

Functions of Code Switching from Arabic to English among Jordanian Pilots in their Daily Informal Conversations: A Case Study

Maha S. Yaseen

Department of English, Al-Ahliyya Amman University
Amman, Jordan

Rami A. Sa'di

Department of English, Community College of Al-Kharj
Prince Sattam bin Abdulaziz University
Al-Kharj, Saudi Arabia

Talha A. Sharadgah

Department of English, Community College of Al-Kharj
Prince Sattam bin Abdulaziz University
Al-Kharj, Saudi Arabia

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Abstract

This study examines the frequency and the functions of code switching in informal conversations among Jordanian pilots, who have created their own jargon. It also explores the most frequent English expressions that the pilots switch to in their informal Arabic discourse. The conversations of eight Jordanian pilots aged between thirty and fifty-five were tape-recorded in three separate informal natural settings. The data were used for the purpose of finding out what the pragmatic and communicative functions are that the pilots' code switching serves, and to investigate the most frequent expressions used in their conversations. The results showed that eight main conversational functions can be identified in their code-switching routines, namely: to compensate for the lack of exact equivalents in Arabic, to avoid interruption to the communication when not knowing the Arabic equivalent, to replace long and technical terminology in Arabic with acronyms in English (acronyms are not common in Arabic), to use aviation titles and ranks, to quote/ directly report phrases of speakers, to say the numbers, to refer to names of companies, places, documents, and organizations, and to insert some English formulaic expressions. The findings also showed that the most frequent terms and expressions used in code switching amongst Jordanian pilots are more related to the aviation register than to common-core vocabulary.

Keywords: Arabic-English, code switching, functions, informal daily conversations, Jordanian pilots

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Introduction

Code switching (CS) is a characteristic feature of the speech of bilingual and multilingual speakers irrespective of geographical location. According to Haugen (1956), “code switching, which is the alternate use of two languages, occurs when a bilingual introduces a completely unassimilated word from another language into this speech” (p. 40). The Arab world is known to have a wide array of nationalities, ethnicities, and cultural backgrounds which forge bridges of linguistic and cultural exchange and consequently a state of bilingualism. The increased level of education and the continuous spread of technology are two essential factors that boosted the use of CS among people. For instance, at many universities the language of instruction in major sciences such as accounting, engineering, medicine, as well as aviation is English. These sciences depend heavily on English terminologies that do not have Arabic equivalents or their equivalents in Arabic are rarely used. Consequently, educated non-native speakers of English who study a certain branch of science and share a particular profession usually have a large amount of mutual vocabulary resulting in the emergence of a specialized variety or “register.” As a result, people of the same profession start to code-switch unconsciously from their native language to English using their register as an indicator of their group identification when they communicate with each other both at work and in informal settings.

Wardhaugh (2006) posits that CS is used as an important identity marker for a group of speakers who have to use multiple languages in their general “pursuits.” To illustrate this, he gives the example of physicians who code-switch when they talk to each other, and this communication among the physicians about medical topics with CS occurring throughout happens more easily than it would if outsiders to the medical profession were involved in those conversations, and this is due to the fact that the medical professionals possess the needed vocabulary to code-switch, while the layman probably does not possess much of that vocabulary. He also explains that the norms of CS are not fixed; they change from one group to another “even within what might be regarded as a single community,” (p. 106). These norms of CS involve certain factors such as place of residence, social class, and occupation.

The present study investigates an under-researched area of interest, CS involving the aviation register from Arabic to English among Jordanian pilots in their informal daily conversations. It sheds light on the frequency and the functions of CS in informal conversations among the pilots. It also explores the most frequent English expressions that the pilots switch to in their informal Arabic discourse.

Questions of the Study

This study seeks to answer the following questions:

1. What are the types/functions of code switching among Jordanian pilots in their informal natural conversations with each other?
2. What are the most frequent English words/phrases that Jordanian pilots use in their Arabic conversations?

It is hoped that this study would add to the literature by shedding light on further functions of CS that may still be lurking in the informal conversations of Jordanian pilots. Findings of this study are likely to solidify the existing literature in the field of CS, by providing insight into the use of CS in informal spoken exchanges in the aviation register.

Review of Related Literature

Many researchers (e.g., Gumpers, 1982; Auer, 1998; Wardhaugh, 2006) have attempted to define the term *conversational CS*. Gumperz (1982) defined it as “the juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or subsystems” (p. 59). For Auer (1998), CS is the “alternating use of two or more "codes" within one conversational episode” (p. 1). Wardhaugh (2006), on the other hand, defined it as a process in which

People ... are usually required to 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. (p. 101)

Myers-Scotton's (2006) general definition of CS as “the use of two language varieties in the same conversation” (p. 239) is satisfying so that it will be used as a practical definition throughout this paper.

The linguistic, social, communicative and metaphorical functions of CS as a conversational tool have been a subject of intensive and meticulous research (e.g., Zainil & Arsyad, 2021; Wardhaugh, 2006; Romaine 1995; Gumpers, 1982; Hudson, 1980). Gumperz (1982) suggested six main conversational functions for CS, namely quotations, addressee specification, interjections, reiteration, message qualification, and personalization vs. objectivization. For him, the quotation function is used when someone resorts to code switching in order to convey a message to someone else in the form of a quotation or reported speech. The addressee specification is intended to send a specific message to a specific person in a certain setting, while interjection is used when CS serves as sentence filler and usually works as a connector between sentences. Reiteration is used when a message is repeated in the second code; sometimes the repetition is literal, sometimes with some modification. Sampson (2011) states that this type of CS, using both the L2 word and its L1 equivalent, may be used “in order to ensure that the message has been understood by everyone” (p. 4). Message qualification occurs in long utterances when the subject of the sentence is in one code and the predicate is in another. The last function is personalization vs. objectivization, which implies the switch from code to another to show an opinion or a personal feeling about a certain topic. These main conversational functions summarize the need to use a second code in a certain setting.

Romaine (1995) used Poplack's (1980) three different kinds of CS and illustrated every type with examples. The first type is *tag switching* which “involves the insertion of a tag in one language into an utterance which is otherwise entirely in the other language” (p. 122). Examples given by Romaine are: *I mean, I wish, you know*, etc. Another type is *intersentential CS*, which means the alternate use of codes between sentences or clauses in which each clause or sentence belongs to a different variety. Romaine also identified *intrasentential CS* as the alternate use of codes within a single sentence or clause, and it includes mixing within word boundaries, known as *code mixing*. Although some scholars use the technical terms CS and code mixing in most contexts interchangeably (such as Muysken & Muysken, 2000; Bokamba, 1989), Romaine posited that code mixing is the intersentential type of CS, i.e., it is the use or the mixing of units of language such as vocabulary items or longer utterances from two different languages at the sentence or utterance boundary. By contrast, as has already been pointed out, Romaine stated that CS should occur within the same phrase or sentence for it to be termed CS.

Wardhaugh (2006) described two types of CS: *situational* and *metaphorical*. He asserted that situational CS takes place when the speakers change the language used depending on the situations in which they speak a particular language in one particular situation but switch to another language should the situation change without any change of topic. On the other hand, metaphorical CS occurs when speakers change the language they speak depending on topic. Wardhaugh clarified that some topics may be discussed by using any of the codes, “but the choice of code adds a distinct flavour to what is said about the topic” (p. 104).

In this context, it is important to clarify the difference between borrowing and CS. Borrowing is simply “when an item is taken over lock, stock and barrel from one variety into another” (Hudson, 1980, p. 59). This indicates that a lexical item is taken from one variety into another and is integrated into the native variety without the need to switch from L1 to L2. A borrowed item is also “*assimilated* in some degree” to the rules of the second language. Hudson points out “that the phenomenon of borrowing refers to the use of a word or a phrase that has been accepted in the native language, whereas CS could take place at the word level, phrase level, sentence level, or more” (p. 214). In this sense, the phenomenon of borrowing does not need bilingual speakers since monolinguals can apply this phenomenon too. Monaghan and Roberts (2019) state that a borrowed item such as a loan word or phrase sometimes completely supplants a previously existing native word, or it sometimes coexists with a native word with a similar meaning. In these two scenarios, the use of a loan word is not to be seen as a kind of CS at all because the loan word has become part and parcel of the language that has borrowed it and is not seen as a foreign word/phrase anymore.

Register can be defined as “set(s) of language items associated with discrete occupational or social groups. Surgeons, airline pilots, bank managers, sales clerks, jazz fans, and pimps employ different registers” (Wardhaugh, 2006, p. 52). It is also defined as a “specialized lexicon that is used by persons in a certain profession or aficionados or fans of a certain sport or activity” (Myers-Scotton, 2006, p. 28). Biber and Finegan (1994) identified register as “a language variety viewed with respect to its context of use” (p. 4).

The phenomenon of CS has been investigated in various contexts across the Arab World in a variety of settings – in educational, social, and work/professional settings. For example, Alenezi and Kebble (2018) conducted a study of this phenomenon in the context of medical classroom discussions in universities in Saudi Arabia, and they found out that Saudi medical students “had a strong preference for using code-switching over a monolingual medium of instruction” because “code-switching was more desirable for course content comprehensibility” (p. 148).

Hamed et al. (2017) posited that Arabic speakers frequently code-switched during their daily conversations that were particularly centred on the theme of technology. Among the factors that contribute to this phenomenon are “globalization, urbanization, immigration and international businesses and communication” (p. 209).

Abdulhady and Al-Darraji (2019) examined CS among Libyan students of translation at Benghazi University. The researchers found out that students used English terms in their casual Arabic conversations mainly when they were unaware of the Arabic equivalents to those English

technical terms, and so to “overcome their translation inability” (p. 175). Interestingly, the researchers also found out that in their English conversations students sometimes code-switched to Arabic just to add ‘local colour’ to their speech.

At the local arena where the researchers come from, ample research has addressed the phenomenon of CS in Jordan at different levels. For example, Rabab’ah and Al-Yasin (2017) investigated CS in the conversations of Jordanian EFL teachers with their students in class. The researchers concluded that switching to L1, which was Arabic in that context, in the EFL classroom was quite common, and that the frequency and types of CS were contingent largely upon the students’ English proficiency. They found out that the lower the English proficiency of the students, the higher the frequency of CS. They posited that CS was often resorted to by the teachers to achieve pedagogical functions, such as wanting to be more intimate with the students and building rapport with them.

Hussein (1999) examined the purpose and attitude for the CS phenomenon among Jordanian university students. He found that students switch from one code to another for a multiplicity of reasons, such as language gap, which is the lack of equivalents in the Arabic language for the English words and phrases, the ease of using English to express scientific terms and concepts, and the familiarity with some formulaic English expressions like those used in greeting, apologies, complements, etc.

Hleihil (2001) investigated the motivations and attitudes towards the phenomenon of CS among Jordanian employees and customers in an American fast-food restaurant. For the purpose of this work, the researcher developed a three-section questionnaire and distributed it to 200 salespeople and customers of the American fast-food restaurants in some Jordanian cities. Spontaneous conversations between clients and employees and between employees themselves were also tape-recorded. The researcher found that respondents had strong motivations for CS, and the most salient of those motivations was the lack of equivalents in the Arabic language to the names of the American dishes. He also found that respondents differed in their attitude towards CS according to their age, gender, occupation, education and region.

Al-Khatib and Sabbah (2008) explored the language structure and sociolinguistic functions of CS between Arabic and English in mobile phone SMS among Jordanian university students. The results showed that students switch from Arabic to English for three main reasons: CS as a matter of prestige, using academic and technical terms to fill gaps in the language, and serving the function of euphemism.

To the best of the researchers’ knowledge, no previous studies have investigated the aviation register in Jordan. More specifically, the code-switching phenomenon among pilots is a topic that has not been investigated in the literature before, which makes the present study of special value and relevance to the field of sociolinguistics and to English for Specific Purposes (ESP).

Methods

This research used the quantitative research method. Data were collected from the participants, and then all cases of CS in the elicited data were singled out and grouped in a table.

Statistics of frequency and percentages were calculated, and those statistics provided the launching pad for the discussions section of this research article.

Participants and setting

Eight male Jordanian pilots took part in the study. They were informed that their conversations were being recorded for research purposes, but they were not given any detailed information on what parts or particular features of their conversations the researchers were interested in. The data used in this study for the analysis of CS in the informal conversations of the participants were collected over the period of ten days in three informal meetings where the conversational exchanges were tape-recorded. The purpose of the meetings was to exchange friendly visits among colleagues who shared the same profession and worked for the same company. All the meetings took place in the home of one of the pilots in Amman, Jordan. Seven of the eight participants were married and one was single. The mother-tongue of all the pilots is the Jordanian Arabic vernacular, and evidently it is their everyday conversational variety. It differs from the formal Modern Standard Arabic variety in its vocabulary, syntactic structure and pronunciation. The ages of the participants ranged from 30 to 55. More specifically, their ages were 30, 35, 37, 37, 38, 40, 45 and 55. Those pilots had all completed their academic studies at the Royal Jordanian Academy in Jordan. In order for them to possess a good level of English proficiency, pilots were required to pass an English proficiency test provided by the Civil Aviation Authority. However, the command of English for the pilots was different from one to another because each one of them attended a different school and lived in a more or less different social environment. The speakers in the tape-recordings chose their topics freely with no intervention from the researchers, who were not part of the conversation. The main topic of discussion was the promotion of one of the participants from a first officer rank to captain. This evolved into a discussion of the challenges in flying on which he might be tested during the process of promotion as well as the problems that he might face in the simulator while being examined.

Instrument

Three meetings on three different days were recorded on a recording gadget with the permission of the participants, so as to be played back for analysis. Each meeting lasted for approximately two hours. After collecting the data, the researchers listened several times to the recordings generated from the meetings, transcribed every single utterance phonetically using phonetic symbols (see Appendix B), and then provided an English translation.

Research procedures

As has been mentioned, the collection of data was carried out at three informal meetings on three different days; the meetings took place at the home of one of the eight participants. The recordings were conducted using a recording gadget, and then the researchers listened to all those audio recordings and wrote them out and transcribed every single utterance in phonetic alphabet. The researchers also translated each utterance into English. All examples of CS that could be elicited from the data were collected and presented in a table. The table was used to provide a succinct statistical summary of the results, namely to elucidate the frequency and percentage of each case of CS. This statistical summary of the results was the basis from which the researchers set about their analysis of the functions of CS in their data as well as the types of code-switched expressions that could be found.

Findings

The data revealed that Jordanian pilots use CS of eight different types: technical terms and terminologies such as *airline, autopilot, landing gear*; technical acronyms and abbreviations such as *CBT, JAR, LOFT*; aviation titles and ranks such as *captain, dispatcher, fleet manager*; quotations and reported speech such as *u-iħna næzli:n alli: "If you have anything report to me"*; English numbers; names of companies places, documents and organizations; formulaic expressions such as *thank you, hello, bye*; and other miscellaneous words and phrases. The data also revealed that the highest seven occurrences of CS in the conversations of the participants were related to the aviation register. The 'quotations and reported speech' type of CS appears to be the only one in the collected data that can be classified as an example of intersentential switching, i.e., code mixing. The formulaic expressions, such as *goodbye* and *hello*, can be classified as examples of tag switching. All the other types of switching in the collected data can be categorized strictly as examples of CS. However, in this paper, as was the custom in Romaine, all three patterns will be referred to as examples, or variant types, of CS.

Discussion

Discussion Related to the First Question

Regarding the first question that investigates the types of CS among Jordanian pilots in the aviation register, the data revealed that Jordanian pilots use CS of eight different types:

Technical Terms and Terminologies

Pilots switch to the English technical terms extensively in their conversations. This is sometimes due to the fact that these terms have no Arabic equivalents. As explained by Hussein (1999), one important factor inciting CS is when certain language items are present in one language but lack equivalents in another language. This category forms the highest percentage in the findings since there are significantly large numbers of technical terms included. A case in point is the following set of examples: *airline, approach, augmented (crew), autopilot, auto-throttle, cargo, check, checklist, cockpit, course, cruise, destination, engine, engine failure, escape route, flight level, flight plan, fuel, grounded, hangar, heading, hung start, landing gear, load sheet, local nights, manoeuvre, panel, and wind shear*.

Below are some examples of these terms as used in their CS in their actual conversations:

- "lamma aħta:ni *wind shear* uħa:r maħo *crash* ħimel *freeze* la *simulator*."
(When he gave me wind shear, he crashed then he froze the simulator.)
- "kunna bnifmal *taxi* willa huweh biħki maħi *tower*,"
(We were taxiing when he called the tower.)
- "mæ aħæk *roster* rasmi: ħaħ?"
(You did not receive an official roster, right?)
- "aħta:h *wet start* fakkaroh *hung start*."
(He gave him wet start but he thought it hung start.)
- "ana fuft el *flight plan demonstration*."
(I saw the flight plan demonstration.)
- "maħħu:l bididi ħaðalni *maintain* nafs el *flight level*?"
(Do I have to maintain the same flight level?)

Technical Acronyms and Abbreviations

Pilots switch for technical acronyms and abbreviations that fall within the scope of their knowledge. This may happen because of the convenience of using the English abbreviation/acronym in comparison to the full form, whether in English or in any other language. Linguistically, an *abbreviation* is related to the separate pronunciation of the initial letters of the constituent words (Cannon, 1989), such as CBT (Competency-based Training) and CRM (Crew Resource Management). An *acronym*, on the other hand, is pronounced as a single word (Cannon, 1989), such as IATA, JAR, JAV, LOFT, and they stand for (International Air Transport Association), (Joint Aviation Requirements), (Jordan Aviation), and (Line Oriented Flight Training) respectively. Below are some examples used in the Jordanian Arabic context:

- "abel mæ niʃmal il LOFT bi simulator." (Before we do the LOFT in the simulator.)
- "min we:n bidi aʃraf ʃan ha:ð el route escape iða miʃ mawzu:d la fi Boeing wala fi IATA?" (How can I know about the route escape procedure if it is unavailable neither in Boeing nor in IATA?)

Other abbreviations that have frequent presence are:

APU (Auxiliary Power Unit), AMC (Acceptable Means of Compliance), ATC (Air Traffic Control), CBT (Competency-based Training), CMC (Crew Member Certificate), CMB (Climbing to), CRM (Crew Resource Management), GPS (Global Positioning System), FMS (Flight Management System), GPWS (Ground Proximity Warning Computer), ILS (Instrument Landing System), QRH (Quick Reference Handbook), RVSM (Reduce Vertical Separation Minimum) , SOP (Standard Operating Procedure), and VOR (VHF Omni-directional Radio Range)

- "ʃabak el generator mæ aʒa maʃo el APU." (He connected the generator but the APU did not work.)
- "biddak itʃajjek il CRM." (You have to check the CRM.)
- "iħna ʃinna limitations ʃala i ʃaija:rah mawzu:d bil OFM." (We have limitations for the aircraft in the OFM.)
- "ħatta law næzel ILS hæy ʃuru:t el VFR." (Even if you are landing with ILS, these are the conditions of the VFR.)
- "bniʔdar niʃbek il autopilot wħatta lal GPWS." (We can connect the autopilot even in the GPWS.)

The above examples show that pilots refer to the aviation acronyms and abbreviations extensively with no need to clarify any single code since this kind of usage is an integral part of their practical life. In light of Wardhaugh's (2006) explanation, it may be suggested that the extensive use of aviation abbreviations and acronyms by the pilots functions as an identity marker for this group who are united by the same 'pursuits'. Also in line with Al-Khatib and Sabbah (2008), it may be posited that the subjects code-switched here in order to fill gaps in the language since those abbreviations and acronyms did not exist in Arabic.

Aviation Titles and Ranks

The corpus of collected data shows that even though Arabic has equivalent terms to the English ones, the participants ignore them and insist on using the English ones. There are certain

positions, titles and ranks that are used in the English aviation register, and Jordanian pilots seem very unlikely to use their Arabic equivalents. Such codes are: *captain, crew, dispatcher, (first) officer, fleet manager, flight attendant, HOD (Head of the Department), load sheet master, supervisor, (training) instructor, (training) examiner, trainee.*

- "nuṣ il *instructors* miḥ mawzu:di:n."
(Half of the instructors are unavailable.)
- "ḥinna waḥad min il *trainee* kḥi:r *overconfident*."
(One of our trainees is so overconfident.)
- "iḥna il *officer* ḥinna aḥṭar min *captain* ḥindhom."
(An officer in our company is more skilful than their captain.)

In the first two utterances, the speakers replaced the Arabic "mudarreb" and "mutadarreb" with their English equivalents "instructor" and "trainee" respectively. It is obvious that the layman would not do such switches since the Arabic equivalents are available and used as a matter of course. In the third utterance we expect that the words "officer" and "captain" would be replaced by the word "ṭaijja:r" by an ordinary person in the Arabic discourse since most non-specialists are unaware of the difference between both ranks. While Abdulhady and Al-Darraj (2019) suggested that their subjects could have code-switched during their English conversations to Arabic to add 'local colour' to their speech, it may be suggested here that in the same vein the pilots could have code-switched to English in their Arabic conversations in order to add either a 'professional colour' or 'more global colour' to their speech.

Quotations and Reported Speech

Another common code-switching feature in the daily conversations of the participants in the study was the reporting of English words and phrases that were originally spoken in English although those participants could have translated them into Arabic. This quotation function is one of the six main functions of CS reported by Gumperz (1982). Perhaps, this code-switching saves the speaker the trouble of translation:

- "kunna raḥ niṣmal *crash*, u-iḥna næzli:n alli "*if you have anything report to me.*"
(We were about to crash when we were descending. He said to me, "If you have anything, report to me.)
- "axadha minni u-alli "*I am the captain, and I'll do whatever I want.*"
(He took it from me and said, "I am the captain, and I'll do whatever I want.")
- "biḥki:lo "*you are stupid*" uddæm il *crew.*"
(He said to him, "You are stupid!" in front of the crew.)

In the above excerpts, it can be noticed that quotations and reported speech can be expressed in two different syntactic structures: "inter-sentential", on the periphery of the utterance, such as in the first and second examples, or "intra-sentential", within the utterance, like in the third example.

English Numbers

Results show that pilots use English numbers extensively for two main reasons. First, they name aircraft using the number part of the name only without the need to mention the full model name of the aircraft. For example, they use *seven three seven* to refer to Boeing 737, *triple seven* for Boeing 777, *seven six seven* for Boeing 767, and *three eighty* for Airbus 380. In other

cases, they only mention the sub-number of the model name to refer to a certain aircraft. For instance, pilots use *four hundred* to refer to the Boeing 737-400. It is also noticeable that pilots feel satisfied by uttering the first two numbers to refer to the aircraft type:

- "aʕti:ni il *flight re-dispatch* la *seven six*."
(Give me the flight re-dispatch for the seven six.)
- "mafru:d ʒibna min il *seven six* u-min il *three twenty* waħad."
(We should have had one from the seven six and one from the three twenty.)

In the above examples, the speakers refer to Boeing 767 by using the first two numbers "*seven six*" and to the Airbus 320 by using numbers without the need to mention the full name of make and model.

The second use of numbers in the pilots' jargon occurs when talking about visibility, level, speed and time. Below are some examples:

- "il *visibility* kənat *one hundred*."
(The visibility was one hundred.)
- "jaʕni fət ʕal *hold maximum speed two hundred fifty*."
(It means that he entered the hold with a maximum speed of two hundred fifty.)
- "ana ʕa:leʕ *fifteen minute sector*."
(I have a fifteen-minute sector.)

Names of Companies, Places, Documents and Organizations

In the aviation register, most proper names and a lot of common names are usually referred to in English. Examples are: *Air Baltic, Algeria, Cairo, Casablanca, Civil Aviation, Cubana Airlines, Emirate Airlines, Jeppesen, Jordan Aviation, Morocco, operation manual, and Tripoli*. This type of CS could not be due to language gap as explained by Hussein (1999) or Hleihil (2001) because those names did of course have Arabic equivalents. But rather, this is probably because in their job the pilots communicate in a motley environment, with people from various linguistic and ethnic backgrounds. For example, the speaker in the following utterance switched to the English word "Tripoli" instead of its Arabic equivalent "ʕara:blus" which is used by the majority of Arab speakers:

- "bas tismaʕ fi: *rotation* ʕala *Tripoli* bitxa:f."
(You feel afraid when you hear that there is a rotation to Tripoli.)

The same case is for "Emirates Airlines" which is usually replaced by "al-imarætijjah liʕajara:n" by other native speakers of Arabic.

- "biddu jiʕbeq il *requirements* tæ3et *Emirates Airlines*."
(He wants to apply the requirements of Emirates Airlines.)

Cairo is also replaced by the Arabic equivalent "alqa:hirah"
"kæn maʕæna: bi *Cairo*"
(He was with us in Cairo.)

Formulaic Expressions

English expressions of thanks, greetings and apologies were also palpably present in the discourse. Such expressions are also used by the majority of Jordanian people whether they

possess good English proficiency or not. Code-switching to such expressions has become so common amongst Jordanians that for some it is more of a norm than the exception. This may be referred to as a type of tag switching that was explained by Romaine (1995) who used Poplack's (1980) illustration of the different kinds of CS. Below are examples from the data:

- "Thank you ḥabi:bi."
(Thank you, dear.)
- "Hello jæ man."
(Hello, man.)
- "jalla bye ḥabi:bi."
(Goodbye, my dear.)
- "sorry ḥabi:bi."
(Sorry, my dear.)

Miscellaneous Words and Phrases

In analysing the data, some other terms that make pilots switch from Arabic to English can be indicative of a high level of proficiency in the English language. These terms have their Arabic equivalents and are usually used by Jordanians in their Arabic versions. Nevertheless, it can be noticed that pilots use such terms frequently either to show a high level of proficiency in English or because they are used to them:

- "ḥasab il bids tæʕet il ʃarikh."
 - (It depends on the bids of the company.)
- "itajjara:t min ḍimn il assets tæʕet il ʃarikh."
 - (Aircraft are considered within the assets of the company.)
- "ṭalabet unpaid leave bas mæ awʃalha."
 - (I asked for unpaid leave in order not to fly there.)
- "bidhom fine, gharemeḥ liʔinw w-ʃilna bakki:r."
 - (They asked for a fine because we arrived early.)

In the last example, the word *fine* is followed by its Arabic equivalent *gharemeḥ*, and this may be used in order to avoid misunderstanding since "fine" has other meanings too. This is a clear example of reiteration. The concept of reiteration as explained by Sampson (2011) was discussed earlier in the literature review section of this paper.

It should be stated here that although some of the CS functions discussed by Gumperz (1982), such as reiteration and quotation, were evidently present in a number of examples in the data, other CS functions in Gumperz, such as interjection and message qualification, could not be detected anywhere in the collected data of this study. The interjection function was not present because as subjects were conversing in their L1 all the time, with occasional cases of intrasentential CS, and they only used L1 interjections. The message qualification function was not present most probably because this function requires CS involving the use of longer utterances such as whole sentences or several sentences as explained by Gumperz; in our data, most CS, apart from the quotations, involved the use of individual vocabulary items, abbreviations and acronyms, and relatively short formulaic expressions.

Discussion Related to the Second Question

Regarding the most frequent words and expressions that pilots use when they code-switch from Arabic to English, it has been noticed that the highest seven occurrences are related to the aviation register. In Wardhaugh's (2006) terminology, it seems that in the informal conversations of the subjects of this study, the CS occurrences that could be recorded were almost exclusively of the metaphorical type, with very few instances of situational CS. That is because whenever the subjects' conversations veered into topics unrelated to their profession as pilots, CS almost disappeared. This is naturally not a surprising result since people who share the same profession usually talk about mutual interests in their domain. However, these terms are subject to change due to the fact that the frequency of the used term will vary in accordance with the main topic of the conversation. Appendix A shows the most frequent terms and expressions with frequencies ranging from 21 to five along with their percentages of use. Terms with a less-than-five frequency are not listed.

Most of the above-mentioned expressions have their Arabic equivalents such as "engine", "training", "speed" and "idea". Nevertheless, pilots do not seem to be willing to use the Arabic equivalent. Words that are especially used as terms peculiar to the aviation register are most likely to be used in English only. Examples from Appendix A are: "simulator", "captain", "autopilot", "approach" and "operation". The last type of terms in the aviation register refers to those which do not have Arabic equivalents and are only used in their English version, e.g., "auto throttle" and "re-dispatch".

Limitations of the Study

This study is based on data collected from a small sample of eight Jordanian pilots who were gathering at the house of one of their friends in casual informal settings which extended over three sessions. The data collection process took ten hours of recording. Moreover, the compiled data were restricted to the topics that had been raised and discussed during the three meetings. Thus, these topics are subject to change according to the ambient circumstances of the subjects. Hence, the frequencies in the results are also subject to change.

Conclusion

The present study was conducted to investigate an under-researched area of interest, CS involving the aviation register from Arabic to English among Jordanian pilots in their informal daily conversations. This study aimed to explore the types/functions of CS in the aviation register as recorded in a sample of three informal conversations by eight Jordanian pilots who are non-native speakers of English. It also meant to show the most frequent English terms and expressions used in the pilots' informal discourse in Arabic.

Regarding the functions of CS, the analysis showed that pilots code-switch in eight major conversational types, namely: technical terms and terminologies; technical acronyms and abbreviations; aviation titles and ranks; quotations and reported speech; English numbers; names of companies, places, documents and organizations; formulaic expressions; other miscellaneous terms and phrases. The results showed extensive CS to English in the Arabic discourse of the participants, which means that pilots inject words, phrases and whole sentences from English into their spoken Arabic.

By examining the frequency of the English terms and expressions, it was discovered that technical terms, technical abbreviations, and terms that are related to the aviation register in general have the highest frequencies and that they are used more often than other words from the Jordanian Arabic vernacular.

In general, Arabic is still used as the primary means of discourse for communicative purposes by Jordanian pilots whose native language is Arabic; English is used as a facilitator, and sometimes the lack of competence in the mother-tongue vernacular plays a role. English also appears to be a main linguistic resource that pilots are used to when they communicate within their register since it is the main language of the aeronautics science. It is also known that being a pilot is a prestigious profession; thus, people involved tend to use English terms extensively since good knowledge of English is considered something of a prestigious status symbol.

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About the Authors:

Dr Maha Yaseen is specialised in linguistics, with a particular interest in phonetics and phonology as well as in syntax. She is currently conducting research in educational technology and in various types of functional code-switching at Al-Ahliyya Amman University in Jordan in conjunction with colleagues in other universities. ORCID: <https://orcid.org/0000-0002-6719-4829>

Dr Rami Al-Sa'di is specialised in linguistics, with a special interest in phonetics and phonology. He also has vested interests in TEFL and educational technology. Recently, he has been conducting empirical lab research on the pronunciation of English as spoken by Arabic-speaking EFL learners, with focus being on stress placement as well as other aspects of articulatory phonetics. ORCID: <https://orcid.org/0000-0002-6205-6144>

Dr Talha Sharadgah is specialised in education and TEFL. He is particularly interested in educational technology. He has recently been conducting research on education in a virtual learning environment in the COVID-19 pandemic era. ORCID: <https://orcid.org/0000-0001-6338-9605>

References

- Abdulhady, S. E., & AL-Darraji, O. O. (2019). Code switching: A close study of translating English linguistic terms into Arabic. *International Journal of Linguistics, Literature and Translation*, 2(3), 175-187. DOI: [10.32996/ijllt.2019.2.3.20](https://doi.org/10.32996/ijllt.2019.2.3.20)
- Alenezi, M., & Kebble, P. (2018). Investigating Saudi medical students' attitudes towards English-Arabic code-switching in classroom instruction. *The Asian ESP Journal*, 14(1), 142-160.
- Alkhatib, M., & Sabbah, E. H. (2008). Language Choice in Mobile Text Messages among Jordanian University Students. *SKY Journal of Linguistics*, 21, 37-65.

- Auer, P. (1998). Introduction: Bilingual conversation revisited. In P. Auer, (ed.), *Code-switching in conversation: Language, interaction and identity* (pp. 1-24). London and New York: Routledge.
- Biber, D., & Finegan, E. (1994). *Sociolinguistic perspectives on register*. New York and Oxford: Oxford University Press.
- Bokamba, E. G. (1989). Are there syntactic constraints on code-mixing? *World Englishes*, 8(3), 277-292. <https://doi.org/10.1111/j.1467-971X.1989.tb00669.x>
- Cannon, G. (1989). Abbreviations and Acronyms in English Word-Formation. *American Speech*, 64(2), 99-127. <https://doi:10.2307/455038>
- Gumperz, J. (1982). *Discourse Strategies*. Cambridge: Cambridge University Press.
- Hamed, I., Elmahdy, M., & Abdennadher, S. (2017). Building a first language model for code-switch Arabic-English. *Procedia Computer Science*, 117, 208-216. <https://doi.org/10.1016/j.procs.2017.10.111>
- Haugen, E. (1956). *Bilingualism in the Americas: A bibliography and research guide*. Publication of the American Dialect Society, No. 26. Tuscaloosa, Alabama: University of Alabama Press.
- Hleihil, H. (2001). *Arabic-English Code-Switching among American Fastfood Restaurants' Employees and Customers in Jordan: Motivations and Attitudes*, (Unpublished Master's thesis) Yarmouk University, Jordan.
- Hudson, R. (1980). *Sociolinguistics*. Cambridge: Cambridge University Press.
- Hussein, R. (1999). Code-alteration among Arab college students. *World Englishes*, 18(2), 281-289.
- Monaghan, P., & Roberts, S. G. (2019). Cognitive influences in language evolution: Psycholinguistic predictors of loan word borrowing. *Cognition*, 186, 147-158. <https://doi.org/10.1016/j.cognition.2019.02.007>
- Muysken, P., & Muysken, P. C. (2000). *Bilingual speech: A typology of code-mixing*. Cambridge University Press.
- Myers-Scotton, C. (2006). *Multiple Voices: An introduction to bilingualism*. Malden: Blackwell Publishing Ltd.
- Rabab'ah, G., & Al-Yasin, N. (2017). English-Arabic code switching in Jordanian EFL teachers' discourse. *Dirasat, Human and Social Sciences*, 43(2), 313-329. <https://doi.org/10.35516/0103-044-004-019>
- Romaine, S. (1995). *Bilingualism* (2nd ed.). Oxford: Blackwell.
- Sampson, A. (2011). Learner code-switching versus English only. *ELT Journal*, 66(3), 293-303. <https://doi:10.1093/elt/ccr067>
- Wardhaugh, R. (2006). An introduction to *sociolinguistics* (5th ed.). Oxford: Blackwell.
- Zainil, Y., & Arsyad, S. (2021). Teachers' perception of their code-switching practices in English as a foreign language classes: The results of stimulated recall interview and conversation analysis. *SAGE Open*, 11(2), 1-10. <https://doi.org/10.1177/21582440211013802>

Appendices Appendix A

Frequencies of the most used terms and expressions

No.	Word	Freq.	Percentage %
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1.	simulator	21	4.83
2.	engine	16	3.68
3.	fuel	16	3.68
4.	captain	14	3.22
5.	alternate	14	3.22
6.	minimum	14	3.22
7.	training	14	3.22
8.	yes/no	13	2.99
9.	exactly	13	2.99
10.	(first) officer	13	2.99
11.	go around	12	2.76
12.	panel	12	2.76
13.	destination	11	2.53
14.	(re-)dispatch	10	2.30
15.	standard	10	2.30
16.	weather	10	2.30
17.	command	9	2.07
18.	descent	9	2.07
19.	zero	9	2.07
20.	autopilot	8	1.84
21.	check	8	1.84
22.	operation	8	1.84
23.	speed	8	1.84
24.	approach	7	1.61
25.	approval	7	1.61
26.	hangar	7	1.61
27.	runway	7	1.61
28.	course	6	1.38
29.	dangerous goods	6	1.38
30.	escape route	6	1.38
31.	flight	6	1.38
32.	flight level	6	1.38
33.	ok	6	1.38
34.	route	6	1.38
35.	take off	6	1.38
36.	unpaid leave	6	1.38
37.	attitude	5	1.15
38.	cost	5	1.15
39.	hold	5	1.15
40.	idea	5	1.15
41.	instructor	5	1.15
42.	knowledge	5	1.15
43.	limitations	5	1.15
44.	operation manual	5	1.15
45.	performance	5	1.15
46.	sector	5	1.15
47.	syllabus	5	1.15
48.	taxi	5	1.15
49.	termination	5	1.15
50.	Tripoli	5	1.15

51.	visa	5	1.15
52.	visibility	5	1.15
Total number of words:		434	99.82%

Appendix B

Phonetic Symbols of Jordanian Arabic

Consonant Symbols	Arabic consonants	
ʔ	ء	
B	ب	
T	ت	
᠖	ث	
ʒ	ج	
H	ح	
X	خ	
D	د	
᠆	ذ	
R	ر	
Z	ز	
S	س	
ʃ	ش	
ʂ	ص	
d	ض	
t	ط	
᠆	ظ	
ʕ	ع	
gh	غ	
F	ف	
Q	ق	
K	ك	
g	(dialectal sound as in “google”)	
L	ل	
M	م	
N	ن	
H	ه	
W	و	
J	ي	
Short Vowels	i,e	كسره
	u,o	ضممة
	a	فتحة
Long Vowels	a:	ا (قال)
	æ	ا (مال)
	e:	ي (بيت)
	i:	ي (مين)
	u:	و (سور)
	o:	و (موت)
Diphthongs	au	موجود
	ai	طيّاره