Perceptions of Codes Witching in a Multilingual Language Classroom in Morocco

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INTRODUCTION

Background

In this work students' perceptions for code switching during group work in a multilingual classroom in Morocco are analyzed. This study is inspired by real time classroom experience. It reports on qualitative and quantitative data collected through an online survey, involving 50 participants. 80% of the respondents are multilingual in English, Arabic, Darija, and French, while 20% are monolingual in English. Casual observation of group discussions revealed that code switching occurred often during group discussion. This study confirms that 70% of students in this study switch codes during group discussions. Among students who do not understand the lingua franca, 79% feel left out and unheard during group discussions, when code switching occurs. Respondents mention the functions of code switching, which are; to fill in communication gaps that result from deficiency in English and to mitigate difficulties of explaining unfamiliar content, concepts, and ideas. Finally, this study finds that technology helps to close communication gaps in multilingual group tasks. The most frequently used technology tools in this study are Power Point, at 47%, and Word at 23%. Language translation tools are also mentioned as important.

A statement of the research problem

Casual observation of group discussions revealed that code switching occurred often during group discussion. Students in this study switch codes during group discussions, even among students who do not understand the lingua franca. What are students perceptions of code switching in the classroom? What purpose or function does code switching play in multicultural group discussions in the classroom. What AI tools are used in bridging communication gaps if any?

Objectives of the study:

1. To understand students' perceptions of code switching in the classroom
2. To understand what purpose or function code switching plays in multilingual group discussions in the classroom.
3. To find out what AI tools are used in bridging communication gaps.

Research questions

1. What are students' perceptions of code switching in the classroom?
2. What purpose or function does code switching play in multilingual group discussions in the classroom?
3. What AI tools are used in bridging communication gaps if any?

Scope and limitations

This study represents the target population of 50 students in an English writing class. The results may not be

generalizable to other situations, however lessons learned can be of use in informing pedagogy in multilingual classrooms.

REVIEW OF LITERATURE

This section reviews research on various aspects of language learning with a focus on language in education in Morocco. Owing to the multicultural nature of the country, code switching in education cannot be overlooked and therefore the literature examines code switching studies, examining the definition of it, historical developments of findings, and the functions and benefits of code switching in the classroom. Finally, we look at how technology can be used to close gaps in communication in multilingual classrooms.

English and language policy in education in Morocco

Oumar Sanga and Chris Mackie in an article titled Education in Morocco, emphasize that Morocco has been working hard to educate its population. However, these efforts have failed to yield the results that were aimed at. Although Morocco, for example, offers free primary and secondary education to its population, only a few elite families complete secondary education. The root of the problem facing education success in Morocco lies within its complex linguistic, cultural and demographic situation. To set the background for this argument, we must understand Morocco's linguistic and cultural situation inside and outside of the education system. Sanga and Mackie put it that Morocco's education budget exceeds the OECD requirement by 4.5% as Morocco's education budget in 2021 stood at 16.9%, which amounted to 4.5% higher than the OECD limit of 12.4% (Sanga and Mackie 2022).

Demographically, Morocco's population was 36.9 million in the 2020 census. Half of the population is made up of the Amazigh people, whose language is called Berber, or Tamazight. Moroccan Arabs make up the other half of the population. Darija is the lingua franca in Morocco, and it is a local dialect of Arabic, therefore 90% of Morocco people speak Darija to communicate in daily life activities including local commerce (Sanga and Mackie 2022).

The official language policy in Morocco is that French and Arabic are the official languages. However only recently, in 2011, the Morocco language policy, is that the first official language as per the constitution; is Modern Standard Arabic, and Tamazight is the second official language of Morocco. In this policy, Darija is not recognized as an official language, even though it is the lingua franca. The third language that complicates the linguistic landscape of Morocco, is French, which arose from 1912-1956 when France colonized Morocco. Spanish was adopted in Northern Morocco owing to the Spain occupation there (Sanga and Mackie 2022).

In the public education system, from age 6, students are taught in Arabic, as the language of instruction. Modern Standard Arabic to the majority of Morocco children at the age of 6 is a foreign language, since they grow up speaking Darija and Amazigh. At grade 3, in public primary schools, French is introduced as a subject. After the age of 15, which is the age at which compulsory, free education ends, the students join higher education institutions, where the language of instruction suddenly shifts from Modern Standard Arabic to French (Sanga and Mackie 2022).

This sudden introduction of French as a language of instruction in higher education finds the students unprepared for the challenges of succeeding in their major fields of study, because their knowledge of French is limited. However, the minority elite, who studied in private French schools, continue to excel and therefore take over the running of the affairs of the country, while the majority remain poorly educated and unable to participate in employment in Government (Sanga and Mackie 2022).

The French colonial rule and the cultural assimilation notion situated French language as the language of

social status. The elite in society spoke French and exclusive French assimilation was induced through private elite education and Lycées de mission graduation, where only 15% of the Moroccan elite families graduated (Sanga and Mackie 2022).

As a result, according the UNESCO 2022 report, young people of ages 15-24 are unemployed, not in school, and do not have training, many young people have therefore left Morocco in search of economic security abroad. UNESCO recorded Morocco youth as the second highest in number of people studying abroad, second to Nigeria.

Morocco youth are now demanding knowledge of English, which they believe has more economic impact on their lives than French and Arabic. According to the British Council survey, 2021, 40% of youths in Morocco believe that English is more useful to learn today, than French, only 10% said French is useful. Because of the growing demand for English, many schools both private and public are offering courses in English as a Foreign language, while many universities are promoting English and using it as a language of instruction.

What does this review of literature on the complex nature of language in education in Morocco have to do with this research? It means that both Moroccan students, exchange students, international students, and teachers as well as the university would benefit from understanding the complexities of language use in education in Morocco. How we respond to language use in the classroom would be based on this understanding. Negotiating meaning in languages other than the official language helps in the analysis of ideas and in the comprehension and synthesis of information.

How code switching is defined in the literature

Angel Lin defines classroom code switching as "language alteration, the alternating use of more than one linguistic code in the classroom by any of the classroom participants, for example, teacher, student, or teacher aide. This can include both code mixing (intra-clausal/sentential level) (Lin 2013).

Other studies have defined code switching as "overlapping of first language (L1) use in second language (L2) and foreign language, or target language (TL) classrooms. (Turnbull and Dailey-Ocain, 2009) in Lin (2013). Lin also mentions other studies such as (Mahhoob, 2011; Lin 2013) who examined the use of local languages in English classes, and (Brooks-Lewis, 2009; Lin 2013) in his study of the incorporation of L1 in foreign language teaching and learning. (Butzkamm, 2003 in Lin 2013) refers to the same phenomenon as student use of the mother tongue in the task based classroom, while (Carless, 2007 in Lin 2013) labels it as L1 use in the L2 classroom. (Edstrom, 2006 in Lin 2013) uses the term bilingual pedagogy in English as a Foreign Language (EFL). (Forman, 2010 in Lin 2013), calls it first language and target language use in the foreign language classroom, (Littlewood and Yu, 2009 in Lin 2013).

Marilyn Martin- Jones in "Code-Switching in the classroom: Two Decades Research captures over 2 decades of the historical research of code switching in bilingual classrooms. The author states that debates and research on bilingualism in the classrooms emerged mostly in countries that were reforming their language policy in education, such as Canada, South America, Europe, Africa, S.E Asia. "In situations where a new form of language education program has been implemented, or where there has been a change in the medium of instruction…" (Marilyn Martin- Jones 1995; 91). The author points out the importance of understanding the "determinants of language choice and code switching in the classroom" (Marilyn Martin-Jones 1995; 91).

English in a multicultural classroom

Sanju Chaudhary examines the teaching of English in a multicultural Indian classroom, where students

differ in their competence in English language (Choudhary, S. 2016;1). Chaudhary states that acquiring English, "is a natural process for natives, (but), students of other languages have to put in colossal efforts to learn it," Choudhary, S. (2016;1). Learners of English face challenges in pronunciation, spelling and vocabulary, yet speakers of English as a foreign language, face cutthroat competition for opportunities on equal footing with native speakers of English. This reality forces teachers to make difficult decisions on how to manage language use in the classroom (Choudhary, S. 2016).

Ferguson, Gibson 2003, looks at code-switching in post-colonial contexts. He states that "code switching in the classroom widespread multilingual setting in Africa and worldwide; yet it is not infrequently regarded unfavorably by educational policy makers" (Ferguson 2003; 1). Ferguson examines the merits and limitations of code -switching in post-colonial contexts and concludes that "code-switching might be more effectively exploited as a communicative and pedagogic resource in instruction" (Ferguson 2003; 1).

Ferguson observes that African countries, including Morocco, adopted the colonial language as the medium of instruction in education. However, a major disadvantage of learning in a foreign language is failure of attaining excellence in higher education. On the other hand, the advantages of having the ability to use English as an international language is well documented and teachers have found that code switching helps with pedagogical functionality in multilingual classrooms when students lack proficiency in the foreign language. However, policy makers and educationists have expressed misgivings about code-switching in education, while in some cases such as South Africa it is more tolerated (Ferguson 2003; 2).

Ferguson finds 3 reasons for code-switching in the classroom (pg. 2). 1. Code-switching for curriculum access-used by students and teachers to better understand the subject content, 2. CS for classroom management-used by teachers to motivate and praise students. 3. CS for interpersonal relations helps to humanize the classroom climate. CS for curriculum access- "plays an important role in talk and around written text…and the meanings of the text- the purpose is to explain meaning for pupils who have limited control over the language a predicament that is more likely to affect their grades. These findings agree with our study (Ferguson 2003; 4).

In addition Sert, Olcay examines students code switching in English language classrooms and suggests the basic functions of code switching as being the following:

1. Equivalence which means, to explain meaning by saying a words equivalent in the L1 "The student uses the native lexical item when he she has not the competence for using the target language explanation for particular lexical item.
2. Floor holding-A student fills in gaps in conversation in the native language.
3. Reiteration- Eldridge (1996: 305-307 in (Olcay 2005; 3) states these are messages are reinforced emphasized or clarified in the native language.
4. Conflict control: Clarification of intended meaning through native language to avoid misunderstanding (Olcay 2005; 3).

Olcay, mentions that many teachers have opposed native language use in the classroom, arguing that successful attainment of the target language, in this case, English, is dependent on its exclusive use in the classroom. However, recent studies have shown the important role that using other languages can play in foreign language learning. Olcay notes that there are supporters of the use of L1 in the classroom, in the form of code switching. Olcay quoting Cook (2002:333) states that code switching in classrooms where students do not share the same native language may create a problem, as some students, though few maybe neglected. However, supporters of code switching in the classroom suggest code switching serves for the continuity of speech, and aids communication of meaning. (Skiba 1997 in Olcay 2005; 4). Therefore, code switching should not always be regarded as a barrier to communication or a deficiency to language learning. It can be a useful strategy in classroom interaction if the aim is to make meaning clear and to transfer

knowledge to students in an efficient way. However, code switching dependency may result to inability for learners to communicate in an foreign language immersion situation (Olcay 2005; 5).

AI solutions for classroom group assignments and discussions

The final part of my research was to find out how students in multilingual teams used technology to overcome barriers and to enhance communication. Kursat Cagiltay, Barbara Bichelmeyer and Goknur Kaplan Akilli, explain that IT can help multilingual teams to "work and learn collaboratively" (Cagiltay et al. 2015; 1). The authors reiterate that multilingual teams enrich learning and therefore, understanding and applying strategies that will leverage on these strengths is important because the future survival of humanity will depend on successful multicultural communication (Hofstede 1980 in Cagiltay et al. 2015; 3).

METHODOLOGY

Data collection method

Data for this project was gathered through an online survey, classroom observation, note taking and recording.

Target population

50 multilingual, undergraduate students, who spoke Arabic, Amazigh, Darija, French, English, Spanish, American English and other international and African languages in Morocco.

Data presentation and analysis

This section presents the questions and responses of the online survey. Questions 1,2, 3, 10 and 13 sort to investigate how prevalent code switching was in the classroom during group discussions. The results confirm that 90% of students in this target study population do indeed participate in group discussions, and that although 78% of the target population understand the lingua franca, a significant, 22% do not understand some of the languages that are spoken during group discussions. 76% of the respondents have witnessed or experienced the use of languages other than English (code switching) during group work discussions. When in question 10 respondents were asked if they spoke a language other than English in group discussions, the answer was a resounding YES! with the majority, 80% saying that they did use other languages other than English during group discussions. 88% stated that the use of multiple languages aided groups to understand the task:

13. In your opinion, does speaking languages other than English in group discussions help the group to understand the task?

More Details   Insights

Yes	42
No	6
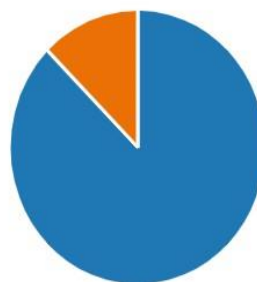
Key: 'Yes-42' represents 88% while 'No-6', represents 13%

Question 4, 5, and 6, show the perceptions that students, who do not understand the lingua franca have toward code switching during group discussions. 47%, which is nearly half of those who do not understand the lingua franca, feel left out of the group discussion, and 32% of them feel unheard during group discussions when code switching occurs. Out of those who did not understand the language that was used during group discussions, 50%, said that code switching had a negative effect on their overall performance in group tasks, while the other half said that code switching had no effect on their final performance in the group work.

Questions 6, 7, 8, and 9 examine how technology was used to bridge communication gaps. When participants were asked which types of technology they used during group discussion tasks, responses generated on a word frequency chart or Word Cloud, showed that 23% used Word, 47% used Power Point, 9% used OneDrive, and 21% used other AI tools which they mentioned as, Google, Microsoft Teams, video conferencing tools such as Teams, and Zoom, Canva, Genuily, WhatsApp, Google Docs, Grammarly, and Chat GPT. Translation technology tools were also mentioned as being important. These results indicate that most respondents, that is 88%, used technology to aid communication during group discussions.

When asked how these technology tools helped to counter any communication problems in group tasks, qualitative responses were provided. Some of the most important and interesting quotes are: ID 2 " *Power Point allows multiple team members to work on the same presentation simultaneously, which can help to facilitate collaboration and reduce the risk of miscommunication or misunderstanding"*

ID 3 *"as the technology works in English, we were obliged to communicate with it"* This response implies that even though some participants had difficulties using English, they were forced to use English because the technological tools were written in English. ID 5 similarly stated, *"it was helpful due to the fact that we all used English while using the technology", "Everything was written in English".*

ID 4 *"it facilitated the task between the group members by translating."* This respondent mentioned translation tools as aiding smoother communication in multilingual group tasks.

ID 9 said, *"yes, it helped us see what it is lacked within the conversation and see if we can improve it"*

ID 11, a native speaker of English, and non-speaker of the lingua franca, stated, *"we were able to work separately, but still see each other's responses."*

Another respondent said, *"In our group work, usually we use teams to arrange meetings and shared document so everyone can edit on it." "Our group used several different technologies to support our collaboration and communication, including WhatsApp: We used WhatsApp to stay in touch " "We mainly used collaboration tools that allows us to share documents instantaneously."*

Questions 11 and 12 elicited students' perceptions about code switching and informed us about the functions of code switching in group work. The following interesting quotes from the qualitative responses depict the 5 functions of code switching which are mentioned in this study:

ID 1 *"Sometimes I face difficulties to explain my point of view in English."*

ID 2 *"Certain ideas and concepts may be easier to express in Arabic over English due to linguistic nuance or subtleties. because as you know our English is not our Mother Language"*

ID 4 *"To help others to understand what we are talking about."*

ID6 *" I use different languages in group discussions to facilitate effective communication and understanding among group members."*

ID 7 *"It's spontaneous most of the time, just as a habit or because it's more comfortable."*

ID 9 *"I use my mother language (Arabic) because sometimes it is easier to get straight to the point, I use French for the same purpose."*

ID 13 *"Sometimes in a group discussion we use our mother tongue especially if all the group members can understand it because we feel more comfortable in using it to convey our ideas quickly."*

ID 14 *"Because English is my fourth language and someone it is just more helpful."*

ID 15 *"Moroccan if we are all Moroccans."*

ID 16 *"in order to express myself better if I cannot find the right word in English."*

ID 26 *"Sometimes it feels more natural to use with fellow Moroccans since it makes communication easier, especially when they speak it more fluently than English."*

Below is a word cloud visualization of the functions of code switching categories that were most frequently mentioned.

Deficiency in English, National Identity, clarification of issues, ease of communication, natural language use, comfort, and convenience are some of the major reasons mentioned for code switching in multilingual group discussions in the classroom.

The following pie chart shows responses to the question, "Which languages do you use in group discussions?

English	16
Arabic/Dirija	23
French	1
Other	9

Key: Arabic/ Darija-23, represents 47%; English-16, represents 33%; Other-9, represents 18%; and French-1 represents 2% ('Other' represents ALL of the languages)

The above pie chart shows that indeed the majority of students in this study speak languages other than English in group discussions.

Other important findings from this study are that code switching is regarded as useful for group work success in this context. Most participants are empathetic to group members who do not understand the lingua franca and believe that code switching should not purposefully leave some members out or jeopardize the performance of those who do not speak the language.

Group members who switch codes have genuine reasons for doing so, they just want to do their best in the task. For instance, respondents mention the strategies that they used to ensure inclusivity of all members, such as providing written instructions in English, using visual aids, such as diagrams, charts, info graphics to illustrate the group task in order to make it easier to understand even for non-native speakers of English, translating the instructions into languages that they understand, and using English with members who do not speak the lingua franca, presenting the final group decision to members of the group who do not understand the lingua franca and listening to their input. Below are some of the statements respondents made.

"Of course, if one member does not understand the other language, we will try our best to explain the task clearly in English, ask him/her to engage wi"

"As I mentioned earlier, all team members in my current group understand multiple languages. However, if we were in a situation where a team member onl"

"When a group member who understands English the whole group switches to English since everyone speaks it in the university."

"Use a translation tool, use visuals, speak slowly and clearly, use simple language, or in the worst case seek the help of a translator"

"Even if I don't speak the same language as some group members, I make sure to be respectful and open-minded. I try to find common ground and use nonve"

"There will be always culture differences, but we try to find a common ground."

"If I face the same problem, we use a bilingual facilitator. If a group member is bilingual, they can act as a facilitator to help translate and commun"

" Perhaps, using a bilingual member, using translation software, being patient and respectful, using nonverbal cues, and establishing clear communicat"

"I think when working on a group the first thing the members should agree on is the language they are going to use and start from there."

SUMMARY OF RESULTS

ITEM	YES (number of respondents)	NO (number of respondents)	TOTAL (number of respondents)
Understood language used	39	11	50
Participated in group task	45	4	49
Witnessed code switching	39	11	50
Used technology	43	6	49

Spoke languages other than English	39	10	49
Agree that code switching aids communication in group tasks	42	6	48
Consider non speaker of lingua franca as important	44	3	47
Face challenges as a group while code switching	18	31	49

Although this study presents 50 students' perceptions of code switching, a few did not respond to some of the questions as shown in the summary of results table above.

CONCLUSION

This study confirms the following main findings, that:

1. 80% of the respondents are multilingual in English, Arabic, Darija, and French, while 20% are monolingual in English.
2. Darija is not recognized as an official language, even though it is the lingua franca that is spoken by 90 % of the population.
3. In Morocco public school system, the language of instruction shifts from Standard Arabic to French at primary and secondary, and now, to English in university and therefore higher education finds the students unprepared for the challenges of succeeding in their major fields of study because their knowledge of English is limited.
4. Morocco youth are now demanding courses in English based on the belief that English has more economic impact on their lives than French. Owing to this growing demand for English, many schools, both private and public are offering courses in English as a Foreign language, while many universities are promoting English and using it as a language of instruction.

This study in addition finds at least 4 functions of code-switching in the classroom which are:

1. Code-switching for understanding the subject content and meaning
2. Code switching to fill in communication gaps that result from deficiency in English.
3. Code switching to mitigate difficulties of explaining unfamiliar content, concepts, and ideas in English.
4. Code switching for ease of communication and national identity

Finally, AI tools such as Word, PowerPoint, Translation tools, Whats App and Zoom, among others, are used by participants in this study to mitigate barriers to group communication in a multilingual setting.

RECOMMENDATIONS

Firstly, this study recommends the overhaul of the language of instruction policy in upper primary and secondary schools in Morocco. English should be used as the language of instruction in schools, while Arabic, French and Spanish should be taught as national and foreign languages respectively.

Secondly, further research on language in education policy should be conducted to ensure that national students, exchange students, international students, and teachers, as well as the universities benefit from understanding the linguistic complexities of language in Morocco.

Thirdly, educators' response to language use in the classroom would be based on the understanding of these

linguistic complexities. It is however clear that negotiating meaning in languages other than the official language helps students to analyze, comprehend and synthesize information.

Finally, therefore, code switching should not be viewed as having a negative impact on learning in a language classroom. It should be viewed as aiding "pedagogical functionality in multilingual classrooms when students' proficiency in the foreign language is superseded by their knowledge of their first language (Ferguson 2003; 2).

AI solutions to the problem

This study finds that technology helps to close communication gaps in multilingual group tasks. The most frequently used technology tools in this study are Power Point, at 47%, and Word at 23%. Language translation tools are also mentioned as important. The results may not be generalizable to all situations, however lessons learned can be applied to improve pedagogy in multilingual classrooms.

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