

## Code Switching in Medical Field in Khartoum State

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### Abstract

*This study aims at presenting code-switching and code-mixing in medical field in the state of Khartoum in the Sudan. The case study is three hospitals in Khartoum State. Eventually code-switching and code-mixing takes place in bilingual and multilingual communities. The first part is The Introduction shedding light on the topic which is the study subject. Then the researcher presents the objective of the study. It is to investigate the phenomenon of code-switching and code-mixing in the medical field in Khartoum State. The consequences of repetition of medical terms among medical staff that as a result has its positive impact among the doctors of house man ship. Then the study presents the motives behind the study. The motives are to investigate the variance and the diversity in bilingual and multilingual society. And to what degree is the phenomenon of code-switching will enrich vocabulary building in medical field in Khartoum State. In addition to that we present literature review. The previous studies and what does it add to the field of case study; which is code-switching and code-mixing in the medical field study on three main hospitals in Khartoum State. These hospitals are: Omdurman Educational hospital, the Public hospital in Khartoum North hospital. It is realized that the doctors, and the physicians write their medical report in English language as a foreign language and as a language of education in most schools of medicine. Then we have the conclusion of this academic paper. This study comes to conclusion that code-switching and code-mixing are phenomenon in medical field in Sudanese hospitals in general and Khartoum State hospitals in particular.*

**Keywords:** Language, code-switching, code-mixing, Medical Field

## INTRODUCTION:

(Jack C. Richards and Richard Schmidt, long men Dictionary of Language Teaching And Applied Linguistics, long man, 2010): Sociolinguistics; the study of language in relation to social factors, that is social class, educational level and type of education, age, sex, ethnic origin, etc. linguists differ as to what they include under sociolinguistics.

Many world include the detailed study of interpersonal communication, sometimes called micro-sociolinguistics, e.g: Speech Acts, conversation Analysis, Speech Events, Sequencing of utterances, and also those investigations which relate variation in the language used by a group of people to social factors (see sociolect). Such areas as the study of language choice in Bilingual or Multilingual communities, language planning, language Attitudes, etc, may be included under sociolinguistics and are sometimes referred to as macro-sociolinguistics, or they are considered as being part of the sociology of language on the social psychology of language.

(Ibid): code switching (n) a change by a speaker (or writer) from one language variety to another one. Code switching can take place in a conversation when one speaker uses one language and other speaker answers in a different language. A person may start speaking one language and then change to another one in the middle of their speech, or sometimes even in the middle of a sentence. For example, from the speech of a German immigrant in Australia: Das handled von einem second hand dealer and his son.

"That is about a....."

Code switching can be a sign of cultural solidarity or distance or serve as on act of identity.

The phenomenon of code switching in Medical Field in Khartoum State is quite obvious. Since the Sudan was under British Coltonery for more than 60 years, English language at that time was a second language and the language of Government and education. After independence in 1956. English language has become as a foreign language. Now it is the language of education parallaly with Arabic language the mother tongue of Afro-Arabian Sudanese citizens. This

study targets the staff of medical field in Khartoum State in three hospitals. They are: Omdurman Educational hospital, Khartoum North hospital and the public hospital in Khartoum City. It is realized and it is observed the Doctors, nurses and even patients in this environment are affected by the term of code switching. It is normal to listen to a patient inquiring after a house man ship doctors.

It is observed that due to an interview with a patient in the section of internal medicine in Omdurman educational hospital that X. patient has a good sum manucardic diseases as a result of being around for a long time due to his illness. X. patient has an idea of such terms just like: Co-patient, patient, symptoms side effect of treatment. The repetition of such terminology among doctors, chemists, nurses and physicians enables him to digest such medical terms.

Thus the relationship between sociolinguistic and code switching; code switching is simply defined as using two or more languages in one conversation activity. This phenomenon generally occurs in society but people are not aware of it. All people certainly have a good control of more than one language. The first one is of course the mother tongue language that has been taught since childhood, and the other one is the national language which unites the entire nations in the country.

Although there are some people who have good control of more than two language but at minimum, they have two linguistic repertoires.

Linguistic repertoire can be described as the different variety of languages that someone can use fluently. That is the high level and low level of the language. For example the high level of Indonesian language is the official. Indonesian language with the perfect spelling (EYD: Eiaan Yang Disempurinkan), and the low level Indonesian language is the dialect of the Indonesian language itself, such as dialect of Javanese, Sudanese, Batakese, and other regional dialects. The choice of the code depend on the situation and the participants involved in the interactions. Typical situations settings, interaction, and topic will use typical pattern of the code which will describing the social context of the talk. For example, a typical family interaction would be located in the setting of home, typical participants will be the members of the family member, and typical topics would be family activities. These factors will also influencing the speaker to code switching (Holmes, 2001).

And in order to code switch, that particular person must at least has two linguistic repertoires. The code switching itself now a days has become a trend or style of speaking in a society and this style of speaking in a society and this style of speaking has once been studied in the sociolinguistics.

### **The Objectives:-**

It is to investigate the phenomenon of code switching of Medical Field in Khartoum State. The consequences of repetition of medical terms among medical staff that as a result has its positive impact among the Doctors of house man ship: the new doctors after the policy of decision educational policy makers after the movement of Arabization of academic syllabus. That may lead to solidarity and good mastery of English language as a foreign language. It enhances the phenomenon of Bilingualism and multilingualism. It is to investigate to what extent it will raise the awareness of patient and co-patient with the culture of the terminology language of this Medical Field among the society who uses this code switching. It gives the community of this phenomenon a sufficient and satisfactory well of such terms. It adds to their knowledge a reasonable notion of this culture. It gives an impulsive power of knowledge of more than one language in accordance to the high level of language and the low level of language. It is observed that the medical field culture with its English and Latin languages as spread among Bilingual Community in the Republic of the Sudan. Hence it is thought that the movement of Arabization in academic syllabus is not much affected. It is realized that the medical students after graduation of school medicine tend to sit for Tofel and Ilets Examination in order to find a scholarship of part one and part two in medical specialization. Thus the current trends of Sudanese young people is to streng them the Bilingualism and multilingualism through the phenomenon code switching and to what degree this measurement makes the medical field students more competent in Bilingualism through code switching. Most of Sudanese indigenous citizen have their mother tongue Arabic language as a national language and the language of their tribes which are called vernacular in addition to English language as a foreign language.

### **Motives:-**

The motives are investigate the variance and the diversity in Bilingual and multilingual society. And to what degree is the phenomenon of code switching will enrich vocabulary Building in Medical field in the State of Khartoum. To what estimated this phenomenon will add as a language culture to the new graduate doctors at the stage of house man ship. What are the benefits that may be gained through the window of code switching in medical field in Khartoum State. What is the feed back in the society of patients and their co-patient. It is to trace the intricacies, disparity and discrepancy that can stand as a shield against through code switching. Hence the motives of the study is to realize the input and output of bilingualism and multilingualism through the context of code switching. It is investigated due to the high level of language and the low level of language. Thus it is suggested that the phenomenon of code switching in the medical field needs to be investigated scientifically. And what is the distinction between the high level of language and the low level of language. To what degree does the phenomenon of code switching may cope with the national language and the other vernaculars that are used by domestic Sudanese tribes. What is the feed back of languages interactions through code switching. To what extent social class has its influence on vocabulary building through code switching in a multilingualism community. To what degree it enriches the languages that are used throw browng as example there are may lexical items enter the Dictionary of the mother tongue language due to the context of code switching in the Medical field in Khartoum State.

### **Literature Review:-**

(Mohamed Quriat Alenezi, Mimistry of Education, Gender and Student's Attitude toward code switching: A correlational Study with the Reference to Saudi Arabian Medical Students at North Border University, International Journal of English Language & Translation Studies, 26/07/2016, Kingdom of Saudi Arabia). Stated that; in the last decade, the language contact phenomenon including bilingualism and code switching have received much attention. In this respect, this study aimed to investigate correlation between gender of learner and his/her attitude toward code switching between English and Arabic used in medical courses at Northern Boarder University in Saudi Arabia. To this end, quantitative (questionnaire) research design was used to

collect the related data. The total 189 Saudi Arabian ESP students at Northern Border University (111 males and 78 females) formed the participants of the study. The results of data analysis revealed that there was no significant difference in the student's attitudes toward code switching because of the gender. Both the female and the male students agreed that code switching was more desirable and believed that it made the course easy to understand.

English language has severed as the medium of instruction in universities all over the world. choosing the medium of instruction in teaching and learning is an important decision for educational institutions as well as for learners. However, the policy covering this facet of education is generally controlled by a governing entity which is either one of the following – the ministry. The educational board, or other governing institutions. Decisions concerning the medium of teaching affect the performance of students in the overall subjects including the science subjects and the main recipient of this action comprises the teachers and learners. While deciding on this pertinent educational detail.

The decision to use English as a medium of instruction in countries where it is not the main language can sometimes be problematic for both teachers and students. It has been noted that in bilingual classrooms all over the world, code switching is often used. Thus, in the last decade, the language contact phenomenon including bilingualism and code switching have received much attention. As a matter of fact, the term, 'language control phenomenon', was developed to show the various kinds of language contact phenomenon including code switching, code mixing as well as borrowing. The term also even encompasses phenomenon that are not counted as code-switching such as loan words and interference (Blanc & Hamers, 2000). In-depth and extensive research has been conducted concerning code switching and its uses in the classroom in the form of contextualization cue varies from phonological, lexical and syntactic options to various kinds of both code switching and style shifting. In addition, Amin (2009) stated that in the Arab region, science education is being disseminated even though it lacks the necessary research-based policies and suggested ideal practices. He added that only a small body of knowledge has been dedicated to code switching in relation with learning and teaching of science subjects. Language contact studies generally concentrate on different kinds of language contact scenarios and different categories of

bilingualism. The main issue in where bilingual speakers use two or more languages in a single conversation alternatively (Lesly and Muykem (eds), 1995). In addition, code-switching can be referred to as a national result of the two languages in bilinguals' interaction in two or more than characterized as multilingual or multicultural. The present study looked at the language position and attitudes of Saudi students of the medical college of Northern Border University toward code switching in classroom teaching involving both Arabic and English focusing on gender variation. That is, it aimed to investigate whether gender difference had an effect on student's attitudes towards code-switching between English and Arabic.

Code-switching is a term widely used in reference to language contact. It is the alternate use of two or more than two languages in the same utterance which may be formed of one word, phrase or sentence (Grosjean, 1982). It is also defined as the situation which occurs when bilinguals alternate between two common languages they are proficient in a conversation and the switch occurs in the middle of sentences that includes phrases, words or even parts of words (Grosjean, 1982). Similarly, Skiba (1997) defines code-switching as the alternation between two languages or dialects in a conversation between two individuals sharing the same dialects or languages. He adds that it has various forms such as single word switches, phrase switches, and clause switches. On the other hand, Gumperz (1982:59) defines code-switching as the positioning of two languages belonging to two diverse grammatical systems or sub-systems within the same conversation. In the present study, code-switching is defined as the phenomenon in which bilinguals alternate between words, phrases and sentences of two or more common languages.

Bokamba (1989: 278) defines code-switching as the integration of various linguistic units like affixes – bound morphemes, word-unbound morphemes, phrases and clause of two grammatical systems or sub-systems in the same conversation, i.e. code mixing arises at the intra-sentential level while code-switching arises at the inter-sentential level (Bokamba, 1989: 278) which makes them two distinct concepts. This rationale is Sridhar and Sridhar, 1980; Tay 1989; and Kamwangamalu and Lee, 1991).

The difference between code-switching and code-mixing has been under controversy. While Mc Clure (1978), Bokamba (1988), Kachru (1982), Wentz (1977) and Clyne (1987) as well as others acknowledge

the distinction between the two terms, they differ in their sources of "code changing is the changing of language alternately at the level of the main constituent (e.g. NP, VP, S). In other words, it is a complete shift to another system of language" (P.6). He provided the examples below as depicting code-change:

1. "I put the forks in las mesas".  
(I put the forks of the tables.)
2. "Let's see que hay enel dos".  
(Let's see what there is on two.) (P.6)

Code-mixing is defined by McClure (1978) as:

"The individual's use of opposite language elements which can not be considered to be borrowed by the community. It occurs when a person is momentarily unable to access a term for a concept in the language which he is using but access it in another code or when he lacks a term in the code he is using which exactly expresses the concept he wishes to convey" (P.7).

On the other hand, Gumperz (1982; 59) defines it as, "the juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or sub systems". Myers – Scotton's (1993) definition is a much structured one compared to Gumperz which is "the use of two or more languages in the same conversational turns, or even within the same sentence of that turn". Similar to this definition is Hoffman's which states that code-switching is "the alternate use of two languages or linguistic varieties within the same utterance or during the same conversation" (Hoffman, 1991, 110).

As for code-mixing, according to Bokamba (1989: 278), it is "the embedding of various linguistic units such as affixes (bound morphemes), phrases and clause from two distinct grammatical systems or sub systems within the same sentence and speech event", which implies that code-mixing arises in intra-sentential level as opposed to code-switching which arises in inter-sentential level. Based on this rationale, code-mixing and code-switching are two distinct concepts with the former arising intra-sentential and the latter arising inter-sentential. This explanation is supported by majority of the scholars (e.g. Sridhar & Sridhar, 1980; Tay; and Kamwangamalu & Lee, 1991).

The above definitions present a confusion of terminology use in the field. While some Scholars such as Bokamba (1989), Kamwangamalu (1992), and Sridhar & Sridhar, (1980) contend that



code-switching and code-mixing are two distinct occurrences. The former occurring at the inter-sentential level and the later occurring at the intra-sentential level, other Scholars such as Gumperz (1982), and Myers – Scotton (1993) consider code switching as a general term that encompasses the linguistic alternations at both levels.

Moreover, even with the efforts expended by the scholars in distinguishing between the two terms, some state that these efforts have ended in failure (Blanc and Hamers, 2000). Based on Hamers and Blanc's research, the attempts to differentiate between the two resulted in failure owing to their similarities and to the fact that they are both used to relay similar linguistic and social functions. As such, Hill & Hill (1980) consider the terms interchangeable and use it as such. They stated the [code switching and code-changing] (P.122).

Bilingualism is a concept that refers to the situation of linguistic community whereby two languages are in contact with each other resulting in two codes utilized in one interaction by the bilinguals (Blanc and Hamers, 2000: 6). Mohanty (1994: 13) defines a bilingual person as one who is able to satisfy the communicative challenge of the society through his/her interaction with other individuals in the society in two or more than two languages. In the definition of bilingualism, the proficiency/ competence is generally the main topic of debate. Linguists are of the opinion that a bilingual person is one who is really proficient in both languages. For instance, Bloomfield (1935: 56 cited in Martin-Jones, 2000) defined bilingualism as the almost native proficiency in both languages. On the other hand, McNamara (1967 cited in Blanc and Hamers, 2000) stated that a bilingual person is one who commands the proficiency in one of the four language skills of listening, reading, speaking and writing in a language aside from his native language. Haugen (1953) provided a broader definition by stating that it is sufficient that the speaker is able to produce complete and meaningful utterance in another language to be referred to as bilingual (cited in Martin-Jones, 2000).

(Susan Shiou - maiSu, Huei- meiChu, Motivations in the code-switching of Nursing Notes in EFL Taiwan, Chang Gung College of Technology, Taiwan, En Chu Knorg Hospital, Taiwan, Hong Kong Journal of Applied linguistics 9,2 (2004): PP. 55-71) stated that, Nursing pre-professionals are required to practice writing nursing notes in Chinese before they start to practice nursing in hospitals. However, as soon as these nursing pre-professionals enter the real work

context in Taiwan, they start to write in both English and Chinese. Although EFL learners are taught in Chinese, schools, the result is not effective because social pressures such as time constraints and the need to accommodate are a compelling force that motivates nursing professionals to switch codes. This has led to confusing situation and may have even encouraged code switching in the notes written by the nurses in training or in the work context. What seem to be needed are clearer guidelines which lead to improve communication among medical professionals. Understanding why EFL learner might make certain choices in language use can lead to more to learnt and appreciative attitudes toward the learners full range of communicative detrimental consequences which they have an obligation to bring to the attention of appropriate audiences.

Nursing pre-professionals are required to practice writing nursing notes in Chinese before they start to practice nursing at hospitals. To make sure they write in a standard code (Chinese), all their writing is monitored or corrected by nursing teachers before they can be copied onto the progress notes, which nursing teachers and nursing textbooks claim to have legal status.

However, as soon as these nursing pre-professionals enter the real work contexts in Taiwan, they start to write in both English and Chinese. Not only do they switch codes in a single sentence:

Pt pain, C/O sleeping

(Patient has stomachache, complained poor sleeping quality.)

In Taiwan, where English is a foreign language (EFL), doctors keep medical records and write diagnoses in English, while nurses write in a code-switched/ mixed style.

Although it is a common belief that language competence is the factor which most possibly contributes to the English for doctors/ Chinese for nurses dichotomy, we are not sure whether it should be the way it is. What we can be sure of is that doctors' diagnoses and nursing notes are legal documentation through which medical staff of different shifts communicate with one another, treat and take care of patients. At school and at work, practicing nursing students and staff nurses are required to describe and write down every condition they observe following each given intervention for the patients. For both their subject (nursing) and language (English) teachers; code-switching is not appropriate:

In Taiwan, subject teachers contend that nurses or nursing students should write nurses notes in their first language, Chinese; language teachers argue that nursing professionals need to learn to write in English because of reasons such as the trend of globalization, or the Greek and Roman origin of medical terminology which constitutes the basic lexicon of the nursing register. However, code switching has become the norm in the EFL writing of nursing notes (Su, 2002, 2003). Nursing are taught to write in Chinese during nursing practicums except for medical terminology, which is taught in English. A very stable language phenomenon in nursing note writing is the Chinese-structured, code-switched, and code-mixed writing style, which nurses pass on from one shift to the other. Nurses are trained to not only to read doctors' diagnoses and follow orders, but also to carry out their own assessment and care plan accordingly. They describe what they do from at least four perspective (SOAP). S: Subjective statement from patients' condition and P: planning for patients care according to the assessment.

Doctors, who are nurses' partners at work, tolerate the phenomenon of code switching well since they are not the closet part of the community regarding the function of the language. Nurses notes are for nurses to communicate with those of the earlier and later shifts. The nurses rely on the notes to carry out the care, intervention and earlier orders from doctors. Some of these notes look like the speech act of "orders", because the verbs are often written in their bare forms (e.g. give for gave, keep for kept, check for checked). In the United States, nursing notes are written in the past tense or passive voice to mean doctors' orders were carried out, have been carried out or was done. In the Chinese English nursing notes, most of the time bare forms of verbs are used to indicate past events.

(Salima Abdul-Zahra, code-switching in language: An applied Study, J. Of College Of Education For Women, vol.21 (1) 2010.) stated that, it is obvious, but important fact that in addition to the communicative function of language there is the social function which explains the role that language plays in society. This can be enlightened in sociolinguistics through code-switching. Code-switching, in which one single speaker uses different varieties in his/her speech, is one of the various speech situations of language - variation. There are three types of CS: situational switching, metaphorical switching and conversational switching. This researcher concentrates on the last type

since it suits the aim of the study. Many studies have been conducted to deal with the question "why do bilinguals switch languages?". There are functions and reasons behind switching from one code to another. The theoretical parts of the paper includes those functions after the explanation of language varieties and the mixture of these varieties.

The practical part includes a questionnaire given to twenty bilingual speakers and the analysis of their responses has shown that most of the functions given by them are almost similar to those which have been discussed in the theoretical part. However, the participants have explained some different reasons behind their change of language during their speech, such as to show off or to attract the attention or the interest of others and other reasons.

Language has been defined differently. Each definition points out a certain property of language. The focus here is on the definitions which explain the relation between language and society, since it is the scope of this study. Sociolinguists define language as an interaction between members of a social group.

Finocchiaro (1964:8) defines language as "a system of arbitrary vocal symbols which permits all people in a given culture or other people who learned the system of that culture to communicate or to interact". So, it is the means of which a social group cooperates. Bloch and Trager (1981: 4) define language as "the institution whereby humans communicate and interact with each other by means of habitually used oral-auditory symbols". These definitions refer to the interactive and communicative function of language in a society.

It is stated that human language has many properties: 1.communicative vs. informative (Yule, 1985: 18). 2.displacement (Ibid). 3. arbitrariness (Lyons, 1981:19) 4.duality (Ibid: 20). 5.discreteness (Crystal, 1985: 97), and 6.productivity (Lyons, 1981: 22). Accordingly, all languages are universal in different countries. Halliday (1978: 21) points out that language has to interpret the whole of our experience and it has to express our participation, as speakers in the speech situation. As participants in society, one interacts with other people, takes roles in one's speech, and in doing so, one is making judgment, opinions, feelings...etc. and one does this through language. Halliday (1984: 5) expresses also that "language is used, from an early stage, to regulate the behavior of others". Similarly, Rommetveit (1979:137) states that "we create and present a picture of ourselves through our language use, indicate, our attitude, regulate our

interpersonal relationship and social attachments to groups to establish social bands".

So, language is used by society (social group) to communicate ideas, emotions, and desires by using voluntarily produced symbols and the most important function is the social function in addition to the communicative one. Clearly, these functions and properties of language assure that every person possesses 'language' but with particular forms depending on certain factors such as where he/she was born, who s/he is, what he/she does, to whom he/she speaks and where. Consequently, there are varieties of language.

### **1.Varieties of language:**

To avoid confusion one must start with some matters of terminology such as "variety" and what it contains such as "idiolect", "accent", and "dialect", which the reader may come across. Ferguson and Gumperz (1960: 2-13) make it clear that one of the concerns of linguistics is to find a systematic way to answer such questions as: Are British English and American English one language or two varieties of one language? Do all the Arabic dialects constitute one language or several? To answer such questions there should be a valid widely accepted definition of language. Some definitions have been explained in the introduction, so let's now clarify what is meant by a variety?

Ferguson and Gumperz (Ibid) explain that a variety is:

Any body of human speech patterns which is sufficiently homogenous to be analysed by available techniques of synchronic description and which have sufficiently large repertory of elements and their arrangements or processes with board enough semantic scope to function in all normal contracts of communication. Two sets of varieties are said to constitute different language if they differ significantly, in their treatment of certain phonological and morphological features of a reconstructed parent variety.

Trudgill (1975: 15) explains the reasons behind the existence of varieties in language. One of these is that people migrate to other countries and if people there do not speak the same language, the migrated people have to learn the language of the new society to communicate successfully with them. This makes them speak two languages.

One may speak different varieties of one language and this is due to language changes, language change is another reason behind the

existence of varieties since human's needs are changed continuously. Language, with the passage of time, changes to fulfill human's complex needs of communication and interaction. Trugill (1975: 17) defines a dialect as "one of several different "versions" of a language. It is a form of language distinguished from other forms of the same language by pronunciation, grammar or vocabulary". Trugill goes on explaining that the term "dialect" was borrowed as a learned word, from Greek in the Renaissance. We may notice the distinction between "language" and "dialect" as due to the influence of Greek culture, since the distinction was developed in Greek because of the existence of distinct written varieties in use in classical Greece, each associated with a different area and used for different kind of literature. But their meanings now are different in English from those of the Greek terms. For English speakers, the difference between language and dialect is a matter of 'size' (a language is a larger than a dialect). So, a variety called a language contains more items than one called a dialect lacks.

If one applies these criterion, standard English is not a dialect but a language, therefore, it is used in formal writing. Accordingly, people in Britain habitually refer to languages which are unwritten as dialects.

Ferguson and Gumperz (1960: 2-13) explain that the use of 'dialect' means an inferior language and this use is still widespread but linguists prefer to operate without this distinction. The other use of 'dialect' is to mean any non-standard variety of language.

Hudson (1980: 39) discusses whether it is possible to make boundaries between varieties until one comes to the level of the individual speaker, i.e., the idiolect which is a term used in linguistics to refer to an individual way of speaking or not.

He justifies the impossibility of this matter by saying that there are various differences based on geography (regional dialect). After many experiments, the dialectologists have drawn the conclusion that many items have their own distribution through the population of speakers. Crystal (1994:313) assures that regional dialect divisions are never clear-cut because of the influence of other (e.g. social) factors. Dialects are not only distributed geographically because of two main sources of complexity: firstly, there is geographical mobility-people move from one place to another, secondly, the social class, sex and age.

Therefore, dialectologists speak of social dialects to refer to non-regional differences. Because of these factors, a speaker may show more

similarity in his/her language, people from different social group in the same area. The essential cause of the development of social dialects is the forces of prestige or the lack of it because in any locality the speech of same people is considered more worth imitating.

Falk (1973: 304) states that the speech of people with relatively high incomes and educational backgrounds tends to be quite similar no matter which region of the country they live in. When people move to certain area, they often try to settle in neighborhood where others are from the same background.

Because of the difference in sensitivity to regional and social distinctions between pronunciation and other aspects of languages, it is normal to make a distinction between "accent" and "dialect".

Lyons (1981: 268) states that the difference between the terms "accent" and "dialect" is that the former is restricted to varieties of pronunciation whereas the latter covers differences of grammar and vocabulary; so it is quite possible for different people to speak the same dialect with strikingly different accent.

Crystal (1987: 24) explains that usually speakers different dialects have different accents, but speakers of the same dialect may have different accents too. What makes the national accent so important socio-linguistically is that members of a language-community often react to sub phonemic and phonemic differences of pronunciation in the same way as indicators of the speaker's regional or social provenance. Lyons (1981: 275) states that it has been demonstrated that members of a particular social group will react either positively or negatively to certain accents and dialects without seeing or knowing anything about the speaker.

(Jecah Khadi Gimode, A socio – Pragmatic And Structural Analysis of Code-switching Among the Logoli speech community of Kangemi, NAIROBI, Kenya, Doctor of literature and philosophy, sociolinguistics, University of South Africa, 25 February 2015) states that Bilingualism is a global phenomenon. Over the years it has been propelled by the active forces of modernization and globalization, According to Milroy and Muysken (1995: 4) the contemporary world has become increasingly multilingual due to these two-forces. This view is supported by Romaine (1989:8), who observes that there are about thirty times as many languages as there are countries. According to Prasad (2010, 195), bilingualism develops as speakers of different language meet and interact socially and linguistically described as

language contact phenomenon. These include code-switching, borrowing, diglossia, interference, and transfer, among others, which Milroy and Muysken (1995,10) describes as *marquee transcodigue* (trans coding markers).

Multilingualism is a phenomenon that especially pervasive in Africa due to the great diversity of ethnic groups and languages. Myers-Scotton (1993b, 36, 37) attests to this observation, following her extensive research in Kenya, Zimbabwe and Nigeria.

She identifies the common patterns of bilingualism as being the speaker's own first language. Followed, by an indigenous *lingua franca*, then the official language.

In the case of the city of Nairobi, this trilingual pattern involves the speaker's mother tongue, then Kiswahili and English.

According to Trudell (2009, 1) multilingualism is an international resource and a gift which spreads the circle of communication to more people. She observes that in sub-Saharan Africa multilingualism is often "a pragmatic response" when language communities come into contact. Its significance is, therefore, basically instrumental. Veit-Wirld (2009, 683) concurs with this observation when she states that bilingualism contemporary when Africa is an agent of popular culture, 'creating a local artistic flavor in a global setting'. This, she states, is manifested in song where code-switching is predominant. In the same vein, Fasold (1984,9) posits that a multilingual society is arguably richer than a nation with only one dominant ethnic group. This study examines the phenomenon of code-switching among the logoli speech community of the kangemia area in Nairobi. The switching behaviour studied involves three languages varieties namely; logoli, kiswahili and English. The study is subsumed under two theoretical models formulated by Carol Myers-Scotton. Firstly, the Markedness Models which attempts to explain the social motivations (1993b.) secondly, the Matrix language frame (MLF), (Myers-Scotton, 1993a, 1993c, 1995, 2002, 2005a) attempts to explain the grammatical aspects code-switching in Kangeme.

(ALEKSI MAHDE, Language choice, language alternation and code-switching in the Mercator – Hondius Atlas, Approaching Religion. Vol.6, No. 1. May 2016) states that, the atlas of Gerardus Mercator (Gerardus Cremer), or the Atlas sive cosmographic meditationes de fabrica muni et fabricati figura, is one of first modern atlases and one of the most famous of those compiled in the Netherlands (for general



accounts of the atlas, see Keuning 1947; van der Krogt 1997, 2015). The first (unfinished) edition was published in 1995, but the copperplates were later acquired by Jodocus Hondius (Joost de Hondt) and his business associates. The revised Mercator-Hondius Atlas was published for the first time in 1606 with added maps and texts. The texts printed on verso of the maps were written by Pertrus Montanus (Pieter van den Berg), who was a brother-in-law of Hondius and a Latin teacher. Many subsequent editions of the atlas were produced in the years that followed. The first editions of the atlas were produced in the years that followed. The first additions in Latin, but versions in European vernaculars such as French, German and Italian were produced later as well. The present article focuses on the multilingual nature of the Mercator-Hondius Atlas (1613, edition quarta) by discussing language choice, language alternation and code-switching patterns in different parts of the atlas. The dominant language of the descriptive texts is Latin, but there are also switches into many other languages, including Greek (written in Greek script) and several vernaculars. Furthermore, the map pages tend to indicate the names of different types of area (e.g. cities, seas, and oceans) in different languages. The aim of the present article is to provide a preliminary exploration of the possibilities of approaching the atlas with the aid of concepts and ideas derived from modern code switching studies. I demonstrate how these concepts can be used to describe the language choice pattern in the text and discuss some of the challenges the data poses for a linguistic approach.

### **Recent research on multilingual features in historical texts:**

The study of multilingualism and related phenomena has been a popular topic in linguistics and its neighboring fields, especially since the 1950s. Perhaps the one feature which has received the most attention in this period has been code switching defined variously as, for example, "the juxtaposition within the same speech exchange of passages belonging to two different grammatical systems or subsystems" (Gumperz 1982: 59) or [t]he mixing of language within one communicative event (or stretch of discourse/ text), be it spoken or written (Schendl and Wright 2011 b: 23).

In many of the earlier studies, the focus was on bilingualism as a more general phenomenon, while research on code-switching (henceforth CS) was on the rise from approximately the 1970s onwards. The

earlier studies focused almost exclusively on spoken language and true bilinguals but during the past 25 years or so, research on CS in written materials has become quite common.

The focus of CS studies has varied over the years, but perhaps the most prominent areas of interest have been the grammatical constraints on CS (see, e.g. Myers- Scotton 1993a, 2002; Matras 2009: 129-36; Mac Swan 2014) and the functions of CS (Gumperz 1982; Myers –Scotton 1993b; Garder-Chloros 2009: 42-88; Matras 2009: 114-29). A related problem has been to define CS in such terms as to demarcate it from similar phenomena, such as borrowing (lexical or otherwise) and interference. Traditionally, many researchers have divided CS into at least two categories: Intrasentential and Intersentential. The former refers to switching which takes place within a sentence (or clause), while the other refers to switching at sentence boundaries.

### **The Core of the Topic:**

The researcher has made a field study on three main hospital in Khartoum State. These hospitals are: Omdurman educational hospital, The Public hospital in Khartoum City and Khartoum North hospital. It is realized that the doctors, and the physicians write their medical reports in English as a foreign language and as a language of Education in most Schools of Medicine. Although the Government during the last twenty years has applied the Arabization movement. That is to say to teach in the school of medicine in Arabic. But still most of references are in English, hence the teachers of medicine teach in English and Arabic. This idea has been applied on most of the Universities in Sudan. Still the influence of English is dominant. According to field survey it is found that on these above mentioned hospitals as a samples out of more than 800 hospitals in the Sudan. Some of them are Governmental and some of others are private for economical interest of the owners in the private medical sectors. The researcher finding is that most of Doctors write their medical reports in English and their diagnoses of the sick people. Since they communicate in their mother tongue which is Arabic, still the influence of English language dominant. Thus hereby appears code-switching and code-mixing the researcher has prepared Tables of Lexical Items of English medical work that are used in speech community inside the hospitals in Khartoum State in particular and in the Sudan as generals.

**Table (1): The public hospital and Khartoum North Hospital**

Medical English Words	Medical English Words	Medical English Words
1.Patient.	9.Medicines.	17.Abdomna Pain.
2.Co-Patient.	10.Surgeon.	18.Infection.
3.Diagnoses.	11.Treatment.	19.Analysis.
4.MIR.	12.Plaster.	20.Antibiotic.
5.X- ray.	13.Operation.	21.Abnormal.
6.Care plan.	14.Theatre.	22.Normal.
7.Pass away.	15.Check up.	23.Brain Stroke.
8.Surgery.	16.Pain	24.Cardic disease.

**Table (2): Omdurman Educational Hospital.**

Medical English Words	Medical English Words	Medical English Words
1.Uren.	9.CT. computer Tomography .	17.Amutation.
2.Defect.	10-Injection.	18.Fracture.
3.Genetic.	11.Thermometer.	19.Rupture.
4.Diabetes milletus.	12.Dose.	20.Joints.
5.Hypertension.	13.Gloves.	21.Tablets.
6.Hypotension.	14.Mask.	22.Vomiting.
7.Follow up.	15.Cast.	23.Stigma.
8.Investigation.	16.Pulse.	

It is observed that the table 1 in the public hospital and Khartoum North hospital the medical staff uses code-switching and code-mixing. The nurses at school of nursing acquired their knowledge of nursing in Arabic within the use of English medical terminology. Thus due to their experience in nursing with doctors in Sudanese hospitals they cope with the trends of code-switching from Arabic language as a mother tongue and English language as a foreign language.

Since the doctors in these hospitals write their medical reports in English even though the Sudanese patients have a good idea of these medical English Terms. This is due to direct contact and repetition.

Hereby some examples of medical code-switching in Khartoum north hospitals and the public hospital in the city of Khartoum.

- A. hnl...mltu the analysis.  
Did you make the analysis.
- B. //ain the Co-Patient.  
Where is the Co-Patient.
- C. Mu:nu: // Follow up.  
Who is doing the follow up.
- D. wain natiga the investigation.  
Where is the result of investigation.
- E. S//raft the medicines.  
Did you have the medicine.
- F. //lmisto //indu the round.
- G. ma hiea nti:gat the operation

What is the result of the operation.

It is thought to be obvious that the phenomenon of code-switching exists among the medical staff and even among the patients so far co-patients. In table (1) these English medical terminologies are common in hospitals communities. For example in table 1. Column one words such as: 1. Patients 2. Co-Patient 3. Diagnoses. 4. MIR 5. X-ray 6. Care Plan 7. Pass away 8. Surgery.

These terms are used intensively in Everyday life in hospitals in Khartoum State. The code-switching appears when the medical staff uses their Arabic mother tongue within the usage of these English medical terms by chance and accidentally without much attention. And these means of communication has become common among the patients, co-patients and the medical staff.

This phenomenon become normal in communication in medical field community. Thus due to repetitions all those of concerns has become familiar with code-switching phenomenon in Sudanese hospitals in general and Khartoum State hospital in particular. On one hand in table 1. Column 2. words such as: 9. medicines 10. surgeon. 11. treatment. 12. Plaster. 13. operation. 14. Theatre. 15. Check up. 16. Pain.

The above mentioned English medical terms are used intensively and extensively in communication of code-switching from Arabic language as a mother tongue and English language in medical community communications. Hence, code-switching and code-mixing is quite clear phenomenon medical field society in Khartoum State hospitals. Code-switching and code-mixing is a culture in a bilingual and multilingual community just as the Sudanese community has his/her national language Arabic, English language as a foreign language and more than 3000 vernaculars are used among Sudanese Tribal Societies. Eventually Sudanese people are multilingual community. Such African country rich with many language vernacular, it is normal to have in it the phenomenon of code-switching and code mixing.

In table .2. Omdurman Educational hospital. These examples are taken from medical Sudanese staff; doctors and nurses:-

A. Afh//s the Uren.

Examines the Uren.

B. //ind//k diabetes milletus.

Do you have diabetes milletus history taking.

- C. gi:s the hypertension.  
Measure the hypertension.
- D. Mun//: ////amil follow up.  
Who is making follow up with you.
- E. Adbut the dose.  
Fix the dose.
- F. gi:b 5 injection from //ls//idalia.  
Bring 5 injection from the pharmacy.

Eventually the above mentioned Examples of code-switching takes place in Omdurman Educational hospital. Thus the phenomenon of code-switching and code-mixing is clear among bilingual and multilingual community like the African country the Sudan. And since the Sudan was under British Colloneg, the influence of English language is clear as a foreign language and language of communication in medical field in form of code-switching and code-mixing. Even though the medical students and doctors of house man ship are acquainted and adopted to code-switching and code-mixing.

It is thought to be essential and potential for the medical students house man ship doctors and medical staff to use code-switching since the Sudan as an African country, rich with more than 3000 local vernaculars language. In addition to that the intensive impact of English language as a foreign language. Therefore, Sudanese people are multilingual community. It is normal to find one of the staff uses this tribe vernacular, Arabic language and English medical terms. That is because English in the Sudan is considered to be as a foreign language and the language of Education. The medical staff has to sit for ILETS and TOFEL Examination for the sake of doing part one and part two in many specialization medicine. Mainly in condition they would like to work abroad in Europe, US, Australia ...etc.

Due to the good mastery of English language as a foreign language and the language of Education medical field staff community tends to use code-switching and code-mixing. The phenomenon of code-switching and code-mixing over whelrus the medical society in the Sudan in general and Khartoum State in particular.

Table .2. Omdurman Educational hospital. These lexical English Items are under investigations:- Table .2. Column 1:- 1.Uren. 2.Defects. 3.Genetic. 4.Diabetes milletus. 5.hypertension. 6.hypotension. 7.Follow up. 8.Investigation.

The above mentioned medical English terminologies are used normally in Sudanese hospitals in Sudan in general and in Khartoum State hospital in particular. It is found that most medical field staff, houseman ship doctors, nurses and even though the medical students community used to use such English terms in forms of code-switching and code-mixing. The influence of Sudanese Black African multilingual individuals play a vital role in using code-switching and code-mixing in their communities. Since Arabic language is the national language and the mother tongue to Sudanese people, in addition to the more than 3000 vernacular tribal languages. Moreover to add English language is considered to be as a foreign language and the language of Education Sudan is rich with languages and its culture.

Thus the finding is that medical field staff uses code-switching and code-mixing.

On the other hand Table .2. Omdurman Educational hospital. Column 2 the below medical English lexical items are used by medical staff in forms of code-switching and code-mixing:-9.C.T. computer Tomography. 10.Injection. 11.Thermometer. 12.dose. 13.gloves. 14.Mask. 15.Cast.

The above mentioned medical English terminologies are used normally in Sudanese hospitals in Sudan in general and in Khartoum State hospital in particular. It is found that most medical field staff, houseman ship doctors, nurses and even though the medical students community used to use such English terms in forms of code-switching and code-mixing. The influence of Sudanese Black African multilingual individuals play a vital role in using code-switching and code-mixing in their communities. Since Arabic language is the national language and the mother tongue to Sudanese people, in addition to the more than 3000 vernacular tribal languages. Moreover to add English language is considered to be as a foreign language and the language of Education Sudan is rich with languages and its culture. Thus the finding is that medical field staff uses code-switching and code-mixing.

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The above mentioned medical lexical items are used intensively and extensively in forms of code-switching and code-mixing due to the

usage of mother tongue Arabic language and the shifts to the English language as a foreign language, language of Education and the language of Ex. Collonizer the British Empire at that time.

Even labours like cleaners and other labours, patients and co-patient due to repition use code-switching and code-mixing in medical fields community in Sudanese hospitals in general and hospitals in Khartoum State in particular.

Table 2. Column 3.

The below medical English lexical items are used in forms of code-switching and code-mixing in Omdurman Educational hospital in Khartoum State; they are:-16.Pulse. 17.Amputation. 18. Fracture. 19.Rupture. 20.Joints. 21.tablets. 22.Vomiting. 23.stigma: it used in psychiatric hospital in Omdurman.

The above mentioned medical terminologies are used in medical field among medical staff in forms of code-switching and code-mixing.

The phenomenon of code-switching and code-mixing are due to adaptation of English language as a foreign language and language of Education.

Because the Sudan as an African country rich with more than 3000 vernaculars tribal languages and the national Arabic language.

In addition to that the impact of English language as a foreign languages. The phenomenon of code-switching and code-mixing is dominant among medical field staff in Omdurman Educational hospital.

On other hand Table.1. Column, 1,2,3 there are 24. Lexical medical English items which are used normally by medical field staff in the public hospital and Khartoum North hospital. These lexical medical language are so common in forms of code-switching and code-mixing among medical Sudanese Staff. The impact of code-switching and code-mixing in these communities are common and normal.

The below list of Medical English lexical items are used among: Doctors, house man ship, doctors, nurses, medical students and the patients and co-patients; they are:-

Table.1.The public hospital and Khartoum North hospital.

Column1: 1.Patients 2. Co-Patient 3.Diagnoses. 4.MIR 5.X-ray  
6.Care Plan 7.Pass away 8.Surgery.

Column 2: 9.medicines 10.surgeon. 11.treatment. 12. Plaster.  
13.operation. 14.Theatre. 15. Check up. 16.Pain.

Column 3: 17.Abdomna Pain. 18.Infection. 19.Analysis.  
20.Antibiotic. 21.Abnormal. 22.Normal. 23.Brain Stroke. 24.Cardiac  
disease.

## **CONCLUSION:**

This study comes to conclusion that code-switching and code-mixing are phenomenon in medical field in Sudanese hospitals in general and Khartoum State hospitals in particular. It is discovered that medical staff, nurses, house man ship doctors, physician, medical students, patients and co-patients use code-switching and code-mixing. Since the Sudan as ab African country was under British Colloney for more than 6 years. In addition to that English language is considered to be as a foreign language and the language of Education. On one hand the Sudanese people are considered to be a multilingual communities. Since there are more than 3000 vernaculars languages of tribal Sudanese society. Thus code-switching and code-mixing are obvious phenomenon as observed in medical field communities in Khartoum State. As the case study is in Khartoum State. On which is presented in three local hospitals as an examples. There are Omdurman Educational hospital, the Public hospital and Khartoum North hospital. Eventually the study finds that code-switching and code-mixing are quite clear phenomenon in medical field sector, among medical staff in Khartoum State hospitals as an examples.

Thus code-switching and code-mixing as a phenomenon reflect the culture of Sudanese African communities. And as a branch of sociolinguistic the phenomenon of code-switching and code-mixing are under focus are under investigation in Sudanese medical community. It is a society of multilingual individuals that appear clearly in this study. It is suggested that further studies and investigation should take place; in order to enrich the researches in this area.

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