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Code Switching in Moroccan Nursing Education: Exploring Pedagogical Functions and Professors' Attitudes

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Abstract

Adopting Code switching (CS) in education still constitutes a topic of controversial debate across multilingual societies. While some consider it a pedagogical tool that helps learners attain academic knowledge comprehensively, others claim that it is regarded as a sign of imperfect control of language. Within the Moroccan context, only a few rigorous studies have approached CS from a pedagogical perspective as this study is the first to explore its use in nursing education. Thus, this paper aims to measure how frequently CS is used, its functional roles, and professors' attitudes towards deploying it in the Higher Institute of Nursing Professions and Technicians of Health (HINPTH). The study deploys a mixed research design where data are collected through a survey questionnaire distributed to 27 professors. For a full understanding, the survey data are paired with a thematic analysis of findings from a previously conducted study with students within the same institute to ease the interpretation of attitudes and experiences voiced by professors. The findings have revealed that the majority of respondents hold positive attitudes toward CS pedagogical functions in understanding content while some warn against its undesirable learning outcomes. Practically, it is recommended that CS should be judicious and

1. INTRODUCTION

The Moroccan linguistic profile, which is characterized by diversity and complexity, enables Moroccans to alternate different linguistic varieties in their daily interactions. They switch Moroccan Arabic/Tamazight with French/English based on different factors such as speech situations and the involved participants. One of the consequences that result from the contact of these languages is called code switching, the seamless transition between two

or more languages within the same learning environment. This process has become an integral part of formal and academic settings such as classrooms whereas teaching scientific subjects must officially be taught through French as a medium of instruction solely (Cahier des normespédagogiques du cycle licence de l'ISPITS, 2013). The Higher Institute of Nursing Professions and Technicians of Health (HINPTH) in Marrakech is a fertile terrain to investigate this practice since professors and their students share mostly the same linguistic background and tend to switch codes in their classroom interactions. At the international level, a substantial number of studies have been investigated CS in multilingual and bilingual contexts such as Morocco where much importance is given to functional roles and attitudes of this practice in cultural contexts and social discourses. After researching CS studies in 5 major databases, Nazri & Kassim (2023) revealed that recent literature mainly associated the use of CS with issues such as identity, the construction of meaning, the persuasiveness of advertisements, and various language styles. On the other hand, CS is also investigated within academic contexts where teachers and students are in interaction. On whether CS could influence learners' English performance, Castillejo et al. (2018) found out that there is significant relationship between the respondents' frequency on the use of CS and their English performance in the classroom. The present study, however, seeks to explore the possible functions CS can serve, the frequency of its occurrence, and professors' attitudes toward adopting it as a teaching strategy in Moroccan higher education, particularly in content-based classes (HINPTH).

Thus far, the study includes four sections. The first one provides a literature review on code switching with specific reference to its definition, its types, and its use in education. It reports what has been said about CS in recent literature and previous related studies. The main pedagogical functions of CS set by Ferguson and others have also been put forward. The second section is more practical. It is devoted to research design and the adopted methodology for data collection. The last section analyzes and interprets the obtained data. Before concluding, the paper discusses the obtained findings and then paired them with previous findings from another study on students' attitudes and perceptions towards the use of CS within the same context (Elbouchti, 2022). In sum, the present study seeks to contribute to the ongoing debate about deploying/not deploying code switching in education and provides practical insights about situations where CS is considered beneficial and when it is a hindrance to the teaching-learning process.

1.2.Research Questions

To achieve the research objectives stated in the introduction, the following questions are the triggers of the present paper:

1. Do professors code switch in the Higher Institute of Nursing Professions and Technicians of Health classes?
2. How frequently do they code switch?
3. Whatfunctionsdoes code switching serve in switch in the Higher Institute of Nursing Professions and Technicians of Healthclassroom settings?
4. What are the professors' and students' attitudes toward the use of code switching in switch in the Higher Institute of Nursing Professions and Technicians of Health classes?

2. LITERATURE REVIEW

Code switching is a common practice among learners and professors in most bilingual and multilingual higher educational contexts. In literature, Code switching definitions, functions, pedagogical purposes, and attitudes toward its usage in mainstream education have been investigated by several researchers. Through their fieldwork studies, some of them (Ahmed &Jusoff, 2009; Alenzi, 2010; Bilgin& Rahimi, 2014; Jinxia, 2010; Ibrahim et al., 2013; Rivera & Mazak (2017) prove the vital role it plays as a teaching strategy to enhance the quality of learning while others indicate that it might be a barrier to the process of learning (Johansson, 2014; Julianne &Hammink, 2000; Lin, 2013).

2.1.Code switching

Code switching made its first appearance in Weinreich's Seminal *Languages in Contact* (1953). Through his definition of what it means to be an ideal bilingual, the author implicitly mentions the idea of code switching.

> The ideal bilingual switches from one language to the other according to appropriate changes in the speech situation (interlocutors, topics, etc.), but not in an unchanged speech situation, and certainly not within a single sentence (Weinreich, 1953: 73).

Weinreich's definition suggests that CS occurrence depends primarily on a certain setting/situation that gathers different participants who are discussing a particular topic. The ability to switch between two languages and more, according to these variables, is what makes a perfect bilingual. Subsequently, CS received the attention of several scholars and researchers. One of the most influential scholars with whom CS is frequently associated is Gumperz (1982). He explicitly defines CS as "the juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or subsystems" (Gumperz, 1982, p.59). Within the same vein, (Poplack, 1980) defines, in much the same way, the term as "the alternation of two languages within a single discourse, sentence, or constituent" (Poplack, 1980, p. 583). Later, Peter Trudgill (1992) describes CS as "the process whereby the bilingual or dialectal language speakers switch back and forth between one language and another within the same conversation" (Trudgill, 1992, p.16). This process, as Beardsmore (1982) notes, is not random but rule-governed. Worded differently, Beardsmore goes hand in hand with Weinreich's definition in that CS occurs due to factors such as topic of the conversation, the code being used, the situation, and the participants.

In addition to these, other researchers such as Cook (1991), Baker (2006), Nilep (2006), Bailey (2000),Jdetawy (2011), and Momenian & Samar (2011) have investigated the process of CS and provided mostly similar definitions. However, CS in the present paper is not investigated from only a sociolinguistic perspective; but also seen from a pedagogical view point. Thus, as a working definition, CS in this study means any switch between two languages (learners'/professors' mother tongue and French as a medium of instruction (MOI) in the HINPTH classes) for communicating and scaffolding content rather than an end in itself.

2.2.The evolution of code switching in education

In the dynamic landscape of education, the use of CS in education has changed in terms of the way it is perceived by past researchers such as, among others,Wong-Fillmore, 1985; Chaudron, 1988; Ndayipfukamiye,1996; Julianne & Hammink 2000;Cook, 2001; Sert, 2005; Gardner-Chloros, 2009. and recent researchers like Boukous, 2011; Then & Ting; Wei, 20112011; Lin, 2013; Bahous et al., 2014;Laghmam, 2016;Al-Qaysi &Al-Emran, 2017; Benchiba, 2018; Adroish and Razi, 2019; Bagui & Adder, 2020,and Yamat et al., 2020. CS is, as AitAazzi (2104) considers it, a "natural product and a hallmark of bilingualism and bilingual education where students consistently receive information in two languages" (Morocco World News, 2014).

In the past, opting for learners' mother tongue/ CS was perceived negatively. Such a claim was associated with the fact that instructors who code switch while lecturing are either not pedagogically proficient or linguistically incompetent in the language of instruction (Lin, 1996; Julianne& Hammink, 2000; Sert, 2005). Thus, they resort to CS whenever a failure to convey the intended content occurs.

In view of this, Chaudron (1988) and Wong-Fillmore (1985) opine that less exposure to the target language hinders learners' language performance and conceptual knowledge. By contrast, enough input in the language of instruction (L2) enables learners to build a solid linguistic repertoire. Thus, the less a learner relies on CS, the less the habit of thinking in L1(students' mother tongue) to produce a spoken or written discourse in L2 is decreased.

More recently, CS has become the norm in settings where more than one language is spoken. For some researchers, Ndayipfukamiye (1996), Cook (2001),and Wei, (2011), classroom CS has become a common practice that underpins the learning/teaching process in different ways. It smoothes content access and makes it more comprehensible for learners. CS encourages interaction and enhances the process of communication among learners and their professors. Gardner-Chloros (2009) adds that CS is not to be regarded as a sign of language competence or incompetence; it is by contrast "beneficial than harmful at the individual level" (Gardner-Chloros, 2009; p. 180).

2.3.Previous studies on code switching within the educational context

In a study they conducted about the role of CS in teaching content-based classes (Science and Mathematics), Yamat et al., (2020) found that it is a strategy that scaffolds learners' understanding of these subjects. The findings of the study go hand in hand with what Vygotsky's theory of learning comes up with, that scaffolding enhances students' learning. This means that learners need assistance till they feel more independent and more capable of understanding and doing activities they don't use to accomplish themselves.

In the Tunisian educational context, Bach **Baoueb**& **Toumi** (2012) investigated a study on the use of CS among students of Economics and Management at Sfax University. Through students' interactions, the researcher was able to explore the prominent motivations for their switches. The results show that most instances of CS are primarily used for clarifying hard terminologies, encouraging participation, and due to students' low

proficiency level in French as a Medium of Instruction. Although few professors don't admit their use of CS in the classroom, the majority confirm the opposite and even tolerate switching whenever the goal is communicative.

Although researchers across the world have devoted substantial parts and chapters to the use of CS in education, this practice is still a topic of much controversy. Checking the Moroccan research database proves that only a few rigorous studies were undertaken in this regard. Among the studies that have been conducted on CS from a pedagogical point of view are Luomala (2016), Laghmam (2016), Dahia (2019), and Outbir (2019). All these studies are published BA or MA monographs. Most of them refer to CS as the use of students' mother tongue in a setting where French or English is taught. As a limitation to the findings they found, none of them have tackled the use of CS either in higher education or in content-based classes. Thus, the present paper aims at filling this literature gap as it is an attempt to provide insights on how much and for what reasons is CS used from professors' teaching experience,their attitudes, and their students' standpoint.

2.4.The pedagogical Functions of code switching

In addition to the previously mentioned functions of CS, other studies testify this behavior to discoverthe motivations behind its use. The most known classification of CS pedagogical functions is the ones suggested by Ferguson (2003). CS is mainly used for:

Curriculum access: teachers use CS to communicate content in a more comprehensible way. Mattson &Burenhult (1999) refer to this function as 'topic shift'. As the term suggests, the instructors shift to students' L1 to make the delivered content meaningful. In this way, teachers activate students' previous knowledge in L1 with the new content in L2 to construct meaning. Within the same camp, Mattson &Burenhult (1999) add that CS is motivated by its repetitive function. For instance, a teacher may introduce the content first and then repeat it in the learners' mother tongue. However, this practice may affect students' performance and teach them laziness.

Classroom management: teachers code switch to control students' behavior, check their home assignments, or reprimand latecomers. This function also includes encouraging or praising students for doing well. In the Malaysian content-based classes, Othman and Saat (2009) undertook a study to explore the main language challenges pre-service science teachers experience during the teaching practicum and the strategies they deploy to solve them. It is reported that most pre-service teachers use CS (English and Malay) as a teaching strategy in the classroom to gain the attention of their students.

Interpersonal relations: teachers opt for code switching to build a positive rapport with students and emotionally minimize student-teacher distance. In other words, it is used to humanize the effective climate of the classroom. According to Mattson &Burenhult (1999), It is referred to as affective function. Herein, code switching is used to create a solid and intimate student-teacher relationship.

Communicative tool: classroom CS also is considered a communicative tool. In this respect, Reyes (2004) conducted a study that does not support the negative perspective towards CS as a mark of language incompetency. Rather, for Reyes, CS is considered a strategy that reflects students' 'communicative competence' in the classroom. It is used "to

achieve communicative goals" (Reyes, 2004; p. 94). Within a similar environment to our study, the same results were found concerning the communicative role CS plays among students of economics and management at Sfax University in Tunisia. In this setting, most occurrences of CS are used "for clarification, explanation, and enhancement of classroom participation" (Bach **Baoueb**& **Toumi**, 2012; p. 279. Important to note, the Tunisian language policy that is adopted to teach scientific and technological subjects is similar to the Moroccan one. After the failure of Arabization, the Tunisian language policy experienced 'unstable linguistic vicissitudes' that resulted in a lack of language proficiency at most educational levels. The use of CS in this study is attributed, to a great extent, to students' lack of proficiency in French as MOI.

The review of related literature discussed so far has shown that CS in education can be analyzed in different methodologies and from different perspectives. While some studies analyze only students' data, others investigate teachers' discourse in the classroom. Yet, a more informative study makes use of both. In our case, only professors will be our respondents as we have already reported students' voices in a previously published article within the same setting, HINPTH of Marrakech (Elbouchti, 2022). The results of the previous study will be used as a reference for comparison in the analysis part. Importantly, CS also differs from the context where language is a medium of instruction in content-based classes and the contexts where it is a school subject itself. In the former setting, language is not the focus but a mediating tool for content delivery.

3. RESEARCH DESIGN AND METHODOLOGY

In Moroccan higher education, there is widespread multilingualism and multiculturalism. Moroccan Arabic, Tamazight, and Hassani are the mother tongue of Moroccan students. In HINPTH classes, some students are also enrolled from different countries, particularly African ones. Because of the colonial history that Morocco went through and due to the implemented language policies, students are taught content subjects in French as a medium of instruction. This multilingual context is the environment where much occurrence of CS is prevalent and where university professors and their students have mostly one linguistic repertoire in common(Moroccan Arabic). With these considerations in mind, the nature of our research questions and its objectives suggest that the mixed method (both qualitative and quantitative data) would be more compatible and beneficial. It is a useful approach to achieve an in-depth understanding of professors' attitudes toward the pedagogical use of CS in classroom settings.

Data collection is a significant step in any research. The data can be taken from written documents, observations, questionnaires, and field notes. Thus, the present paper is based on data from two sources: professors' attitudes and experiences whose data are collected through a quali-quantitative open-ended questionnaire, and their students' voices whose voices and opinions were previously collected in Elbouchti's (2022).

To obtain data, official permission was sought from the Faculty of Letters and Human Science at Ibn Zohr University in Agadir. ThroughGoogle form application, the questionnaire was distributed to all professors at HINPTH in Marrakech to take part in the study. The procedure of sharing the questionnaire with professors for completion was mediated by the coordinator and the principal of HINPTH in Marrakech. The main disciplines being taught are Kinesiotherapy, Orthopedic nursing, Radiology, Mental

Health, Polyvalent nursing, Neonatology and Pediatrics, Family and Community Health, Mid-wife, Laboratory, Anesthesia and Intensive care, and some common subjects such as Biology, Maths, and Law.

Accordingly, the obtained data were described and analyzed in terms of statistics using Excel (charts, tables, figures, and percentages) and SPPSS software for correlations. Other possible comparisons between variables are made. As for analysis and discussion, integrating some items into major themes has also been put forward. To ensure reality and reliability, our informants were requested to participate equally and voluntarily in the study. For ethical considerations, they were told that their information would be used exclusively for research purposes. They were not asked to provide their names and their emails.

4. DATA PRESENTATION AND ANALYSIS

Data were obtained over 20 days toward the end of the school year. The distributed questionnaire consists of four sections and fifteen items. The first section is designed to get respondents' background information (gender, specialty, and years of experience). The second section raises questions about students' language proficiency, CS frequencies, and whether the use of CS is performed randomly or with professors' awareness. While the third sections gather data on the pedagogical functions of CS, the last one reports professors' attitudes toward its use as an instructional tool in content-based classes.

4.1. Participants' background information

A total number of 27 professors from the HINPTH of Marrakech took part in this study, constituting 17 females and 10 males. The number of students who were previously recruited for the same study was about 145 ranging from different disciplines (Elbouchti, 2022).

As for professors' teaching experience, most of them (20) are reported to have between 1 and 10 years of experience. Only 7 of them have between 10 and 20 in the classroom while none of our respondents seems to have more than 20 years. This does not mean that professors with over 20 years of experience don't teach at the institute, but probably they didn't have the willingness to participate in the study.

To have a general idea about the IPSITS classes, the respondents participated from a range of disciplines, teaching different subjects. Important to note, some professors may teach a common subject, law for instance, to more than one discipline. Table 1 below shows the distribution of the disciplines and subjects being taught.

Table 1. *Content-based disciplines/subjects*

Disciplines/ subjects	%	N
Radiology	29.6%	8
Kinesiotherapy	18.5%	5
Mid-wife	11.1%	3
Mental health	11.1%	3
Laboratory	7.4%	2
Anesthesia and intensive care	7.4%	2
Orthoprothese	3.7%	1

Biology	3.7%	1
Maths	3.7%	1
Law	3.7%	1
Total	**100%**	**27**

Although the researcher has addressed other disciplines such as intensive and urgent care, polyvalent nursing, neonatology and pediatrics, and family and community health, professors who teach these specialties did not respond to the questionnaire. Their non-involvement might be attributed to the time in which we distributed the questionnaire as it was time for examinations and correction by the end of the year.

As mentioned before, the means of instruction through which students receive academic knowledge is French. When professors are asked about their learners' level in French, their responses are shown in Figure 1 as follows:

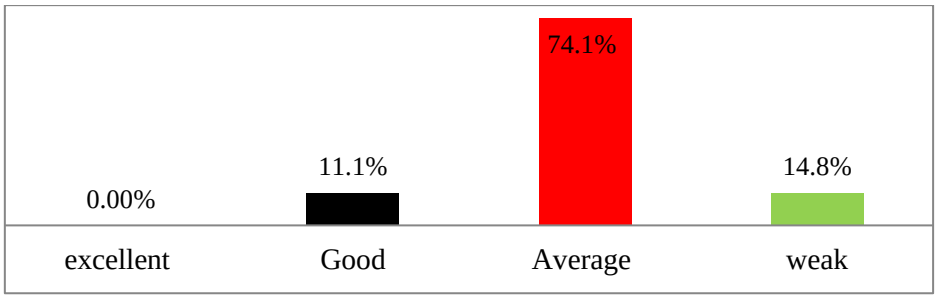

Figure 1:*professors' evaluation of their students' proficiency in French*

As can be noticed from Figure 3 above, 74.1% of the respondents state that their students have an average level in French while none of them is excellent. 14.8% and11.1% choose weak and good levels respectively. These percentages show that there is a considerable lack of proficiency in students' level in French. According to Elbouchti's (2022), findings show that "only 4.83% of the students have some degree of fluency in French. 35.86% of them have a good level while the highest percentage (52.41%) represents those who have an average level"(Elbouchti, 2022, p.23). This decrease could be attributed to the vicissitudes of the Moroccan language policy students have gone through from primary school until the undergraduate level. While trying to implement the Arabization process, students learn scientific subjects in Arabic in primary, middle, and secondary school. Then, they are taught these subjects in French in tertiary education. For the time being, secondary, and higher education students are back to French as MOI while the primary level does not undergo any change. Seemingly, the transition has created some kind of confusion among students at all educational levels, including the post-graduate one where a shift from French to English is made. The same results were found among students of Economics and Management at Sfax University as Tunisia and Morocco, among others, share a common colonial history (Bach Baoueb&Toumi, 2012).

4.2. Professors' frequency of using CS in the classroom

Before knowing the extent of CS use, professors were asked whether they use it in their classroom discourses. In numbers, their responses revealed that CS is a reality that cannot be avoided as long as the learners' language proficiency level is weak. One may assume that this correlation between students' level in French and professors' tendency to

use CS is legitimate as the same result has been reported in Elbouchti, (2022). The answer to whether professors code switch is presented in Figure 2 below:

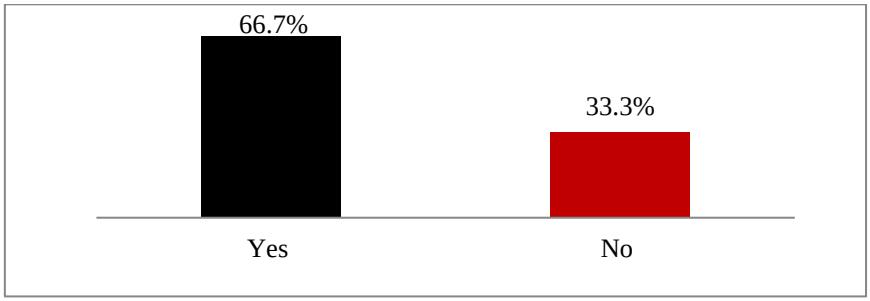

Figure 2.*Professors' responses on whether they use code switching in the classroom*

The majority (66.7%) of the participants confirm CS existence in the classroom while only 33.3% (9 participants) claim the opposite. This result is, to some extent, reasonable if compared with the previous results on students' proficiency levels. In other words, those who state that the majority of students possess an average level in French are mostly the same who opt for CS in their teaching practices. In a follow-up question to know how frequently CS is used, the participants were given a Likert scale that were assigned codes from 1 to 4 (1=always, 2=often, 3=rarely, 4=never). Their responses appeared in Figure 3 as follows:

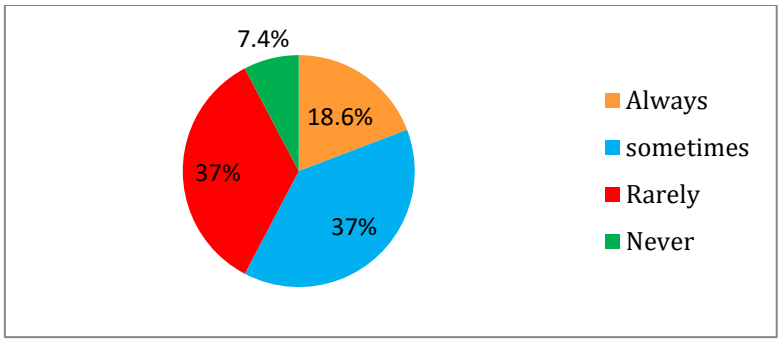

Figure 3. *Professors' extent of using CS in the class*

From the responses in Figure 5 above, it can be seen that ten participants (37%) reported that they sometimes opt for CS in their teaching practices. Ten professors (37%) responded that they rarely use it while for five of them (18.6%), CS is a regular behavior. On the other hand, only two respondents (7.4%) never code switch, particularly in anesthesia. If we associate students' level with professors' tendency to use CS, one may argue that these two variables are fundamentally interrelated as students who are enrolled in Anesthesia and Intensive Care are supposed to be higher achievers due to the selection procedures and the difficulty of the entrance exam they have to take before being accepted. Compared to the obtained data of students, Out of the 72 students surveyed, nearly half (49.70%) indicated that their professors frequently engage in code switching during classroom instruction. A total of 47 students (32.4%) reported that their professors consistently employ code switching, specifically alternating Moroccan Arabic with French. In contrast, a smaller proportion, comprising 26 students (17.9%), mentioned that

their professors rarely engage in code switching. Both findings show that CS is there and it is only the frequency of using it that differs (Elbouchti, 2022).

4.3. CS pedagogical functions in HINPTH classrooms

To investigate the motivations for the use of CS, two successive questions are formulated for thispurpose. The first is quantitative. It provides the respondentswith a list to choosefromapproximately 12 instructionalroles CS may serve in the classroomcontext. Meanwhile, professors are alsogivenanother option thatindicates "none of all". The follow-up question is qualitative as itsought to know otherpedagogicalfunctionsbased on participants' personalteachingexperience. The results of the first question are described in Table 2below in the form of numbers and percentages.

Table 2.*CS pedagogical functions*

Professors code switch to:	**N**	**%**
Explain new/difficult concepts	18	75.0%
Clarify instructions during the course	9	37.5%
Clarify instructions during scientific experiments	9	37.5%
Check students' understanding	12	50.0%
Maintain classroom discipline	4	16.7%
Provide help to low achievers or those with special needs	19	79.2%
Praise students/ give feedback about their performance, or boost them to participate.	8	33.3%
Build interpersonal relationships/good rapport with students.	13	54.2%
Capture students' attention and create an interactive classroom	15	62.5%
Create an anxiety-free atmosphere/ sense of humor.	18	75.0%
Discuss issues related to religion or identity.	9	37.5%
None of the above	3	12.5%

The above data show that the respondents have chosen some CS pedagogical functions over others with varying proportions. Most cases in which CS is highly used are found when professors tend to provide help to low achievers and students with special needs (79%), explain new/difficult terms (75%), create an anxiety-free atmosphere(75%), capture students' attention and boost them to interact more (62%), build a positive rapport with students (54.20%), and for checking comprehension (50%). The other functions (CS for clarifying instruction, giving feedback, discussing religion/identity, and maintaining classroom discipline) didn't receive much importance as the percentage of the participants who selected such choices ranged between 16.70% and 37.50%. However, only 12.50% report that CS serves none of the suggested functions. Probably, these participants are the ones who claim that they don't use CS in their teaching practices at all. Based on the obtained data from students' surveys, the contexts where CS occurs are illustrated in Table 3 below (Elbouchti, 2022.p.24).

Table 3.*Students' views about the contexts where CS is used*

Contexts	Responses (yes)	
	N	%
- To give instructions	60	41.7%
- To check understanding	109	75.7%
- To motivate us	92	63.9%
- To give us feedback	61	42.4%
- To explaindifficult terminologies	131	91.0%
- During an experiment	64	44.4%
- In the case of distance learning	44	30.6%
- For a sense of humor	112	77.8%

Following the previous analysis, a subsequent qualitative item is formulated to discover more functional roles of CS. Table 4 below reports all the functions that professors have identified. Their responses are translated from Arabic and French into English. Some responses are integrated into one function as they express the same idea.

Table 4. *Professors' motives for adopting CS in HINPTH classrooms*

Professors	Responses (the researcher's translation)
P1	"CS is deployed in order not to marginalize students with a low proficiency level in French. It is a kind of discrimination if French only is used."
P2	"To accelerate comprehension and facilitate the learning process"
P3	"To get an effective performance"
P4	"For interaction"
P5	"To make target language (French) likable and easier for all students to understand".
P6	"For greeting"
P7	"Code switching should be used during exams. It is also helpful among learners in the case of group work".
P8	"To decrease stress and boredom"
P9	"CS helps learners be more attentive, not being lost when something is not clear, and enhances their academic performance. Within this environment, students won't lose passion for a professor who is more comprehensive and flexible, a professor who believes in their mental abilities. Therefore, an interpersonal relationship between all members of the class is built. Students would feel at ease while receiving knowledge instead of being careless and unmotivated to learn".
P10	"To contextualize certain situations and explain them through students' real socio-cultural life".
P11	"Facilitating the comprehension of scientific concepts through CS makes it easy for students to perform well in exams. It is also a time-saving strategy".
P12	"Using students' L1 in teaching is a sign of belonging to a common identity".
P13	"Classroom management"

If we compare Table 2 with Table 4 above, one may notice that professors add more CS functions. Qualitative data provided in Table 4, however, seem more concrete and precise. It is so in the sense that each professor suggests a function(s) based on his/her personal teaching experience. CS, as it is apparent, is used as a technique to ensure equality and integration, accelerate comprehension, decrease stress and boredom, motivate the unmotivated, contextualize certain situations, to show belongingness, during exams, and for group work.A summary of the major themes in which CS can be used is provided in the discussion section.

4.4.Professors' attitudes towards the use of CS as apedagogicaltool in teaching

The last section of our questionnaire reveals mixed attitudes towards CS. While some professors approve it as a helpful instructional tool, others consider it a hindrance to the learning-teaching process. To have an in-depth presentation of the obtained data, five items are statistically described and analyzed below:

Q 9. In your opinion, a professor who code switches in the classroom is:

a. Flexible
b. Incompetent in the language of instruction
c. *Other, pleasespecify…*

As a response to this item, it has been found that professors' attitudes vary. They consider a professor who uses CS as being either flexible, incompetent in French, or other related responses. Their attitudes are summarized in Table 5.

Table 5. *Attitudes towards professors who use code switching in the classroom*

A professor who code switches in the classroom is:			N	%
a.	Flexible		18	66.7%
b.	Incompetent in the language of instruction		1	3.7%
c.	Other, please specify…	P1 "Maybe both responses (flexible and incompetent)"	1	3.7%
		P2 "For me, both cases could be true. Sometimes, professors find themselves obliged to switch not only to Moroccan Arabic but also to English to explain the content to students from Nigeria, Guinea, and other African countries"	2	7.4%
		P3 "it depends on the frequency and the reasons for using CS"	1	3.7%
		P4 "I think that even being competent, professors should take into account students' lack of understanding and their feelings as well. Not all of them are of the same level. For me, CS is a characteristic of a good professor. Unfortunately, most professors opine that CS is a hallmark of lack of proficiency".	1	3.7%
		P5 "A code switcher professor is flexible	2	7.4%

	if he/she tries to adapt to the level of the learners"		
Total		**27**	**100%**

(Translation mine)

The obtained results in Table 5 above indicate that the majority of the respondents (66.7. %) admit that a professor who uses L1 and L2 alternatively is more flexible than one who relies on the sole use of the medium of instruction. By contrast, only one respondent (3.7) claims that using CS is associated with incompetency. Other given attitudes seem more informative. P2, for instance, contends that professors' competency and flexibility are both required. Although French is the language of instruction in the HINPTH, the mastery of English is also helpful as it is important for CS between French and English, a language that foreign students understand more. P3, on the other hand, opines that flexibility depends on how much extent CS is used and what purposes it is used for. This may entail that the frequency of CS should be limited and its use must be purposeful. Furthermore, P4 adds that there is no harm in being flexible as long as learners understand the content and feel more comfortable. Thus, it is deduced that whatever language is used, the focus in content-based classes is more on comprehension rather than the means of instruction itself.

Q10. Using CS as a teaching strategy is:

a. Time-saving
b. Time-wasting

Regarding time as an important variable in teaching, it can be seen that a significant number of participants argue that CS is a time-saving strategy. Notwithstanding, only a few of them declare the opposite. Professors' opinions are voiced in Figure 4 as follows:

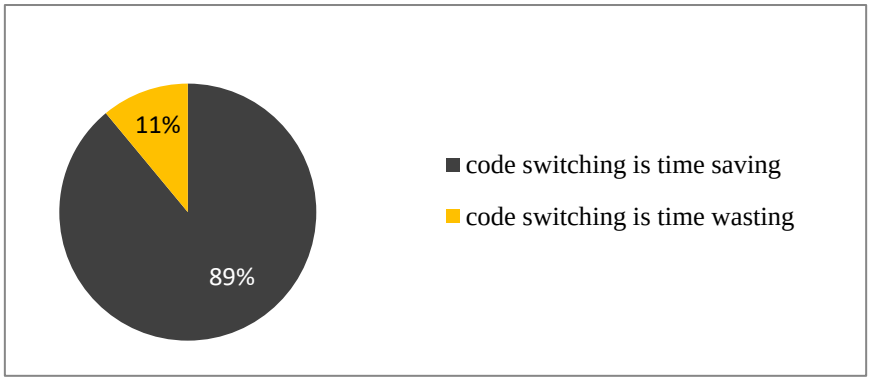

Figure 4.*CS as a time-saving/wasting strategy*

The fact that only a few participants 11% admit that CS is time-wasting indicates that this teaching tool is favored as long as it has the function of saving time. Within the same camp, further results obtained from the following item confirm the effectiveness of adopting CS as a pedagogical tool.

Q 11. Do you think that CS between Moroccan Arabic (MA) and French as a medium of instruction:

a. ***Is an effective teaching/learningstrategy?***
b. ***Impedes the teaching/learning process and teacheslaziness?***
c. ***Has no impact at all?***

When participants were asked whether CS underpins the teaching/learning process or undermines it, most cases (74%) go for choice (a)while 6 (22%) respondents stated that CS has no impact at all. On the other hand, only 1 (4%) participant claims that CS increases reliance on students' mother tongue and teaches laziness. As Figure 5 demonstrates, participants' responses vary significantly.

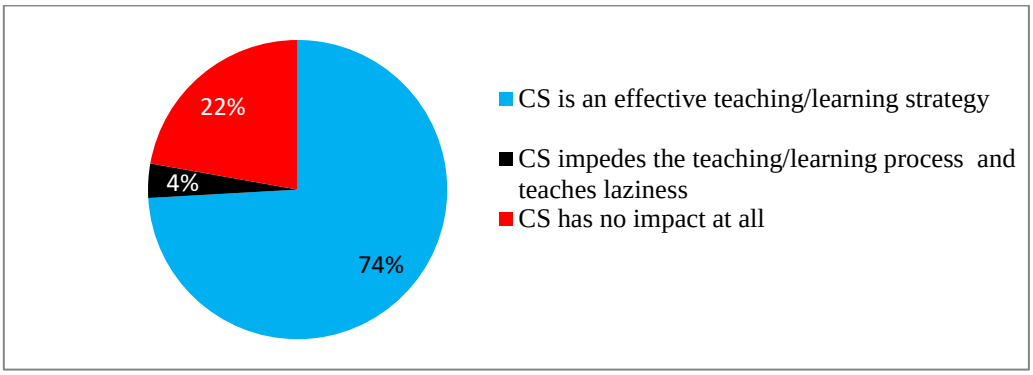

Figure 5.*Professors' Attitudes towards CS as a teaching strategy*

Regarding students' perspectives, a significant number (85.5%) believe that code switching contributes positively to learning and aids in better comprehension of the content. A minority (6.90%) express the view that CS has no discernible impact, suggesting it neither enhances nor hinders the learning experience. Conversely, eleven students (7.6%) perceive CS as an obstacle to effective teaching, asserting that it fosters laziness(Elbouchti, 2022.p.26). To some extent, this percentage aligns with the previously obtained data of professors.

Given that previous results have shown that professors hold positive attitudes towards CS, another item is put forward to get more attitudes on the appropriate extent to the use of CS.

Q 12. To what extent do you think code switching should be used in content-based classes?

a. ***Always***
b. ***Whenever the need calls for that***
c. ***Never***

This question seeks to measure attitudes towards the ideal extent of CS use. Figure 6 demonstrates professors' responses in this regard.

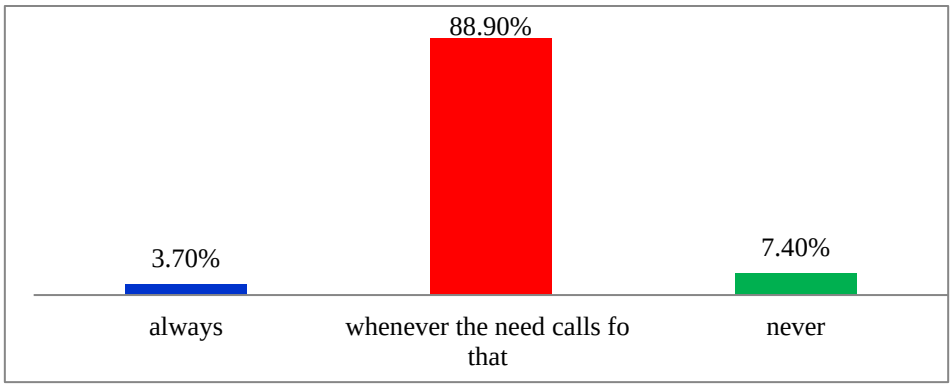

Figure 6. *Professors' attitudes towards the optimal frequency of using CS*

From Figure 6 above, it can be concluded that most professors (88.90%) advocate the purposeful use of CS. This entails that they are aware of the fact that using L1 just for the sake of using it is undesirable. This is apparent from the other choice "always" which is selected only by one participant (3.7%). On the other hand, 2 respondents (7.40) contend that CS should never be used. Although they constitute a low percentage, some professors don't tolerate the use of CS in their classes whatever functions it serves.

Last, professors were also asked to display their attitudes towards the relationship between students' level and the frequency of using CS in content-based classes. The question is put forward as follows:

Q 12. Do you think that CS frequency changes according to students' level?

Yes No

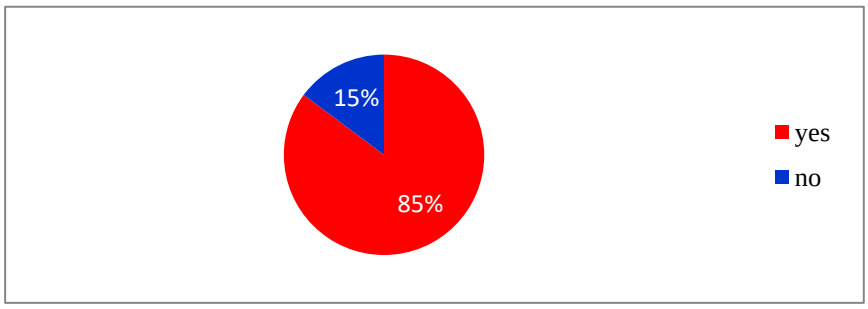

Figure7. *Professors 'attitudes towards the relationshipbetweenstudents' level and CS frequency*

From Figure 7 above, most participants confirm that students' level is a measure of the allowed frequency of CS use. This indicates that the more students are proficient in the language of instruction, the less CS is opted for. Therefore, CS is believed to be used frequently in the first years of undergraduate students as they encounter, for the first time, new terminologies, new ways of teaching, and new parameters of evaluation. Thus, it can be concluded that most professors probably code switch to cope with their students' limited language competence.

5. DISCUSSION OF FINDINGS

The obtained findings are direct answers to the four research questions raised earlier:

1. Do professors code switch in the Higher Institute of Nursing Professions and Technicians of Health classes?
2. How frequently do they code switch?

3. Whatfunctionsdoes code switching serve in switch in the Higher Institute of Nursing Professions and Technicians of Healthclassroom settings?
4. What are the professors' and students' attitudes toward the use of code switching in switch in the Higher Institute of Nursing Professions and Technicians of Health classes?

As a response to the first question, it seems that CS does exist in most HINPTH classes. Up to (68%) of our participants assert that CS is a part of their teaching practices while 32% of them disconfirm the statement. Similarly, students also do confirm their professors' use of code switching. 95.90% of students think that professors shift from French, as a medium of instruction, to students' mother tongue, Moroccan Arabic(Elbouchti, 2022). This implies that CS is highly present and can't be overlooked. It is a practice that deserves a place in professors' and policymakers' agendas. The second section of the questionnaire has been designed to find out an answer to the third question, the main functions CS serves. Three tables (see tables 2, 3, and 4 above) have shown interesting findings in this regard.These tables are summarized into the following major themes:

- CS for classroom management
- CS for a smooth content delivery
- CS for interpersonalrelationships
- CS for full integration
- CS for improvingstudents' educationalachievement
- CS for clarification/explanation

It was found that CS has other pedagogical functions in the classroom. It is used for praising students, giving feedback about their performance, boosting them to participate, checking their understanding, and greeting them. Furthermore, professors also believe that CS is a time-saving strategy that can be used not only during instruction but also during examinations and laboratory experiments. With CS, professors opine, boredom and stress could be reduced. These findings indicate that CS is not a random behavior but a role-governed one. It is oftentimes used to serve a certain pedagogical role regardless of how frequently it occurs. Hence, this paper's outcomes go hand in hand with the pedagogical functions suggested by Mattson and Burenhult (1999), Ferguson (2003), Reyes (2004), Othman and Saat (2009), Bach **Baoueb, Toumi** (2012), and Elbouchti (2022).

The third section of the questionnaire, which addresses professors' attitudes towards CS as a teaching strategy, was intended to provide an answer to the third question. As previously mentioned, results on attitudes are mixed. On the one hand, the majority of the respondents display positive attitudes towards such a practice. The arguments that support this view are: a) CS is a time-saving strategy (74%), b) it is an effective teaching /learning tool (89%), and c) it is only opted for when there is a pedagogical need (88.9). The arguments which are not of this view are: a) CS may teach students laziness and reliance on professors' translation (4%), b) it has no impact on the teaching/learning process at all (22%), and c) mostly half of our respondents (48.9%) feel at ease when using French only. All in all, professors assert in the last item that the main factor that controls CS frequency is students' proficiency level. In much the same way, Elbouchti, (2022) concluded that the majority of students (85.50%) at HINPTH show "positive attitudes towards adopting code

switching as a teaching strategy as long as it provides them with a helping hand to better fathom the content. Only a few of them, those who are fluent in French, state that CS may hinder the process of learning. For these, opting for CS makes students lazier and more passive participants (Elbouchti, 2022, p. 30).

To sum it up, the findings of the present study seem to have answered the research questions stated in the introduction. CS is a strategy that should be purposefully and judicially used. However, CS is recommended to be minimized as students' language proficiency level gets higher.

6. CONCLUSION

The present paper has aimed to investigate professors' attitudes toward using CS as an instructional tool in the Higher Institute of Nursing Professions and Technicians of Health (HINPTH) classes in Marrakech, the extent of its use, and the main pedagogical roles it plays in enhancing students' learning performance.The findings from the quantitative and qualitative data analysis along with the findings of the previous study (Elbouchti, 2022) have revealed that CS is a reality in most professors' lectures. CS is found to help manage classrooms, ensure comprehensive content, integrate low-level students, encourage participation, and build a positive rapport among professors and their learners. According to the respondents' attitudes, CS is also believed to uphold professors' delivery of lessons more than undermining learning in content-based instruction. A worth raising point is that limited and purposeful use of CS is highly recommended. Any excessive or aimless use of such a practice may lead to undesirable learning outcomes such as laziness and more reliance on L1. Empirically, the findings of this study seem, to some extent, compatible with results obtained in previous studies in similar educational contexts (Husseing, 1999; Ndayipfukamiye,1996;Cook, 2001; Levine, 2003; Ahmed &Jusoff, 2009; Gardner-Chloros (2009); Alenzi, 2010; Jinxia, 2010; Bach **Baoueb& Toumi**, 2012;Bilgin & Rahimi, 2014;Luomala, 2016; Dahia, 2019; Laghmam, 2016; Outbir, 2019; Yamat et al., 2020,and Elbouchti (2022).

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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