructors code-switch more in the Turkish EFL context?
4. For which mode of instructor-student interaction (e.g. teaching, classroom management, and casual communication/socialization) do instructors code-switch more?
5. Is there a relationship between instructors' CS in the classroom and students' level of proficiency?

3 Methodology

The study is comprised of both quantitative and qualitative methods of inquiry within a mixed method approach. The quantitative analysis provides the descriptive statistics for the questions addressed including frequencies and overall mean scores regarding the research questions at issue. An explanatory factor analysis (EFA) and a subsequent discriminant function analysis (DFA) were performed to determine the underlying factors for CS and the predictors of instructors' CS practices in relation to their CS frequencies in the given context. The qualitative data were utilized to provide deeper insights into the linguistic phenomenon in question, also pertaining to the quantitative findings. The qualitative data elicitation technique is intended to provide triangulation as well. The term CS in the study is operationalized as EFL instructors' alternating the language of instruction from L2 (English) to L1 (Turkish). Thus, all the data collected were analyzed pertaining to the use of L1 only, excluding switches from Turkish to English.

3.1 Participants

The study involves 155 EFL instructors (125 females, 30 males) from six schools of FLs at large state universities in Turkey. These instructors' teaching experience ranges from 2 years to 15 years. 77 of these participants hold Master's (N= 78) or doctoral (N=7) degrees in English Language Teaching, American or English Literature, and Translation Studies. The number of instructors with only a Bachelor's degree is 66. Also, four of the participants reported having a certificate in teaching Eng-

lish as a foreign or second language, such as CELTA and DELTA. The participants teach all language skills (integrated skills, writing, reading, listening and speaking) at four proficiency levels – elementary, pre-intermediate, intermediate and upper-intermediate.

3.2 *Setting*

The setting for the current study is comprised of schools of FLs at six large state universities in Turkey. These universities are well-known and prestigious state universities with large populations of EFL instructors. It should also be noted that these universities have a monolingual (TL-only) policy within the principles of the Communicative Approach to language teaching. The courses offered at these schools of FLs are listening and speaking, reading, writing, and integrated skills including grammar.

3.3 *Data collection procedures*

3.3.1 *Instruments*

The instrument utilized in the current study is an online questionnaire in English developed by the researcher (see Appendix B). Called *The Codeswitching (CS) Questionnaire*, the instrument was administered to all the EFL instructors at the six institutions via e-mail, the data from which were utilized for the EFA and DFA. A total of 155 participants responded to the instrument, which is comprised of a total of 42 items in three sections. The first section was designed to collect data on the demographic, academic and professional backgrounds of the EFL instructors, and included 9 items. The second section was designed to collect data on their CS frequencies, functions and factors for CS, such as the skills they teach, modes of communication, the students' proficiency levels, and their attitudes towards it. This second section was comprised of 31 5-point Likert scale items, one multiple-choice question, and one open-ended question. The last section is comprised of an open-ended item to collect qualitative data regarding participants' additional opinions and comments about CS.

4 *Data analysis and results*

The questionnaire was piloted and tested for reliability before it was administered. The Cronbach's Alpha was .867, which indicated more than sufficient reliability to conduct an explanatory factor analysis (Field, 2005). The data from the online CS questionnaire were analyzed quantitatively using the Statistical Package for Social Sciences (SPSS), version 21. Statistical tests were run for descriptive statistics, explanatory factor analysis (EFA), and discriminant function analysis (DFA) of the quantitative data. The correlation matrix from the principal component analysis, the factor extraction method, was utilized to see the relations among the variables. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) was calculated beforehand for effectiveness and appropriateness of the sampling for a factor analysis. The KMO value was found to be .858, which indicated that the sample size is sufficient for an effective EFA (Field, 2005). Also, Barlett's Test of Sphericity results indicated significant relationships among the variables ($p < .001$). The responses to the open-ended questions were qualitatively analyzed using content analysis after they were transcribed. The textual data from the open-ended item for additional comments were coded for emergent themes and analyzed both manually and by means of an online tool, *Discovertext*.

4.1 *Quantitative results*

To answer the first research question, the Likert scale scores gathered from 155 participants for the quantitative items in the second section of the instrument with regard to CS functions, instructors'

CS frequencies, and attitudes underwent an EFA to determine the underlying factors in the participants' responses (Field, 2005). The reason for selecting an explanatory factor analysis (EFA) is that there have been no established theories pertaining to what factors might underlie the CS phenomenon in the Turkish EFL context, to the date of the study. Following Dörnyei (2007) and Loewen and Gonülal (2015), factor loadings of .30 and greater on the obliquely rotated correlation matrix were regarded as significant. Also, the significance levels of all items were checked through anti-image correlation matrix to support the inclusion of items in the EFA. Accordingly, items with significance levels lower than .50 (items 1, 6, 13 and 14) were removed from the EFA. Items with negative wording (items 16 and 30) and those with a negative sentiment (items 5, 9, 23, 27,) were reverse coded. The Cronbach's alpha for the questionnaire was found to be .849 after these procedures. Therefore, explaining 65.5% of all variance in the data, the results of the factor analysis produced seven factors with eigenvalues greater than 1 (See Table A.1 in Appendix A). Each item in the relevant section of the questionnaire was assigned to one of the seven factors depending on the results of the EFA (See Table A.2 in Appendix A).

The leveling off of eigenvalues on the scree plot (see Fig. 1 below) following the seventh factor was also influential when selecting the seven-factor solution (Field, 2005).

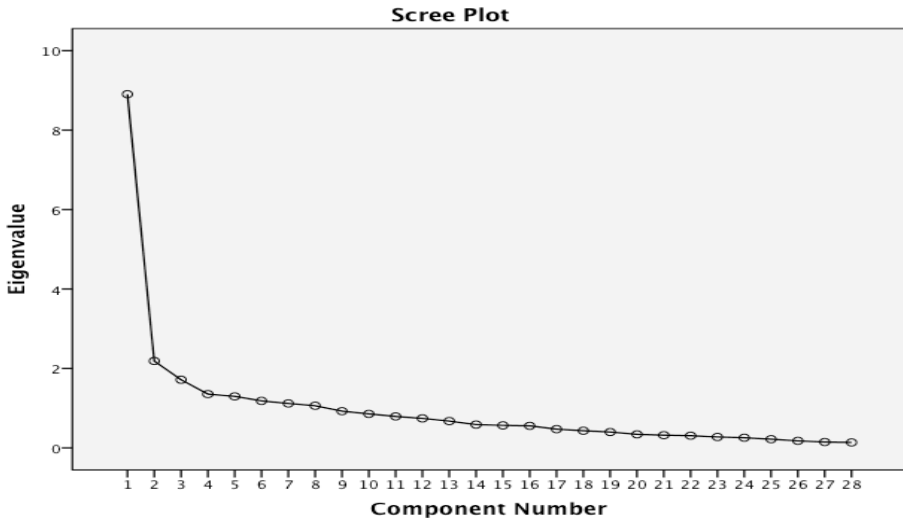


Fig. 1. Scree plot for EFA

Labeled as *the morphosyntactic and semantic structure of English*, the first factor (F1) accounts for 32.9% of all variance and includes items referring to various issues pertaining to the differences between the linguistic system of English and Turkish experienced by instructors, leading them to switch to Turkish. The second factor (F2), *negative attitudes towards codeswitching as a pedagogical tool*, explains 8.1% of all the variance and comprises items addressing issues as to how CS negatively affects the dynamics of the classroom resulting in poor student performances in the L2, as well as their affective states (i.e. motivation). The third factor (F3), *modes of communication*, explains 6.4% of the total variance and includes items addressing the CS issues pertaining to the ways instructors and students communicate. Accounting for 4.9% of all variance, the fourth factor (F4), *vocabulary*, is comprised of two items regarding CS in relation to vocabulary teaching or semantic access in the L1/L2. The fifth factor (F5) is labeled as *learner comprehension*, which explains 4.8% of the total variance. This factor relates to CS as a pedagogical tool to promote learner comprehension. The sixth factor (F6) accounts for 4.3% of all variance and includes items in relation to *instructors' perceived competency in the English*; it was therefore labeled accordingly. The seventh factor (F7) explains 4.1% of the total variance and is labeled *clarification* as the comprising items pertain to CS issues in providing instruction, feedback, and error correction.

As for the second research question, a discriminant function analysis (DFA) was performed to determine the extent to which the factors obtained could differentiate the participant instructors with different reported amounts of CS. First, the participants were divided into groups according to their reported CS amounts, such as *rarely switchers* (RS), *sometimes switchers* (SS), *usually switchers* (US), and *always switchers* (AS). Accordingly, factor means and standard deviations were calculated for each CS frequency group (See Table A.2 in Appendix A). For instance, on F2, *negative attitudes towards CS as a pedagogical tool*, the instructors who rarely switch from English to Turkish had the highest score, which indicated that these instructors were the least positive about the efficiency of CS as a pedagogical tool.

The independent variables in the discriminant function analysis are the seven factors determined. The dependent variable is determined to be the amount of CS reported by the participants. The DFA was utilized to explore how well the CS frequency group membership was predicted by the seven factors. Table A.3 (See Table A.3 in Appendix A) depicts the results of the DFA. Accordingly, two functions were determined in differentiating group membership, which also explained 100% of the total variance. However, only Function 1 was found to be statistically significant ($p < .001$), accounting for the 97.8% of the total variance.

In order to differentiate the four CS frequency groups on the function determined, a structure matrix was utilized to explore what variables contribute more to group membership. The structure coefficients for each predictor variable are indicated in Table A.4 (See Table A.4 in Appendix A).

With respect to the first function, F1, *the morphosyntactic and semantic structure of English*, had the highest loading (.858), followed by F7, *clarification* (.753) and F5, *learner comprehension* (.546). As for function 2, only factors 1 and 7 had the high loadings (F1, .514; F7, .638) although the function itself is not significant. Therefore, the results point out that participants' responses to Factors 1, 5, and 7 help differentiate group membership according to CS frequencies on Function 1 only (Wilk's Lambda = .62, eigenvalue = .59, Chi Square = 71, Variance = 97.8%, $p < .001$). Figure 2 visually represents the CS factors among the four groups of CS frequency.

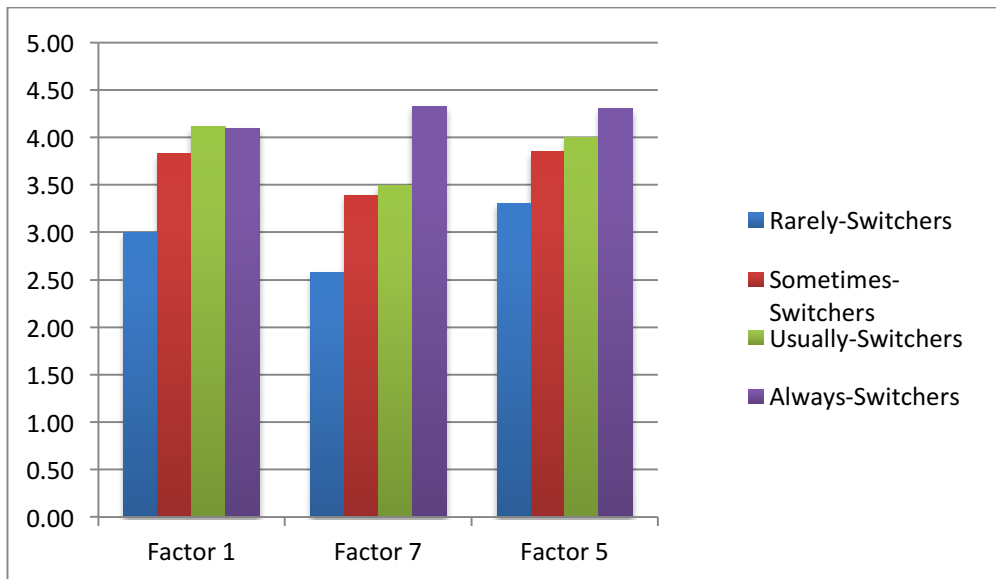


Fig. 2. Visual representation of the CS factors among the four groups of CS frequency

Each group of CS frequency has a distinct centroid as seen in Figure 3 below. Table A.5 (See Table A.5 in Appendix A) also depicts the group centroids, where scores further away from zero represents greater differences.

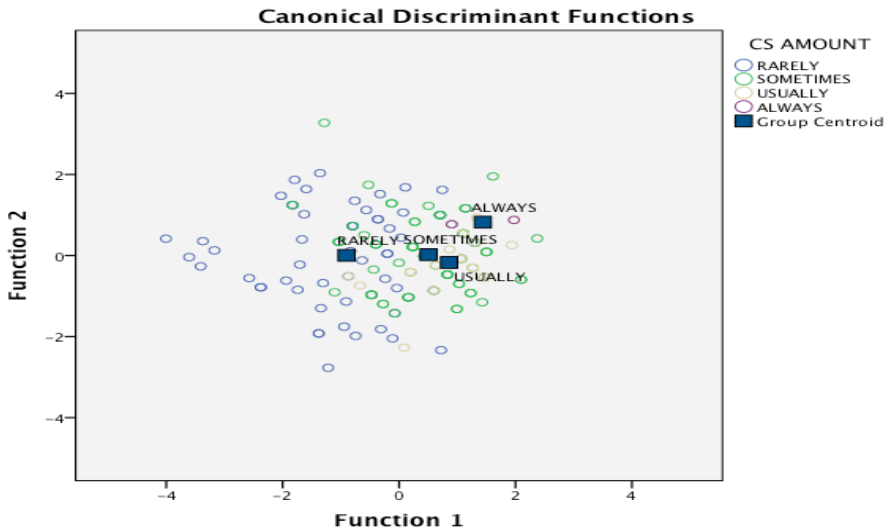


Fig. 3. Visual representation of centroids of the four CS frequency groups

As visually represented above, the centroid of the RS group is $-.90$, that of SS is $.50$, US is $.86$, and AS is 1.439 . The values indicate that the SS and US groups are relatively close to each other, while the RS and AS groups are located further from each other. The results pertaining to proximity indicated that the instructors' CS frequency has an effect on CS factors. In other words, usually and sometimes switchers' perceptions with regard to the CS factors were significantly different than the rarely and always switchers in a way to predict their group memberships.

Considering the third research question, the responses given to item 18, *I switch to Turkish based on the skill I teach*, ($M=3.54$, $SD=1.13$) indicated participants' agreement with the statement. The open-ended sub question for the above-mentioned item was also analyzed to determine for which language skill the instructors tend to CS more. The frequencies for each provided language skill (grammar, writing, vocabulary, reading, listening, speaking, and pronunciation) were calculated. Accordingly, the skill for which instructors reported code-switching to Turkish the most was determined to be grammar (43%), which was followed by writing (28%), vocabulary (15%), reading (10%), listening (2%), speaking (2%), and pronunciation (2%).

To answer the fourth research question on instructor-student interaction, the relevant items on the CS questionnaire were analyzed for descriptive statistics along with Factor 3, *modes of communication*, which explained 6.13% of the total variance. Accordingly, the participants were found to agree with item 15, *I switch to Turkish to socialize with students* ($M=3.56$, $SD=.96$). The participants also agreed with item 31, *I switch o Turkish in the classroom for personal communication with my students (daily talks, hobbies etc.)*, ($M=3.19$, $SD=1.15$) and item 25, *I switch to Turkish for class management issues*, ($M=3.15$, $SD= 1.14$). These results indicated that participants tend to code switch to Turkish mostly to socialize with students.

As for the fifth research question exploring the relationship between instructors' CS and students' level of proficiency, item 8, *Students' English proficiency is an important factor triggering switching into Turkish*, was analyzed for descriptive statistics. With the highest mean score ($M= 4.1$, $SD= 1.11$) on the instrument at issue, participants highly agreed with the statement. Also, the item at issue had a positive loading ($.51$) on Factor 5, *Learner Comprehension*. These results, thus, confirmed the relationship between students' English proficiency and instructors' CS.

4.2 *Qualitative results*

4.2.1 *Open-ended item in the online CS questionnaire*

To explore the participants' beliefs, attitudes, and insights about the CS phenomenon in the EFL context, three qualitative data collection mechanisms were employed. The first of them was the open-ended item in the online CS questionnaire, to which 155 participants responded. However, only 44 instructors taking the instrument provided further comments for the open-ended item. The data collected were entered into the online qualitative text analysis software, *Discovertext* for an initial round of coding. Following this procedure, the data were also manually coded by the researcher for the emerging themes. To ensure intra-rater reliability, all qualitative data underwent multiple rounds of manual coding at which different research questions were asked, closely related responses were grouped, and different patterns were established addressing each theme. The determined themes are presented with accompanying quotes in the following subsections.

4.2.1.1 *CS for individual learner differences*

The first theme was identified in relation to CS as a pedagogical tool addressing learners' individual differences. Among them, the most addressed issue pertained to reducing language learning anxiety along with providing a friendly, stress-free learning atmosphere by means of the use of L1. Statements like "Students feel more comfortable and friendly with the teacher with code-switching" highlights the benefits of CS as a pedagogical tool. It was also remarkable that anxiety-reducing facilitation mostly aligned with issues of interaction, communication and socialization.

It is especially instrumental in establishing personal relationships, because they feel more comfortable when they are understood by the teacher in their mother tongue. Thus, minimizing the stress, it paves the way for a more relaxed learning environment.

As seen in the quotation above, in such statements, the use of L1 was also addressed as a tool to establish and maintain good relations with the learners, highlighting the communicative function of CS. While serving as a tool to provide a relaxed learning environment, and socialize with the learners, CS was also attributed as a pedagogical tool to help students understand depending on the difficulty of task or activities.

There are some activities requiring the teacher switch into his native language just because of the challenges students encounter in understanding the rubric. And the teacher also needs to build a friendly atmosphere to break the anxiety students have in extra curricular minutes of the lesson.

Motivation was another issue addressed in participants' comments regarding individual differences. Similar to reducing anxiety, CS was seen as a tool to motivate learners as well as a tool for personal communication when establishing social proximity. A conscious and judicious amount of CS in the classroom was believed to have positive effects on learner motivation as seen in the quotation below:

I believe teachers' use of L1 at certain times, when done consciously, does not inhibit learners' language acquisition or learning. I use it frequently and naturally mostly for purposes of motivation in the classroom, in which the effects are visible: Switching to the mother tongue immediately serves as an energizer and helps create good rapport with my students. If done in a controlled way and NOT used as a refuge, code-switching becomes just another resource for the teacher to make use of in the EFL classroom.

However, CS was also regarded as a source of demotivation for learners, as it diminishes students' oral production in the L2 while increases the amount of L1 use. This finding aligns with the quantitative findings from the EFA. Therefore, instructors' negative attitudes towards CS as a pedagogical tool may have emerged from the negative evidence regarding students' poor L2 perfor-

mance. The following quotation is a good example of how CS becomes problematic in the L2 classroom: “It demotivates my students. If you use it once they always try to make you use the mother tongue”.

4.2.1.2 CS due to time constraints

Another theme that emerged in the textual data pertains to time constraints in the statements, such as “I think time is a very important factor that triggers switching. The less time we have the more code-switching we do.” It is a factor for the participant teachers to switch to Turkish due to the nature of the EFL context explored, where teaching every single aspect of the L2 in a two-semester schedule in an English Preparatory Program is not possible.

Another reason could be time-restraints here in this school. I shouldn't lose time in the lesson because I have a lot to do in the classroom, so I tend to prefer code switching so as not to lose time. Using Turkish saves us more time. Sad but true!

Also, the belief that CS is triggered by time constraints mostly aligns with the idea that explaining some linguistic items in the L2 is too complex, time-consuming, or easier (and time-saving) if explained in the L1, as shown in the quotation below.

I personally believe that L1 should be used in teaching to save time and to make students comprehension better if there is a direct equal structure in the grammar of the target language or the structure is too complex.

4.2.1.3 Clarification, comprehension check, and feedback

Another theme that emerged from the textual data is related to clarification for several purposes. Task difficulty, comprehension check, error correction, and feedback are the main issues where instructors' switching into L1 for clarification in statements, such as “To clarify the instructions and to prevent some possible misunderstandings on the part of the students about the tasks and their responsibilities, using Turkish is useful”. The use of CS is also believed to be beneficial for certain skill instruction, such as grammar and vocabulary. However, limited amount of CS is preferred for the abovementioned functions.

L1 is a helpful means in class prompts, in giving feedback, correcting errors, giving the equivalences of abstract terms, explaining some grammar points but it should be used in a limited way when need be and the dominant class language should always be English.

4.2.1.4 Students' level of English proficiency

The participants commented on their CS experiences as they addressed students' English proficiency levels. Statements, such as “I think it [CS] is done and I think should be done more at lower levels and avoided at higher ones” and “CS strongly depends on students' language proficiency” indicate the theme at issue. Low proficiency level students were also addressed more than proficient ones depending on the skill instructed.

Low level proficiency classes may need Turkish explanation while learning grammar or studying writing skills/ code switching helps students to become more aware of the differences or similarities between the two languages...the learner proficiency is so low that they don't even know the basic sentence structure or vocabulary that is used in definitions or instructions.

4.2.1.5 CS amount

While CS was regarded as a useful pedagogical tool in EFL instruction, the importance of how much CS should occur in the classroom emerged as a major theme from the textual data. As described above, excessive amounts of CS were believed to diminish students' oral production in the

L2 and negatively affect their performances. Yet, judicious amounts of CS were considered to be useful. Statements, such as “Code-switching should not be considered as a taboo in the EFL classroom, but then as teachers we should try to keep it at a minimum (less than 20%)” can be taken as primary instances. This idea of “CS-when-inevitable” was also supported with instructors’ personal theories (Macaro, 2001, 2005) out of their teaching experience. The following quotation provides deeper insights into why, how, and the degree to which an instructor should CS.

I have a class rule, I can speak Turkish whenever I want, but my students can speak Turkish only when I allow them (and I generally don't). Therefore, I observe that my speaking Turkish in the class does not affect my students negatively; they always try to speak in English. They always tell me my explaining difficult rules or sentences in Turkish help them understand lessons much better. However, it's difficult to find a good balance. I've tried using only English or using a lot of Turkish in my lessons. Especially in lower classes like elementary, neither methods worked. It has taken me years to decide how much Turkish I should use in class. I believe now I use Turkish only when it is necessary for my students to understand the teaching point better.

CS is only beneficial if used in reasonable amounts for clarification purposes. Using a lot of CS for low levels students cannot be solely justified with learners’ lack of competence in the L2. As stated by the participant above, a good balance, though difficult to determine, can be a solution to diminish the disadvantages of CS and benefit its facilitative effects in EFL instruction.

5 Discussion and pedagogical implications

Drawing on constructivism and teachers’ personal theories (Macaro, 2001), this study investigated why (triggering factors), how (for what functions), and to what extent (CS amount/CS for specific language skills/learners’ proficiency levels) EFL instructors switch to their L1 in the tertiary level Turkish EFL context. In this section, the results from the quantitative and qualitative analyses will be discussed in light of the corresponding literature.

The results of the EFA produced seven factors triggering Turkish EFL instructors’ CS in the classroom, which align with the factors determined by previous research (Ahmad & Jusoff, 2009; Greggio & Gill, 2007; Gulzar, 2010; Jingxia, 2010; Kim & Elder, 2005; Macaro, 1997, 2001, 2009; Turnbull & Arnett, 2002; Turnbull & Dailey-O’Cain, 2009; Ustunel & Seedhouse, 2005; Van der Walt, 2009). The first factor, *the morphosyntactic and semantic structure of English*, points out the fact that the linguistic difference between the mother tongue and the target language is the most crucial factor leading the participants to switch to Turkish more as it explains 32.9% of total variance. The linguistic difference between English and Turkish leads the instructors to make use of their L1, as it becomes quite demanding for the learners to comprehend the relationship among the target form, its function, and its contribution to the general meaning due to the nature of the languages at issue. Furthermore, this factor was also found to be a prominently recurring theme in the textual data. However, as suggested by the findings, this factor is in close relationship with learners’ proficiency levels in the L2. Provided that the learners are at an intermediate level of proficiency, the need for switching to L1 becomes invalid (Polio & Duff, 1994). Therefore, the main trigger behind an instructor’s decision to what extent to use the L1 is determined by the learners’ relative competency levels in the L2 as well.

The second factor, *(negative) attitudes towards CS as a pedagogical tool*, accounted for 8.1% of the total variance. The findings indicated that if the instructor holds a positive attitude towards CS, she/he is more inclined to use it as an aid to provide further clarification on the target structure if necessary. Conversely, their negative attitudes will give rise to their avoiding language alternation. This result also aligns with the major theoretical framework for the study on teachers’ personal theories regarding CS (Macaro, 2001). The participants in the study were found to have rather negative attitudes towards CS as a pedagogical tool as they agreed with items such as *CS leads students to use more Turkish in the classroom* ($M=3.76$, $SD=.97$) and *CS is not an effective strategy in language teaching* ($M=3.61$, $SD=.94$) which also supports the idea that learners in the EFL context at issue are not sufficiently exposed to the L2 and consequently the language of instruction should be the L2

as much as possible in order to provide the essential linguistic input to the learners (Polio & Duff, 1994). In terms of the participants' reported amount of CS from the quantitative data, 85% of all instructors reported switching to Turkish rarely or sometimes, while only 15% of them reported switching to the L1 usually or always. The mutual relation between participants' personal theories on CS and their negative attitudes confirmed the low frequencies of their use of the mother tongue as a pedagogical tool in the EFL classroom. It can be concluded that the majority of the participants in the study embrace a theoretical stance as to CS somewhere between *the virtual* and *the maximal positions* as their attitudes and CS frequencies support either an extensive use of the L2 or a judicious use of the L1 (Macaro, 2001; 2009). However, only 15% of them can claim to hold *the optimal position* defending the extensive use of Turkish in EFL instruction. The reason behind this finding might be the nature of EFL contexts where the belief which dominates the nature of instruction that extensive use of the L1 will deprive the learners from the crucial linguistic input and therefore diminish their oral production in the L2 (Duff & Polio, 1990).

The factors *modes of communication, vocabulary, learner comprehension, instructors' perceived competency in English, and clarification* support the findings in the literature pertaining to CS in EFL contexts (Greggio & Gill, 2007; Jingxia, 2010; Van der Walt, 2009). These findings also echoed in the interview data as recurring themes. The participants agreed to switch to their L1 to socialize with their students, to translate vocabulary, when they feel insecure about their English proficiency, and when there is a need to provide further clarification either due to the complexity of the target structure or the materials used.

Considering the functions of CS triggered by the above-mentioned factors, the findings underlined the fact that CS is mostly perceived as a source for explaining complex structures non-existent in the L1, a time-saver within the heavily-loaded curriculum, as it facilitates and accelerates instruction especially with low level students (clarification, comprehension check and feedback) and acts as an aid to address the affective needs of the students, as it is perceived as a tool to create rapport with them. As for specific skill instruction, CS was determined to be of help in terms of grammar (43%) and writing (28%) more than vocabulary (15%), reading (10%), listening (2%), speaking (1%), and pronunciation (1%). This finding also aligns with the most prominent factor triggering CS, *the morphosyntactic and semantic structure of English*. While especially low proficiency level students need more aid from their L1 to comprehend the receptive skills, the use of the L1 is not welcome and preferred when instructing productive skills regardless of the proficiency levels of the students. It should also be noted that the results from the DFA determined factors 1 and 7 as predictor variables in terms of the participants' perceptions as to group membership. Those who switch to Turkish rarely or sometimes were found to comprehend *the morphosyntactic and semantic structure of English* and the need for *clarification* not as essential as determining a need to use the L1.

As for individual learner differences, CS was regarded as a tool addressing learners' affective needs as determined by their need to communicate and socialize with their instructors. CS was also regarded as a source to diminish FL learning anxiety. Again depending on their levels of proficiency, instructors may benefit from their shared L1 to build rapport with the learners, provide the emotional support when they need, and socialize with them especially when the topic is non-curricular. Nonetheless, the results also yielded evidence that CS might be a source of demotivation and a factor diminishing students' oral production, which can be explained by the nature of the EFL context.

The results of the current study indicated that instructors' personal theories as developed upon their attitudes towards CS determines how they perceive its effectiveness as a pedagogical tool and how they rank the most beneficial functions they attribute to CS. Therefore, depending on EFL learners' competency levels, and the dynamics of the context in question, CS can be most beneficially utilized as a source to diminish the linguistic distance between English and Turkish drawing on the morphosyntactic and semantic differences between the two languages. If a need for clarification, comprehension check, and feedback provision are evident, CS can effectively aid the FL classroom. Keeping the fact in mind that especially low level students need more emotional support and source of motivation from their instructors, CS can be used as a tool to build rapport and trust among the stakeholders. However, instructors should be aware of their personal theories as developed by

their experiences in the classroom which give way to their CS perceptions. With higher level learners, CS may not be equally useful on the grounds that it may diminish oral production and become a source of set back for such learners. Finally, while instructing productive skills which heavily depend on receiving and modeling from the input, such as speaking, CS might not be preferred due to the nature of interaction between the instructor and the learners; yet, receptive skills, especially grammar, can be clarified with the use of the L1 when need be. CS can also be a tool that instructors may refer to when time-constraints overwhelm the ideal teaching dynamics of the EFL classroom.

6 Limitations and conclusion

This study has several limitations regarding its design, namely participant selection, the EFL context at issue, and the nature of the phenomenon itself. To begin with, the sample from which the data were collected cannot account for the whole EFL instructor population in Turkey. Also, the interview data are only limited to three instructors representing four different CS frequencies supposedly arising from their personal theories pertaining to CS (Macaro, 2001; 2009). A different sample from differentiated institutions within a longitudinal design might yield alternative results. It should also be noted that this study lacks data representing learners' perception regarding the phenomenon at issue. Therefore, there is a need to conduct a study where the perceptions of both the instructors and learners are explored in a comparative fashion. Learners' input would bring different insights into the area of study and will help practitioners make clearer decisions not dependent only upon their perceptions and theories but also upon those of the learners' who are exposed to CS as a pedagogical tool.

In sum, CS in the Turkish EFL context is determined most specifically by learners' English competency. However, teachers' personal theories pertaining to their attitudes about the effectiveness of CS as a pedagogical tool determines both the extent to which they switch to their L1 and how they comprehend its functions in the EFL context (Macaro, 2001, 2009).

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10. I switch to Turkish when there are no equivalents in English.	.35		.47
<i>Factor 2: Negative attitudes towards CS as a pedagogical tool</i>			
20. CS leads students to use more Turkish in the classroom.	.85	.32	.77
29. CS diminishes students' oral production.	.79		.73
*16. CS is not an effective tool in EFL instruction.	.60		.62
*27. CS is an effective strategy in language teaching.	.57		.73
*9. CS positively affects the class.	.57		.69
*23. CS motivates the students.	.53	-.39	.73
*5. CS helps teachers control the class.	.37		.66
<i>Factor 3: Modes of Communication</i>			
31. I switch to Turkish in the classroom for personal communication with my students (daily talks, hobbies etc.).	.85		.69
15. I switch to Turkish to socialize with the students.	.77		.58
25. I switch to Turkish for class management issues.	.61		.54
<i>Factor 4: Vocabulary</i>			
28. I switch to Turkish to translate vocabulary.	.82		.83
7. I switch to Turkish when teaching new vocabulary.	.82		.81
<i>Factor 5: Learner Comprehension</i>			
11. CS decreases students' language learning anxiety.		.74	.58
19. Lesson contents and objectives are important factors triggering switching into Turkish.		.55	.62
8. Students' English proficiency is an important factor triggering switching into Turkish.	.41	.51	.67
12. I switch to Turkish to help students' comprehension.		.48	.33
24. CS helps students clearly understand the points instructed.		.43	.57
<i>Factor 6: Instructors' Perceived Competency in English</i>			

*30. I switch to Turkish because I feel insecure about my English competence.						.86									.77	
26. Instructors' English proficiency is an important factor triggering switching into Turkish.	.35		.38													.59
<i>Factor 7: Clarification</i>																
4. I switch to Turkish to give feedback.															.69	.62
3. I switch to Turkish to provide instructions and prompts.															.66	.68
21. I switch to Turkish to explain student errors.															.65	.64

Note: *In Factor 2, and Factor 6, items had negative loadings either due to negative wordings or sentiments in the way the respondents comprehended the statements. Therefore, responses to items 5, 9, 16, 23, 27, and 30 were reverse coded (i.e. 1_5, 2_4, 3_3, 4_2, 5_1).

Table A.2 Factor Means and Standard Deviations by CS Amount Groups

CS Group	Factor Means (<i>M</i>) and Standard Deviations (<i>SD</i>)															
	1		2 ^a		3		4		5		6		7			
	N	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
RS	62	3.00	.82	3.31	.77	2.90	.85	2.24	.88	3.31	.79	2.29	.70	2.58	.92	
SS	71	3.83	.65	2.63	.58	3.48	.71	2.87	.94	3.85	.56	2.26	.71	3.39	.62	
US	20	4.11	.38	2.83	.62	3.82	.57	3.43	.67	4.00	.36	2.53	.85	3.50	.71	
AS	2	4.10	.42	2.93	.10	4.17	.24	4.00	.00	4.30	.14	2.75	1.1	4.33	.47	
TOTAL	155	3.54	2.2	2.92	2.1	3.30	2.4	2.71	2.5	3.66	1.9	2.31	3.4	3.09	2.7	

^aA higher score indicates a less positive attitude towards CS.

Table A.3 Summary of discriminant functions

Function	Eigenvalues	Wilk's Lambda	Chi Square	Variance %	Cumulative %	<i>p</i>
1	.59	.62	71	97.8	97.8	.000
2	.01	.99	1.96	2.2	100	.374*

*Not significant at *p*<.05 level

Table A.4 Factor loadings on significant function

Factor	Function 1	Function 2**
1	.858*	-.514*
7	.753*	.638*
5	.546*	-.083
2	-.446	-.012
4	.378	.031
8	.332	-.146
3	.211	.098
6	-.067	.021

*Indicates largest values on the function ** Function not significant

Table A.5 Functions at group centroids

Groups	Function 1	Function 2*
Rarely – Switchers (RS)	-.90	.00
Sometimes – Switchers (SS)	.50	.02
Usually – Switchers (US)	.86	-.17
Always – Switchers (AS)	1.44	.82

* Function not significant

Appendix B

CODE-SWITCHING QUESTIONNAIRE

Thank you for agreeing to take part in this survey. The aim of this research is to help us better understand the EFL instructors' code-switching practices in the classroom. There is no 'right' or 'wrong' answers to any of these questions. Please read each item carefully before responding. The information we get from you is significant to the success of this project. In foreign language classes, sometimes teachers shift from one language to another (e.g. from English to Turkish) in their teaching. This phenomenon is called codeswitching (CS), which refers to the alternate use of the first language and the target language.

I. Demographic Information

Age:			
Gender:			
Affiliation/Institution:			
Last Degree Earned: a) Bachelor's b) MA c) Ph.D d) Other please specify			
Years of Teaching Experience:			
Courses Taught:			
L1:	L2:	L3:	Other:

II. Codeswitching Practices

1. How much do you switch into Turkish in the classroom?

a) never (0%) b) rarely(1-20%) c) sometimes(20-50%) d) usually(50-70%) e) always(70-100%)

II. Code-switching practices and attitudes

For each item identified below, circle the number to the right that best fits your judgment of its quality.

Use the rating scale to select the quality number

(1) Strongly Disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree

Survey Items	S D A	D A	N	A	S A
2. I switch to Turkish to explain a grammar point.	1	2	3	4	5
3. I switch to Turkish to provide instructions and prompts.	1	2	3	4	5
4. I switch to Turkish to give feedback.	1	2	3	4	5
5. Code-switching help teachers control the class.	1	2	3	4	5
6. Materials used in the classroom are important factors triggering switching into Turkish.	1	2	3	4	5
7. I switch to Turkish when teaching new vocabulary.	1	2	3	4	5
8. Students' English proficiency is an important factor triggering switching into Turkish.	1	2	3	4	5
9. Code-switching positively affect the class.	1	2	3	4	5
10. I switch to Turkish when there are no equivalent expressions in English.	1	2	3	4	5
11. Code-switching decreases students' language learning anxiety.	1	2	3	4	5
12. I switch to Turkish to help students' comprehension.	1	2	3	4	5
13. Departmental policy is an important factor triggering switching into Turkish.	1	2	3	4	5
14. I switch to Turkish only for lesson warm-up activities.	1	2	3	4	5
15. I switch to Turkish to socialize with the students.	1	2	3	4	5
16. Code-switching is not an effective tool in EFL instruction.	1	2	3	4	5
17. The distance between the linguistic systems of Turkish and English is an important factor triggering switching into Turkish.	1	2	3	4	5
18. I switch to Turkish based on the skill I am teaching	1	2	3	4	5
Please specify the skills (grammar, reading, writing, vocabulary, speaking, pronunciation, listening)					
19. Lesson contents and objectives are important factors triggering switching into Turkish.	1	2	3	4	5
20. Code-switching leads students to use more Turkish in the classroom.	1	2	3	4	5

21. I switch to Turkish to explain student errors.	1	2	3	4	5
22. I switch to Turkish when teaching grammar.	1	2	3	4	5
23. Code-switching motivates the students.	1	2	3	4	5
24. Code-switching helps students clearly understand the points instructed.	1	2	3	4	5
25. I switch to Turkish for class management issues.	1	2	3	4	5
26. Instructors' English proficiency is an important factor triggering switching into Turkish.	1	2	3	4	5
27. Code-switching is an effective strategy in language teaching.	1	2	3	4	5
28. I switch to Turkish to translate vocabulary.	1	2	3	4	5
29. Code-switching diminishes students' oral production.	1	2	3	4	5
30. I switch to Turkish because I feel insecure about my English competence.	1	2	3	4	5
31. I switch to Turkish in the classroom for personal communication with my students (daily talks, hobbies, etc.)	1	2	3	4	5
32. Do you have any comments about code-switching in EFL classrooms?					

Thank you very much for your collaboration.