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Codeswitching among Maghreb Arabic-French-English speaking international students in a Hungarian university hostel: An exploration of functions

This study tries to identify the functions of Maghreb Arabic-French-English codeswitching (CS) among trilingual adult speakers in their informal conversation. The corpus of the data consists of natural data collected utilizing a questionnaire, audio recording, and interview. The audio recording was analyzed using the conversational analysis (CA) approach (Auer 1984, 2005, 2007; Li, 2002). The findings show that the participants used CS for different reasons, that is, participant-related, language-related, and discourse-related. Additionally, the findings corroborate the effectiveness of using CA in data analysis, provided that it is fortified by additional data sources such as questionnaires. Nonetheless, it is essential to acknowledge that CA encounters intermittent limitations in offering a comprehensive explication of the authentic impetus underlying CS.

Keywords: codeswitching, CA approach, Arabic-French-English trilinguals, functions

1. Introduction

While a substantial body of literature exists on CS, it is evident that CS offers abundant avenues for further exploration. Moreover, some CS functions identified in previous literature fail to provide a satisfactory explanation for why speakers' codes switch instead of continuing the conversation in the primary language. To elaborate, Auer (2007) states that "frequently, we get lists of conversational loci for code alternation and examples, but no sequential analysis is carried out to demonstrate what exactly is meant, for example by 'change of activity type,' or by 'reiteration" (p. 120). According to Li (1994), CS is a creative language practice, and thus, an instance of CS may be interpreted in various ways depending on how other participants interact with it (Auer, 1984). Therefore, there is a need for a comprehensive investigation that delves into the functions of CS.

This study aims to fill the gaps in the literature by examining CS among Maghreb Arabic-French-English trilingual adult speakers. By focusing on this specific linguistic context, the study intends to identify the underlying functions that drive the use of CS among the participants. The study begins with a literature review on

CS. It then introduces the research question, details about the participants, data collection, and analysis processes. Subsequent sections encompass the presentation and in-depth discussion of the results. Finally, the article culminates in summarizing the outcomes and offering pathways for future research in this dynamic field.

2. Literature review
2.1. CS in trilinguals

Oksaar's (1977) study on her trilingual son's acquisition of German at the age of 3.11 was the first study on trilingual CS (Edwards & Dewaele, 2007). Oksaar observed her son using CS for various reasons, such as drawing attention, getting clarification, and filling in vocabulary gaps. The study found a transfer of words between Estonian and Swedish, with some words used in a different context in German. However, trilingual CS within a sentence was not found. Chevalier (2015) conducted a notable study on trilingual language development, examining two children, Lina and Elliot, from the ages of two till four aged Lina's background includes Swiss-German, Belgian French, and American English, while Elliot has Swiss-German and English roots, plus exposure to French in daycare. Both had low rates of intrasentential mixing, but Lina showed more mixing between sentences (intersentential mixing). Chevalier attributes this to Lina's imbalanced language exposure versus Elliot's more balanced trilingualism without a dominant language. Mosca's study (2019) examined how trilingual individuals in their late twenties select languages when switching. The results showed that all three languages compete for selection and that the process involves suppressing irrelevant languages based on proficiency and typological similarity. In summary, the above-mentioned studies contribute valuable insights into CS behavior and multilingualism in terms of theory, methods, and comparisons. However, the present study differs in linguistic context, participant demographics, and research focus.

   In conclusion, trilingual CS studies have gained significant momentum over the past few years, with researchers from different disciplines showing more interest in trilingualism and recognizing its unique characteristics compared to bilingualism. This shift in focus has shed light on the complexity and fluidity of language use in multilingual contexts. Trilingual CS research has also contributed to our understanding of how the trilinguals' use of languages is influenced and shaped by different sociolinguistic and psycholinguistic factors.

2.2. Terminology issues

Defining CS has always been a bone of contention among many researchers. According to Milroy and Muysken (1995), "the field of code-switching research is replete with a confusing range of terms descriptive of various aspects of the phenomenon. Sometimes the referential scope of a set of these terms overlaps and sometimes particular terms are used in different ways by different writers" (p. 12). Such confusion can be attributed to the fact that "scholars do not seem to share a definition of the term. This is perhaps inevitable, given the different concerns of formal linguists, psycholinguists, sociolinguists, philosophers, anthropologists, etc." (Nilep, 2006, p. 1). To elaborate, some researchers have focused on the grammatical aspects of CS (e.g., Poplack, 1980), some focused on the psycholinguistic perspective (e.g., Grosjean, 1982), and some on the sociolinguistic perspective (e.g., Shin, 2010). Each discipline has its unique way of explaining and even defining CS, a situation aptly articulated by Alvarez-Cáccamo (2002), who states that:

> The first thing that has intrigued me for some time is how, in the 50 or so years of history of the term "code-switching", the literature has come to encircle such a number of varied communicative phenomena into a single label, and how this label has been hyper technified to the point of producing offshoots such as "code-mixing", "code-shifting", and so on. (p. 1)

Before presenting the specific definition adopted in this study, I find it essential to provide the reader with some of the definitions of CS attested in literature. CS is "the juxtaposition of two codes (languages). . .perceived and interpreted as a locally meaningful event by participants" (Auer, 1999, p. 310). "People. . .select a particular code whenever they choose to speak, and they may also decide to switch from one code to another or to mix codes even within sometimes very short utterances and thereby create a new code in a process known as code-switching" (Wardhaugh, 2006, p. 101, italics in original). "code-switching constitutes the skilled manipulation of overlapping sections of two (or more) grammars" (Poplack, 1980, p. 601). CS is the situation where "elements of two or more language varieties are found in the same clause, but only one of these varieties is the source of the morpho-syntactic frame for the clause" (Myers-Scotton, 2006, p. 241).

To conclude, the literature is rich in various definitions of CS. However, for this study, CS is defined as using more than one language within sentence boundaries or between sentences in the same conversation by the same or different speakers.

3. The study

This research aims to answer the following question:

RQ: What are the functions underlying the use of Maghreb Arabic-French-English CS as used by the participants in this study?

3.1. Participants

The study focuses on a sample of three male Master's degree students (mean age: 23.3 years). They share the same nationality as their parents, with two participants from Morocco and one from Algeria. The participants have varying socioeconomic statuses, and their majors include chemical engineering and tourism management. They are sequential Arabic-French-English trilinguals acquiring languages through natural exposure and formal education. French was introduced in primary school, while English was introduced in intermediate school. The participants have different levels of proficiency in French and English. Their parents speak Arabic exclusively, and their siblings speak various languages. These factors provide important information for understanding the participants' CS behavior. Table 1 illustrates and summarizes the most essential information of the participants based on their answers to the questionnaire[1]. For the sake of privacy, pseudonyms are used to replace real names.

Table 1. Characteristics of participants

Participant	Nationality	Age	Language	AO		LP (%)		YL		Language preference	Degree
				F	E	F	E	F	E		
Yassin	Moroccan	23	A/F/E	10	15	65	50	13	8	A	MA
Walid	Algerian	22	A/F/E	9	11	80	80	12	9	A	MSc
Gafor	Moroccan	25	A/F/E	5	13	85	70	17	8	A	MSc

Note. A = Arabic; F = French; E = English; AO = Age of onset; LP = Level of proficiency; YL = Years of learning; MA = Master of Arts; MSc = Master of Science.

3.2. Data collection procedure

The data collection process involved multiple steps to ensure gaining sufficient natural data for addressing the research question. These steps mainly included: 1) Selective sampling, that is, deciding on the criteria for selecting participants based on the researcher's own choice (Creswell, 2014). 2) Contacting friends and colleagues and asking them to fill out a questionnaire and nominate some potential participants, known as snowball sampling. 3) Identifying qualified participants based on their answers to the questionnaire. 4) Selecting participants through convenience sampling (Dörnyei, 2007). 5) Audio-recording the conversation; more

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[1] https://docs.google.com/document/d/1-Dv3dSNFDrn5pQ8WDvWIsC2Fqd2gGGek/edit?usp=sharing&ouid=110498117658556072619&rtpof=true&sd=true

specifically, data collection occurred in a laboratory setting, encompassing a continuous session lasting 58 minutes and 27 seconds. The deliberate choice of the laboratory, located on the participants' university campus, was driven by various considerations; notably, its familiarity and conducive environment facilitated participant engagement. Furthermore, the laboratory's state-of-the-art audio recording equipment ensured optimal recording quality. Finally, the inherent tranquility of the setting minimized the risk of interruptions, thereby enabling the collection of undisturbed data. The recorded session comprised an informal conversation among the participants. It is essential to emphasize that the discussion was free from guidance, manipulation, and the researcher's presence, aligning with the study's commitment to capturing naturalistic data; participants were allowed free rein regarding the choice of topics and language(s) used. Limited information about the study's true nature was disclosed to avoid influencing CS occurrences or patterns. 6) Conducting an interview to explore participants' CS behavior further. This research methodology entailed interviewing a randomly selected participant to further investigate his use of CS in the conversation. The interview process was conducted one-on-one, lasting approximately 30 minutes. The interview began with the participant listening to a recording of his conversation. Following this, the participant was asked to explain his use of CS.

3.3. Data analysis procedure
The qualitative data analysis process followed a chronological sequence of procedures. Firstly, the study's core corpus was transcribed manually. A native Maghreb Arabic colleague aided in the transcription, following the conventions in Appendix A and the transliteration system in Appendix B. Notably, in the English translation, instances of CS are underlined, considering the switching occurring between the same speaker's turns. Another native Maghreb Arabic speaker then double-checked the transcription. Next, the conversation was segmented into topics, turns, and utterances. Codeswitched elements were identified. CA, combined with information from the questionnaire, was applied to analyze each instance of CS, focusing on determining its functions. Auer (2007) states that a successful approach to studying CS "might . . .consist of analyzing the signaling value of the juxtaposition of languages and deriving the conversational meaning of code-alternation from it" (p. 119). Accordingly, Auer suggests that to reveal the true function of a CS occurrence, we should look at the preceding and following turn(s) and try to determine the function in relation to the conversation itself and the participants involved. According to Stroud (1998), Auer's sequential approach necessitates exploring the functions achieved by CS by studying the conversation as a whole, taking into account turn, participants, and context rather than dealing with isolated

CS occurrences. Judgments made by the researcher were compared with those from the interview (see above) to ensure accuracy. In cases of discrepancies, the instances were reevaluated, and appropriate decisions were made. The analysis process involved presenting and discussing each identified function of CS, using representative examples from the data.

4. Results and discussion

Upon careful analysis of the data, it has been ascertained that the use of CS by the participants in the present study can be encompassed within three overarching categories, namely participant-related, language-related, and discourse-related functions. It is worth mentioning that although this outcome seems consistent with Auer's (2007) previously reported research findings, Auer has not addressed the idea of language-related functions. However, it should be noted that classifying instances of CS into categories was not a straightforward process, as certain examples of CS could be perceived as being related to more than one category or even multiple functions within the same category. For instance, the choice to discuss a particular topic using a specific language may be attributed to either language proficiency or identity confirmation. Moreover, in the same example, different functions of CS might be identified; however, only CS occurrences that serve the function in question will be dealt with.

4.1. Participant-related functions

The participant-related functions of CS are primarily categorized into two functions, namely identity confirmation and filling linguistic gaps.

4.1.1. Identity confirmation

The research findings reveal that the individuals under study engaged in CS to affirm their in-group membership, thereby manifesting their social identity. This was evident through their adoption of the language used by the preceding interlocutor, as observed in their utilization of identical vocabulary or linguistic preferences. Additionally, participants used CS to affirm their multilingual identity, as demonstrated by the repetition of certain lexical items in alternative languages or the intermittent inclusion of words from disparate linguistic systems. Intriguingly, these instances of CS appeared to lack explicit communicative intent or functional significance.

Example 1:

(1) Walid: […] ka:nu: jiħku:li: ʕalal-<u>prix</u> ʔalʔasʕa:ɾ illi: ka:nu: jikɾu: bi:hum ka:nu: taqri:ban ʔil-**average** ka:nat **forty** ħattal-**fifty** lamma: niħna: wasˤalna ʔil-**average** ta:ʕil-**prices** ka:nu: ħawa:li: sabʕi:n […]
(2) Gafor: ʔanal-ʕa:m ʔilli: fa:t isˤsˤaɾa:ħah ilʕa:m ilfa:ʔit kanħa:wil ʔinn:i nidfaʕ **apply**ee ba:ʃ naxud **private room** wala:kin qa:lu: lijja: blːi sˤaʕb sˤaʕb
(3) Walid: **where like here in the Magister?**
(4) Gafor: ʔi:h **here in the Magister**
(5) Walid: **Okay**
(6) Gafor: qa:lu: lijja: sˤaʕb qa:lu: lijja: sˤaʕbah ʃwajjah
(7) Yassin: zaʕma: ʔil-**process** ka:n /
(8) Gafor: <u>c'est pas question de process</u> qa:lu: lijja: ʔana: jaʕni: ʔinnak sˤaʕb ʔinnak ta:xud **private room**
(9) Walid: <u>non pour moi c'était impossible</u> ma:ʃi: ɣayɾ sˤaʕbah qallak laː ma fi:ʃ imka:nijjah itˤlaːqan ʔinnak ta:xud ba:ʃ

Example 1: Translation

(1) Walid: They used to tell me about the <u>prices</u> they used to pay for rent; they were around the **average** of **forty** to **fifty**. But when we reached, the **average** of the **prices** was around seventy.
(2) Gafor: Last year, honestly, I tried to pay an application fee to get a **private room**, but they told me it was difficult, very difficult.
(3) Walid: <u>Where, like here at Magister?</u>
(4) Gafor: Yes, **here at Magister**.
(5) Walid: **Okay**.
(6) Gafor: <u>They told me it was difficult really difficult.</u>
(7) Yassin: It seems the **process** was
(8) Gafor: <u>It is not about the process</u>, they told me that it is just difficult to get a **private room**.
(9) Walid: <u>No, for me, it was impossible.</u> It is not just difficult; there is absolutely no possibility for you to get one.

This example exemplifies the use of CS for identity confirmation (social and multilingual). Walid confirms his multilingual identity through his translation of the French term 'prix' into Arabic, despite all speakers being trilingual. Given their shared linguistic repertoire, this translational act may appear redundant for effective communication. Furthermore, Walid's switching to English when using numerical

expressions lacks communicative intent or functional necessity. Moreover, Gafor, in line 4, aligns with Walid's language choices and lexical preferences from the preceding utterance. This accommodation subsequently prompts Yassin, in line 7, to incorporate an English word within his Arabic utterance. Notably, the presence of this English word, having a cognate in French, triggers Gafor's CS into French, subsequently influencing Walid to follow suit, thereby initiating a chain-like CS sequence.

In contrast to Bullock and Toribio's (2009) perspective that CS can be unintentional and devoid of purpose, my study takes a contrary stance. Their assertion highlights that not all instances of language alternation in bilingual speech necessarily convey a specific communicative intent or purpose. For certain bilingual individuals, CS may simply serve as an alternative way of speaking, wherein they engage in such language shifts because they can do so, even without conscious awareness of their CS behavior (ibid).

However, in my paper, I argue that CS, even when seemingly lacking an explicit purpose, affirms the speaker's linguistic identity. Even in cases where the participant could not provide a clear rationale for his CS during the interview, the confirmation of linguistic identity emerges as a compelling explanation for its occurrence. This perspective posits that using CS serves the inherent purpose of reinforcing the speaker's linguistic identity.

4.1.2. Filling linguistic gaps

The study reveals that participants engaged in CS as a means to bridge linguistic gaps, which can be attributed to several factors. Firstly, certain linguistic expressions or equivalents were unfamiliar or even unknown to the participants, likely due to the context of acquisition. This finding aligns with Grosjean's (2015) complementarity principle, which suggests that bilinguals may lack proficiency in certain linguistic aspects. Secondly, participants experienced temporary lapses in memory, as indicated by hesitation sounds during speech production. These hesitations indicate momentary difficulties in accurately retrieving or recalling specific terms or expressions.

Example 2:

(1) Yassin: ʔida: ka:nat <u>rentable</u> li:ha:
(2) Walid: qultlak ʔiða: hijjah baɣat
(3) Gafor: wa ʔida: ka:nat <u>rentable</u> lildʒaza:ʔir bitˤabi:ʕatil-ħa:l
(4) Yassin: fi: dʒami:ʕil-ħala:t <u>rentable</u> lildʒaza:ʔir ħi:t ɣa:da ta:xud ʕandhum ʔil-**fees** di:ja:wil matˤa:ɾ

Example 2: Translation

(1) Yassin: If it is <u>profitable</u> for it.
(2) Walid: I told you if it wants it.
(3) Gafor: And if it is <u>profitable</u> for Algeria, naturally.
(4) Yassin: In all cases, it is <u>profitable</u> for Algeria because they will charge them the airport <u>fees</u>.

Based on the questionnaire data, it is evident that Yassin is pursuing a degree in tourism management and that the language of instruction for his undergraduate studies was French. However, for his master's degree, the language of instruction has shifted to English. Consequently, specific specialized terms or terminology such as 'rentable' and 'fees' - essential for his field of study - may not have readily available Arabic equivalents in his linguistic repertoire. Alternatively, if Arabic equivalents do exist, they may be unfamiliar to Yassin, requiring additional time and effort for him to access and use them effectively. This observation, which aligns with the findings from the interview, explains CS from Arabic to French and English in the above example.

Example 3:

(1) Walid: […] ħa:bbi:n jiħtadˤnu: kull ʔil ki:f nqu:l ha:ðihil-ʔaħda:θ-ʔirrija:dˤijjah ha:di: fi: ʔa:sjah ħa:lijjan qatˤar raħ tirdʒaʕ hi:k maʕal-mustaqbal fa-humma ʔil-**vision** ta:ʕhum ka:nat aaa <u>à long terme voilà à long terme</u>
(2) Yassin: baʕd faqatˤ min ka:sil-ʕa:lam biwaħduh
(3) Walid: raħ ji:dʒu: raħ ji:dʒu: kti:r **events** illi: raħ tiħtadˤinhum qatˤar **so they will be hosted by Qatar and** (.) <u>la plupart</u> ta:ʕ ʔil ta:ʕ ʔlli: ħkayt ʕalayhum ʔinta ʔisma: aaa <u>hébergement</u> ka:nu: ka:nu: <u>des tentes</u> ka:nu: kulhum xijam <u>voilà démontables</u> tiqadar tħutˤhum min baʕidha […]

Example 3:

(1) Walid: They want to host all these, how do we say, sports events in Asia currently. Qatar will go back to being like that in the future. Their <u>vision</u> was <u>a long term.</u>
(2) Yassin: After the World Cup.
(3) Walid: Many **<u>events</u>** will come, and **<u>Qatar will host them</u>**. <u>Most of</u> the <u>accommodations</u> you mentioned earlier were <u>tents</u>, all of them were <u>removable</u>. You can set them up and then dismantle them afterward.

In the provided example, it is clear that Walid encountered transient memory lapses, as evidenced by hesitations during his speech. These hesitations indicate that Walid faced challenges in retrieving or recalling specific terms or expressions with precision. As a result, he resorted to CS as a strategy to overcome these difficulties. For instance, he used the phrase 'des tentes' (French for 'tents') when the corresponding term momentarily eluded him. However, once he recollected the appropriate word in Arabic (the primary language of communication), he used it accordingly.

4.2. Language-related functions
The language-related functions of CS are primarily categorized into two functions: economy of pronunciation and filling linguistic gaps.

4.2.1. Economy of pronunciation
The study reveals that the participants engaged in CS to circumvent the use of words that posed challenges in terms of pronunciation or required additional time and effort due to their length. Using CS, the participants opted for alternative language choices that offered easier pronunciation or more concise expressions.

Example 4:

(1) Yassin: **first class** tiqdar timʃi: bi:ha: biqal min ha:dal-taman fil-*tram*
(2) Gafor: fil-*tram*
(3) Yassin: fil-*tram*
(4) Gafor: fil-*tram* **first class** ɣa: tku:n bihaði:k ʕiʃɾi:n ju:ɾu:
(5) Walid: **the problem he will take the same time**
(6) Yassin: wi da:ba: ka:ʕ maʕ hada:k aaa **high-speed train**

Example 4: Translation

(1) Yassin: You can travel in **<u>first class</u>** for less than that price on the tram.
(2) Gafor: On the tram.
(3) Yassin: On the tram.
(4) Gafor: On the tram, **<u>first class</u>** will cost around 20 euros.
(5) Walid: **<u>The problem is that the tram will take the same amount of time</u>**.
(6) Yassin: Now, with the **<u>high-speed train</u>**, everything will change.

In the given example, it is notable that Yassin engages in CS during line 6 by incorporating English into his speech. Specifically, he opts to use the expression 'high-speed train' instead of its Arabic equivalent, 'qitˤaːr faːʔequs-surʕah.' This choice of CS can be attributed to Yassin's acknowledgment, as indicated during the interview, of the greater ease of pronunciation associated with the English expression compared to its Arabic counterpart. This decision reflects Yassin's conscious use of CS to ensure smoother articulation and linguistic flow within the conversation.

4.2.2. Filling linguistic gaps
The study reveals that participants resorted to CS as accurate equivalents were not readily available in the dominant language of the conversation. The purpose of CS was to prevent communication breakdowns caused by the lack of exact terms or expressions.

Example 5:

(1) Yassin: tkammal zaʕmaːl-biniː
(2) Walid: ʔismaː <u>la contribution</u> taːʕ <u>l'gouvernement algérien</u> ʃwajjah <u>ça va</u> fil-**domain** haːda
(3) Yassin: ħnajjah ʕandna duːk <u>les promoteurs immobiliers</u> ʔilliː kaidiːɾlik fiː ʕannaː <u>des gammes</u> /
(4) Walid: <u>c'est un secteur privé</u>
(5) Yassin: ħinnaː <u>les gammes</u> dijaːlis-sakanaː kaːjin ʕandak sakan iqtisˤaːdi wa kaːjin ʕandak *moyen standing* wa kaːjin ʕandak *haut standing* haduːlit-laːtah dijaːl zaʕmaː <u>les gammes</u> liː katixtaːɾ minhum wi katʃuːf ajja waħdah liː hijjah mnaːsbak ʔaktar binnisbah liːk ntaːjja ʕalaː ħasb ʕuːd taːniː

Example 5: Translation

(1) Yassin: You can continue building.
(2) Walid: <u>The contribution</u> of <u>the Algerian government</u> in this <u>domain</u> is <u>satisfactory</u>.
(3) Yassin: In Morocco, we have <u>real estate developers</u> who provide different <u>housing options.</u>
(4) Walid: <u>It is a private sector.</u>
(5) Yassin: We have <u>housing categories</u> available, including affordable housing, medium standing, and high standing. These different categories of <u>housing options</u>

allow you to choose the one that suits you best according to your preferences and needs.

In the given instance, Yassin, in line 4, uses CS from Arabic to French by using the phrase 'les promoteurs immobiliers.' As explained during the interview, Yassin implements this linguistic maneuver to exemplify that the Arabic equivalent, namely 'munʕiʃ iqtisˤa:di:' does not encompass an identical conceptualization. Consequently, using the Arabic counterpart, which lacks the exact semantic nuances inherent in its French alternative, may potentially lead to a breakdown in effective communication.

4.3. Discourse-related functions

CS can serve as a contextualization cue that is discourse-related. The discourse-related functions of CS are primarily categorized into three functions, namely initiating a turn, clarifying, and correcting mistakes.

4.3.1. Initiating a turn

The study observed the use of CS as an indicator to initiate a turn in the conversation. The participants used CS as a pragmatic strategy to signal their intention to speak and assume their conversational turn. By incorporating a different language, participants effectively captured the attention of other interlocutors and asserted their readiness to contribute to the ongoing discourse.

Example 6:

(**1**) **Gafor**: >> **there is a huge difference** la: la: ʕandul-ħaq
(**2**) **Walid**: ʔilʔiʃka:l wayn ʔanhum humma: ka:nu: hikka
(**3**) **Yassin**: la:
(**4**) **Walid**: >> **they were like that no wait**

Example 6: Translation

(**1**) **Gafor**: **There is a huge difference**. He is right.
(**2**) **Walid**: The problem is that they were like that.
(**3**) **Yassin**: No.
(**4**) **Walid**: **No, wait. They were like that**.

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Providing additional contextual information to facilitate an exhaustive comprehension of the given example is essential. The scenario revolves around an intense discussion among the participants about the Amazigh people's appellation as 'Berber.' A contentious dispute emerged regarding the potentially offensive nature of the term 'Berber.' Notably, the discourse was characterized by recurrent interruptions, impeding the smooth flow of conversational turns. In this context, CS emerged as a valuable linguistic device used by the participants to convey their intention to speak and assert their entitlement to the conversational floor.

4.3.2. Clarification

The study reveals that the participants used CS to explain or clarify certain concepts or ideas. By switching to another language, the participants sought to leverage a broader linguistic repertoire, thereby enhancing their ability to convey information effectively.

Example 7:

(**1) Gafor**: jaʕni: raħla:t raħla:t ma: bayn mudun ma: bayn ʔildʒanu:b wa-ʃʃama:l
(**2) Walid**: **yes yes but it's kinda expensive**
(**3) Gafor**: jaʕni: ʔinna:s ka:nat
(**4) Walid**: liʔannu: muħtakari:n qitˤa:ʕ muħtakar **there are only like two airline companies two airlines only** […] **so** ʔiða: ka:n ʕandak faqatˤ **two** fa-raħ jiħtakru: ʔissu:q raħ jifridˤ /
(**5) Yassin**: **prices** li: baɣa:
(**6) Walid**: ʔajwah raħ jifridˤ ʔaj **prices** huwwa jalli: jifridˤha: lʔannu: ʕumu:man ʔil-**prices** ki:f jitʕallaqu: bilʕardˤ wi-tˤtˤalab ʔiða: ka:jna: <u>compétition</u> jaʕni: ʕindak <u>la concurrence</u> fi <u>le marché</u> ʔiða: miʃ la:qi:n <u>la concurrence</u> fi <u>le marché</u> maʕna:ha jiqadar jifridˤ ʔarrusu:m ʔilli: jiħib wi-nta raħ tku:n maħtu:m ʔannak titʕa:mal maʕa:h nuqtˤah θa:nijah fil-dʒaza:jir <u>c'est que</u> ʕandna […]

Example 7: Translation

(**1) Gafor**: He means flights between cities in the south and north.
(**2) Walid**: **<u>Yes, but it is expensive</u>**.
(**3) Gafor**: So, people were.
(**4) Walid**: <u>Because it is a monopolized sector</u>; **there are only two airline companies**. So, <u>if you only have</u> **two**, <u>they will monopolize the market and impose</u>.
(**5) Yassin**: **<u>Prices</u>** that it wants.
(**6) Walid**: Yes, it will impose any **<u>prices</u>** it wants because **prices**, in general, depend on supply and demand. If there is no <u>competition</u> in <u>the market</u>, it can impose

whatever fees it wants and you will be forced to deal with it. Another point in Algeria <u>is that</u> we have.

In the given instance, Walid endeavors to elucidate the concept of monopoly as a causal factor for the escalation of ticket prices. Notably, Walid strategically uses French and English expressions within an Arabic discourse to convey and explicate this notion effectively. This deliberate CS serves as a linguistic strategy Walid uses to enhance the clarity and comprehensibility of his explanation. By integrating French and English terminology, Walid adeptly conveys the intricacies and nuances associated with the concept of monopoly, thereby facilitating a more exact and accurate depiction of its impact on the rise of ticket prices.

4.3.3. Correcting mistakes

The study findings indicate that the participants used CS as a mechanism to correct mistakes during communication. When encountering an error or inaccuracy in their speech, the participants seamlessly switch to another language to rectify the mistake. By doing so, they could immediately provide the correct information or expression and ensure accurate communication.

Example 8:

(1) Gafor: jaʕni: ʕadadil-ʔama:kin walla: ʔaktar min ʕadadil-ʔaʃxa:sˤ ʔilli: ka:jna
(2) Yassin: humma: ka:nnu: da:ba: kaju:ʤdu: la wa:ħid **mega event** ʔil-**mega event** daja:l ka:sil-ʕa:lam ka:n xa:sˤhum fi:ni: <u>accueil</u>ju: ʔanna:s wa jiʤi:bu:hum laʕandhum da:ba: hada:k ʃi: li: baqa: du:k ʔil-**flat** ʔaw hada:k ʃi: ʔilli: tqa:du: <u>les appartements</u> kulhum

Example 8: Translation

(1) Gafor: So, you mean the number of places is either equal to or less than the number of people who are there.
(2) Yassin: They were actually preparing for a **<u>mega event</u>**, the World Cup, which was specifically to <u>welcome</u> people and bring them to their country. Now, that is why all the **<u>flats</u>** or <u>apartments</u> are occupied or reserved for this purpose.

In the above example, Yassin uses CS as a corrective measure in response to an error made in using the singular form of the word 'flat' instead of its appropriate plural form. To rectify this linguistic mistake, Yassin used a codeswitch to French, using the plural form of the word 'flat' in French, 'les appartements.' This strategic

application of CS serves as a linguistic tool used by Yassin to amend linguistic oversight by introducing the accurate plural form of the word, thus ensuring linguistic precision and accuracy in the discourse.

4.4. Interview

Findings from the interview show that the combined use of CA and additional data sources, such as questionnaires, demonstrated a high degree of efficacy in making accurate inferences about the underlying reasons for CS. However, certain exceptional cases existed where the underlying reasons for CS could not be adequately inferred using this approach. For example, the use of CS due to recency of use or avoiding speech impairment was problematic to ascertain through this method. Furthermore, there are instances where the interviewed participant could not provide any explicit reason for his use of CS. In such a case, the explanation was the need for identity confirmation as a multilingual speaker.

5. Conclusion

In summary, the analysis of the data on CS in this study revealed three overarching functions: participant-related, language-related, and discourse-related functions. Participant-related functions include affirming identity and filling linguistic gaps. Language-related functions involve economizing pronunciation and filling linguistic gaps. Discourse-related functions encompass initiating a turn, clarification, and correcting mistakes. However, it is important to acknowledge a limitation of this study, which is the relatively small number of participants. While our findings provide valuable insights into the functions of CS, the limited sample size may impact the generalizability of these findings. Therefore, it is plausible to consider that including more participants in future CS studies may unveil additional functions inherent in this linguistic phenomenon. Finally, I propose that engaging participants in CS studies specifically designed to investigate the underlying motives for CS would be a valuable avenue for research. This suggestion arises from the recognition that established approaches, such as the CA approach, occasionally encounter limitations in fully elucidating the genuine impetus for CS.

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Appendices

Appendix A
Transcription conventions

Symbol	Meaning
>>	Speaking louder
???	An inaudible gap in the conversation
(.)	A short pause (less than 3 seconds)
(..)	A medium pause (3 to 6 seconds)
(…)	A long pause (more than 6 seconds)
hhh	Laughter
[	Overlapping speech
mmm, eee, aaa	Hesitation sounds
normal font	CS for Arabic
bold font	CS for English
<u>underlined</u> <u>font</u>	CS for French
italicized font	Borrowing
…	An incomplete utterance
[...]	Intentional omission
/	Interruption

Appendix B
Note on transliteration

I use the standard system for transliterating Arabic into the Latin script, which is called the International Phonetic Alphabet (IPA) for Arabic. Gemination is represented by doubling the consonant. Transliteration is based on pronunciation.

Arabic consonants	IPA	Arabic consonants	IPA
ء	ʔ	ض	dˤ
ب	b	ط	tˤ
ت	t	ظ	ðˤ
ث	θ	ع	ʕ
ج	dʒ	غ	ɣ
ح	ħ	ف	f
خ	x	ق	q
د	d	ك	k
ذ	ð	ل	l
ر	ɾ	م	m
ز	z	ن	n
س	s	ه	h
ش	ʃ	و	w
ص	sˤ	ي	j

Arabic Vowels	Description	IPA
◌َ	Short open front vowel	a
◌ُ	Short close back vowel	u
◌ِ	Short close front vowel	i
ا/ى	Long open front vowel	a:
◌ُو	Long close back vowel	u:
◌ِي	Long close front vowel	i: