Switches that Count: Perceived Functions of University Instructors' Code-Switching Practices in English Major Undergraduate Content versus Language Classes

Mahnaz Eslami[1]
Hossein Talebzadeh*[2]

Abstract

There are contradicting views about the place of L1 and code-switching (as a common phenomenon) in language classrooms. Despite the plethora of studies investigating classroom code-switching, there is a lack of research comparing trans-languaging practices of university instructors across different contexts particularly in Iranian EFL undergraduate classrooms. The purpose of this study was to examine and compare the actual practices and perceived justifications and functions of code-switching in university level language and content classes. To do so, two groups of Iranian instructors (2 males and 4 females) teaching English major content classes (i.e., *Principals of Translation, Translating Journalistic Texts*, and *Research Methodology*) and language courses (i.e., *Speaking and Listening, Reading Comprehension*, and *Writing*) were observed, their classes were recorded, and they were interviewed through the stimulated recall technique. The switches' professed functions were qualitatively analyzed and then were categorized into three broad pedagogical functions (*curriculum access*, *classroom management*, and *interpersonal relations* along with their sub-functions), and,

* Corresponding Author
[1] MA, Department of Foreign Languages, Faculty of Literature and Humanities, Kharazmi University, Iran meslami69@yahoo.com,
[2] Assistant Professor of Applied Linguistics, Department of Foreign Languages, Faculty of Literature and Humanities, Kharazmi University, Tehran and Karaj, Iran. talebzadeh@khu.ac.ir; htmu88@yahoo.com

ultimately, they were counted and compared quantitatively. The findings revealed that code-switching was perceived as a goal-directed strategy which was considerably more prevalent (especially intersentential type) in content classes. The findings in this study can make contributions to the work of university instructors, language teachers, and other educational skateholders.The purposeful and fruitful practice of judicious code-switching as a communicative teaching strategy canhelp teachers reduce students' cognitive and affective burden while improving their comprehension and learning.

Keywords: classroom code-switching, content classes, language skills classes, perceived functions, undergraduate, university instructors

Introduction

As a common yet controversial phenomenon in most bilingual situations, including the language learning contexts, code-switching has attracted the attention of scholars over the last few decades, and many researchers have attempted to identify its types and functions in the classroom (e.g. Bullock & Toribio, 2009; Dailey-O'Cain, & Liebscher, 2009; Ferguson, 2003; Jouibar, et al., 2021; Macaro, 2009; Momenian & Samar, 2011; Nazeri, et al., 2020; Samar & Moradkhani, 2014). Some researchers believe that only the target language should be used in the classroom to ensure that learners have received as much input as possible in the target language (Chaudron, 1988; Ellis, 1984; Turnbull & Arnett, 2002; Wong-Fillmore, 1985), while some researchers argue that L1 use should be allowed in the foreign language classroom to improve comprehension (Levine, 2014; McMillan & Rivers, 2011; Rivers, 2011; Stern, 1992; see also Jouibar et al., 2021). Investigating the functions of classroom code-switching, Willans (2011) observed that learners' code-switching was purposeful and in fact improved their learning rather than only compensating for their lack of proficiency in the official language. He concluded that there should be a policy which does not hinder learning by not allowing the use of other languages and at the same time help learners to improve their English proficiency (Willans, 2011).

As noted above, code-switching can be a resource conducive to learning.The next issue, however, is clarifying the determinant criteria for its classroom application by leaners and teachers in order for code-switiching to be beneficially applied, while not depriving the students of the necessary input they

need to receive in the target language. The optimal level for code-switching which "will ultimately lead to enhanced language learning and the development of bilingual communicative practices" was addressed in Turnbull and Dailey-O'Cain's work (2009, p. 183). They proposed that an optimal level of L1 use can operate as a cognitive tool resulting in the development of language learning. Code-witching practice in its optimal level will scaffold learners and take advantage of L1 resources and at the same time prevent learners' and educators' dependence on the first language (Turnbull & Dailey-O'Cain's, 2009). More specifically, it depends on the teachers' knowledge and awareness of the functions and reasons for (beneficial versus detrimental) code-switching based on the context of use.

In an inspiring study which accentuates the significance of context in classroom code-switching practices, Ferguson (2003) investigated the phenomenon in content classrooms where the medium of instruction was a foreign language. He identified the functions of code-switching as well as the attitudes, and policies towards it. Moreover, discussing the scaffolding role of code-switching in content classes, Ferguson argued that a resort to the local language of the students can reduce the difficulties they may encounter in content classes. In a relevant investigation, Mokgwathi and Webb (2013) compared code-switching in language versus content classes. They observed that teachers of the content-based classes used code-switching more than language teachers, and code-switching was tolerated less by language teachers indicating that the subject played a significant role in code-switching tolerance.

Previous domestic investigations on the actual practices as well as the cognitive knowledge structure of Iranian language teachers underscore the existence of and a resort to the contested practice of code-switching as an integral component of the teachers' practical knowledge-base (e.g., Ebrahimzadeh & Talebzadeh, 2021; Samar & Moradkhani, 2014). In fact, in spite of the surge in the number of Iranian studies on the functions of code-switching in the language classroom (e.g., Jouibar, et al., 2021; Momenian & Samar, 2011; Nazeri, et al., 2020; Rahimi & Eftekhari, 2011; Samar & Moradkhani, 2014), little research, if any, has been conducted exploring and comparing types and functions of code-switching (as a context-bound phenomenon) in content versus language classes in the Iranian universities.

To address some of the above-mentioned gaps in the literature, the present

small-scale exploratory study intends to monitor and analyze the actual code-switching practices of a sample of Iranian university instructors in order to ultimately tap into their cognitions of code-switching as a teaching strategy; in so doing, the researchers investigate and compare the perceptions of the language versus content course instructors about the reasons and functions underlying their actual classroom practices. Specifically, the following questions are raised:

1. What are the functions of teacher code-switching as perceived by the Iranian university instructors?
2. To what extent are the instructors' code-switching practices and professed functions different in the language classes versus content classes?

The findings of this study can shed new light on the cognition of language teachers (Akbari & Dadvand, 2011; Akbari, Dadvand, et al., 2012; Ebrahimzadeh & Talebzadeh, 2021; Samar & Moradkhani, 2013) as well as on the potential pedagogical role of translingual practices in the language classroom, and how they can benefit the teachers and their learners without hindering learning at the cost of mere target language use.

Review of Related Literature
Description of Code-switching

Dailey-O'Cain and Liebscher (2009) consider code-switching as a common phenomenon in bilingual speech and define it as "the systematic, alternating use of two languages or language varieties within a single conversation or utterance" (p. 131). Gumperz (1982) defines code-switching as "the juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or subsystems" (p. 59). Code-switching is a universal characteristic of multilingual speech which emerges in multilingual groups with shared identities and "displays the underlying linguistic and social flexibility of speakers in conversation" (Franceschini, 1998, p. 67).

As Gafaranga (2009, p. 125) proposes, code-switching contributes to some aspects of talk organization, including "'"turn-taking (participant selection), opening sequences (see language negotiation), repair organization, preference organization, and inserted and aside sequences". Bullock and Toribio (2009) believe that all the speakers, even monolinguals, vary the language they use in different conditions.

They further argue that code-switching is not a sign of lack of control in separating the languages or lack of proficiency, rather it is a communicative resource for bilingual speakers. Bullock and Toribio (2009) characterize code-switching as a phenomenon which may range from inserting a single word in another language to larger segments of discourse.

Various factors determine bilinguals' preference for using a particular type of language switching, including, as noted by Bullock and Toribio (2009), "bilingual proficiency, level of monitoring in the two languages, the triggering of a particular language by specific items and the degree of separateness of storage and access systems" (p. 8). It is claimed that there is a greater occurrence of intra-sentential code-switching (i.e. switches within a sentence) in the speech of balanced bilinguals, because high level of proficiency in both languages is needed in order to be able to mix languages at the sentence level (Muysken, 2000).

Types of Code-switching

Code-switching has been conceptualized under different models with varying orientations to the cognitive or social aspects of the phenomenon such as the minimalist program, the matrix language framework, the language production model, and conversation analytic model of code-switching, among others (Cantone, 2007; Cantone & MacSwan, 2009; Gafaranga, 2009; Myers-Scotton & Jake, 2009; Muysken, 2000). In line with the major aim of the current study, we mainly focus on three categories of code-switching types.

Winford (2009) categorizes language mixing into two groups of insertional code-switching and structural convergence. He further assumes two types of insertional code-switching, called classic code-switching and composite code-switching. In classic code-switching, the content morphemes or phrasal elements of one language are inserted in the structural frame of the other while in composite code-switching, there is a shared structural frame which is taken from both languages (Winford, 2009).

Another typology, which is provided by Muysken (2000), uses code-mixing as the general term to describe the processes involved in mixing languages in bilingual speech; Muysken (2000) chooses this terminology over code-switching because he believes that code-switching should only be attributed to the alternation

process, which itself is a type of code-mixing. He further argues that code-switching draws a distinction between code-mixing and borrowing which is too sharp. Muysken (2000) proposes that there are three main processes of code mixing, namely insertion (i.e. putting content components of one language in the structure frame of the other language resulting in inhibition of each language activation at specific points of language shift), alternation (also called code-switching, where the speakers alternates between the structures of the languages using both languages' lexicon and structures), and congruent lexicalization (i.e. putting into a shared structure the lexical items of two languages with similar grammatical structures). Code-swithcing in the current study is used in the general sense of code-mixing (as proposed by Muysken (2000)).

From a grammatical point of view, Poplack (1980) categorizes code-switching into three types of inter-sentential, intra-sentential, and emblematic or tag switching. In inter-sentential switching, the switch takes place at sentence boundary; to produce this type of switch more knowledge of L2 is needed. Intra-sentential switch occurs within the clause boundary and requires the speaker to have enough knowledge of the grammar of both languages in order to produce grammatical utterances. The third type is tag switching which includes interjections, fillers, tags, and idiomatic expressions produced in the second language with minimal knowledge of its grammar. Poplack suggests that bilinguals' ability can be measured based on their code-switching behavior. She illustrates the grammar of the bilingual speakers in the following figure:

Figure 1

Representation of Bilingual Code-switching Grammars (Poplack, 1980, p. 239)

a. Inter-sentential switching   b. 'tag'-switching   c. Intra-sentential switching
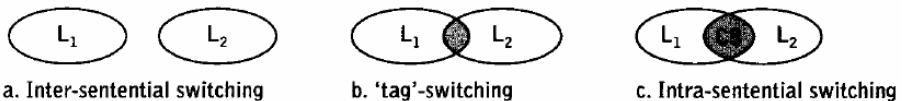
Code-switching in the Classroom

Jouibar, et al. (2021) highlight the position of the "bilingual approach to teaching a foreign language" which proposes "that students' foreign language is built upon their first language knowledge and abilities …. [and] the starting point of learning a foreign language is students' first language (Enama, 2016; Hofweber et

al., 2020; Narayan, 2019)" (p. 147). Although nowadays the systematic use of first language in the classroom is gaining varying levels of acceptance , some programs still insist on the exclusive use of target language in the classes. French immersion is one of these programs which holds to the idea that exclusive use of target language is the best practice, yet the results of the studies conducted on the use of first language in these programs reveal that students code-switch in classroom for cognitive and social purposes and their first language use improves their learning and does not hinder it (McMillan & Turnbull, 2009).

In a study investigating teacher code-switching practices in French immersion program, where the target language is the medium of instruction rather than its purpose, McMillan and Turnbull (2009) examined two experienced teachers' perceptions and practices regarding first language use. One of the teachers advocated the exclusive use of the target language, yet he used a small amount of students' first language in his teaching practice. The other teacher advocated the systematic use of first language and used it in order to ensure learner comprehension while teaching. The results of this study revealed that although the policy of the program was against the use of first language, both teachers used it in their teaching practices (McMillan & Turnbull, 2009).

Evans (2009) studied code-switching in a computer-mediated communication context where the students were learning their interlocutors' language. He investigated the natural interaction between native and non-native speakers of two languages and the way students might have learned from each other. The analysis of the data showed two kinds of switches, between-post switching and within-post switching. The majority of the switches were within posts, either inter-sentential or intra-sentential code-switching. The functions of these switches were similar to the switches in bilingual speech. Most of the intra-sentential switches to target language were produced by more proficient bilinguals suggesting that this kind of switching demands a high level of proficiency in both languages (Evans, 2009).

Sali (2014) observed three EFL classes in a secondary school in Turkey to explore the reasons teachers had in mind for using students' L1 in the classroom. In so doing, she found three broad academic, managerial, and social/cultural reasons for employment of L1. The most widely used reason was the academic function

through which teachers spoke students' first language to convey the content of the lesson. Teachers also used L1 for managing purposes among which giving instructions for classroom tasks and activities was the most frequent. Another reason for employing L1 was concerned with cultural and social issues when teachers used the familiar code, students' first language, to establish rapport, communicate shared cultural expressions, and praise students (Sali, 2014). When interviewed, all Sali's (2014) participating teachers expressed a positive attitude toward using L1 in the classroom and attributed positive pedagogical values to L1 use. They believed that the employment of first language can improve learners' comprehension and reduce their anxiety.

According to Nagy and Robertson (2009, p. 85) the following factors influence the choice of language in the classroom:

- *External factors*: The curriculum, examinations, expectations in the school, the attitudes of the head-teacher, colleagues, parents and the political context

- *Internal (teacher-related)*: Professional experience, training, proficiency in the target language, self-confidence, beliefs about and attitudes towards the target language

- *Internal (learner-related)*: Age, ability, proficiency level, motivation, attitude towards the target language

- *Internal (context-related)*: The stage in the lesson and the nature of the task or activity

- *Internal (use of language)*: The extent to which language use is formulaic or predictable in the context

Examining the benefits and drawbacks of code-switching in content and language classes, Mokgwathi and Webb (2013) observed that code-switching happened in the classrooms in all the locations, subjects, levels, and by both genders. Teachers of the content-based classes used code-switching more than language teachers, and code-switching was tolerated less by language teachers indicating that the subject played a significant role in code-switching tolerance. Most of the switches by content teachers were intra-sentential, while language teachers mainly used inter-sentential code-switching. The findings of their study posit some positive (e.g. improving comprehension) and negative (e.g. constraining

L2 input) educational effects for code-switching.

In an Iranian context, a rather sizable sample of EFL students along with their teachers were observed and surveyed by Nazari et al. (2020) through an observation checklist and questionnaire developed to study the motivational determinants of code-switching in EFL classrooms. The results of their quantitative and qualitative analyses of institute classes revealed that there were six factors motivating the students to code-switch (i.e. forgetting or not knowing the English equivalent; forgetting or lack of word in language that the person speaks; transforming information easily; intricacy of some words in the language that person speaks; expressing emotions easily; and better understanding). Rather than being incentivised by their own personal comfort or the presence of classroom observers, the teacherswere motivated by more practical, pedagogical factors, namely preventing students' confusion; saving time; simplifying teaching,   understanding better (for students); teaching new terms, and providing better teaching (Nazari et al., 2020).

Samar and Moradkhani (2014) investigated teachers' purpose for code-switching, too. They observed EFL classrooms and interviewed four teachers to find out their cognitions about the aims of code-switching. Students' better comprehension was the most significant justification while efficiency was the least frequent reason for code-switching. They argued that language institute teachers employ code-switching strategy in their classes regardless of the (institutional) policies that forbid the use of any language other than the target language. They use translanguaging as a tool which helps them to accomplish curriculum objectives and reduce affective filters, ultimately leading to a better learning. Being among the extant quality studies tapping into the Iranian teachers' code-switching cognitions, Samar and Moradkhani (2014) is limited to language institute practitioners.

From among the few studies of code-switching in the Iranian academic settings, Shabani et al. (2016) as well as Rahimi and Eftekhari (2011) aimed to investigate the motivations and/or perceptions of Iranian university lecturers. The former interviewed 6 TEFL instructors and gave questionnaires to some of their students to investigate the purposes of code-switching, the preferences of the students, and the (mis-)match between that of the students and their instructors. No distinction was made, however, between the language skills and subject classes.

Shabani et al. (2016) concluded that although some lecturers were against code-switching to Persian in the classroom, others found it a useful pedagogic and affective strategy; additionally, the learners were generally positive about this practice as a strategy which is conducive to learning.

Rahimi and Eftekhari's (2011) qualitative analysis of the perceptions of two university lecturers (one teaching General English and the other ESP courses) is the closest in objective to ours. To identify functions of code-switching, perceptions of the instructors, and the words triggering cognitive code-switching, Rahimi and Eftekhari (2011) observed and interviewed the two instructors and found some differences between the two contexts. In addition, they identified the following six functions common between the two EFL contexts: providing equivalent for the key words, explaining grammatical structures, highlighting some lexical elements of vocabulary, inspiring students, expressing humor, and explaining next programs and assignments. Moreover, both lecturers "considered code switching as the crucial and influential part of Iranian EFL classrooms which aimed to facilitate the continuity of classroom interactions" (Rahimi & Eftekhari, 2011, p. 61). Their limited sample, nevertheless, did not leave much room for either a quantitative data analysis or a distinction between TEFL skills and subject area classes/lecturers.

All in all, being a context-sensitive phenomenon, code-switching and the pertinent actual practices, justifications, and functions (perceived by different stake-holders) in various domestic contexts are not yet amply scrutinized. In fact, it can be deduced from our literature review that, although there are several studies addressing code-switching forms and functions in different contexts, there is still paucity of investigations which qualitatively explore and compare the actual practices and the self-professed functions of instructor code-switching in content versus language classes in the context of language major programs at Iranian universities.

Methodology

Participants

The research questions of this exploratory qualitative-quantitative study address teachers' code-switching practices with regards to their functions, types, and differences in two contexts of content versus language university classes.

Accordingly, six instructors participated in the study, three of them were instructors at Kharazmi University and the other three were teaching at Azad University of Karaj holding PhDs (4) and MAs (2) in English Language Teaching. The classes of these six teachers (2 male and 4 female instructors) were observed and recorded from the beginning to the end of the session. Immediately after the classes finished, the instructors were interviewed using stimulated recall technique about their perceived justifications and functions of the code-switching practices they had employed during class time.

Procedure

The data of the study was collected through observation and interview. A total of six classes were put into two groups. All the classes were undergraduate English language majors' and their medium of instruction was English. In the first group, there were three content classes of *Theoretical Foundations and Principals of Translation, Translating Journalistic Texts*, and *Research Methodology*. Inthe second group, there were three general English language classes: *Speaking and Listening*, *Reading Comprehension*, and *Writing*. Each class lasted for 90 minutes which gave us 540 minutes of class time in total. The classes were both observed and audio recorded; additionally, whenever the instructors switched codes in their speech, their utterances and the exact time and context were marked and transcribed (either on the spot or later when the files were reviewed) to be used for the stimulated recall phase in the interview held immediately after the class (Gass & Mackey, 2016). The instructors were not informed in advance about the objectives of the research in order to prevent any change in their natural class routine. After the class was recorded from the beginning to the end, the instructors were interviewed on their switches during class time to elicit her/his perception of the function of each switch. The stimulated recall technique was used to evoke these perceived functions. The interview sessions were recorded, too. Afterwards, all the recordings were transcribed by the researchers to explore and compare types, frequencies, and functions of code-switching in content versus language skills classes. Due to the nature of the collected data, the analysis of the data is in the form of frequency counts.

Data Analysis

As mentioned above, the data from the speech of six university instructors were recorded and transcribed. In order to investigate the functions of teachers' code-switching, the functions that teachers assigned to each switch had to be coded. The framework adopted to code the data in the present study was inspired by Ferguson's (2003) pedagogic functions of code-switching since our initial analysis of a small proportion of the data (around 10 per cent) revealed that it can best account for our data as the functions proposed in our data set were similar to Ferguson's broad pedagogical functions. In his review of functions of classroom code-switching in postcolonial contexts, Ferguson (2003) states that the claimed functions of these switches can be put into three broad categories:

i. CS for curriculum access. Basically, to help pupils understand the subject matter of their lessons,

ii. CS for classroom management discourse. e.g. To motivate, discipline and praise pupils, and to signal a change of footing,

iii. CS for interpersonal relations. E.g. To humanize the affective climate of the classroom and to negotiate different identities. (p. 2)

According to Ferguson (2003), the *curriculum access* function is related to elaborating the meaning which was presented in English in the first place. The purpose is to make the meaning understandable for students. *Scaffolding knowledge construction* which helps the students learn the content of the lesson better is a sub-function of curriculum access. *Classroom management* is related to the circumstances when the teacher uses the students' first language to attend to 'off-lesson' issues and to manage what is not related to the subject matter; such as controlling students' behavior, gaining their attention, and dealing with latecomers. It may also include managing students' learning; such as elaborating task instructions, addressing a specific student, and encouraging students' participation. Finally, *interpersonal relations* is related to instances when the teacher engages in a friendly talk with students during class time. From time to time, teachers may use the local language of students in order to get away from the formal teacher-student relationship and create empathy with students as members of the same society (Ferguson, 2003).

In the present study, code-switches with *curriculum access* functions are

coded as scaffolding knowledge construction, clarifying, reiterating, emphasizing, checking for understanding, and pointing out the obvious. *Classroom management* functions are coded as encouraging students, lightening the mood, gaining students' attention, giving directions, confirming and checking, controlling student's behavior, dealing with latecomers, addressing a specific student, and inviting student participation. And *interpersonal relations* are coded as building rapport. A brief summary of these pedagogical functions and sub-functions are presented in table 1. Moreover, following Poplack's (1980) typology, we categorized instructors' code-switching into three types of inter-sentential, intra-sentential, and tag switching.

Table 1

Broad Functions, Sub-functions, and Instances of Code-switching in the Study

Function and sub-function	Description	Examples taken from the study dataset
Curriculum access	To help the students understand the lesson better	
Scaffolding knowledge construction	*The teacher explains and elaborates the lesson*	"سبکش حماسی هست his poems are like Ferdowsi's" (Content class, Translation Theories, Female, PhD)
Emphasizing	*The teacher emphasizes on something to make the students aware of its importance*	خیلی اهمیت داره که بدونید" For what type of text you are translating" (Content class, Translation Theories, Female, PhD)
Reiterating	*The teacher repeats an utterance*	تا اونجاییکه می تونیم خلاصه باشه،" concise باشه '' (Content class, Translation of Journalistic Texts, Female, PhD)
Clarifying	*The teacher gives an equivalence or rephrases a statement*	"Now in Farsi we say کارد بخوره به اون شکمت" "In this situation, I code-switched to clarify the exact meaning … because it was not clear enough

Function and sub-function	Description	Examples taken from the study dataset
		"..." (Language Skills class, Reading Comprehension, Female, MA)
Checking for understanding	*The teacher checks students' understanding of the lesson*	"OK, so you should be able to tell me تفاوت این دو تا design در چی هست؟" (Content class, Research Methodology, Male, PhD)
Pointing out the obvious	*The teacher points out that the meaning of something is clear*	"خوبه به شرطی که بخواید Functional کار کنید" "The students have been taught and are quite familiar with the term functional and it is obvious to them." (Content class, Translation of Journalistic Texts, Female, PhD)
Classroom management	Managing classroom issues and students' behaviors	
Encouraging students	*The teacher encourages students*	"اونایی که درس نخوندن حداقل Listen کنن" (Content class, Translation of Journalistic Texts, Female, MA)
Lightening the mood	*The teacher changes the mood and tone of the class to prevent exhaustion*	"اون دیگه چه Demon ی بوده که عرضه نداشته تا Tribe بره و Was easily fooled by the paints" "It was intended as fun and to lighten the mood while repeating the key terms of the listening passage."

Function and sub-function	Description	Examples taken from the study dataset
		(Language Skills class, Speaking and Listening, Male, PhD)
Gaining students' attention	*The teacher draws students' attention on the task or the lesson*	"خوب بچه ها The first paragraph …. [again in Persian, then in English] What does it say in the first paragraph?" (Content class, Translation Theories, Female, PhD)
Giving directions	*The teacher gives directions and elaborates task directions and class activities*	The instructor who had elaborated on the task ahead in Farsi explained that "the class is heterogeneous, and some would and some would not understand the task requirements; to invite and give equal chance of participation to all class members [the instructions are supplemented in Farsi] (Language Skills class, Speaking and Listening, Male, PhD)
Confirming and checking	*The teacher confirms or seeks confirmation on what has been asked or said*	"Yes, آرد میزدن به خودشون To look attractive یا گل (میزدند)؟" "To ensure that students have heard 'flour' and not 'flower'" (Language Skills class, Speaking and Listening, Male, PhD)
Controlling students' behaviors	*The teacher disciplines student's behavior, talk, or their interactions*	[Reacting to a student's unfavorable behavior] "What happened همینجوری بدون اجازه؟" (Content class, Translation Theories, Female, PhD)
Dealing with latecomers	*The teacher attends to the student who has arrived late*	"اصلا چرا اومدی؟ اومدی که حاضر بخوری؟" (Content class, Translation Theories, Female, PhD)
Addressing a	*The teacher contacts*	"It was like a rainbow.

Function and sub-function	Description	Examples taken from the study dataset
specific student	*one specific student*	هررنگی که دستش رسیده." "I code-switched here to help the struggling student through restating the gist and relieving some tension and to show him/her that s/he had done the task correctly." (Language Skills class, Speaking and Listening, Male, PhD)
Inviting students' participation	*The teacher asks students to participate in class procedures and activities*	See also "Giving directions" example above
Interpersonal relations	Creating a friendly environment in the classroom	
Building rapport	*The teacher creates empathy and establishes rapport with students*	"At some points, I use Farsi to establish rapport with my students or to avoid their becoming bored (so that) they'd laugh or understand the point, like example 2." (Content class, Translation of Journalistic Texts, Female, PhD)

Results

The purpose of this study was to scrutinize code-switching practices in higher education English-medium content and language classes. Through the data collection procedure, it was observed that code-switching practices were purposeful and served different functions; they are utilized to enhance students' learning, to help the teacher control classroom setting, and also to enable learners and instructors to communicate as members of the same discourse community leaving behind the student-teacher roles and reducing the distance between them when the occasion was appropriate. In this section, a detailed description of the findings of the study which help to answer the research questions are presented.

To answer the first research question, university lecturers were interviewed about their perceptions of functions of the switches they had employed during class time. The justifications and perceived roles were analyzed, coded, and categorized

into three broad functions (and their sub-functions) inspired by Ferguson's (2003) scheme. Most of the code-switching practices functioned as *curriculum access* and *classroom management* (43% and 41%, respectively). *Interpersonal relations* category was the least frequent function among others with only 16% (see Figure 2). Among sub-functions of *curriculum access*, scaffolding knowledge construction followed by clarifying were employed relatively more frequently. And for *managing classroom setting*, gaining students' attention and lightening the mood were the aim of most of the switches (See Figure 3 as well as Tables 2 and 3).

The second research question deals with comparing code-switching practices in language classes versus content classes in terms of frequency, function, and type. It was observed that the employment of code-switching in content classes was almost three times more frequent than language classes. From a total of 205 observed code-switches, 155 of them belonged to content classes while only 50 of them pertained to language classes. Regarding types of code switching (Poplack, 1980), the most popular kind was inter-sentential code-switching with 56% of all switches. Next was intra-sentential with 37.5% of use. And only 6.5% of them could be classified as Tag switching. Figure 1 illustrates the number of each type in two groups of language and content classes.

Figure 1

Frequency of the Three Types of Code-switching in Language and Content Classes

Percentage of Types of Code-Switching
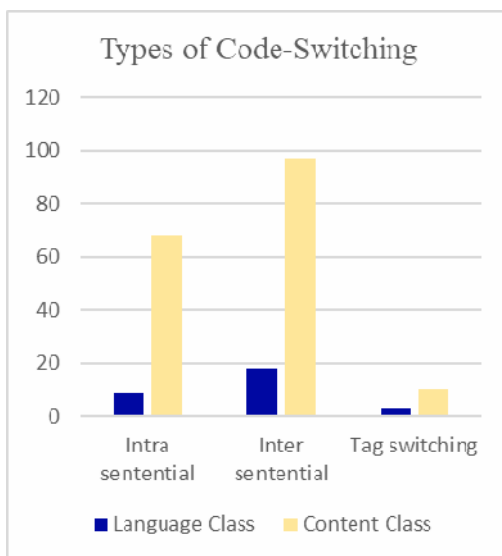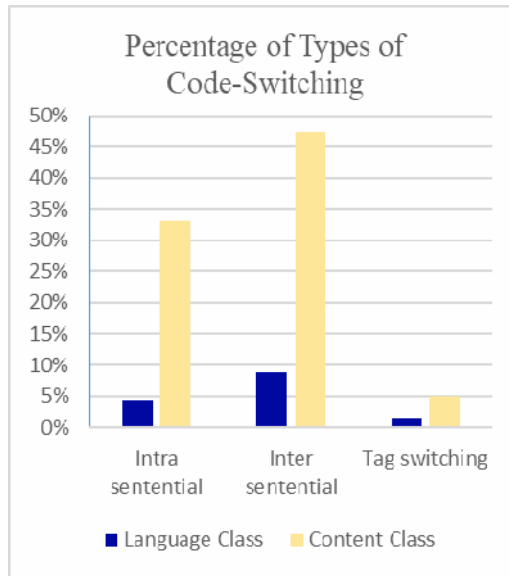
In terms of the purpose behind the practice of code-switching, the most frequent pedagogical function in content classes was *curriculum access* and in language classes it was *management of classroom*. *Interpersonal relations* function was employed the least in both classes. Figure 2 shows the frequency of these broad functions in language and content classes.

Figure 2

Frequency of Broad Pedagogical Functions of Code-switching in Language and Content Classes

Broad Functions of Code-Switching
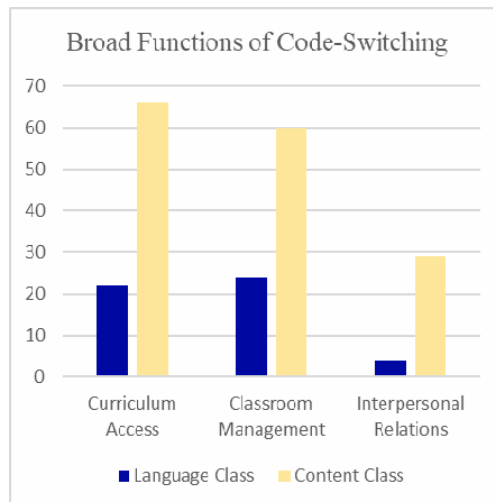
Investigating sub-functions of these broad functions revealed that teachers mostly used code-switching for scaffolding and clarifying when the purpose was *accessing the curriculum* (Table 2).

Table 2

Sub-functions of Curriculum Access in Language and Content Classes

Context	Scaffolding knowledge construction	emphasizing	reiterating	clarifying	Checking for understanding	Pointing out the obvious
Language Classes	15%	0	0	7.5%	0	2.5%
Content classes	20%	7.5%	12.5%	20%	10%	5%
Total	35% (n=31)	7.5% (n=7)	12.5% (n=11)	27.5% (n=23)	10% (n=9)	7.5% (n=7)

As can be seen in table 3, for *managing the classroom*, teachers code switched mostly to focus students' attention and lighten the mood.

Table 3

Sub-functions of Classroom Management in Language and Content Classes

Context	Encouraging students	Lightening the mood	Gaining students' attention	Giving directions	Confirming and checking	Controlling students' behaviors	Dealing with latecomers	Addressing a specific student	Inviting students' participation
Language Classes	0	7.89%	7.89%	2.63%	2.63%	2.63%	0	2.63%	2.63%
Content classes	5.26%	18.42%	28.98%	5.26%	2.63%	2.63%	2.63%	2.63%	2.63%
Total	5.26% (n=5)	26.31% (n=22)	36.87% (n=32)	7.89% (n=7)	5.26% (n=4)	5.26% (n=4)	2.63% (n=2)	5.26% (n=4)	5.26% (n=4)

Table 4 reports the amount of code-switching occurrence for *interpersonal relations* during the class time observed.

Table 4

Sub-function of Interpersonal Relations in Language and Content Classes

Context	Building rapport
Language Classes	13.33%
Content Classes	86.66%
Total	N=33

As can be seen in figure 3, scaffolding and clarifying were the most frequent functions in both language classes and content classes while only content classes made use of code-switching for emphasizing, reiterating, and checking for understanding. To *manage the classroom*, teachers of language and content classes used similar amounts of code-switching to confirm and check, control behaviors, address a specific student, and invite students' participation. A summary of the frequency of sub-functions utilized is presented in Figure 3.

Figure 3

Sub-functions of Code-switching in Language and Content Classes

Discussion

This study aimed at investigating code-switching practices employed by university instructors teaching courses in two different contexts of language and content classes for undergraduate English majors; it, firstly, intended to examine the purpose(s) behind the use of this communication and learning strategy (Ferguson, 2003; Macaro, 2005), and secondly to compare the teachers' code-switching practices in these two contexts. In so doing, we drew upon Ferguson's (2003) tripartite broad pedagogical functions, namely, *curriculum access*, *classroom management*, and *interpersonal relations* (and their diverse sub-functions) as well as Poplack's (1980) typology of code-switches in terms of *inter-sentential*, *intra-sentential* and *tag switching*. As far as code-switching functions are concerned, it was observed that the employment of code-switching strategy was totally purposeful and teachers code-switched for *achieving curriculum objectives* as well as *managing classroom*. And sometimes these switched codes served the purpose of *communicating with students* in a more friendly environment away from professional distances (Tables 1-4 and Figures 2 and 3). Regarding comparison of code-switching practices in language classes versus content classes in terms of frequency, function, and type, we found that code-switching was employed much more frequently in content classes (almost three times) compared to language classes. Moreover, in terms of Poplack's (1980) three-way typology of switches, inter-sentential code-switching was the most frequent (56%) of all switches, followed by intra-sentential switching (37.5%) and a meager number of tag switching instances (only 6.5%) (Figure 1).

Comparabale to the three categories of functions (inspired by Ferguson, 2003) emerging in our findings, Sali (2014) explored three main reasons for using L1 by Turkish EFL teachers as *academic, managerial, social/cultural* functions, the employment of which would lead to an acceleration in learner comprehension and elimination of anxiety the learners may feel in classroom. In a similar vein, Samar and Moradkhani (2014) scrutinized teachers' cognition of classroom code-switching in EFL classroom. They found helping students understand better as the most significant reason for switching codes during class time, which is in accordance with our finding of using L1 to scaffold students and to enhance their lesson comprehension as the most prominent reason behind teachers' code-switching. In

general, the current findings lend ample support to other studies which identify code-switching as an integral component of the teachers' cognition and practical knowledge-base (e.g., Ebrahimzadeh & Talebzadeh, 2021; Samar & Moradkhani, 2014).

Taking into account the context of teaching, we observed that code-switching occurred in all the classes with different subjects, from content classes to language classes. All teachers (in varying degrees) resorted to students' first language in order to make the lesson more comprehensible to learners, although it was more favored by content teachers than by language teachers. In fact, the nature of the class and its requirements appear to require and induce differing levels of switches in and out of Persian. For instance, we noticed that *translation* related classes (and to a lesser extend *Reading* course) seemed to depend on the instructors' (manifesting their) proficiency in both languages, while *Methodology*, *Writing,* and *Speaking and Listening* tended to rely more on target language in their respective content versus language categories. As pointed out in the bilingualism literature, bilinguals have different proficiencies in their languages according to their "age of second language acquisition, the quality of linguistic input received, the language most used, and the status of the language in the community" (Bullock & Toribio, 2009, p. 7) and the quality and quantity of code-switching might be affected by such considerations. It should be noted that as suggested by the Processes View of Bilingual Memory the effect of task (e.g. conceptually-driven versus data-driven) type on cognitive resources should be taken into account, too (Heredia & Brown, 2004). However, as will be noted in the following paragraphs, rather than being merely affected by external factors or teacher-related factors like proficiency (Nagy & Robertson, 2009), the circumstances of content versus language classes are more likely to require instructors to draw on different types of cognitive processes and language-mixing strategies.

In both content and language classes, inter-sentential switching was the most prominent type, in comparison to other types of code-switching. This finding was similar to Mokgwathi and Webb's (2013) and Gwee and Saravanan's (2016) results where content teachers tended to alternate languages more often in comparison to language teachers; however, Mokgwathi and Webb found inter-sentential code-switching more frequently used among language teachers, while

intra-sentential switching was the most recurring type among content teachers. As contended by our studies' interviewees and might be deduced from our data-set (e.g. Table 1), it seems that inter-sentential switches are less likely to create confusion and, consequently, serve better the instructional purposes (e.g. curriculum access; giving directions) of the code-switching; however, intra-sentential switches can be more suitable for interpersonal, attention-gaining, rapport-building purposes (e.g. encouraging the students; lightening the mood). Generally, given the rather high proficiency levels of the participating instructors, it seems that a recourse to either inter-sentential or intra-sentential switches was triggered more by functional and pragmatic considerations rather than merely by language proficiency constraints (as suggested in the literature, e.g. Evans, 2009; Muysken, 2000; Poplack, 1980).

We observed that the main purpose behind teachers' use of L1 in content classes was related to *curriculum matters*, among which scaffolding knowledge construction and clarifying were the most important reasons (Tables 1 through 3). Looking into language teachers' purposes of code‐switching, it was revealed that their main concern was to manage the classroom mostly to lighten the mood and gain students' attention (Figure 2 and Tables 2 and 3). Consistent with the findings of the present research, Gwee and Saravanan (2016) also found that *curriculum access* was the most prominent function in content classes while *classroom management* was the most prevalent category in language classes. Observing language classes and a range of content classes with different subject matters, they identified scaffolding as the most recurring sub-function of *curriculum access* across all classes. Nonetheless, the most frequent sub-function of *classroom management* in their study was not congruent with what was observed in our study. They declared that teachers used L1 mostly to give directions for classroom tasks or homework in both subject and language classes, whereas in the present study teachers desired for a more focused and exciting classroom, changing languages in order to lighten the mood and draw students' attention on the classroom procedure (see Tables 1, 2 and 3). All in all, being less constrained by Nagy and Robertson's (2009, p. 85) external factors, the university instructors contended to be more influenced by internal factors, particularly learner-related and context-related rather than teacher-related and language use factors (see our literature review above for more details of the internal and external factors).

As it was observed, rather than being merely a sub-conscious practice, teachers' code-switching was used as a pedagogical tool and resource to help students learn the subject better, participate in the classroom more efficiently, and overcome the affective factors which may hinder learning. By employing this pedagogical strategy, teachers attempted to reduce the cognitive and affective burden learners may bear in the classroom (Sali, 2014); it is in spite of the fact that code-switching between languages and dialects may increase the cognitive load in bilinguals (Terry et al., 2010) and it can have a processing cost (for the lecturers) since "speakers expect the input signal to continue in the same language, and hence their processing strategies are tuned to that language" (Bullock, 2009, p. 167).

These findings seem to be of significance in teacher education programs and awareness raising about the role of L1 in EFL classes. Teachers need to be aware of the positive effects of this strategy and even encouraged to use it as a facilitative tool to help students in constructing knowledge and understanding the lesson better in a more comfortable environment. Of course, while a systematic use of L1 can improve and accelerate teaching and learning, care must be taken not to make learners overly dependent by excessive use of L1 (as noted by one of our participants, too). Therefore, a need for informing teachers about the optimal level of code-switching arises in order to get the best results from this valuable technique in their classrooms.

Conclusion

This study, with its focus on instructors' trans-linguistic practices and perceptions, could fill a number of gaps in the rather populated literature on classroom code-switching. In particular, underscoring the academic context of Iranian English majors and the distinction between skills courses and subject courses could set it apart from similar studies. Considering its objectives and focused methodology, the findings of the present study can have important pedagogical implications for university instructors, teacher educators, and policy makers. Particularly, our findings lend ample support to the position favored by the advocates of a judicious application of first language in the (language) classroom against an exclusionist position.

Raising the practitioners' and teachers' (particularly the novice ones')

awareness about the diverse justifications and functions of code-switching as an instructional strategy can broaden their perspectives. Specifically, it can be of immense relevance for the instructors who teach undergraduates majoring in English (as prospective or practicing language teachers) with a predisposition for exclusive target language application at the expense of the students' optimum learning, efficient classroom management, and meaningful teacher-student relationship. Broadening and sharing their insights on how and when they should switch codes to facilitate their students' learning without being accused of excessive use of first language, university lecturers can be both perfect practical knowledge repositories as well as dependable role models for their students. Furthermore, both groups can affect all the stake-holders (learners, parents, policy makers, institute managers and supervisors, etc.)   that tend to impose a mindless target-language only policy regardless of the context of use, level of the learners, and possible multi-faceted justifications and benefits of healthy doses of mother-tongue in the classrooms.

Our study was among the few recent domestic studies comparing practices and perceptions of code-switching in higher education context of language versus subject classes; nevertheless, a number of potential limitations might constrain making strong claims and generalizations and also call for addressing them through future inquiries. First, it is the exploratory nature of the study and the rather limited sample size (though similar to or better than comparable, domestic studies reviewed above). Second, the context of the study was delimited to undergraduate university classrooms, while other contexts and levels were excluded. Therefore, we invite future studies to utilize a larger sample in varied contexts including in different (higher education) institutions and online (versus traditional) classes across curricular levels.

Declaration of Conflicting Interests
The authors do not have any conflicts of interest to declare.

References

Akbari, R., & Dadvand, B. (2011) Does formal teacher education make a difference? A comparison of pedagogical thought units of BA vs. MA teachers. *The Modern Language Journal*, 95(1), 44–60. https://doi.org/10.1111/j.1540-4781.2010.01142.x

Akbari, R., Dadvand, B., Samar, R. G., & Kiany, G. R. (2012). Pedagogical knowledge base in ELT: A conceptual framework. *TEL (Teaching English Language)*, 6(2), 49-77. https://doi.org/10.22132/TEL.2012.54901

Bullock, B. E. (2009). Phonetic reflexes of code-switching. In B. E. Bullock & A. J. Toribio (Eds.), *The cambridge handbook of linguistic code-switching* (pp. 163-181). Cambridge University Press.

Bullock, B. E., & Toribio, A. J. (Eds.). (2009). *The Cambridge handbook of linguistic code-switching*. Cambridge University Press.

Cantone, K. F. (2007). *Code-switching in bilingual children*. Springer.

Cantone, K., & MacSwan, J. (2009). The syntax of DP-internal code switching. In L. Isurin, D. Winford, & K. de Bot (Eds), *Multidisciplinary approaches to code switching* (pp. 243-278). John Benjamins Publishing.

Chaudron, C. (1988). *Second language classrooms: Research on teaching and learning*. Cambridge University Press.

Dailey-O'Cain, J., & Liebscher, G. (2009). Teacher and student use of the first language in foreign language classroom interaction: Functions and applications. In M. Turnbull & J. Dailey-O'Cain (Eds.), *First language use in second and foreign language learning* (pp. 131-144). Multilingual Matters.

Ebrahimzadeh, S. & Talebzadeh, H. (2021, December 7-9). *Do teachers align themselves with their students? Convergence, divergence and their social, educational, and contextual correlates in the classroom discourse of Iranian practitioners* [Paper presentation]. 18th International TELLSI Conference, Tarbiat Modares University and IAU, Tehran, Iran.

Ellis, R. (1984). *Classroom second language development*. Pergamon.

Evans, M. (2009). Code switching in computer-mediated communication: Linguistic and onterpersonal dimensions of cross- national discourse between school learners of French and English. In M. Turnbull & J. Dailey-O'Cain (Eds.), *First language use in second and foreign language learning* (pp. 50-65). Multilingual Matters.

Ferguson, G. (2003). Classroom code-switching in post-colonial contexts: Functions, attitudes and policies. *AILA Review,* 16(1), 38–51. https://doi.org/10.1075/aila.16.05fer

Franceschini, R. (1998). Code-switching and the notion of code in linguistics: Proposals for a dual focus model. In P. Auer (Ed.), *Code-switching in conversation: Language, interaction and identity* (pp. 51-75). Routledge.

Gafaranga, J. (2009). The conversation analytic model of code-switching. In B. E. Bullock & A. J. Toribio (Eds.), *The Cambridge handbook of linguistic code-switching* (pp. 114-126). Cambridge University Press.

Gass, S. M., & Mackey, A. (2016). *Stimulated recall methodology in applied linguistics and l2 research.* Routledge.

Gumperz, J. J. (1982). *Discourse strategies*. Cambridge University Press.Gwee, S., & Saravanan, V. (2016). Use of code switching in multilingual content subject and language classrooms. *International Journal of Multilingualism*, 15 (2), 1-18. https://doi.org/10.1080/14790718.2016.1181634

Jouibar, B., Hadian, B., &Vaez, M. (2021). The effect of task difficulty on the quantity and quality of Iranian lower-intermediate EFL learners' code-switching. *Journal of Language Horizons, 5*(1), 145-166. https://doi.org.10.22051/lghor.2020.32109.1331

Levine, G. S. (2014). Principles for code choice in the foreign language classroom: A focus on grammaring. *Language Teaching, 47(3),* 332-348. https://doi.org/10.1017/S0261444811000498

Macaro, E. (2005). Code switching in the L2 classroom: A communication and learning strategy. In E. Llurda (Ed.), *Nonnative language teachers: Perceptions, challenges, and contributions to the profession* (pp. 63-84). Springer

Macaro, E. (2009). Teacher use of codeswitching in the second language classroom: Exploring 'optimal' use. In M. Turnbull & J. Dailey-O'Cain (Eds.), *First language use in second and foreign language learning* (pp. 35-49). Multilingual Matters.

McMillan, B. A., & Rivers, D. J. (2011). The practice of policy: Teacher attitudes toward "English only". *System*, *39(2)*, 251-263. https://doi.org/10.1016/j.system.2011.04.011

McMillan, B., & Turnbull, M. (2009). Teachers' use of the first language in French immersion: Revisiting a core principle. In M. Turnbull & J. Dailey-O'Cain (Eds.), *First language use in second and foreign language learning* (pp. 15-34). Multilingual Matters.

Mokgwathi, T., & Webb, V. (2013). The educational effects of codeswitching in the classroom – benefits and setbacks: A case of selected senior secondary schools in Botswana. *Language Matters*, *44*(3), 108-125. https://doi.org/10.1080/10228195.2013.839734

Momenian, M. & Samar, R. G. (2011). Functions of code-switching among Iranian advanced and elementary teachers and students. *Educational Research and Reviews,* 6(13), 769-777. http://www.academicjournals.org/ERR

Muysken, P. (2000). *Bilingual speech: A typology of code-mixing.* Cambridge University Press.

Myers-Scotton, C., & Jake, J. (2009). A universal model of code-switching and bilingual language processing and production. In B. E. Bullock & A. J. Toribio. (Eds.), *The Cambridge handbook of linguistic code-switching* (pp. 336-357). Cambridge University Press.

Nagy, K., & Robertson, D. (2009). Target language use in English classes in Hungarian primary schools. In M. Turnbull & J. Dailey-O'Cain (Eds.), *First language use in second and foreign language learning* (pp. 66-86). Multilingual Matters.

Nazeri, S., Amini, D., & Salahshoor, F. (2020). Motivational determinants of code-switching in Iranian EFL classrooms. *The Journal of Applied Linguistics and Applied Literature: Dynamics and Advances,* 8(1), 151-173. https://doi.org./10.22049/JALDA.2020.26812.1171

Poplack, S. (1980). Sometimes I'll start a sentence in Spanish *y termino en español:* Toward a typology of code-switching. In L. Wei (Ed.), *The bilingualism reader* (pp. 205-240). Routledge.

Rahimi, A. & Eftekhari, M. (2011). Psycholinguistic code switching in Iranian university classroom context. *The Journal of Language Teaching and Learning,* 1(1), 54-63. https://jltl.com.tr/index.php/jltl/article/view/81

Rivers, D. J. (2011). Politics without pedagogy: Questioning linguistic exclusion. *ELT Journal*, *65*(2), 103-113. https://doi.org/10.1093/elt/ccq044

Sali, P. (2014). An analysis of the teachers' use of L1 in Turkish EFL classrooms. *System, 42*, 308- 318. https://doi.org/10.1016/j.system.2013.12.021

Samar, R. G., & Moradkhani, S. (2014). Code switching in the language classroom: A study of four EFL teachers' cognition. *RELC Journal*, *45* (2), 151-164. https://doi.org/10.1177/0033688214534796

Shabani, G., Asadi Jamani, R., & Mashhadi Heidar, D. (2016). A study of Iranian EFL university lecturers' practice of code switching in English as foreign language instruction. *Journal of Studies in Education,* 6(2), 95-118. https://doi.org/10.5296/jse.v6i2.9247

Stern, H. H. (1992). *Issues and options in language teaching*. Oxford University Press.

Terry, J. M., Hendrick, R., Evangelou, E., & Smith, R. L. (2010). Variable dialect switching among African American children: Inferences about working memory. *Lingua, 120*, 2463-2475. https://doi.org/10.1016/j.lingua.2010.04.013

Turnbull, M., & Arnett, K. (2002). Teachers' uses of the target and first languages in second and foreign language classrooms. *Annual Review of Applied Linguistics, 22,* 204-218. https://doi.org/10.1017/S0267190502000119

Turnbull, M., & Dailey-O'Cain, J. (Eds.). (2009). *First language use in second and foreign*

language learning. Multilingual Matters.

Willans, F. (2011). Classroom code-switching in a Vanuatu secondary school: Conflict between policy and practice. *International Journal of Bilingual Education and Bilingualism, 14*(1), 23-38. https://doi.org/10.1080/13670050903576038

Winford, D. (2009). On the unity of contact phenomena and their underlying mechanisms: The case of borrowing. In L. Isurin, & D. Winford, & K. D. Bot (Eds.), *Multidisciplinary approaches to code switching* (pp. 279-306). John Benjamins.

Wong-Fillmore, L. (1985). When does teacher talk work as input? In S.M. Gass & C.G. Madden (Eds.), *Input in second language acquisition* (pp. 17-50). Newbury.