A COMPARATIVE CASE STUDY:
CODE MIXING BETWEEN ENGLISH AND THAI
OF THE PRIVATE HOSPITAL'S NURSES IN BANGKOK

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A COMPARITIVE CASE STUDY: CODE MIXING BETWEEN THAI AND ENGLISH OF THE PRIVATE HOSPITAL'S NURSES IN BANGKOK

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ABSTRACT

The purposes of the study were to reveal the influence of social factors of the patients, level of education and social-economic class, on English-Thai code mixing between nurses who work at the central medical private hospital and local medical private hospital in Bangkok, to categorize the grammatical patterns, and to reveal the patient attitudes towards the nurse-patient interactions. The data for this study were collected for 200 hours: 100 hours from 10 nurses who have worked at the central medical private hospital and 100 hours from 10 nurses who have worked at the local medical private hospital. In total, there were 200 hours.

The results revealed that the social variables of the patients: level of education and socio-economic class influenced the code mixing of nurses as it was stated in the hypothesis. According to the occurrences of English mixed words, noun, verb, and adjective are the predominant categories. Regarding the patient attitudes, nurses who worked at the central medical private hospital which represented the patients with a high level of education and high socio-economic class used English mixed code more than nurses who worked at the local medical private hospital which represented the patients with a low level of education and low socio-economic class. Moreover, the patients in the central medical private hospital were more satisfied towards English mixing of nurses than the patients in the local medical private hospital. Another variable which might have motivated English-Thai code mixing by nurses found in this study was the interlocutors who had a direct influence on the choice of language use of nurses. Nurses tended to mix languages to conform with preferences of a patient who first introduced English words into the conversation as they wanted to maintain in-group communication.

KEY WORDS: CODE MIXING / CODE SWITCHING / THE NURSE-PATIENT INTERACTIONS

114 pages

กรณีศึกษาเปรียบเทียบ: การปนภาษาระหว่างภาษาอังกฤษและภาษาไทยของพยาบาลในโรงพยาบาลเอกชนในเขตกรุงเทพฯ

A COMPARITIVE CASE STUDY: CODE MIXING BETWEEN THAI AND ENGLISH OF THE PRIVATE HOSPITAL'S NURSES IN BANGKOK

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บทคัดย่อ

การศึกษาครั้งนี้มีจุดประสงค์เพื่อเปิดเผยอิทธิพลของปัจจัยทางสังคม ได้แก่ ระดับการศึกษาและสถานะทางเศรษฐกิจและสังคมของผู้ป่วยมีผลต่อการปนภาษาระหว่างภาษาอังกฤษและภาษาไทยของพยาบาลในโรงพยาบาลเอกชนในเขตกรุงเทพและโรงพยาบาลเอกชนนอกเขตกรุงเทพ จัดหมวดหมู่ทางด้านโครงสร้างทางไวยากรณ์ และเปิดเผยถึงทัศนคติของผู้ป่วยที่มีต่อการปนภาษาของพยาบาล วิธีการเก็บข้อมูลโดยการบันทึกเทป 10 ชั่วโมงต่อพยาบาล 10 คน จากโรงพยาบาลเอกชนรอบใน และ 10 ชั่วโมงต่อพยาบาล 10 คน จากโรงพยาบาลเอกชนรอบ นอก รวมทั้งสิ้น 200 ชั่วโมง

ผลการศึกษาพบว่า ตัวแปรทางสังคมของผู้ป่วย ได้แก่ ระดับการศึกษาและสถานะทางเศรษฐกิจและสังคมมีอิทธิพลต่อการปนภาษาระหว่างภาษาอังกฤษและภาษาไทยของพยาบาล ซึ่งสอดคล้องกับสมมุติฐานของการศึกษา กล่าวคือ พยาบาลในโรงพยาบาลเอกชนรอบในมีการใช้คำภาษาอังกฤษในการสนทนากับผู้ป่วยซึ่งเป็นตัวแทนของผู้ป่วยที่มีการศึกษาและสถานะทางเศรษฐกิจและสังคมสูง มากกว่าพยาบาลในโรงพยาบาลเอกชนรอบในซึ่งผู้ป่วยในโรงพยาบาลเอกชนรอบในเป็นตัวแทนของผู้ป่วยที่มีการศึกษาและสถานะทางเศรษฐกิจและสังคมต่ำ ในการแบ่งกลุ่มทางไวยากรณ์ พบว่าคำนาม คำกริยา และคำคุณศัพท์ พบมากตามลำดับ และ คนไข้ในโรงพยาบาลเอกชนรอบในมีความพึงพอใจในการใช้คำภาษาอังกฤษของพยาบาลมากกว่าคนไข้ในโรงพยาบาลรอบนอก ในการศึกษาครั้งนี้ยังพบปัจจัยทางสังคมอีกหนึ่งประการที่ส่งผลกระทบต่อการปนภาษาของพยาบาล คือ ปัจจัยของตัวผู้ป่วย พยาบาลจะปนภาษาอังกฤษเมื่อผู้ป่วยเป็นฝ่ายเริ่มใช้ภาษาอังกฤษในการสนทนาก่อน เสมือนต้องการความเป็นส่วนหนึ่งในการสนทนานั้นๆ

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CHAPTER I
INTRODUCTION

1.1 Background of the Study

One of the most frequently spoken foreign languages in Thailand today is English as it plays an important role in communication, education and business. The linguistic phenomenon of code mixing commonly emerges in a bilingual speech community. Fasold (1984) explained code mixing as being pieces of one language used while a speaker was basically using another language. The language pieces taken from another language were often words, but they could also be phrases or larger units.

In the past decades, Thailand was considered a monolingual speech community until in early 1612 when the English language was first introduced into Thailand through contact with foreign native speakers of English (Ministry of Education, Thailand, 1981). As a result, Thailand had become a multilingual speech community because there were foreign languages, dialects, and multiple nationalities in Thai society (Prasithrathsint, 1997). With globalization and modernization, English has become the key issue in schools and universities as a second language and has a significant influence on education and society today. The domain of English use for contact has gradually expanded into daily life conversation amongst Thai people such as business, economy, education, technology and communication. The use of Thai-English code mixing is not only limited to the upper classes both the elite and well-educated, but is also used by all social classes. Hence, this phenomenon has generated a wide range of studies on Thai-English code mixing in Thailand. There have been many studies done on the code mixing phenomenon on Thais in the area of mass media, education, communication, and professions. However, no previous research in Thailand has yet been conducted in the field of nursing regarding Thai-English code mixing.

Having worked in the nursing fields for nearly fifteen years, the researcher has found that nursing is an important career in Thailand and plays an important role in Thai society. Nurses are important because they are the ones who know first hand the importance of patients care. Doctors are sometimes in a hurry and unable to adequately listen to all of the concerns their patient may have. It is the job of the nurse to relay the vital information to the doctor in charge to make sure their patients are taken proper care of. Moreover nurses are vital in providing patient communication in the hospital. For nurses and their patients, communication during medical care, using technical terminology can lead to problems in interpretation. Nurses often use medical terms when discussing therapeutic issues with their patients, making it especially difficult for interpreters to pass accurate messages on to the patients. In addition, language barriers are influenced by other factors. To communicate effectively between the nurses and their patients, it is necessary to discover the factors which influence their interaction. An awareness of these factors is critical to bridge the gap and avoid failures in communication. Therefore, it would be interesting and worthwhile to investigate the factors which influence the code mixing of Thai and English between nurses and their patients. Furthermore, the present study will make useful contributions to sociolinguistic studies and add to body of academic literature on Thai-English code mixing, a comparative case study of the private hospital's nurses in Bangkok.

Thus, the purpose of this study is to reveal the influence of social factors: the level of education and the socio-economic class, on code mixing between Thai and English by health professional care-givers in the medical field, specifically nursing in private hospitals (between caregivers and patients). It also analyses a description of patterns of code mixing in nurse-patient interactions within on-duty communication and practice. This research studies code mixing between Thai and English by nurses in Bangkok, using two sampling groups for data collection, 20 informants from two private hospitals in total, to determine the hypothesis validity according to sociolinguistic methodology.

1.2 Objectives of the study

1.2.1 To examine the influence of social factors, level of education and socio-economic class, on the distribution of English words during nurse-patient interactions through Thai-English code mixing by nurses who work at a central medical private hospital and a local medical private hospital in Bangkok.

1.2.2 To describe patterns of Thai-English code mixing in terms of the grammatical category of English mixed words occurred in the nurse- patient interactions

1.2.3 To investigate patients' attitudes on the nurses' code mixing behaviour.

1.3 Hypothesis of the study

The study is set up to test the hypothesis that social factors such as the level of education and the socio-economic classes of the patients directly influence the degree of code mixing between English and Thai by nurses in medical teams, specifically in nursing at private hospitals. The research hypotheses are:

1. Nurses tend to code mix between Thai and English with patients at the central Bangkok private hospital more than with patients at the local Bangkok private hospital.

2. English mixed words used by the nurses are categorised into several grammatical categories such as noun, verb, adjective, and classifier, but the predominant categories are noun, verb and adjective respectively.

3. For English mixed words, patients at the central Bangkok private hospital have a better understanding than patients at the local Bangkok hospital.

1.4 Benefits of the study

It is hoped that this study will reveal the influence of social factors, level of education and socio-economic class, of patients on Thai-English code mixing used by nurses at the central Bangkok private hospital and the local Bangkok private hospital. Moreover, it will reveal patterns of Thai-English code mixing in terms of the grammatical category found in nurse-patient interactions. Regarding patient attitudes, the findings will serve as a guide for effective communication training courses for nurses.

1.5 Scope of the Study

This study focuses on Thai-English code mixing by nurses in Bangkok with respect to geographical location, namely a central area and a local area. In this study, the central area location is in the inner city of Bangkok. According to Bangkok Metropolitan Administration Management Act 1995 [2528 B.E.], the inner city consists of 11 districts. They are Phra Nakhon, Pom Prap Sattru Phai, Samphanthawong, Pathum Wan, Bang Rak, Yan Nawa, Sathon, Bang Kho Laem, Dusit, Bang Sue, Phaya Thai, Ratchathewi, Huai Khwang, Khlong Toei, Chatu Chak, Thon Buri, Khlong San, Bangkok Noi, Bangkok Yai, Din Daeng and Vadhana. The local area includes the urban fringe and suburbs of Bangkok comprises 29 districts: Phra Khanong, Prawet, Bang Khen, Bang Kapi, Lat Phrao, Bueng Kum, Bang Phlat, Phasi Charoen, Chom Thong, Rat Burana, Suan Luang, Bang Na, Thung Khru, Bang Khae, Wang Thong Lang, Khan Na Yao, Sai Mai, Min Buri, Don Mueang, Nong Chok, Lat Krabang, Taling Chan, Nong Khaem, Bang Khun Thain, Lak Si, Khlong Sam Wa, Bang Bon and Thawi Watthana.

Moreover, the present study focuses only on the medical private hospital in each of the two areas and they both have more than 100 beds. A government hospital will not be investigated in this study because of the differences in social rank. In the analysis, social factors: the level of education and the socio-economic class of the patients, both in a central medical private hospital and local medical private hospital,

are considered to influence code mixing between Thai and English by nurses in medical teams.

This study uses two sampling groups, 20 informants in total. Only Thai nurses from the central and local private hospitals are selected as participants for this study. Three methods of data collection were used namely, participant observation, interview and questionnaire.

1.6 The Definition of Terms

There are some terms in the present study, which need definition for mutual understanding, therefore it is necessary to provide readers with a clear and usable meaning of the terms that are often mentioned.

1. Central medical private hospital

A central medical private hospital that caters for patients with a high level of education and high socio-economic class.

2. Local medical private hospital

A local medical private hospital that caters for patients with a low level of education and low socio-economic class.

3. Code mixing

A change of code to English at the word level in a predominately Thai sentence, as used by Thai Nurses in the central medical private hospital and the local medical private hospital.

4. Borrowed word

English language words that have been borrowed or adopted by Thai nurses in Thai context.

5. Transliteration

The original English word that is borrowed directly into the Thai language with no Thai equivalent.

6. Loan translation

An English word borrowed for use in the Thai language with a Thai equivalent translation.

1.7 The outline of the study

The body of my thesis is structured into five chapters, the essential functions of which I briefly outline in what follows:

Chapter 1 focuses on describing the background of the study, the objectives of the study, the hypotheses of the study, the benefits of the study, the scope of the study and the definition of terms related to the present study.

Chapter 2 consists of the concepts under the topic of code switching and code mixing and theoretical framework as well as previous studies involved in code mixing, both in overseas and Thai contexts.

Chapter 3 describes the research design of the study, the population of the study, the sampling, the data collection and the data analysis.

In Chapter 4, a detailed analysis of the Thai-English code mixing data is presented, and then in Chapter 5 the main findings from my study are summarised, with a discussion of the findings, the implications of the present study and recommendations for further studies.

CHAPTER II
LITERATURE REVIEW

2.1 Code-switching and Code-mixing

In receiving the attention of many scholars, the meaning of code-switching and code-mixing has created confusion in the field because usage of terms differs between scholars. The concept of code-switching was first defined by Weinreich (1953) as a specific type of interference. Weinreich (1953) stated that interferences were those instances of deviation from the norms of either language which occurred in the speech of bilinguals as a result of their familiarity with more than one language, as a result of language contact. Furthermore, Weinreich's code-switching took place when a bilingual's utterances contained lexical material from two different languages. The scope of this phenomenon included the insertion of different types of lexical material. However, linguists such as Clyne (1987) and Haugen (1972) did not agreed with Weinreich's definition because the term 'interference' had often been associated with negative connotations. Later, code-switching was defined by Gumperz (1982, p. 59) as 'the juxtaposition within the same speech exchanges of passages belonging to two different grammatical systems or subsystems'. Gumperz (1982) employed code-switching as an umbrella term to cover any form of alternation of language systems within or above the sentence level.

On the basis of many linguistic studies in code-mixing, Hadson (1980, p. 53) stated 'code-mixing occurred in a bilingual speech community in which fluent bilinguals talking to one another used both languages and changed from one language and which involved every level of lexical and syntactic structure including words, phrases, clauses and sentences'.

Fasold (1984) concurred with Hudson (1980) but he distinguished code-switching from code-mixing. Fasold (1984) pointed out that code-mixing was one of the major kinds of language choice which was subtler than code-switching. In code-mixed sentences, pieces of one language were used while a speaker was basically

using another language. These language pieces of another language were often words, but they could also be phrases or larger units.

Bokamba (1989) made a clear distinction between code-mixing and code-switching. He defined code-switching as the mixing of words, phrases and sentences from two distinct grammatical (sub-) systems across sentence boundaries within the same speech event. In addition, code-mixing referred to the embedding of various linguistic units such as affixes (bound morphemes), words (unbound morphemes), phrases and clauses from two distinct grammatical (sub-) systems within the same sentence and speech event. In other words, when a language switched between sentences, code switch occurred whereas intrasentential switch was code-mixing.

Likewise, Sridhar and Sridhar (1980) considered that code-switching occurred at an inter-sentential level, while code-mixing took place at an intra-sentential level.

There is still no consensus on the two terms code-switching and code-mixing, some scholars such as Bokamba (1989), Kamwangamalu (1992), Sridhar and Sridhar (1980) argue that code-switching and code-mixing are two distinct phenomena. It is necessary to distinguish inter-sentential (code-switching) and intra-sentential (code-mixing) code alternations. Some such as Gumperz (1982) and Clyne (1987) suggest that the distinction between code-switching and code-mixing is not necessary. They use the term ‘code-switching’ to include both situations. Likewise, Pfaff (1979) and Bhatia (1992) prefer to use the term ‘code-mixing’ to cover both terms.

In this study, the researcher will use the term ‘code-mixing’ because the present study concentrates to the use of English mixed words at word level in a fundamentally Thai sentence.

2.2 Bilingualism and Multilingualism

The terms ‘bilingualism’ and ‘multilingualism’ are very important to discuss the issues of code-mixing. Bilingualism refers to the use of two languages by an individual or a speech community. If a speaker is fluent in two languages, they become bilingual. Harley (1995) states that it was not necessary for the speakers to be equally fluent, but at least they should be very competent in the second languge.

According to Milroy and Muysken (1995), modernization, globalization, colonization, language revival and migration has led to increasing and wide spread bilingualism and multilingualism over the last fifty years. In the early work on bilingualism and language contact of Weinreich (1953), bilingualism referred to the use of two or more languages alternatively by a person. For the users of two or more languages, there might be some instances in which they deviate from the norms of one of the languages they speak as a result of their familiarity with many languages. In addition, he offered a little information on how well two or more languages needed to be known or whether there were any graduations in bilingual usage depending on speaking, writing, reading or listening abilities. He also discussed the different kinds of interference attributed to language contact including phonetic interference, grammatical interference and lexical interference and proposed three type of bilingualism depending on the way in which the two languages were learned. These were compound bilingualism, co-ordinate bilingualism, and subordinate bilingualism.

Valdes (1988, p. 114) defines the term bilingual generally as ‘an individual who has more than one competence, that is, one who can function to some degree in more than one language’. She concludes that bilingual individuals can be both slightly bilingual or very bilingual, and are characterized as having varying degrees of proficiency in their two languages in both the written and oral modes.

For most linguists, multilingualism refers to communication through several languages. For Herdina and Jessener (2002, p. 52), multilingualism is regarded as ‘the command and/or use of two or more languages by the respective speakers’.

Marsour (1993, p. 20) mentions that ‘language choices are determined by the domains of social behavior (family, neighborhood, work)’. This means a

multilingual society is characterised by a number of languages which serve different social purposes.

Furthermore Edwards (1994) suggests that multilingualism occurs for various reasons. The first reason is the movement of people: immigrants bring their own language into contact with the languages of the existing population. Similarly, Wolfson (1989) found that factors such as wars, famines, and other natural disasters which involve the movement of people results in language contact whereby multilingualism arises. Another reason for the rise of multilingualism is political union among different linguistic groups. Likewise, Wolfson (1989, p. 260) states 'the separation and gradual divergence of regional dialects of the same language are also factors leading to increased multilingualism'.

2.3 Borrowing

Gibbons (1987) states that borrowing typically requires only monolingual competence and if words are used frequently enough they become part of the normal unconscious form of speech.

Valdes (1988) defines borrowing as typical of what happens when speakers of one language come into contact with concepts that are new to them and for which they have no available vocabulary. He describes borrowing as a common result of language contact.

Udomwong (1981) states that many of the English loanwords into Thai have gone through phonological change and now follow Thai phonotactics are listed in Thai dictionaries. Likewise, Kamwangamalu (1989) states that structural borrowing entails the integration of linguistic units from one language into the linguistic system of another language. Borrowed items are phonologically or/and morphologically and syntactically adapted to the native language of the speakers.

Prasitharatsin (2004) defines loanword or borrowed word as a word taken in by the Thai language from the English language. She also mentions that there are two different kinds of loan words: transliteration and loan translation. Transliteration refers to the original English word borrowed directly into the Thai language with no

Thai equivalence. Loan translation refers to an English word borrowed for use in the Thai language with a Thai equivalent translation.

The concept of borrowing in the present study is derived from the borrowing concept as proposed by Prasitharatsin (2004). The researcher concludes that a borrowed word refers to an English word that is usually borrowed or adopted into the speaker's first language.

2.4 The Thai language

Central Thai or standard Thai is the national and official language of Thailand and the native language of the Thai people. Thai is a member of the Tai group of the Tai-Kadai language family.

Within Thailand, there are four major dialects: Central Thai, Northern Thai, Northeastern Thai, and Southern Thai. These dialects are different in tones and word choices. Central Thai is spoken by urban people including speakers in Bangkok and is taught in all schools and by widely understood in all regions. Other Thai dialects are usually spoken by people in those particular regions of Thailand.

Standard Thai is composed of several distinct registers. There are different forms for different social contexts. There is a set of vocabulary to be used when addressing members of the royal family. There is also one to be used when discussing Buddhism or addressing monks. As for common Thai, politeness and familiarity between speakers plays an important role in determining word choice. For example, common Thai (spoken Thai) is used in informal situations, without polite terms of address, and between close relatives and friends. Formal Thai (written Thai) is used in official situations and in written form and includes respectful terms of address.

Regarding the phonology, there are 44 Thai consonant letters which provide 21 sounds in case of initials. For finals, only eight sounds, as well as no sound, are used. Thai has only 11 consonant clusters. There are 18 vowels in Thai. The basic vowels can be combined into diphthongs. There are five phonemic tones: mid, low, falling, high and rising. According to Tumtavitikul (1997), tones sometimes referred to as rectus, gravis, circumflexus, altus and demissus, respectively.

In terms of grammar, Thai can be considered to be an analytic language. The word order is subject-verb-object, although the subject is often omitted. Thai pronouns are selected according to the gender and relative status of speaker and audience. According to Thonglaw (2002), Thai can be categorised into seven categories: noun, pronoun, verb, adjective and adverb, preposition, conjunction and interjection. Noun are uninflected and have no gender; there are no articles. Nouns are neither singular nor plural. Some specific nouns are reduplicated to form collectives: เด็ก [dek] is often repeated as เด็กๆ [dek dek] to refer to a group of children. The word พวก [pʰûak] may be used as a prefix for a noun or pronoun as a collective to pluralize or emphasise the following word. Plurals are expressed by adding classifiers, used as classifiers.

Pronouns are often omitted. Pronouns are ranked in honorific registers, and may also make a distinction in relation to kinship and social status. Some examples are, ผม [pʰŏm], ดิฉัน [dì ː tɕʰán]), คุณ [kʰun] and เธอ [tʰɤ ː]. Thai does not have a separate possessive pronoun. Instead, possession is indicated by the particle ของ [khong].

Verbs do not inflect nor are there any participles. Duplication conveys the idea of doing the verb intensively. The passive voice is indicated by the insertion of ถูก [tʰù ː k]) before the verb. Negation is indicated by the placing of ไม่ [mâj]. Tense is conveyed by tense markers before or after the verb.

There is no morphological distinction between adverbs and adjectives. Many words can be used in either function. They follow the word they modify, which may be a noun, verb, or another adjective or adverb. Intensity can be expressed by a duplicated word.

Prepositions refer to words which indicate relationships between words or clauses so that we might understand what sort of relationship the word or clause which falls after the preposition has to the element which falls before it.

Conjunctions refer to words which serve to connect individual words with individual words; sentences or clauses with other sentences and clauses; paragraphs with other paragraphs; or, to provide connections which are elegant and fluid.

Finally, interjections refer to words which indicate sounds we exclaim at times when we are happy, sad, startled, surprised, or mistrustful. Alternatively, (interjections) are words which expand the context of a story to achieve increased completeness.

To determine English words mixed in the Thai context of nurse-patient interactions in terms of the grammatical analysis, the present study is based on the Thai grammatical framework used by Thonglaw's (2002) in his work on the fundamentals of the Thai language.

2.5 Previous studies

Code-mixing has received much attention from researchers in various disciplines such as Blom and Gumperz (1972), Gumperz (1982), Gibbons (1979, 1983), Wei (1994), Nishimura (1997), Shin (2002), and Arnfast and Jorgensen (2003) because people all over the world communicate with one another more frequently. Previous literature addressed many language/dialect pairs including Bokmal/Ranamal, Chinese/English, Japanese/English, Korean/English, Arab/English. The following is a summary of the researches mentioned above.

2.5.1 The review of research related to code-mixing in overseas

Studies on code-mixing of different languages have flourished in the past twenty to thirty years. In 1979, Gibbons studied code choice amongst a special group of students at the university of Hong Kong. His work shows that Cantonese-English code-mixing was frequently found on the university campus. Later, Gibbons (1983) examined the attitudes of the students towards code-mixing through a matched-guise experiment. He found that their attitudes were ambivalent. They considered code-mixing was a useful communication tool in daily conversations. However, they were also hostile towards it.

Nishimura (1997) investigated Japanese/English in-group code-switching amongst the second generation Japanese living in Toronto, Ontario. The findings reveal that there are three types of bilingual speech: (1) the basic Japanese variety with occasional English lexical items; (2) the basically English variety with English as the base language and (3) the mixed variety with no base language identifiable. It was noticed that even the same individual might use different types of code-switching, and reason for using code-switching could vary.

Also on mixing with English, Wei (1994) examined the language choice of different generations of Chinese residents in a defined area of north-east England. His study revealed that code-switching might not occur in all bilingual communities on all occasions. The code-switching behaviour of his informants was speaker-specific and context-specific. In analysing the social dimension of code-mixing, he proposes the social network perspective, which examines the identities of the people with whom the speaker regularly interacts, in addition to the speaker's own identity. This perspective places importance on the relationship between the speaker's linguistic behaviour and interpersonal relations, and also the development of the speaker's social identity through interaction. In other words, 'a person's language use is influenced and shaped by the types of social contact they have' (1994, p. 23).

Other researches have also been done on code-switching or code-mixing of different languages. For example, Shin (2002) investigated the characteristics of code-mixing among Korean-English bilingual children, with a special focus on the distinction between code-switching and borrowing. Hussein (1999) examined Arab college students' attitude toward code-switching and code-mixing, in order to find out when they code-switched and the reasons for such linguistic behaviour. The study also explored the most frequent English expressions that were used in Arabic discourse. The results revealed that students had both positive and negative attitudes toward code-switching and code-mixing. It was also discovered that the most important reason for code-switching or code-mixing was the lack of Arabic equivalents for English terms or expressions. Arnfast and Jorgensen (2003) investigated the use of code-switching in learners of Danish, and from their findings, they acknowledged

code-switching as an increasingly sophisticated language skill during second language acquisition.

Gumperz (1982, p. 66) defines the concepts of 'we-'and 'they-' code, which are linked to the notion of group identity. The tendency is for the ethnically specific, minority language to be regarded as the 'we-code' and become associated with in-group and informal activities, and for the majority language to serve as the 'they-code' associated with the more formal, stiffer and less personal out-group relation.

Bloom and Gumperz (1972) conducted a study on code-switching in Norway between a standard language (Bokmal) and a dialect (Ranamal) concerning social meaning in linguistic structure. The study reveals the code-switching as situational; switching from one language to another based on the situation in which the language was used. Metaphorical code-switching refers to switching from one language to another based on the language that suited the topic.

In the grammatical approach, most studies were more concerned with the linguistic constraints of code-switching. Two of the most influential contributions are Sankoff and Poplack's (1981) and Poplack's (1982) studies. The free morpheme constraint principle derives from Sankoff and Poplack to propose a free morpheme constraint and equivalence constraint for code-switching. Under these constraints, the switch between two constituents is only allowed when the order of the constituents is shared by the two languages involved.

Myers-Scotton (1993) proposes the Matrix Language Frame Model. She states that one of the languages in code mixing plays a more dominant role and refers to it as the matrix language. It sets the morphosyntactic frame for the code-mixing sentences. The constituent order and functional categories of the matrix language are assumed to dominate a clause containing elements of an embedded language in code-mixing. She also proposes the "markedness model" of code-switching to explain the choice of language. She notes that speakers have a sense of markedness regarding available linguistic codes for any interaction, but choose their codes based on the person and/or relationship they wish to have with others. From her studies of subjects in Kenya and other parts of Africa, she concludes that their codes are chosen in order to define the different identities.

2.5.2 The review of research related to code-mixing in Thailand

Code-mixing is not only an issue that has become a subject of discussion overseas, but also in Thailand. In 1977, Pairat studied some aspects of code-mixing in Thai. The results of her study show that nouns and verbs are used indirectly because the mid-tone in English becomes a falling tone in Thai. From her findings, she concludes that (1) code-mixing represents modern people who possess high education, (2) code-mixing is a language tool of specific groups such as doctors and (3) code-mixing is used by media to describe meaning and reason.

Phattaranit (1982) conducted a code-mixing study between English and Thai. The scope of the study was the speaking and writing of academics and writers. This study reveals that English words often appear more than once in a phrase or sentence. The reason given as to why they used English words was because English words could give direct meaning and academes and writers were familiar with the English words used.

Seeha-umpai (1987) studied the language use of tourist guides in Thai and English Code-switching. The study showed that the guides tended to code-switch when talking with tourists, especially those who had been in the business for more than 10 years. The English words used were found to occur unintentionally and according to the Thai structure, and might be considered interference. However, this was a study on code-switching whereas the result also showed code-mixing.

Natboon (1993) studied code-switching in Northern Thailand (Chiang Mai Province). The objective of this study was to discover the relationship between the northern Thai dialect and standard Thai and the social roles. The result of the study showed that there were three code-switching rules: situational switching, metaphorical switching and conversational switching. The study showed the usage of the three levels of code-switching as: 7.64 percent for phonology, 92.33 percent at the level of lexicon and 0.33 percent at the level of phrase/clause. It was found that the lexicon appeared when people spoke central Thai dialects more than when speaking northern Thai dialects.

Rakthamying (1994) studied code-mixing between Thai and English concerning the language usage of doctors. The result of this study showed that the data obtained was divided into two groups. Each group of doctors spoke a different pattern of code-mixing. If the listener was able to understand, the doctors would talk to them using English. This kind of code-mixing occurred when the doctors spoke to nurses. In Thailand, English is recognized as the international language and plays an important role in academic communication. Moreover, academic papers are always written in English, especially for the technical terms. However, when the doctors in the study spoke to people outside their field, such as patients, they tried to avoid using English because they knew that the patients would not understand. Consequently, the doctors used a lot code-mixing between Thai and English.

Thitiwattana (1996) studied the code-mixing of English in Thai of teachers from different departments at Kasetsat University. The data was collected from 3 groups: Thai teachers, English teachers and Administration teachers. This study showed the differences in formal code-mixing usage of each group. The English teachers used more word classes and adapted the word class according to the English structure more than the other groups. The Thai teachers had the lowest frequency of code-mixing, however, the behavior of the teachers differed from their attitude towards code-mixing because some of them still spoke English in class.

Thanutadom (1998) studied code-switching between central Thai (Bangkok) and the southern Thai dialect used by southern students. The results of study showed that there were 4 usage variants: central Thai, southern Thai, central Thai mix southern Thai and southern Thai mix with central Thai. Southern Thai was most frequently used both during working days and on Sundays. The study also revealed that only role-relationship and place had a significant effect on the language use. Southern Thai was most frequently used when the students talked with close-friends, while central Thai was used with those less close. Furthermore, southern Thai was used in less formal situations and central Thai in more formal contexts.

Boonkongsaen (1999) studied the mixing of English in Thai and language attitudes of people of different occupational classes. The results revealed that code-mixing behavior and positive attitudes towards code-mixing were mostly found in

those in the highest positions in professional and managerial groups, at a rate approximately 3.5 times per 3-4 lines. Supervisors who belonged to the middle occupational group were less frequent users of English-Thai code-mixing whereas the lowest code-mixing users were among the semi-skilled occupational group. The results also showed that persons with a positive attitude towards English used code-mixing more frequently than persons with a moderate attitude towards English.

Dandee (2003) conducted a study of code-switching between Thai and English of students at Mahidol University International College. The result of study showed that code-switching occurred on study days more than on non-study days. Social factors related to code-switching when considering the interlocutors, showed most code-switching occurred with friends. Code-switching occurred more in conversations on other topics rather than academic topics. Female students used code-switching more than male students. Students who had graduated abroad used code-switching the most, followed by students who had graduated from general high schools and international high schools in Thailand. The results of this study identified the various domains that influence code-switching by students.

Kannaoakun (2003) explored the mixing of English and Thai in Thai television programs to investigate the mixing of English with Thai based on discourse theory. The results revealed that code-mixing was used in sports programs the most, and in Thai drama the least. A large amount of code-mixing consisted of single nouns inserted in Thai sentences. The mixing of English with Thai occurred even when Thai equivalents existed. Little of the code-mixing was used for emphasis. The findings also suggested that code-mixing served more than a simple utilitarian objective. The majority of the mixing of English with Thai displayed neither an emphatic function nor a linguistic-need function. A great number of the English words embedded into Thai language had undergone modification: truncation, hybridization, semantic shift, or word order shift. This reflects the nativizing process of English words introduced into Thai discourse, a feature commonly reported in languages in other parts of the world.

Finally, Suraratdecha (2005) examined Thai-English code-switching practiced by groups of Thai people in Hawii from two perspectives: sociolinguistic and syntactic. In terms of the syntactic aspect of code-switching, the matrix language frame model (Myers-Scotton 1993, 2002) was used as a tool to investigate the grammatical constraints on Thai-English code-switching. Most of her findings corroborate the model. By considering both sociolinguistic and syntactic aspects of Thai-English code-switching, her study found that social aspects of Thai-English code-switching characterised its linguistic forms. In order to understand the social significance of code-switching, as well as its distinctive pattern in specific communities, ethnographic/sociolinguistic information regarding the participant and the community, had to be taken into account.

From the above research, it is obvious that code-switching or code-mixing has received much attention in Thailand. Most previous studies have been done on social factors influencing the Thai-English code-mixing phenomenon in the areas of mass media, education, communications and professions including medical, however none focus on code-mixing in a field of nursing. It is a primary objective of this current study to examine the influence of social factors on the use of English mixed words by nurses with respect to patients in central and local medical private hospitals.

2.6 Conclusion

In this chapter, concepts related to the topic of code-mixing, namely the differences between code-switching and code-mixing and bilingualism and multilingualism, were discussed. In addition, this chapter included a literature review of code-switching and code-mixing research from both overseas and in Thai contexts. The following chapter will outline the research design, the population, sampling and data collection and analysis of the study.

CHAPTER III
METHODOLOGY

3.1 Research design

This study was designed using a qualitative research methodology. It began with library research under the topic of code-switching or code mixing. Library research was undertaken at the Research Institute for Languages and Cultures of Asia (RILCA) at Mahidol University and at Chulalongkorn and Thammasat Universities, Bangkok. The details of the methodology of this study are presented below.

3.2 Population

The population of this study consisted of a total of 77 nurses, in four wards of a common type found in each hospital. They included 37 nurses from the local medical private hospital and 40 nurses from the central medical private hospital. At the local medical private hospital, eight nurses worked in medical ward, eight in the surgery ward, 16 in the intensive care unit (ICU), and five in the pediatric ward. At the central medical private hospital, eight nurses worked in the medical ward, nine in the surgery ward, 18 in the intensive care unit (ICU), and five in the pediatric ward.

3.3 Sampling

The participants of the study were 10 nurses from the local medical private hospital and 10 nurses from the central medical private hospital. There were 20 nurses in total. They were selected by purposive sampling, estimating a few people for each up to the number of nurses working in the wards mentioned above. In addition, they had to be Thai native speakers and registered nurses who had graduated from a Thai university with a Bachelor degree in Nursing. In addition, they had to have been

working for more than 5 years at the respective central or local Bangkok medical private hospital. The details of the sampling groups which were randomly chosen are presented as follows.

Table 3.1 The details of the population and the participants used in the study

Types of wards	**Local medical private hospital**		**Central medical private hospital**	
	Population	**Participants**	**Population**	**Participants**
Medical Ward	8	3	8	3
Surgery Ward	8	2	9	2
Intensive Care Unit	16	3	18	3
Pediatric ward	5	2	5	2
Total	**37**	**10**	**40**	**10**

Moreover, one hospital from 21 private hospitals in the central area of Bangkok and one hospital from the 13 private hospitals in the local area of Bangkok were also selected by purposive sampling considering size and location. Both hospitals had to have a capacity of more than 100 beds.

3.4 Data collection methods and procedures

For the present study, three different methods were used for collecting the data. They were participant observation, interview and questionnaire.

1) Participant Observation

The first method of data collection was aimed at obtaining as much natural conversational data as possible during the work periods. The participants were informed that the conversation would be recorded but they were not told when the actual recording would be. The conversations were recorded in different, informal or formal, contexts such as in groups or individually in class and while on duty. The conversations about the nature of the nurse's interactions with their patients were recorded on a small digital MP3 recorder over the course of three months. A MP3

recorder was chosen because the participants would be less conscious of it during interactions. The quality of the recording was in most cases quite good. The researcher was able to obtain actual facts using this method. Each recorded conversation was approximately 10 hours in duration. The total recording time was approximately 200 hours. The lists of English mixed words that arose from the conversation data are included in Appendix C.

2) Interviews

In addition, an interview method was also employed for data collection. After the conversations were recorded, the patients were invited to attend one-on-one interviews with the researcher. The purpose of the interviews was to elicit patients' opinions regarding Thai-English code mixing. The interviews which usually started with casual talk, were conducted in an informal setting in which they could share and discuss their feelings and opinions concerning the mixed words in English used by the nurses. In this relaxing atmosphere, it was hoped that the patients would be more willing to express themselves. Each interview lasted from approximately fifteen minutes to half an-hour. The interview consisted of structured interview and open-ended interview questions to ensure the successful communication between nurses and their patients. Follow-up questions, based on the patients' answers and responses, were allowed. The guiding questions used during the interviews are included in Appendix B.

3) Questionnaires

The other means of collecting the data was by questionnaire. In this study, the structured questionnaires were used to collect background information on the participants of the study. The structured questionnaires were based predominantly on closed format. The participants were asked to fill out the questionnaires providing name, age, sex, birth place, mother tongue, working period, working position, working period (central or local Bangkok hospital) and educational background. Questionnaires for patients asked for name, age, sex, birth place, mother tongue, occupation, working position, income and educational background. The purpose of these questionnaires was to obtain sufficient information to assist the researcher in evaluating the participant's qualifications. This information was used to ensure that the participants

were sufficiently qualified to meet the study's requirements. During completion of the questionnaire, the researcher tried to make casual conversation to break the ice. Each participant took less than five minutes to fill out the questionnaire. The questionnaires used in the present study are given in Appendix A.

3.5 Data analysis

Qualitative analysis was adopted to analyse the study of Thai-English code mixing of private hospital nurses in Bangkok. Several types of qualitative data were collected in this study: (1) the records of conversation with the nurse participants from the local and central Bangkok private hospitals and (2) the transcripts of the informal interviews. Data sets (1) and (2) were transcribed, and then the English mixed words identified in the data, were distinguished from the Thai texts. The occurrences of English mixed words were analysed as loanwords: transliteration and loan translation. Transliterations and loan translation were classified in terms of grammatical category in Thai: noun, verb, adjective, adverb, interjection and so on. Word frequency was calculated in terms of percentage and the percentages were analysed according to social factors, level of education and socio-economic class, in order to discover the degree of correlation. Finally, the patients' opinions with regard to the English mixed words used by nurses in their interactions were summarized to ensure their understanding. The content of the present study and the transcriptions were proofread by the Director of Nursing at each institution to ensure accuracy.

3.6 Conclusion

The research design of the study, data collection methods and procedures, and data analysis were discussed in this chapter. The following chapter will discuss the results and findings from all the data obtained according to the research procedure described above.

CHAPTER IV
FINDINGS AND ANALYSIS

4.1 Results of the questionnaires

In the local Bangkok private hospital, 40 questionnaires were handed out to patients to obtain their background information. All questionnaires were returned which was a return rate of 100%. Two of the returned questionnaires were incomplete thus the final number of questionnaires analysed was 38 out of 40 for 95% of participants.

From analysis of the screening questions, only 30 participants met the criteria after considering the requisite low levels of education and socio-economic class of the respondents. The results of data analysed are presented as follows.

Table 4.1 Education levels of patients at the local Bangkok private hospital in terms of frequency and percentage

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than high school	2	6.7	6.7	6.7
High school/Vocational Certificate	5	16.7	16.7	23.3
Diploma, Higher Vocational Certificate	11	36.7	36.7	60.0
Bachelor's degree	12	40.0	40.0	100.0
Total	30	100.0	100.0	

Table 4.2 Patient incomes at the local Bangkok private hospital in terms of frequency and percentage

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 10000	9	30.0	30.0	30.0
10001-20000	10	33.3	33.3	63.3
20001-30000	11	36.7	36.7	100.0
Total	30	100.0	100.0	

In addition, 37 questionnaires were handed out to patients in the central Bangkok hospital to elicit their background information. All questionnaires were returned which was a return rate of 100%. None of the returned questionnaires were incomplete thus the final number of questionnaires analysed was 37 out of 37 for 100% of participants.

From the analysis of the screening questions, only 30 participants met the criteria after considering the requisite high levels of education and high socio-economic class of the respondents. The results of data analysed are presented as follows.

Table 4.3 Education levels of patients at the central Bangkok private hospital in terms of frequency and percentage

	Frequency	Percent	Valid Percent	Cumulative Percent
Bachelor's degree	20	66.7	66.7	66.7
Postgraduate education	10	33.3	33.3	100.0
Total	30	100.0	100.0	

Table 4.4 Patient incomes at the central Bangkok private hospital in terms of frequency and percentage

	Frequency	Percent	Valid Percent	Cumulative Percent
30001-40000	5	16.7	16.7	16.7
40001-50000	15	50.0	50.0	66.7
More than50000	10	33.3	33.3	100.0
Total	30	100.0	100.0	

According to National Statistical Office of the Ministry of Information and Communication Technology in 2009, the average monthly income per household in the municipal area of Bangkok was higher than the average monthly income per household in the non-municipal area (see Appendix D). From the researcher's experience, having worked in the nursing field at the private hospital for many years, there are pre-screening procedures at the admission section of all private hospitals to determine a patient's ability to pay and verify their social class. In addition, Suchariyakul and Jongsoowiwatwonge (1999) conducted a study on families' ability to pay and financially catastrophic illness among out-of-pocket in-patients in Songkhla province. Their study showed that most patients in private hospitals had the ability to pay for the hospital charges. Ability to pay correlated strongly with education level and socio-economic status. The groups who could afford the higher rates of hospital charges were patients with higher education levels and higher socio-economic status. As private hospital inpatient room rates at the central Bangkok hospitals are more expensive than these at private hospital inpatient room rates in the local hospitals (see Appendix E), this study will assume that patients at the central Bangkok medical private hospitals have a higher education and higher socio-economic status than patients at the local Bangkok private hospitals.

4.2 Code Mixing in Nurse-Patient Interactions at the Central Bangkok Private Hospital

All English mixed words identified as commonly used at the central Bangkok private hospital were considered borrowed words. Prasitharatsin (2004) mentioned that there were two different kinds of loanwords or borrowed words, transliteration and loan translation, and this was also evidenced in this current study.

4.2.1 Transliterations in nurse-patient interactions at the central Bangkok private hospital

From the data, there were 62 transliterations which occurred in nurse-patient interactions in the central Bangkok private hospital. According to the Thai grammatical framework based on Thonglaw (2002), they can be categorised into three categories: noun, verb, and classifier. The following Table lists the word classes which were found in the data. The numbers in the Table 4.5 show the distribution and percentage of English words which occurred in conversations.

To calculate the percentage of occurrence of English mixed words, the following formula was applied:

$$\text{Percentage} = \frac{n \times 100}{N}$$

n represents the number of words in each category of word class

N represents the number of English mixed words in the Thai context used by 10 nurses

Table 4.5 The distribution and percentage of transliterations (by word class) occurring during nurse-patient interactions at the central Bangkok private hospital

Word class	The distribution of occurrences in the list of transliterations	Percentage of Occurrence (%)
Noun	47	75.81
Verb	1	1.61
Classifier	14	22.58
Total	**62**	**100**

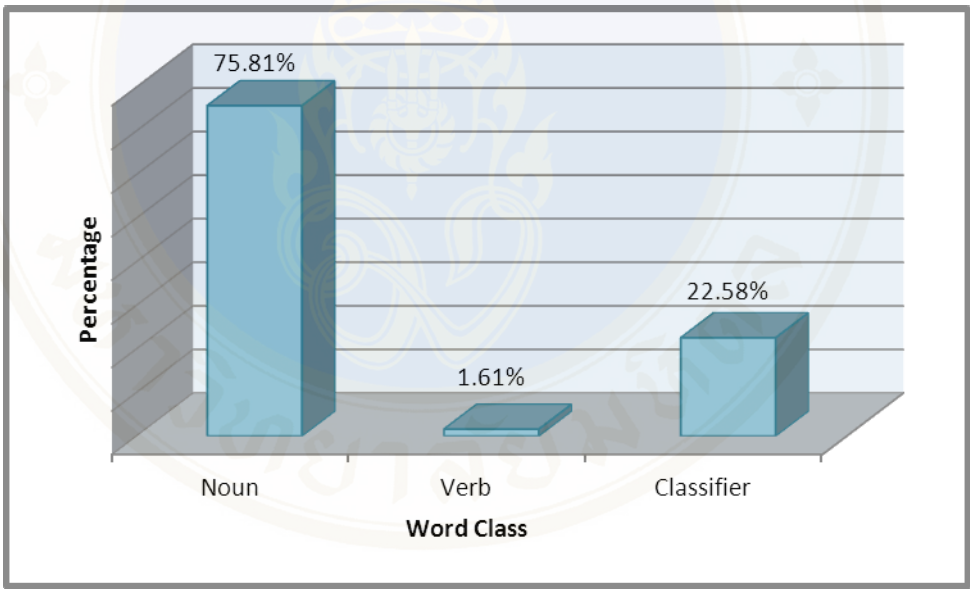

Figure 4.1 The percentage of transliterations (by word class) during nurse-patient interactions at the central Bangkok private hospital

According to Table 4.5 and Figure 4.1, the word class that occurred in the data the most was nouns. There were 47 words categorised as nouns. From the findings, only one English mixed word in the data was categorised as a verb and 14 were categorised as classifiers. Analysis of the distribution of transliteration code mixing at the word level in nurse-patient interactions at the central Bangkok private hospital reveals the following:

4.2.1.1 Noun

Nouns were most commonly used in code mixing in nurse-patient interactions, and 45 nouns occurred in the data. Most nouns were medical terms which were directly borrowed from English and the nurses might have learnt the medical terms in English. Most nurses encountered difficulties finding Thai equivalents or Thai translations of the English words. Therefore, using English medical terminology was convenient and efficient. Here are examples of noun code mixing: *alcohol, alcohol gel, amino acids, ammonia, nitrogen, bacteria, biotin, calcium, carbohydrate, carbon dioxide, cell, cholesterol, clavulonic acid, collagen, coma, crib, down syndrome, enzyme, folic acid, gas, gel, glucose, glycerin, gout, graph, insulin, internet,l-carnitine, migraine, molecules, oxygen , mask, paracetamol, parkinsons, potassium, primrose, protein, shock, sodium, sodium bicarbonate, steroid, thyroid, vaccine, virus, vitamin, website* and *H5N1HIV*. Some examples of these nouns are given below.

Bacteria - จริงๆ แล้วในลำไส้ของคนเราทุกคน ก็มีเชื้อ **Bacteria** อยู่ ซึ่งเป็นเชื้อที่ ไม่ก่อให้เกิดโรคค่ะ

"Actually there are bacteria in the intestines which do no harm to the body"

Carbohydrate - การกินอาหารจำพวก **Carbohydrate** จะทำให้น้ำตาลในเลือดสูงได้

"Eating Carbohydrates will give high blood sugar"

Cell	-	ปกติคนเราจะมีการผลัด **cell** ผิว แล้วสร้าง **cell** ใหม่ขึ้นมาแทน "Normally everybody will slough off dead skin cells, leaving a fresh new layer of skin which is glowing and radiant"
Cholesterol	-	จากผลการตรวจพบว่า **Cholesterol** ค่อนข้างสูง จึงควรหลีกเลี่ยงอาหารที่มีไขมันสูงนะค่ะ "The result shows that you have high cholesterol. You should avoid high fat foods"
Coma	-	ตอนนี้ผู้ป่วยมีอาการ **coma** เพราะว่าการตอบสนองต่อการลืมตา การพูด การเคลื่อนไหว มีคะแนนน้อยกว่า 7 "Right now, the quantifying of an individual's reactions such as eye opening, verbal response, and movement is less than 7. So the patient is in a coma"
Oxygen	-	ระดับ **Oxygen** ในกระแสเลือดยังดีอยู่นะค่ะ "Your blood oxygen level is still good"

In addition, there were two abbreviated terms categorised as nouns found in the data. They were rarely accompanied by a glossary or Thai translation, so the interlocutors needed to acquire a certain level of medical skill to understand their meanings. However, nurses commonly used a variety of abbreviations and short terms in order to rapidly and succinctly give instructions and information to their patients. Examples are given below.

HIV - ก่อนผ่าตัดต้องมีการตรวจ **HIV** ทุกครั้ง มันเป็นเงื่อนไขของการรักษาค่ะ

"You have to test for HIV every time before the operation. It is a treatment condition"

H5N1 - **H5N1** เป็นเชื้อ virus ซึ่งรุนแรงที่ได้มาจากฝูงนกในแถบเอเชีย

"H5N1 is the powerful virus that is raging through Asian bird populations"

Moreover, proper nouns were also found when they referred to trade names for drugs, brand names of medical products and equipment, the names of diseases, brand names of vaccines, and names of persons, places and towns which related to the topic of discussion. However, proper nouns are not considered as code mixing in the present study.

4.2.1.2 Verb

In this study, there was only one transliteration categorised as a verb as below.

Shock – คนไข้กำลัง **shock** อยู่ ญาติกรุณารอข้างนอกนะค่ะ

"A patient is in shock. Please wait outside."

4.2.1.3 Classifier

There were 14 classifiers which occurred in nurse-patient interactions. The following are instances of code mixing categorised by classifier: *amp, c.c., capsule, celsius, centimetre, dose, gram, hertz, kilogram, litre, microgram, milligram, ounce* and *vial*. Some examples of these classifiers are given below.

Amp – ก็คือว่า ยาชนิดนี้ผลิตมาเป็น **amp** แบ่งใช้ไม่ได้ค่ะ

"This pill is produced as amp and we cannot separate them"

Ounce – วิธีที่จะชงก็คือ หนึ่งต่อหนึ่ง นั่นหมายถึง หนึ่งช้อนต่อน้ำหนึ่ง **Ounce** ค่ะ

"The way to take this syrup is by mixing one tea spoon per one oz of water"

Dose – คุณหมอให้ฉีดยาพลาสซิล แบบซิงเกิ้ล **Dose** แล้วน่าจะดีขึ้น

"The doctor has injected a single dose of Plasil to the patient so he should feel better soon"

Liter – ตอนนี้จะเก็บปัสสาวะ 24 ชั่วโมงส่งตรวจ แนะนำให้คนไข้กินน้ำเยอะๆ ประมาณ 4 ถึง 6 **liter** ต่อวัน

"We need to take a urine sample every 24 hours so, could you please drink a lot of water, approximately 4 to 6 litres per day"

Capsule – อะม็อกซีซิลลิน ถ้ากินครั้งละ 2 **capsule** ก็ได้ แต่ให้กินแค่เช้า เย็น 2 เวลา

"The patient can take 2 Amoxycillin capsules at a time but has to take them twice a day, morning and evening"

4.2.2 Loan translations in nurse-patient interactions at the central Bangkok private hospital

From the data, there were 245 loan translations which occur in nurse-patient interactions at the central Bangkok private hospital. They can be categorised into five categories as follows: noun, verb, adjective, classifier, and determiner. In addition, there were three phrases which also occurred in the data. The following table listed the word classes found in the data and the distribution and percentage of the loan translations which occurred in the conversations.

Table 4.6 The percentage of the loan translations during nurse-patient interactions at the central Bangkok private hospital

Word class	**The number of occurrences in the list of the loan translations**	**Percentage of Occurrence (%)**
Noun	157	64.88
Verb	48	19.83
Adjective	34	14.05
Classifier	1	0.41
Determiner	2	0.83
Total	**242**	**100**

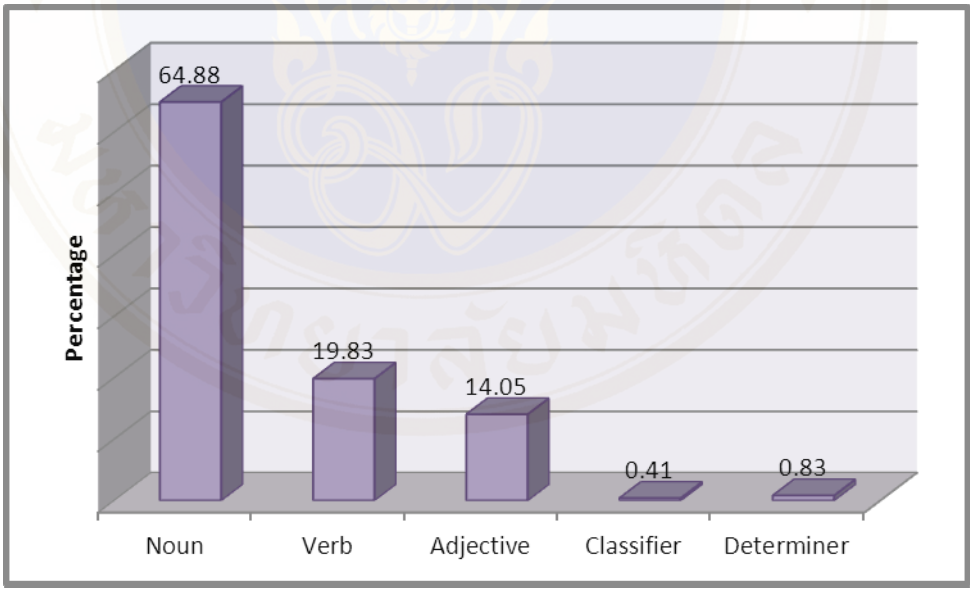

Figure 4.2 The percentage of the loan translations during nurse-patient interactions at the central Bangkok private hospital

According to Table 4.6 and Figure 4.2, the word class with the majority of occurrences was that of nouns. There were 157 words categorised as nouns. The result revealed that there were 48 English mixed words in the data categorised as verbs and 34 English mixed words categorised as adjectives. Classifiers, and determiners were at a low ratio, one and two words respectively. The grammatical categories of loan translations are shown in the following section.

4.2.2.1 Noun

In the present study, there were 157 loan translations in the nurse-patient interactions categorised as nouns: *abortion, acid, action, admission, air, airborne, anti-aging, antioxident, antibiotics, area, aseptic, technique, asthma, background, base line, blood pressure, blood sugar, body, brain, breastfeeding, cancer, case, cath, clinic, company, complication, computer, concept, condition, condom, content, cool pack, course, cyst, dead, death, dehydration, depression, detail, diabetes mellitus, diarrhea, discharge, duration, epilepsy, family, fat, fiber, fitness, gift, set, group o, guide line, haemorrahge, hematocrit, herb, hernia, herpes, hot pack, hypertension, idea, incharge, incubator, influenza, infusion, pump, intercom, juandice, lens, level, lift, lotion, membrane, memory, menopause, metabolism, microwave, monitor, mucous, newborn, normal saline, note, nursery, oil, overdose, pampers, phototheraphy, plastic surgery, platelet cell, pneumonia, pollution, print, product, prognosis, promotion, pulse, radiant warmer, reflux, result, rooming in, routine, sale, sample, screening, set, side effects, sinus, skin, skin traction, soft tissue, solution, sterile technique, stroke, suction, supplements, switch, symptom, syringe, syrup, technique, technology, treatment, ultrasound, ward, wheel chair, white blood cell, whitening, AIDS, BP, CCU,CT scan, DM, DTX, ENT, ER, ICU, IPD, Lab, LR, MRI, NICU, OPD, OR, anest, cesa, chemo, dermato, detox, Hep-B, hypocal, hypogly, neg, neuro, ortho, psycho, pos, post-OP, pre-OP, temp, vac* and *x-rays*. These words had Thai equivalents that could be used, divided into two sub-types. English mixed words with Thai equivalents which are acceptable in common usage and English mixed words with Thai equivalents which are not acceptable in common usage. A large number of them have Thai equivalents which are commonly used in the everyday

speech. Here are some examples of English mixed words with Thai equivalents which are acceptable in common usage, categorised as nouns; *blood sugar*, *dehydration*, *incubator*, *antibiotic*, *side effect*, and *treatment*. Some examples of these nouns are given below:

Blood sugar - ค่าปกติของ **Blood sugar** ก็คืออยู่ระหว่าง 70-110 อันนี้ก็ถือว่าอยู่ในเกณฑ์ปกติดี

"The level of blood sugar is between 70 – 110 which is considered normal"

Dehydration - ถ้าอยู่ในภาวะ **dehydration** ก็จะทำให้แทงน้ำเกลือยากตามไปด้วยล่ะค่ะ

"If the patient is dehydrated it makes it difficult to inject IVF"

Incubator - ตู้ **incubator** เป็นอุปกรณ์ ช่วยรักษาอุณหภูมิของร่างกายในเด็กคลอดใหม่ แล้วเด็กคลอดใหม่ทุกคนก็ต้องนอนปรับอุณหภูมิอย่างนี้ ประมาณ 6-8 ชม. แล้วแต่กรณี

"An incubator is equipment to help maintain a new born's temperature. All new born babies have to stay in an incubator for roughly 6 – 7 hours, depending on the case"

Antibiotic - หมอบอกว่า คุณลิขิตอาจต้องให้ **Antibiotic** ให้ครบ ก็น่าจะประมาณ 5-7 วันค่ะ

"A doctor said Khun Likhit may need to take antibiotics for 5 – 7 days"

Side Effect - ไม่ต้องกังวลนะค่ะ เพราะยานี้แทบจะไม่มี **Side Effect** เลย

"Don't worry as this pill has no side effects"

Treatment - จะต้องให้น้ำเกลือ และใส่เฝือกอ่อนให้กับคุณสาวิตรีนะค่ะ รบกวนจะย้ายคุณสาวิตรีไปห้อง **treatment** ตอนนี้เลย

"Patient who suffers from burning needs a specific treatment. We need to move her into an emergency room right away"

In addition, there are a few of the loan translations which are not acceptable in common usage also occurred in the data. Here are some examples of these words: *computer, technology, Sinus, lotion, clinic,* and *lift*. Even though these words have Thai equivalents such as คณิตกรณ์, ประยุกตวิทยา, โรคโพรงกระดูกกะโหลกอักเสบ, ยาทาผิว and ตู้ลำเลียงชักรอก. Thai people avoid using them. They are so very familiar with English mixed words because these words have been used for a long time. Everyone immediately understand their meaning. In addition, some Thai equivalents are too complicated to use, such as ตู้ลำเลียงชักรอก.

Moreover, some abbreviated or short terms used in the nurse-patient interactions were categorised as nouns. Nurses commonly used a variety of abbreviations and short terms in order to give instructions and information to their patients quickly and clearly. All were medical terms. Examples of these are given below.

BP (Blood Pressure) – **BP** สูงหน่อยนะค่ะ มีปวดศรีษะหรือเปล่าค่ะตอนนี้

"Your BP is quite high. Do you have a headache?"

ER (Emergency Room) – จำได้ไหมค่ะว่าตอนเข้ามาที่ **ER** ไม่ทราบว่าฝากนาฬิกาไว้ที่เจ้าหน้าที่คนไหน

"Can the patient remember when you entered ER who you left your watch with"

TB (Tuboreculosis) – **TB** จริงๆ แล้วติดต่อกันง่ายมาก โดยเฉพาะถ้าอยู่ในที่แออัด หรือชุมชน

"TB can very easily be spread especially in a busy and crowed area"

Neuro (Neurologist) – คงต้องรอให้หมอ **neuro** มาตรวจอีกทีนะคะ

"We probably need to wait for the neurologist to give a second opinion"

Ortho (Orthopedict) – หมอ **ortho** ตรวจแล้ว หมอเค้าให้ทำกายภาพบำบัดค่ะ

"The orthopedic doctor has checked and needs you to do physiotherapy"

4.2.2.2 Verb

The results revealed that there were 48 English mixed words in a Thai context categorised as verbs. The following are samples of code mixing categorised as verbs: *absorb, act, attend, blur, burn, charge, check, clamp, complicate, confirm, consult, contact, contract, control, copy, diet, dilate, fake, feed, fix, follow up, freeze, guide, hit, keep, key, leak, make, mix, observe, plan, print, push, put, record,*

refer, relax, report, round, save, scan, scrub, seal, search, service, set (OR), take care and *treat*. Some examples of verbs are given below.

Clamp - อย่างถ้าคนไข้จะเคลื่อนตัว ลงไปห้องน้ำ ก็ต้อง **clamp** แบบที่พยาบาลทำให้ดูนี้ทุกครั้งนะค่ะ แต่ทางที่ดีก็เรียกเจ้าหน้าที่มาช่วยจะดีที่สุด

"When a patient wants to move or go to the toilet the patient must clamp like the nurse taught you to do but the best thing is to call the nurse to assist you"

Attend - อย่างไรวันนี้ก็ต้องนอน **attend** อยู่ในห้องคลอด คงจะยังย้ายขึ้นวอร์ดไม่ได้ค่ะ

"However, you have to attend at the delivery room today so I'm afraid we cannot move you out of the ward yet"

Observe - อาจจะรบกวนคนไข้หน่อยนะ เพราะว่าจะมีเจ้าหน้าที่มาตรวจวัดไวทอลซายน์ คนไข้ทุก 1 ชั่วโมง และ **observe** อาการอย่างต่อเนื่อง

"We need to ask you to stay at the hospital today as the doctor has to observe you to see if you have any side effects from taking this pill"

Refer - คาดว่าจะต้อง **refer** คุณXXXX ภายในวันนี้เลย เพราะว่าหมอทางโน้น รับเคสแล้ว

"We will refer Khun XXXX to the other hospital today as they have already accepted her case"

Consult - หมอXXXXให้มาแจ้งคุณXXXX ว่าหมอจะขอ **consult** แพทย์เฉพาะทางโรคหัวใจ เพื่อให้มาดูคุณXXXX ด้วย

"Dr XXXX would like to let khun XXXX know that she has to consult a doctor who is a specialist in heart disease for her case"

Control - ในโรคความดันโลหิตสูง ก็คงจะต้องกินยา **control** บลัดเพรสเชอร์ให้ต่อเนื่องนะค่ะ

"A patient who has high blood pressure needs to continue taking pills to control their blood pressure"

4.2.2.3 Adjective

34 English mixed words categorised as adjectives were found in the present study. Here are the instances of loan translations categorised as adjectives: *acute, bad, big, chill, clear, complex, deep, extra, fair, final, fit, happy, high, hot, hit, low, modern, negative, new, perfect, positive, pure, safe, serious, slender, slim, smooth, soft, special, specific, stable, standard, unhappy* and *warm.* Some examples are given below.

Specific	-	มันเป็นเรื่องที่ **specific** มากๆ คงต้องมีการศึกษารายละเอียดเพิ่มเติม "This is a very specific case which will need to be studied in more detail"
Special	-	วันนี้มีอาหาร **special** สำหรับคนไข้ค่ะ น่ากินมาก "There is a special meal for patients today. It looks yummy"
Chronic	-	ผู้ป่วยโรคไต ก็เป็น **chronic** เคส ต้องเข้ามาฟอกเลือดอยู่เป็นประจำ "A patient with kidney problems is a chronic case and needs to have his blood purified regularly"
Acute	-	สรุปแล้ว วินิจฉัยว่าเป็น **acute** ไดอะเรีย หมอให้นอนโรงพยาบาล 3 วันค่ะ "The results show that you have acute diarrhea so you will need to stay in hospital for 3 days"
Stable	-	เราต้องดูให้สัญญาณชีพ **stable** ก่อนที่จะมีการเคลื่อนย้ายผู้ป่วย "Keep the vital signs stable and then we can move the patient"

4.2.2.4 Classifier

There was only one loan translation identified as a classifier, as follows.

Pack - สำลีก้อนแยกเป็น **pack** ให้ผู้ป่วยกลับบ้านไป

"Pack the cotton balls and give them to the patient"

4.2.2.5 Determiner

Determiners as quantifiers indicating quantity occurred rarely in the data. Only two quantifiers were found. They were used before nouns to indicate number. These are given below.

Multiple – ผลอัลตร้าซาวน์ พบ **multiple** ซีสที่รังไข่ มันก็คือ มีถุงน้ำเล็กๆ กระจายอยู่ในรังไข่

"From the ultrasound, we have found multiple cysts in the ovary. There are small cysts spread all over the ovary"

Single – คุณหมอให้ฉีดยาพาสซิล แบบ **Single** โดสแล้วน่าจะดีขึ้น

"Doctor will inject a single dose of Plasil to the patient and he should feel better soon"

Furthermore, three phrases were also found in the data. They occurred at a low ratio. Some examples of these phrases are given below.

OK! – **OK** ค่ะ เดี๋ยวจะบอกคุณหมอให้นะค่ะ

"OK, I will let the doctor know"

Good Night – **Good night** นะค่ะ

"Good night"

Bye Bye! – เดี๋ยวพยาบาลจะลงเวรแล้ว **Bye Bye** นะลูก นอนหลับฝันดีค่ะ

"I am finishing my shift and I have to go now, bye bye, sweet dreams"

As shown in the above examples, the word "OK!" is the continuative in the dialogue. The word "good night" and "bye bye" are expressions which themselves are used as a means of leave-taking. These two words were mostly used by younger nurses to be friendly.

4.3 Code Mixing in Nurse-Patient Interactions at the Local Bangkok Private Hospital

In the following section, the researcher has classified all English mixed words in nurse-patient interactions at the local Bangkok private hospital into two types: transliteration and loan translation.

4.3.1 Transliterations in nurse-patient interactions at the local Bangkok private hospital

From the data, there were 26 transliterations which occurred in the conversation of nurse-patient interactions in a local medical private hospital. They can be categorised into three grammatical classes as follows: noun, verb, and classifier. The following table lists the word classes found in the data.

Table 4.7 The percentage of transliterations during nurse-patient interactions at the local Bangkok private hospital

Word class	The number of occurrences in the list of transliterations	Percentage of Occurrence (%)
Noun	18	69.23
Verb	1	3.85
Classifier	7	26.92
Total	**26**	**100**

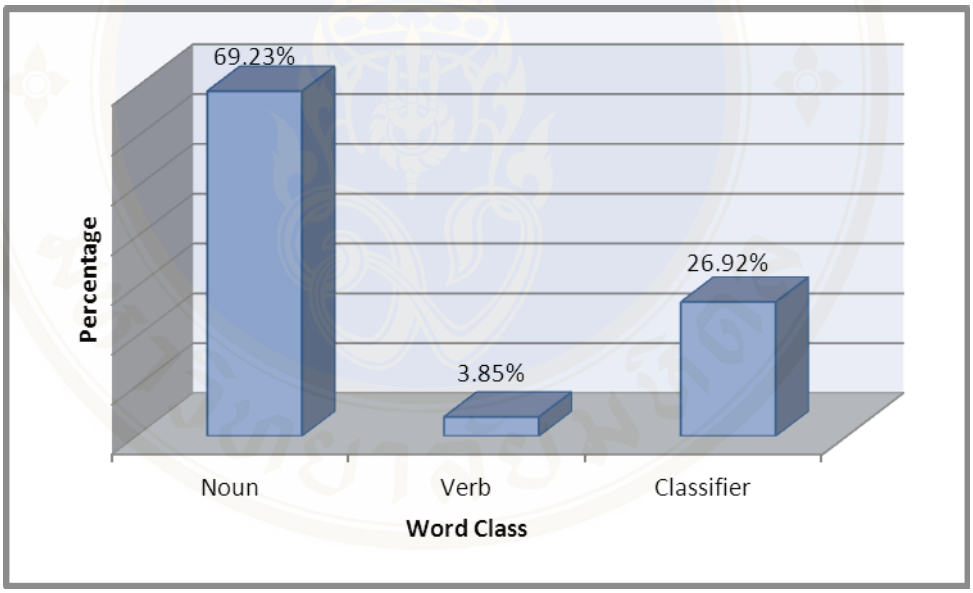

Figure 4.3 The percentage of transliterations during nurse-patient interactions at the local Bangkok private hospital

According to Table 4.7 and Figure 4.3, the word class with the majority of occurrences was nouns. There were 18 words categorised as nouns. The result reveals that there were seven words categorised as classifiers and one word categorised as a verb. The detail of classification of these English words could be summarised as follows:

4.3.1.1 Noun

Nouns were found the most in code mixing of nurse-patient interactions at the local Bangkok private hospital. There were 17 nouns which occurred in the data. The following are instances categorised as nouns: *alcohol, gel, calcium, carbohydrate, fitness, micropore, protein, virus, glucose, autocave, intercom, internet, iodine, migraine, paracetamol, website* and *HIV*. These English words categorised as nouns refer to the solutions, biochemical compounds, chemical elements, symptoms which were used in diagnosing medical conditions and technology terms which related to the topic of discussion. Some examples of these nouns are given as follows:

Calcium – ถ้า **calcium** ต่ำก็ทำให้เป็นตะคริวได้บ่อย

"If you have low calcium it could often cause cramp"

Sodium – **sodium** ต่ำมาก หมอเลยให้ sodium chloride มาทาน

"The patient has low sodium so the doctor has given you sodium chloride to take"

Protein – **protein** ที่ดีที่สุด ก็คือ **protein** ที่มาจากเนื้อปลา

"The best protein you could get is protein from fish"

Website – สามารถเช็คประวัติของแพทย์ได้จาก **website** ของโรงพยาบาลค่ะ

"You can check the doctor's history by looking it up on the hospital website"

Virus - ไข้หวัดเป็นโรคที่เกิดจากเชื้อ **Virus** นะค่ะ

"A virus causes influenza"

There was only one abbreviated term with Thai equivalent categorised as a noun in nurse-patient interactions at the local Bangkok private hospital found in the data. An example is given below.

HIV (Human Immunodeficiency Virus) – การติดต่อของ **HIV** ติดได้ทางเลือดและเพศสัมพันธ์

"HIV can be transmitted by blood transfer and sexual intercourse"

4.3.1.2 Verb

There was only one English mixed word without Thai equivalent during nurse-patient interactions in the local Bangkok private hospital categorised as a verb, as shown below.

Shock – เมื่อผู้ป่วย shock ต้องรีบนำส่งโรงพยาบาลให้เร็วที่สุดนะค่ะ

"When the patients is in shock, he must be sent to hospital as soon as possible"

4.3.1.3 Classifier

There were seven English words categorised as classifiers which occurred in the nurse-patient interactions. Here were some examples of the occurrences of code mixing categorised as classifiers: *capsule, celsius, centimetre, gram, kilogram, litre* and *microgram*. Some examples of these classifiers are shown below.

Gram – คุณพ่อหรือเปล่าค่ะ น้องแข็งแรงดี น้ำหนัก 3,600 **gram** ค่ะ

"Are you the father? Your baby is very healthy. He weighs 3,600 grams"

Kilogram – น้ำหนักคุณXXXX 72 **kilogram** เทียบกับส่วนสูงแล้ว ถือว่าเกินอยู่มากนะค่ะ

"Khun XXXX weighs 72 kilograms which is rather over weight compare to your height"

Centimeter - ก็น่าจะเป็นแผลกว้างประมาณ 4-5 **Centimeter** หมอเปิดแผลไม่ใหญ่หรอกค่ะ

"Doctor is giving you an operation and the incision will be about 4 to 5 centimetres long"

Celsius – อุณหภูมิที่ดี ที่เหมาะสมกับน้อง ประมาณ 25 – 28 องศา **Celsius** นะค่ะ

"The best temperature for a baby is between 25 and 28 degrees celsius"

4.3.2 Loan translations in nurse-patient interactions at the local Bangkok private hospital

From the data, there were 74 loan translations which occurred in the nurse-patient interactions at the local Bangkok private hospital. These English mixed words could be classified into three categories as follows: noun, verb, and adjective. The following table listed the word classes found in the data and the percentage of loan translations which occurred in the conversation.

Table 4.8 The percentage of loan translations during nurse-patient interactions at the local Bangkok private hospital

Word class	The number of occurrences in the list of loan translations	Percentage of Occurrence (%)
Noun	47	63.51
Verb	17	22.97
Adjective	10	13.51
Total	**74**	**100**

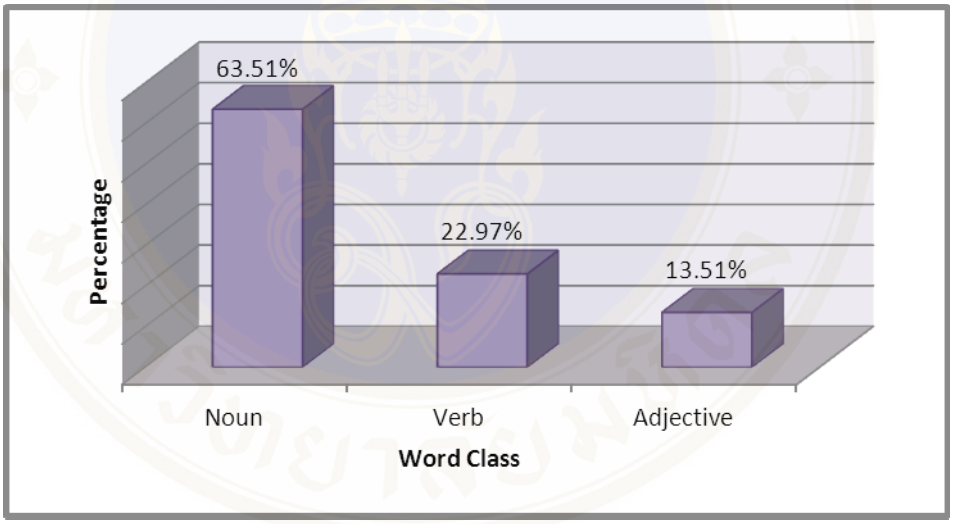

Figure 4.4 The percentage of loan translations during nurse-patient interactions at the local Bangkok private hospital

According to Table 4.8 and Figure 4.4, the results reveal that there were 47 English mixed words in the data categorised as nouns, 17 English mixed words in the data categorised as verbs and 10 English mixed words in the data categorised as adjectives. The grammatical categories of loan translations are shown in the following section.

4.3.2.1 Noun

There were 47 English occurred at a mixed words in the nurse-patient interactions categorised as nouns. The general English nouns were high ratio and the medical terms categorised as nouns occurred at a very high ratio. The following are instances of nouns: *clinic, clip, computer, concept, cool pack, family, gift set, herpes, level, lift, lotion, memo, metabolism, microwave, monitor, note, OPD, card, pampers, print, promotion, remote control, sale, sample, service, set, shampoo, spa, spray, switch, syringe, tank, technique, technology, ward, wireless, cesa, chemo, CT scan, ER, ICU, IPD, Lab, MRI, OPD, OR* and *X-rays.* These kinds of words had Thai translations. Some are acceptable in common usage but some are unacceptable in common usage. Some examples of these nouns are given as follows:

OPD. Card – คุณหมอได้ดูประวัติคนไข้จาก **OPD. Card** แล้วนะค่ะ
"The doctor has seen the patient's history from OPD. card"

Ward – คงต้องย้ายคนไข้ลงจาก **Ward** ไปอยู่ ICU
"We need to move the patients from Ward to ICU"

Level – จากการตรวจ สรุปว่าคนไข้เป็นมะเร็ง **Level** 2 ค่ะ
"The doctor has checked and found that the patient has level 2 cancer"

English mixed words with Thai equivalents which are not acceptable in common usage also occurred in the data. Here are some examples of these words: clinic and promotion. The reason for using the English words is that they were more common in daily conversation, and therefore more acceptable. As they are used habitually, patients are familiar with these English terms. Some examples are given below.

Clinic – จริงๆ แล้ว หมอเค้าก็มี **Clinic** ข้างนอก

"Actually the doctor has a personal clinic outside the hospital"

Promotion – ช่วงนี้โรงพยาบาลมี **promotion** การฉีดวัคซีนไข้หวัด 2009 ในราคาถูก เข็มละ 529 บาท

"The hospital has a promotion for patients who want vaccine for swine flu. It's only 529 baht per a shot"

In addition, the results of analysis reveal that there are 11 abbreviations or short terms in the Thai context categorised as nouns. Here are some examples of these words: *ICU, X-Rays, Chemo, CT,* and *lab*. These abbreviations or short terms were more acceptable and familiar in English than in Thai. These words were more economical and clearer to referential information. Some examples of these abbreviations or short terms are shown as follows:

ICU (Intensive Care Unit) - ที่คนไข้ต้อง admit ที่ **ICU** ก็เพื่อสังเกตอาการอย่างใกล้ชิด

"The patient has to be admitted to ICU for observation"

X-rays (Electromagnetic Radiation) - เดี๋ยวจะมีเวรเปลมารับไป **X-rays** ที่ชั้น 1 นะค่ะ

"We will send a trolley to pick you up for X-rays on the 1st floor"

Chemo (Chemotherapy) - คนไข้ที่ on **chemo** จะมีอาการคลื่นไส้ อาเจียน และผมร่วงร่วมด้วยค่ะ

"Patients who are receiving chemotherapy will have side effects such as dizziness, vomiting and hair loss"

CT (Computerize Tomography) – **CT** Scan แล้วผลปกติดีนะค่ะ ถือว่าโชคดีมากๆ

"After CT scan we found nothing wrong. Congratulations"

4.3.2.2 Verb

The results reveal that there were 17 English mixed words in the Thai context categorised as verbs. Here are instances of loan translations categorised as verbs: *admit, check, consult, contact, control, copy, follow up, record, refer, relax, report, round, scan, screen, search, set* and *take care.* Some examples of verbs are given below.

Copy – คุณพ่อน้องค่ะ รบกวน **copy** บัตรประชาชนและทะเบียนบ้านให้ด้วย

"Could we have a copy of the father's ID card and house blue book please"

Scan – ผลการ **scan** สมองพบว่ามีจุดเลือดออกเล็กๆ อยู่ที่สมองส่วนหน้านะค่ะ

"From the scan result we found a small spot on the front side of the patient's brain"

Search – คุณXXXX ลองไป **Search** ข้อมูลจากอินเตอร์เน็ตก็ได้นะค่ะ

"Khun XXXX can search information from the internet"

Check - เดี๋ยวจะลอง **check** ดูให้อีกครั้งค่ะ

"Let me check it for you again"

Relax - การออกกำลังกายก็เป็นการ **relax** อย่างหนึ่งค่ะ

"Exercise is a type of activity to help you relax"

4.3.2.3 Adjective

Ten English mixed words categorised as adjectives were found in the present study. Here were some examples of English mixed words with Thai equivalents categorised as adjectives: *hot, blur, clear, happy, low, modern, fair, final, fit,* and *perfect*. Examples are given below.

Hot – คนนิยมฉีดวัคซีนป้องกันไข้หวัด 2009 ตอนนี้ถือว่า **hot** สุดๆ เลยค่ะ

"Nowadays H5N1 vaccine is very hot. Many people go to hospitals for injections"

Blur – บรรทัดนี้เห็นชัดไหมค่ะ หรือว่า **Blur**

"Can the patient see this line or is it a blur?"

Clear – ญาติลองคุยกันให้ **clear** ไปเลยดีกว่าค่ะ ว่าจะเอายังไงดี

"The patient's family needs to clear their minds and focus on making the patient happy and propose for the operation"

Happy – ถ้าคุณXXXX **happy** กับการรักษา คุณหมอก็คงดีใจ

"Khun XXXX is happy with her treatment. Doctor is very pleased"

Low – คุณหมอสั่งอาหาร **low** โซเดียมให้คนไข้นะค่ะ

"Doctor orders low sodium food for the patient".

4.4 The comparison of code mixing in nurse-patient interactions between the central Bangkok private hospital and the local Bangkok private hospital

This section compares nurse-patient interactions between the central Bangkok private hospital which represented patients with a high level of education and high socio-economic classes and the local Bangkok private hospital which represented patients with a low level of education and low socio-economic classes. The results showed that the transliterations in nurse-patient interactions at the central Bangkok private hospital can be categorised into three word classes and the transliterations in nurse-patient interactions at the local Bangkok private hospital can also be categorised into three word classes. The loan translations in nurse-patient interactions at the central Bangkok private hospital can be categorised into five word classes and the loan translations in nurse-patient interactions at the local Bangkok private hospital can be categorised into only three word classes. Table 4.9 compares the word classes of code mixing between the central Bangkok private hospital and the local Bangkok private hospital. The numbers in the table show their ratio and percentage.

Table 4.9 The comparison of code mixing in terms of word classes, percentage between the central Bangkok private hospital and the local Bangkok private hospital in nurse-patient interactions

Word Class	Nurse-patient interactions in central medical private hospital				Nurse-patient interactions in local medical private hospital			
	Transliterations		Loan translations		Transliterations		Loan translations	
	The number of occurrences	Percentage (%)	The number of occurrences	Percentage (%)	The number of occurrences	Percentage (%)	The number of occurrences	Percentage (%)
Noun	47	11.63	157	38.86	18	4.46	47	11.63
Verb	1	0.25	48	11.88	1	0.25	17	4.21
Adjective	-	-	34	8.42	-	-	10	2.48
Classifier	14	3.47	1	0.25	7	1.73	-	-
Determiner	-	-	2	0.50	-	-	-	-
Total	**62**	**15.23**	**245**	**60.20**	**26**	**6.39**	**74**	**18.18**

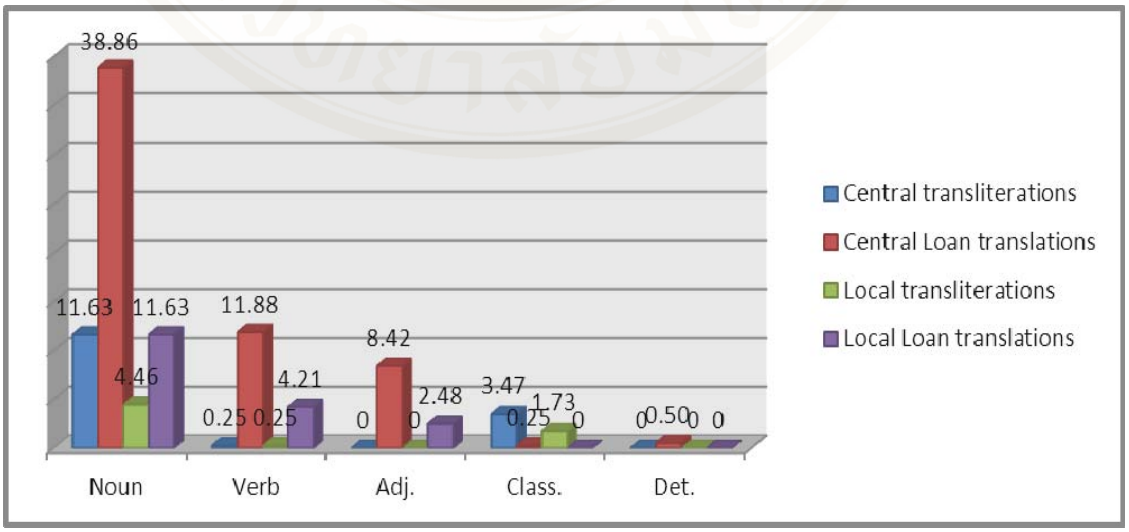

Figure 4.5 Code mixing comparison of nurse-patient interactions between the central Bangkok private hospital and the local Bangkok private hospital in terms of word classes, ratio counts and percentage

According to Table 4.9 and Figure 5, the ratio of distribution of each word class shows that nurses who worked at the central Bangkok private hospital used English mixed words in their conversation more than nurses who worked at the local medical private hospital. For the code mixing of nurses at the central Bangkok private hospital, the transliterations categorised as nouns, verbs, and classifiers were 11.55%, 0.25%, and 3.44% respectively. The loan translations categorised as nouns, verbs, adjectives, classifiers, determiners, and phrases were 38.57%, 11.79%, 8.35%, 0.25%, 0.49% and 0.74% respectively. For the code mixing of nurses at the local Bangkok private hospital, the transliterations categorised as nouns, verbs and classifiers were 4.42%, 0.25% and 1.72% respectively. The loan translations categorised as nouns, verbs and adjectives were 11.55%, 4.18% and 2.46% respectively. No determiners were recorded in nurse-patient interactions at the local Bangkok private hospital.

After comparing the English mixed words between the central Bangkok private hospital and the local Bangkok private hospital, most English mixed words at the local Bangkok private hospital were a subset of the English mixed words at the central Bangkok private hospital. Thirty four transliterations at the central hospital and five transliterations at the local hospital categorised as nouns, eight transliterations at the central hospital and one transliteration at the local hospital categorised as classifiers, and two transliterations at the central hospital and one transliteration at the local hospital categorised as verbs were different from each other. All transliterations are given in the following table.

Table 4.10 The differential transliterations between the central and the local medical private hospitals

Noun		**Classifier**		**Verb**	
Central	Local	Central	Local	Central	Local
amino acids	autocave	amp		shock	
bacteria	fitness	c.c.			
biotin	intercom	dose			
carbon dioxide	iodine	hertz			
cell	bikini	milligram			
cholesterol		ounce			
clavulonic acid		vial			
collagen					
coma					
crib					
down syndrome					
enzyme					
folic Acid					
gas					
GB					
gel					
glucose					
glycerin					
gout					
graph					
insulin					
l-carnitine					
molecules					

Table 4.10 The differential transliterations between the central and the local medical private hospitals (cont.)

Noun		**Classifier**		**Verb**	
Central	Local	Central	Local	Central	Local
nitrogen					
oxygen mask					
paracetamol					
parkinsons					
potassium					
primrose					
shock					
steroid					
thyroid					
vaccine					
vitamin					

Additionally, 120 loan translations at the central hospital and ten loan translations at local hospital categorised as nouns, 33 loan translations in the central hospital and two loan translations in local hospital categorised as verbs, 24 loan translations in the central hospital categorised as adjective, one loan translations in the central hospital categorised as classifiers, two loan translations in the central hospital categorised as determiner, and three loan translations in the central hospital categorised as phrases were different from each other. All loan translations are given in Table 4.11.

Table 4.11 The differential loan translations between the central medical private hospital and the local medical private hospitals

Noun		Verb		Adjective		Classifier		Determiner	
Central	Local	Central	Local	Central	Local	Central	Local	Central	Local
abortion	clip	absorb	admit	acute		pack		multiple	
acid	glucose	act	screen	bad				single	
action	memo	attend		big					
admission	OPD. card	blur		chill					
AIDS	remote control	burn		complex					
air	service	charge		deep					
airborne	shampoo	clamp		extra					
anest	spa	complicate		high					
anti-aging	spray	confirm		negative					
antibiotics	tank	contract		new					
antioxident		diet		positive					
area		dilate		pure					
aseptic technique		fake		safe					
asthma		feed		serious					
background		fix		slender					
base line		freeze		slim					
blood pressure		guide		smooth					
blood sugar		hit		soft					
body		keep		special					
BP		key		specific					
brain		leak		stable					
breastfeeding		make		standard					

Table 4.11 The differential loan translations between the central medical private hospital and the local medical private hospitals (cont.)

Noun		**Verb**		**Adjective**		**Classifier**		**Determiner**	
Central	Local	Central	Local	Central	Local	Central	Local	Central	Local
cancer		mix		unhappy					
case		observe		warm					
cath		plan							
CCU		print							
company		push							
complication		put							
condition		save							
condom		scrub							
content		seal							
course		service							
cyst		treat							
dead									
death									
dehydration									
depression									
dermato									
detail									
detox									
diabetes mellitus									
diarrhea									
discharge									

Table 4.11 The differential loan translations between the central medical private hospital and the local medical private hospitals (cont.)

Noun	
Central	Local
DM	
DTX	
duration	
ENT	
epilepsy	
fat	
fiber	
fitness	
group O	
guide line	
haemorrahge	
hematocrit	
Hep-B	
herb	
hernia	
hot pack	
hypertension	
hypocal	
hypogly	
whitening	
wheel chair	

Noun	
Central	Local
idea	
incharge	
incubator	
influenza	
infusion pump	
intercom	
juandice	
lens	
LR	
membrane	
memory	
menopause	
mucous	
Neg	
neuro	
newborn	
NICU	
normal saline	
nursery	
oil	
ortho	

Noun	
Central	Local
overdose	
phototheraphy	
phycho	
plastic surgery	
platelet cell	
pneumonia	
pollution	
pos	
post-OP	
pre-OP	
product	
prognosis	
pulse	
radiant warmer	
reflux	
result	
rooming in	
routine	
white blood cell	

Noun	
Central	Local
screening	
side effects	
sinus	
skin	
soft tissue	
solution	
sterile technique	
stroke	
suction	
supplements	
symptom	
syrup	
temp	
treatment	
ultrasound	
ward	

In terms of semantic field, both the translations and the loan translations at the central Bangkok private hospital and the local Bangkok private hospital can be categorised into four groups: computer technical terms, scientific terms, medical terms and general terms. Table 4.12 presents the number of these terms used in transliterations and loan translations.

Table 4.12 The types of the differential English mixed words

Types of words / Types of hospitals		**The computer terms**	**The scientific terms**	**The medical terms**	**The general terms**
Central private hospital	Transliterations	1	12	23	5
	Loan translations	1	6	80	96
Local private hospital	Transliterations	-	2	2	2
	Loan translations	-	-	1	11
Total		**2**	**20**	**106**	**114**

The predominant word-types found were general terms, followed by medical terms, scientific terms and computer terms. Furthermore, Thai equivalents at the local Bangkok private hospital which were found as loan translations at the central Bangkok private hospital occurred widely in the data. There were 71 loan translations categorised as nouns: *abortion, acid, airborne, anest, anti-aging, antibiotics, antioxident, area, aseptic technique, asthma, base line, blood pressure, blood sugar, body, brain, breastfeeding, cancer, cath, condition, condom, dehydration, depression, dermato, diabetes mellitus, diarrhea, discharge, DM, DTX, duration, ENT, epilepsy, fat, guide line, haemorrahge, hematocrit, Hep-B, herb, hernia, hypertension, hypocal, hypogly, incharge, influenza, juandice, membrane, menopause, mucous, neg, neuro, ortho, overdose, phototheraphy, phycho, plastic surgery, platelet cell, pneumonia, pollution, pos, post-OP, pre-OP, prognosis, pulse, reflux, rooming in, routine, skin, stroke, supplements, symptom, vac,* and *white blood cell,* 15 loan translations

categorised as verbs: *absorb, attend, burn, complicate, contract, dilate, fake, feed, leak, make, push, put, treat, scrub,* and *seal* and 14 loan translations categorised as adjectives: *acute, bad, complex, deep, extra, high, negative, new, positive, pure, slim, smooth, specific, unhappy* and *warm.* Thus, it is evident that the code mixing in this study was not related to the topics under discussions.

As the central Bangkok private hospital (an urban first class private hospital) represented patients with a high level of education and socio-economic class and the local Bangkok private hospital (a rural second class private hospital) represented patients with a low level of education and socio-economic class, the social variables of the patients: level of education and socio-economic class influenced the code mixing of nurses as stated in the hypothesis.

In addition, an analysis of the study found another factor which might have motivated English mixing by nurses. It was an interlocutor factor which had a direct influence on the choice of language used by nurses. Nurses tended to mix languages to conform with the practice of patients who started using English words in the conversation, as they wanted to maintain in-group communication. A few examples were found in the data:

Nurse: ผู้ป่วยค่ะ พรุ่งนี้คุณหมอให้เข้าผ่าตัด ก่อนเข้าห้องผ่าตัดจะมีการให้น้ำเกลือและเจาะเลือด

"Patient, your operation is tomorrow and we have take your blood and give you IVF beforehand"

Patient: แล้วคุณหมอให้ set OR กี่โมงค่ะ ที่ว่าเจาะ lab ตรวจอะไรบ้าง

"What time does the doctor want me to set OR? And for taking my blood what is it for?"

Nurse: ก็พรุ่งนี้ set OR เวลา 11 โมง ต้องขอตรวจ HIV ก่อนค่ะ เพื่อเป็น base line

"Tomorrow set OR at 11.00, we need to test for HIV for a base line"

Patient: อ๋อ OK ค่ะ

"OK."

4.5 Patient attitudes with regards to code mixing by nurses with whom they interacted

An informal interview was conducted to explore the patient attitudes after interaction with the nurses. This was to assess the success of the nurse-patient interactions. In the following section is an analysis of the interview data revealing patient's attitudes toward English mixed words in the Thai context as used by nurses working at the central Bangkok private hospital and nurses working at the local Bangkok private hospital.

4.5.1 Patient attitudes towards code mixing of nurses who have worked at the central Bangkok private hospital

After analysis of the interview data, there were two levels of distribution of occurrences of English mixed words: high rate, and medium rate. The following table lists the number and percentage of patient attitudes towards the occurrences of English mixed words in the interactions.

Table 4.13 The number and percentage of patient attitudes towards the occurrences of English mixed words in the interactions

The number of English mixed words which occur in the interaction	The number of the patients	Percentage (%)
High	9	30
Medium	21	70
Low	-	-
No English mixed word used	-	-
Total	**30**	**100**

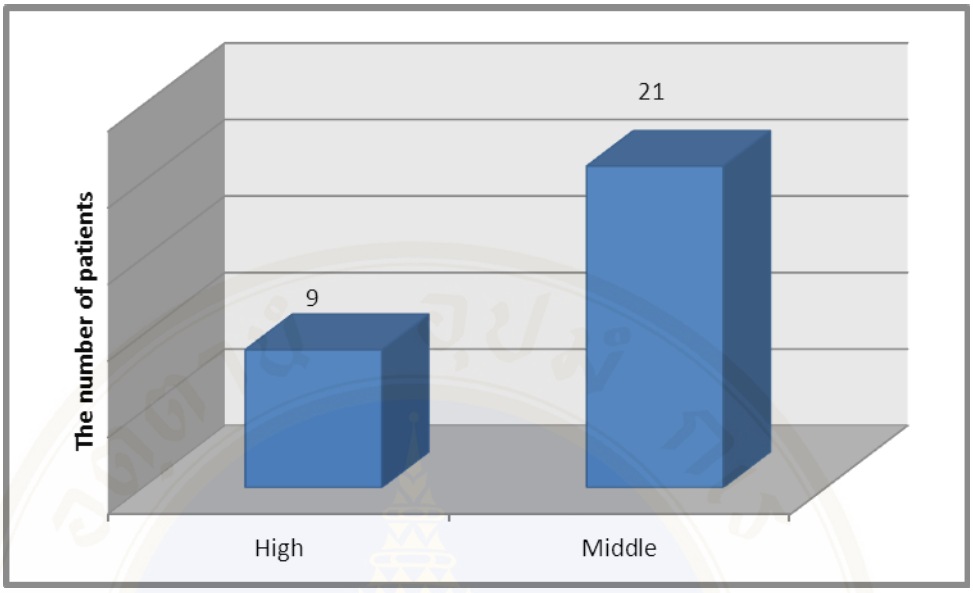

Figure 4.6 The number and percentage of the patient attitudes towards the occurrences of English mixed words in the interactions

Based on data in Table 4.13 and Figure 4.6, nine patients thought that nurses used English mixed words at a high rate in their conversation. Additionally, 21 patients thought that nurse used English mixed words at a medium rate when nurses communicated with them.

In addition, the results showed that there were three levels of attitude towards the English-Thai code mixing of nurses: appropriate to use English mixing, neutral and inappropriate to use English mixing. Appropriate use of English mixing represents a clear understanding of English mixed words. Neutral might represent a fair understanding of English mixed words. Inappropriate use of English mixing was likely to signify an inability in the past of the patients to understand English mixed words. The following table lists the ratio and percentage of patient attitudes towards code mixing in nurse-patient interactions at the central Bangkok private hospital.

Table 4.14 Patient attitudes towards code mixing by nurses who work at the central Bangkok private hospital

The social variables of the patients	**Appropriate to use English mixing**		**Inappropriate to use English mixing**		**Neutral**	
	Ratio counts	Percentage (%)	Ratio counts	Percentage (%)	Ratio counts	Percentage (%)
High level of education and socio-economic class	15	50	3	10	12	40

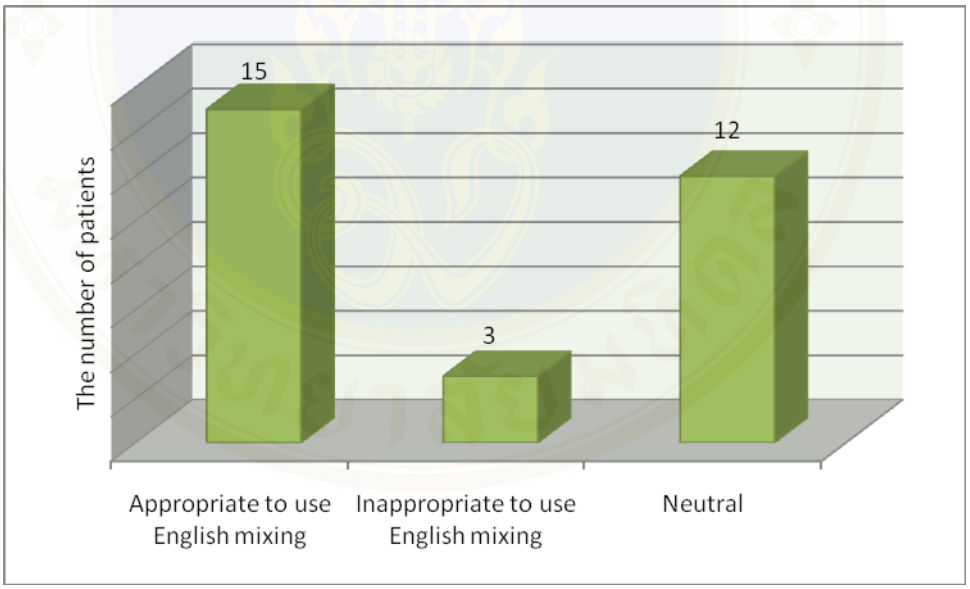

Figure 4.7 Patient attitudes towards code mixing by nurses who have worked at the central Bangkok private hospital

Table 4.14 and Figure 4.7 show that 15 patients thought that using English words was appropriate because they were convenient and efficient. For the medical terms, it was very difficult to find the appropriate Thai equivalents to replace them. English medical terms were more specific, and their meaning could be more accurately conveyed. Twelve patients expressed a neutral attitude regarding the use of

English words by nurses. It was considered that English words were suitable for the topic. Some English words which were used in the communication were familiar. Even though they understood the meanings of the English mixed words sufficiently, those words should be translated into Thai or clarified with elaboration, as they would make the patients better understand and easier to make the point such as dehydration, and hematocrit. Only three patients expressed negative attitudes towards the use of English words by nurses. They thought the abbreviations or short terms were very hard to understand. Those words sometimes caused the patients to misunderstand the meanings such as DTX, and hypocal. Therefore, some abbreviations should be clarified.

4.5.2 Patient attitudes towards code mixing of nurses who have worked at the local Bangkok private hospital

In this section, the results show that there were three levels of the distribution of occurrences of English mixed words according to patients' attitudes: medium, low and no English mixed word. The following table lists the ratio and percentages of the attitudes towards the distribution of occurrence of English mixed words in nurse-patient interactions.

Table 4.15 The number and percentage of patient attitudes towards the occurrence of English mixed words in interactions with nurses

The number of English mixed words which occur in the interaction	The number of the patients	Percentage (%)
High	-	-
Medium	3	10
Low	22	73.33
No English mixed word used	5	16.67
Total	**30**	**100**

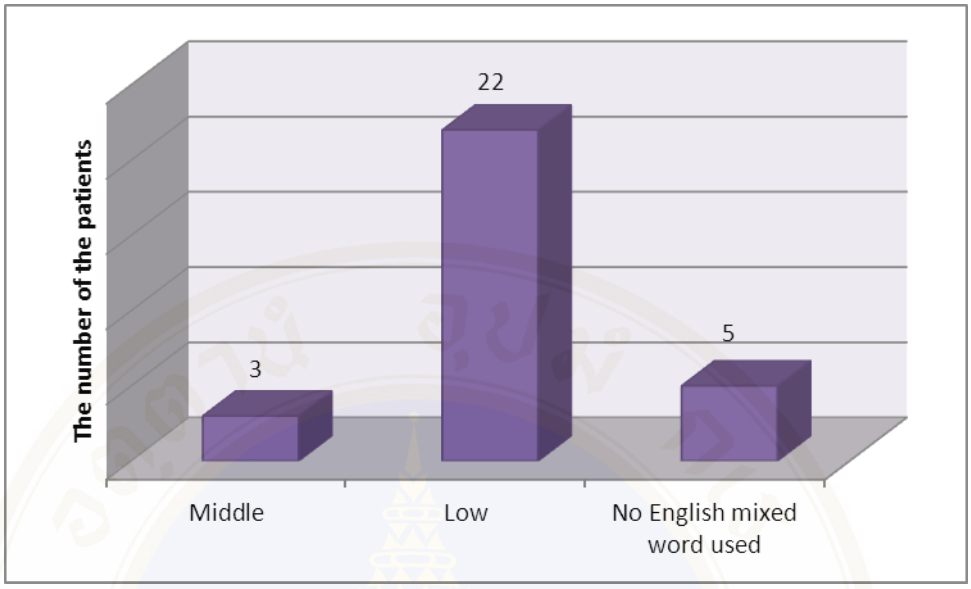

Figure 4.8 The number and percentage of patient attitudes towards the occurrence of English mixed words in interactions with nurses

Based on data in Table 4.15 and Figure 4.8, three patients thought that nurses used English mixed words at medium rates in their conversation. Additionally, 21 patients thought that nurses used English mixed words at low rates in their interactions. Only five patients thought there were no English mixed words.

Regarding patient satisfaction, there were three types of attitudes towards English-Thai code mixing by nurses: appropriate to use English mixing, neutral and inappropriate to use English mixing. The following table lists the ratio and percentage of patient attitudes towards code mixing in nurse-patient interactions.

Table 4.16 Patient attitudes towards code mixing by nurses who have worked at the local Bangkok private hospital

The social variables of the patients	**Appropriate to use English mixing**		**Inappropriate to use English mixing**		**Neutral**	
	Ratio counts	Percentage (%)	Ratio counts	Percentage (%)	Ratio counts	Percentage (%)
Low level of education and socio-economic class	6	20	19	63.33	5	16.67

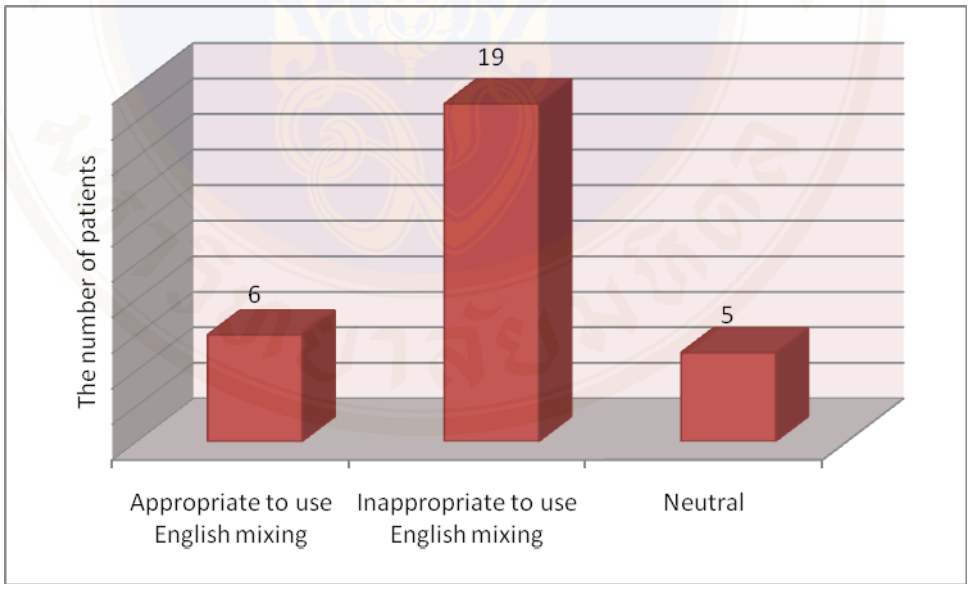

Figure 4.9 Patient attitudes towards code mixing by nurses who have work at the local Bangkok private hospital

Table 4.16 and Figure 4.9 show that 19 patients expressed negative attitudes. There were many reasons for expressing negative views. The general English mixed words were very difficult for them to understand such as metabolism, and herpes. Some abbreviations or short terms and the medical terms caused the failure communication such as cesa and OPD. They were worried that there might be an embarrassing situation when they did not understand the meaning of the most crucial words or words in English. Then there would be both communication breakdown and embarrassment. Thai equivalents or clarification with elaborations were necessary for making the patients understand the meanings easily and correctly.

Six patients expressed positive attitudes regarding the use of English words by nurses. They thought that some English mixed words were used at a very high rate in daily life. Therefore, they were very familiar with them. They understood the meaning of English mixed words eventhough they had a low level of education and socio-economic class. Some patients accepted the use of English words even though they might not understand them. They gave the reason that it would provide an opportunity to improve their language skills.

Additionally, five patients expressed/ a neutral attitude. Regarding the general English mixed words, they could guess the meaning from the context.

4.6 Conclusion

Chapter Four presents and describes the findings from all the data obtained according to the research procedure described in the previous chapter. The entire data and the findings of this study include results of the questionnaires, code mixing in nurse-patient interactions at the central Bangkok private hospital and the local Bangkok private hospital, code mixing comparison of nurse-patient interactions between the central Bangkok and the local Bangkok private hospitals and patient attitudes towards code mixing by nurses with whom they interacted. The following chapter will provide an overall summary of the study, a discussion of the findings, the implications of code mixing, and include suggestions for further research.

CHAPTER V
CONCLUSION AND DISCUSSION

5.1 A Summary of the Study

The present study was conducted in order to examine the phenomenon of Thai-English code mixing amongst nurses and patients at the central Bangkok private hospital and the local Bangkok private hospital. The purposes of the study were to reveal the influence of social factors, level of education and social-economic class, on English-Thai code mixing between nurses who worked at a central Bangkok private hospital and those working at a local Bangkok private hospital in order to categorise the grammatical categories, and to reveal patient attitudes towards the nurse-patient interactions. The data for this study was collected by three different methods: participant observation, interview and questionnaire. The conversations were recorded over 200 hours: 100 hours with 10 nurses at the central Bangkok private hospital and 100 hours with 10 nurses at the local Bangkok private hospital. Informal interviews with patients were conducted in order to investigate patient attitudes towards Thai-English code mixing by the nurses with whom they interacted. In the study, patients at the central hospital (a first class private hospital) represented those with a high level of education and high socio-economic class and patients at the local hospital (a rural second class private hospital) represented those with a low level of education and low socio-economic class. The data obtained were then transcribed in Thai, but English mixed words were written in English. The researcher analysed all the data according to the objectives of the study.

The results reveal that the social variables of the patients, level of education and socio-economic class, influenced code mixing by nurses as stated in the hypothesis. According to the frequency of English mixed words, nurses working at the central Bangkok private hospital which represented patients with a high level of education and socio-economic class used English-Thai code mixing more than nurses

working at the local Bangkok private hospital which represented patients with a low level of education and socio-economic class. For English-Thai code mixing of nurses at the central Bangkok private hospital at word level, English mixed words can be classified into two types: transliterations and loan translations. The distribution of transliterations mixed in the Thai context can be categorised into three grammatical categories: nouns, verbs, and classifiers. Nouns occurred at high rates. Verbs occurred at low rates and classifiers occurred at medium rates. The distribution of loan translations mixed in the Thai context can be categorised into five grammatical categories: nouns, verbs, adjectives, classifiers, and determiners. Nouns occurred at high rates. Verbs and classifiers occurred at medium rates and classifiers, determiners and phrases occurred at low rates. In addition, phrases were found in the data which occurred at low rates.

In addition English mixed words used by nurses at the local Bangkok private hospital can be classified into two types as well. The distribution of transliterations mixed in the Thai context can be categorised into three grammatical categories: nouns, verbs and classifiers. Nouns occurred at high rates. Verbs occurred at low rate and classifiers occurred at medium rates. The distribution of loan translations in the Thai context can be categorised into three grammatical categories: nouns, verbs and adjectives. Nouns occurred at high rates. Verbs and adjectives occurred at medium rates.

Regarding the transliterations, nouns were mostly used in code mixing in nurse-patient interactions. English mixed words as used by nurses at both hospitals, which were categorised as nouns, were divided into two types: proper nouns and common nouns. Proper nouns referred to trade names for drugs, brand names of medical products and equipment, brand names of vaccines, and the names of persons, places and towns which related to the topic of discussion. These terms were not considered as code mixing in the present study. Common nouns were used as medical terms and general English terms in conversations. Regarding the medical terms, nurses might have learnt such terms in English, therefore, it was very difficult to find Thai equivalent or Thai translations to replace English medical terms. Using medical terms was convenient and efficient. The distribution of common nouns was at a high ratio in

nurse-patient interactions when in reference to high technology such as *intercom, internet,* and *website*. English verbs were less commonly used than nouns or classifiers. All abbreviations or short terms categorised as nouns were used as medical terms.

Regarding loan translations, nouns are used most in code mixing in nurse-patient interactions. English mixed noun used by nurses in both hospitals, were divided into two types, medical terms and common nouns. Even though Thai equivalent existed, nurses normally used the English nouns. Most of these words are familiar to Thai people because they are commonly used in everyday speech.

Concerning patient attitudes towards to English mixing by nurses at the central Bangkok private hospital, 30% thought that nurses used English mixed words at a high rates in their conversations. 70% thought that nurses used English mixed words at medium rates when nurses communicated with them. As for patients' level of satisfaction with English mixed words use, there were three attitude-types with respect to Thai- English code mixing by nurses: *appropriate use of English mixing, neutral* and *inappropriate use of English mixing*. 40% of patients expressed neutral attitudes. They understood the meanings of the English mixed words satisfactorily, but considered that these words should be translated into Thai or clarified with further elaboration. This would help patients get the point of the communication more easily. 50% of patients expressed positive attitudes because they felt English was more convenient and efficient. Only 10% of patients expressed negative attitudes towards the use of English abbreviations. For them, these words were very hard to understand, and this sometimes caused the patients to miss the point or misunderstand the context. Therefore some abbreviations need elaboration or clarification.

Concerning patient attitudes towards English mixing by nurses working at the local Bangkok private hospital, 10% thought that nurses used English mixed words with medium rates in their conversations. 73.33% of patients thought that nurses used English mixed words at low rates in their interactions. 16.67% of patients said that no English mixed words were used in nurse interactions with patients. As for patient attitudes towards English mixed words, 20% expressed positive attitudes. The English words used were very common and familiar to Thai people. Some English words

might carry significant Thai meanings. This could be regarded as an application of the principle of economy, which meant those English words were shorter and required less linguistic effort, and could convey meanings more efficiently and unambiguously. Some patients expressed positive attitudes with regard to language skill improvement. 16.67% of patients expressed a neutral attitude. 63.33% of patients expressed negative attitudes. It can be concluded that Thai translations, Thai equivalents or clarifications with elaborations are used as tactical approaches to avoiding communication breakdown.

Another variable which motivated English-Thai code mixing by nurses was where the interlocutors had a direct influence on the choice of language use by nurses. Nurses tended to mix languages to conform with preferences of a patient who first introduced English words into the conversation, as they wanted to maintain in-group communication.

5.2 Discussions

There were three objectives that this study aims to fulfill. Firstly, it examined the influence of social factors namely, level of education and socio-economic class, on the distribution of English words used during nurse-patient interactions through Thai-English code mixing by nurses working at a central Bangkok private hospital and those at a local Bangkok private hospital. Secondly, this study aimed to identify grammatical categories of Thai-English code mixing which occurred in the nurse-patient interactions. Thirdly, this study investigated patient attitudes towards nurses' code mixing behaviour.

The results show that the social variables concerning the patients namely, level of education and socio-economic class, influenced the code mixing of nurses. Nurses used code mixing in Thai and English with patients at the central Bangkok private hospital more than patients at the local Bangkok private hospital. As the central Bangkok private hospital represented patients with a high level of education and socio-economic class and the local Bangkok private hospital represented patients with a low level of education and social-economic class, this finding appears to support the

studies of Gibbons (1987), Suchariyakul and Jongsoowiwatwonge (1999), and Pattaranit (1982). The significance of Gibbons' (1987) research was that the ethnolinguistic background and education level of the interlocutors were main determinants of code choice. Gibbons stated that Cantonese speakers who lacked education are likely also to be members of a low socio-economic group as well. In the study of Suchariyakul and Jongsoowiwatwonge (1999), they stated that ability to pay for the hospital charges was associated with education level and the socio-economic status. The patients who could afford the higher rates of hospital charges were those with higher education levels and higher socio-economic status.

Regarding Thai-English code mixing in Thailand, Pattaranit (1982) also found that a factor in the use of Thai-English code mixing was the level of education. Knowledge of English was undeniably important at higher education levels.

Additionally, the results illustrate that the majority of code mixing elements occurred as nouns, verbs and adjectives which supports the study of Brice (1999). Moreover, the findings also support the Matrix Language Principle (Myers-Scotton, 1993) and the 4-M model (Myers-Scotton, 2002) in that content morphemes were more likely to be switched than other types of morphemes. Similar to the study of Suraratdecha (2005), nouns, verbs and adjectives were the predominant categories in which switches took place in the speech acts of the Thai participants. There were switches of some English system morphemes; however, they were quite infrequent. When they occurred, they often occurred as a part of an Embedded Language island. She found only two examples of single-occurring system morphemes on Thai base forms. She explains that Thai was not an inflectional language, so information about quantity, tense, and gender of a word was given by the addition of extra words.

According to the data, Thai-English code mixing mainly occurs at the word level. This parallels the findings of Gibbons (1987). Gibbons (1987, p. 57) states that a single English word surrounded by Cantonese is the most frequent form of Cantonese-English code mixing. These findings are consistent with Gibbons' (1987) research of code mixing in Hong Kong in which he states that code-mixed elements usually belong to content or open class words as they carry lexical meanings. In the

present study, nouns had the highest number of occurrences, followed by verbs and adjectives respectively. This finding is similar to the pattern of code mixing in Hong Kong.

Regarding the patient attitudes towards to English mixing by nurses, the results show that nurses at the central Bangkok private hospital used code mixing more frequently than nurses at the local Bangkok private hospital. In addition, the results also show that patients at the central Bangkok private hospital were more agreeable to English mixing than patients at the local Bangkok private hospital. The same feature was found in terms of abbreviations. In such cases Thai translations, Thai equivalents or clarification with elaborations should be used for better understanding by the interlocutors. From the findings, it can be said that the level of education and socio-economic classes of the patient was factor which related to their understanding of English mixed words used by nurses. These findings parallel the findings of Gibbons (1987). The inability to speak and understand English in Hong Kong was regarded as a mark of a lack of education and possible membership of a low socio-economic group. Cantonese speakers with no education were addressed only in Cantonese, and people who were able to speak English were considered to be educated and in a high socio-economic group. Therefore, the educated elite plays an important role in linguistic changes.

There are, however, some limitations to this study. One of the limitations was that the sample size was small as there were only 20 nurses and 60 patients involved. Additionally, the personal backgrounds of the patients which were elicited by the questionnaires, were excluded from the data. There were patients with a low level of education but high socioeconomic class and visa versa at both hospitals. Hence, it is suggested that future research could extend these focus groups.

Because of patient attitude towards to English mixing by nurses were elicited by interview, the subjects might not have been telling the truth, or they might just simply expressed views that they thought were wanted or expected.

Furthermore, an other limitation related to constraints encountered in data collection. It was difficult to record the focus groups during their interactions. Other nurses not participating in the study and nurse assistants were asked to record the data.

In spite of the unavoidable limitations, the current study has revealed some interesting data. It is only a small-scale study in terms of the number of subjects and the scope of the study, but it fills a gap in previous studies on code mixing. Since patient social factors, level of education and socio-economic class are crucial factors influencing nurse-patient interactions from the current study, it is predictable that nurses should focus on the background information of the patients to avoid communication breakdown.

In terms of the implications of the study, perhaps the real strength lies in the way the findings indicate two further areas of study. The first is the impact of individual patient demographics, such as education and socio-economic position which is a significant barrier to effective communication between nurses and patients. An adequate awareness of these factors could be used to educate Thai nurses about the most effective communication approaches with patients with particular educational and socio-economic backgrounds which could be significant in health communication research. The second is that the differences between the way nurses at the central Bangkok private hospital and those at the local Bangkok private hospital code mix as evidenced in this study indicate further studies are required which would contribute to the overall body of knowledge in this area of sociolinguistics..

5.3 Recommendations for Further Studies

This study focused on Thai-English code mixing as exhibited by private hospital nurses in Bangkok, in terms of the distribution of occurrence, grammatical analysis, and patient attitudes towards English mixing by nurses at a central Bangkok private hospital and a local Bangkok private hospital. As a result, the following recommendations may be useful for further studies.

1. Further research should analyse other groups of people in hospitals who use English-Thai code mixing in their conversations such as doctors, pharmacists or technicians, in order to measure the results with regard to patient attitudes and understanding

2. More research should be conducted to investigate Thai- English code mixing in written language in hospital charts or OPD charts, Doctor order sheets, Progress notes, Consultation sheets, Operative records and Discharge summary sheets.

3. The study should conduct a comparative study on grammatical structure patterns in these two languages, either in terms of spoken or written language.

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APPENDICES

APPENDIX A

แบบสอบถามในการวิจัย (พยาบาลวิชาชีพ)

เรื่อง การปนภาษาระหว่างภาษาไทยและภาษาอังกฤษของพยาบาลในโรงพยาบาลในเขตกรุงเทพฯ

คำชี้แจง โปรดเขียนเครื่องหมาย ลงในช่อง ☐ และกรอกข้อมูลเกี่ยวกับตัวท่านลงในช่องว่างตามสภาพความเป็นจริง

1. เพศ ☐ 1) ชาย ☐ 2) หญิง
2. อายุ.....ปี
3. สถานภาพ ☐ 1) โสด ☐ 2) สมรส ☐ 3) อื่น ๆ (โปรดระบุ) .....
4. ชนิดของโรงพยาบาล
   - ☐ 1) โรงพยาบาลรอบใน ☐ 2) โรงพยาบาลรอบนอก
5. แผนกที่ทำงาน
   - ☐ 1) กุมารเวช ☐ 2) จักษุวิทยา
   - ☐ 3) จิตเวช ☐ 4) อายุรกรรม
   - ☐ 5) ทันตกรรม ☐ 6) ศัลยกรรม
   - ☐ 7) ผิวหนังและศูนย์ความงาม ☐ 8) รังสีวิทยา
   - ☐ 9) วิสัญญี ☐ 10) เวชปฏิบัติทั่วไป
   - ☐ 10) สูตินรีเวชวิทยา ☐ 12) โสตนาสิก ลาริงซ์วิทยา
   - ☐ 13) อื่นๆ (ระบุ).....
6. ระยะเวลาในการทำงาน
   - ☐ 1) น้อยกว่า 1 ปี ☐ 2) 1-3 ปี
   - ☐ 3) 3-5 ปี ☐ 4) 5-10 ปี
   - ☐ 5) อื่นๆ (ระบุ).....

7. เงินเดือนที่ได้รับ

☐ 1) ต่ำกว่า 10,000 บาท ☐ 2) 10,001 - 20,000 บาท

☐ 3) 20,001-30,000 บาท ☐ 4) 30,001-40,000 บาท

☐ 5) 40,000 บาทขึ้นไป ☐ 6) อื่นๆ (ระบุ).....

8. ระดับการศึกษาสูงสุด

☐ 1) ปริญญาตรี ☐ 2) ปริญญาโท

☐ 3) ปริญญาเอก ☐ 4) อื่นๆ (ระบุ).....

****** ขอขอบคุณที่ให้ความร่วมมือในการตอบแบบสอบถาม ******

แบบสอบถามในการวิจัย (ผู้ป่วย)

เรื่อง การปนภาษาระหว่างภาษาไทยและภาษาอังกฤษของพยาบาลในโรงพยาบาลในเขตกรุงเทพฯ

คำชี้แจง โปรดเขียนเครื่องหมาย ลงในช่อง ☐ และกรอกข้อมูลเกี่ยวกับตัวท่านลงในช่องว่างตามสภาพความเป็นจริง

1. เพศ ☐ 1) ชาย ☐ 2) หญิง
2. อายุ.....ปี
3. สถานภาพ ☐ 1) โสด ☐ 2) สมรส ☐ 3) อื่น ๆ (โปรดระบุ) .....
4. ระดับการศึกษา
   - ☐ 1) ต่ำกว่ามัธยมปลาย ☐ 2) มัธยมปลาย/ปวช
   - ☐ 3) อนุปริญญา, ปวส. ☐ 4) ปริญญาตรี หรือเทียบเท่า
   - ☐ 5) สูงกว่าปริญญาตรี (โปรดระบุ)_____
5. อาชีพ
   - ☐ 1) นักเรียน/นักศึกษา ☐ 2) ค้าขาย/ธุรกิจส่วนตัว
   - ☐ 3) พนักงานบริษัท/องค์กรเอกชน 4) รับราชการ/เจ้าหน้าที่ของรัฐ
   - ☐ 5) รัฐวิสาหกิจ ☐ 6) ว่างงาน/แม่บ้าน/เกษียณอายุ
   - ☐ 7) รับจ้าง ☐ 8) อื่นๆ (ระบุ) _____
6. ตำแหน่งงาน (โปรดระบุ) _____
7. รายได้ต่อเดือน
   - ☐ 1) ต่ำกว่าหรือเท่ากับ 10,000 บาท ☐ 2) 10,001-20,000 บาท
   - ☐ 3) 20,001-30,000 บาท ☐ 4) 30,001-40,000 บาท
   - ☐ 5) 40,001-50,000 บาท ☐ 6) 50,000 บาทขึ้นไป
8. ความถี่ในการเข้ารับการรักษา
   - ☐ 1) 1-2 ครั้ง/สัปดาห์ ☐ 2) 1-2 ครั้ง/เดือน
   - ☐ 3) 3-4 ครั้ง/เดือน ☐ 4) ทุกเดือน
   - ☐ 5) 1-2 ครั้ง/ปี ☐ 6) 3-4 ครั้ง/ปี
   - ☐ 7) นานๆ ครั้ง

****** ขอขอบคุณที่ให้ความร่วมมือในการตอบแบบสอบถาม ******

APPENDIX B

The lists of questions asked during the informal interview are as follows:

1. How often do the nurses whom you interact with use English words in your communication?
2. Did you understand what she said?
3. If you don't understand, please give me some examples of these English words.
4. Do you have any suggestions about language use of nurses?

APPENDIX C

1. **English words mixed in Nurse-Patients interactions in Central Medical Private Hospital** can be categorized into transliterations and loan translations. They are categorises as follows:

Transliterations

1.1 Nouns (47 instances)

Alcohol
Alcohol Gel
Amino acids
Ammonia
Nitrogen
Bacteria
Biotin
Calcium
Carbohydrate
Carbon dioxide
Cell
Cholesterol
Clavulonic acid
Collagen
Coma
Crib
Down syndrome
Enzyme
Folic Acid
Gas
Gel
Glucose

Glycerin
Gout
Graph
Insulin
Internet
l-carnitine
Migraine
Molecules
Oxygen mask
Paracetamol
Parkinsons
Potassium
Primrose
Protein
Shock
Sodium
Sodium bicarbonate
Steroid
Thyroid
Vaccine
Virus
Vitamin
Website
H5N1
HIV

1.2 Verb (1 instance)

Shock

1.3 Classifier (14 instances)

Amp
C.C.
Capsule
Celsius
Centimetre
Dose
Gram
Hertz
Kilogram
Litre
Microgram
Milligram
Ounce
Vial

Loan translations

1.1 Nouns (157 instances)

Abortion	การแท้ง
Acid	กรด
Action	การแสดง
Admission	การรับเข้าไว้
Air	อากาศ
Airborne	ที่ส่งโดยทางอากาศ
Anti-aging	การชะลอความแก่
Antioxident	การต้านอนุมูลอิสระ

Antibiotics	ยาปฏิชีวนะ
Area	พื้นที่
Aseptic technique	วิธีการปราศจากเชื้อโรค
Asthma	หอบหืด
Background	ภูมิหลัง
Base line	ขั้นพื้นฐาน
Blood pressure	ความดันโลหิต
Blood sugar	น้ำตาลในเลือด
Body	ร่างกาย
Brain	สมอง
Breastfeeding	การให้นมบุตร
Cancer	มะเร็ง
Case	กรณี
Cath	สายสวน
Clinic	สถานรักษาพยาบาล
Company	บริษัท
Complication	ความซับซ้อน
Computer	สมองกล
Concept	ความคิด, มโนคติ, มโนภาพ
Condition	สภาวะ, สภาพ

Condom	ถุงยางอนามัย
Content	ปริมาณความจุ, สิ่งที่บรรจุอยู่
Cool pack	ถุงประคบเย็น
Course	ช่วงเวลา, หลักสูตร, แนวทางปฏิบัติ
Cyst	ถุงน้ำ
Dead	ศพ
Death	การตาย
Dehydration	ภาวะขาดน้ำ
Depression	ซึมเศร้า
Detail	รายละเอียด
Diabetes mellitus	เบาหวาน
Diarrhea	อาการท้องร่วง
Discharge	การจำหน่าย
Duration	ระยะเวลา
Epilepsy	ลมชัก
family	ครอบครัว
Fat	ไขมัน
Fiber	กากใย, เส้นใย
fitness	สมรรถภาพทางกาย
Gift Set	ชุดของขวัญ

Group O	หมู่เลือด โอ
Guide line	แนะแนว, แนะนำ, นำทาง, ชี้แนะ
Haemorrahge	การตกเลือด
Hematocrit	ความเข้มข้นของเลือด
Herb	สมุนไพร
Hernia	อาการไส้เลื่อน
Herpes	เริม
Hot pack	ถุงประคบร้อน
hypertension	ความดันโลหิตสูง
Idea	ความคิดเห็น
Incharge	หัวหน้าเวร
Incubator	ตู้อบ
Influenza	ไข้หวัดใหญ่
Infusion pump	เครื่องให้สารสะลาย
Intercom	ระบบติดต่อสื่อสารระหว่าง 2 แห่ง
Juandice	ภาวะตัวเหลือง
Lens	แก้วตา
Level	ระดับ
Lift	ยกขึ้น, ยกระดับ
Lotion	ยาทาผิว

Membrane	เยื่อบุผิว
Memory	ความจำ
Menopause	วัยหมดระดู
Metabolism	กระบวนการเผาผลาญอาหาร
Microwave	คลื่นแม่เหล็กไฟฟ้าความถี่สูงมาก
Monitor	จอแสดงผล
Mucous	น้ำเมือก
Newborn	ทารกแรกเกิด
Normal saline	น้ำเกลือ
Note	บันทึก
Nursery	สถานบริบาลเด็ก, สถานรับเลี้ยงเด็ก
Oil	น้ำมัน
Overdose	ปริมาณยาที่มากเกินไปหรือเกินขนาด
Pampers	ผ้าอ้อม
Phototheraphy	เครื่องส่องไฟรักษาเด็กแรกเกิดตัว
Plastic surgery	ศัลยกรรมตกแต่ง
Platelet cell	เกร็ดเลือด
Pneumonia	ปอดบวม
Pollution	มลพิษ
Print	พิมพ์

Product	ผลิตภัณฑ์, ผลิตผล
Prognosis	การทำนายอาการโรค
Promotion	การสนับสนุน, การส่งเสริม
Pulse	ชีพจร
Radiant warmer	เครื่องทำความร้อนโดยรังสีที่แผ่ออก
Reflux	การไหลย้อน
Result	เป็นผล,ผลลัพธ์
Rooming in	การให้คุณแม่อยู่กับลูกตลอดเวลา
Routine	กิจวัตรประจำ
Sale	การขาย
Sample	ตัวอย่าง
Screening	การคัดกรอง
Set	ชุด
Side effects	ผลข้างเคียง
Sinus	โพรงในกระดูกศีรษะ
Skin	ผิวหนัง
Skin traction	การดึงผ่านผิวหนัง
Soft tissue	เนื้อเยื่ออ่อน
Solution	สารละลาย
Sterile technique	วิธีการปราศจากเชื้อโรค

Stroke	การอุดตันของเส้นโลหิตที่ไปเลี้ยงสมอง
Suction	การดูด
Supplements	อาหารเสริม
Switch	เครื่องปิด/เปิดไฟฟ้า
Symptom	อาการ
Syringe	หลอดฉีดยา
Syrup	น้ำเชื่อม
Technique	กลวิธี (เฉพาะด้าน), วิธีการ
Technology	ประยุกต์วิทยา
Treatment	การรักษา
Ultrasound	การบำบัดโดยใช้อุลตร้าซาวด์
Ward	ตึกรักษาพยาบาล
Wheel chair	รถเข็นผู้ป่วย
White blood cell	เซลล์เลือดเลือดขาว
Whitening	การทำให้ขาว
AIDS	โรคภูมิคุ้มกันบกพร่อง, โรคภูมิคุ้มกันเสื่อม
BP	ความดันโลหิต
CCU	หอผู้ป่วยวิกฤตโรคหัวใจ
CT Scan	Computed Tomography เอกซเรย์คอมพิวเตอร์ ระบบสามมิติ

DM	โรคเบาหวาน
DTX	Dextrostix การเจาะหาระดับน้ำตาลในเลือดที่ปลายนิ้ว
ENT	แผนกหูคอจมูก
ER	ห้องฉุกเฉิน
ICU	หอผู้ป่วยวิกฤต
IPD	แผนกผู้ป่วยใน
Lab	ห้องปฏิบัติการ
LR	ห้องคลอด
MRI	Magnetic Resonance Imagingเครื่องมือที่ใช้สำหรับสร้างภาพอวัยวะภายในร่างกาย โดยอาศัยหลักการของคลื่นแม่เหล็กไฟฟ้าและคลื่นวิทยุ
NICU	หอผู้ป่วยทารกแรกวิกฤต
OPD	แผนกผู้ป่วยนอก
OR	ห้องผ่าตัด
Anest	Anesthesia การดมยาสลบ
Cesa	cesarean การผ่าตัดคลอด
Chemo	การใช้เคมีบำบัด(Chemotherapy)
Dermato	หน่วยโรคผิวหนัง Dermatology
Detox	การล้างพิษ (Detox) Detoxification

Hep-B	โรคตับอักเสบบี (Hepatitis B)
Hypocal	ภาวะแคลเซียมต่ำ
Hypogly	ภาวะน้ำตาลต่ำ
Neg	ผลลบ
Neuro	neurology ประสาทวิทยา
Ortho	orthopaedic เกี่ยวกับกระดูกและกล้ามเนื้อ
Psycho	Psychology จิตวิทยา
Pos	ผลบวก
Post-OP	หลังผ่าตัด
Pre-OP	ก่อนผ่าตัด
Temp	Temperature อุณหภูมิ
Vac	Vacuum สุญญากาศ
X-rays	X-ray รังสีแม่เหล็กไฟฟ้า ที่มีความยาวในช่วง 10-0.01 นาโนเมตร ตรงกับความถี่ในช่วง 30- 30000

1.2 Verb (48 instances)

Absorb	ดูดซึม
Act	แสดง
Attend	เข้าร่วม,ดูแล
Blur	ทำให้คลุมเคลือม ทำให้พร่ามัว
burn	เผา, ไหม้

Charge	ค่าใช้จ่าย, ค่าธรรมเนียม
Check	ตรวจสอบ, ทำสัญลักษณ์
Clamp	เครื่องหนีบ, คีม, ที่หนีบ
Complicate	ซับซ้อน,ยุ่งยาก
Confirm	ยืนยัน
Consult	ปรึกษา
Contact	ติดต่อ
Contract	ทำให้หดตัว,ทำสัญญา
Control	ควบคุม
Copy	ทำสำเนา
Diet	ควบคุมอาหาร
Dilate	ขยาย
Fake	ปลอม
Feed	ให้อาหาร
Fix	ซ่อมแซม,ทำให้แน่น, ติด, ติดแน่น
Follow up	ติดตามผลของ
freeze	กลายเป็นน้ำแข็ง
Guide	แนะแนว, แนะนำ, นำทาง, ชี้แนะ
Hit	ถูกใจ, ถูกรสนิยม,ตี, ต่อย, ชก
Keep	รักษา

Key	พิมพ์
Leak	รั่ว
Make	ทำ
Mix	ผสม
Observe	สังเกต
Plan	วางแผน
Print	พิมพ์
Push	ผลัก
Put	ใส่,ดัน
Record	บันทึก
Refer	ย้าย
Relax	ผ่อนคลาย
Report	รายงาน
Round	ตรวจเยี่ยม
Save	ช่วยเหลือ, ช่วย, ช่วยชีวิต, ประหยัด, สงวน, รักษา, คงไว้, ป้องกัน
Scan	ตรวจรายละเอียด
Scrub	ถูอย่างแรง, ขัดอย่างแรง
Seal	ผนึก, ปิดผนึก
Search	ค้นหา

Service	บริการ
Set (OR)	จัดเตรียม
Take care	รักษาสุขภาพ
Treat	รักษา

1.3 Adjective (34 instances)

Acute	กะทันหัน
Bad	แย่
Big	ใหญ่
Chill	หนาวสั่น
Clear	ชัดเจน
Complex	ประกอบด้วยส่วนต่างๆ , ซับซ้อน, เชิงซ้อน
Deep	ลึก
Extra	พิเศษ
Fair	ยุติธรรม
Final	สุดท้าย
Fit	พอดี
Happy	ความสุข
High	สูง
Hot	ร้อน
Low	ต่ำ

Modern	ทันสมัย
Negative	ทางลบ
New	ใหม่
Perfect	สมบูรณ์แบบ
Positive	ทางบวก
Pure	บริสุทธิ์
Safe	ปลอดภัย
Serious	จริงจัง
Slender	หุ่นอรชร
Slim	บาง
Smooth	ราบเรียบ
soft	อ่อน
Special	พิเศษ
Specific	เฉพาะเจาะจง
Stable	มั่นคง,คงรูป
Standard	มาตรฐาน
Unhappy	ไม่มีความสุข
Warm	อุ่น

1.4 Classifier (1 instance)

Pack	ห่อ, หีบห่อ

1.5 Determiner (2 instances)

Multiple	หลาย, หลายเท่า, มาก
Single	เดี่ยว

1.6 Phrase (3 instances)

OK!	ตกลง
Bye Bye!	ลาก่อน
Good Night	ราตรีสวัสดิ์

2. English words mixed in Nurse-Patients interactions in Local Medical Private Hospital can be categorized into transliterations and loan translations. They are categorises as follows:

<u>Transliterations</u>

2.1 Nouns (18 instances)

Alcohol Gel
Carbohydrate
Fitness
Micropore
Protein
Virus
Glucose
Autocave
Intercom
Internet
Website
HIV

2.2 Verb (1 instance)

Shock

2.3 Classifier (7 instances)

Capsule
Celsius
Centimetre
Gram
Kilogram
Litre
Microgram

Loan translations

1.1 Nouns (47 instances)

Clinic	สถานรักษาพยาบาล
Clip	ที่นอนทารก
Computer	คณิตกร
Concept	ข้อคิดเห็น, ความคิด, มโนคติ, มโนภาพ
Cool pack	ถุงประคบเย็น
Family	ครอบครัว
Gift Set	ชุดของขวัญ
Herpes	โรคเริม
Level	ระดับ
Lift	ยกขึ้น, ยกระดับ
Lotion	ยาทาผิว
Memo	กระดาษจดบันทึก

Metabolism	การเผาผลาญอาหาร
Microwave	คลื่นแม่เหล็กไฟฟ้าความถี่สูงมาก
Monitor	เครื่องควบคุม, ผู้ตรวจสอบ
Note	ข้อความ,หมายเหตุ
OPD. Card	แฟ้มผู้ป่วยนอก
Pampers	ผ้าอ้อม(diapers)
Print	พิมพ์
Promotion	การสนับสนุน, การส่งเสริม
Remote control	เครื่องควบคุมระยะไกล
Sale	ขาย
Sample	ตัวอย่าง
Service	การบริการ
Set	ชุด,จัดเตรียม,ทำให้เกิดขึ้น
Shampoo	ยาสระผม
Spa	สถานบำรุงสุขภาพ
Spray	การฉีดน้ำ, การพ่น
Switch	เครื่องปิด/เปิด
Syringe	หลอดฉีดยา
Tank	ถังขนาดใหญ่สำหรับบรรจุน้ำหรือก๊าซ
Technique	กลวิธี (เฉพาะด้าน),วิธีการ

Technology	ประยุกต์วิทยา
Ward	ตึกรักษาพยาบาล
Wireless	ไร้สาย,ซึ่งไม่มีเส้นลวด
Cesa	การผ่าตัดคลอด
Chemo	การใช้เคมีบำบัด(Chemotherapy)
CT scan	Computed Tomography เอกซเรย์คอมพิวเตอร์ระบบสามมิติ
ER	ห้องฉุกเฉิน
ICU	หอผู้ป่วยวิกฤต
IPD	แผนกผู้ป่วยใน
Lab	ห้องปฏิบัติการ
MRI	Magnetic Resonance Imaging เครื่องมือที่ใช้สำหรับสร้างภาพอวัยวะภายในร่างกาย โดยอาศัยหลักการของคลื่นแม่เหล็กไฟฟ้าและคลื่นวิทยุ
OPD	แผนกผู้ป่วยนอก
OR	ห้องผ่าตัด
X-rays	X-ray รังสีแม่เหล็กไฟฟ้า ที่มีความยาวคลื่นในช่วง 10 ถึง 0.01 นาโนเมตร ตรงกับความถี่ในช่วง 30 ถึง 30000

1.2 Verb (17 instances)

Admit	รับเข้าไว้
Check	ตรวจสอบ, ทำสัญลักษณ์
Consult	ปรึกษา
Contact	ติดต่อ
Control	ทำสำเนา
Follow up	ติดตามผล
Record	จดบันทึก
Refer	ย้าย
Relax	ผ่อนคลาย
Report	รายงาน
Round	ตรวจเยี่ยม
Scan	ตรวจรายละเอียด
Screen	คัดกรอง
Search	ค้นหา
Set	จัดเตรียม,ทำให้เกิดขึ้น
Take care	ไปละนะ ระวังตัวด้วย, ดูแล

1.3 Adjective (10 instances)

Hot	ร้อน
Blur	ทำให้คลุมเคลือม ทำให้พร่ามัว
Clear	ชัดเจน
Happy	ความสุข
Low	ต่ำ
Modern	ทันสมัย
Fair	ยุติธรรม
Final	สุดท้าย
Fit	พอดี
Perfect	สมบูรณ์แบบ

APPENDIX D

Average monthly income per household by source of income and area

Source of Income	Municipal Area	Non - Municipal Area
Total Monthly Income	**39,679**	**26,376**
Total Current Income	**39,509**	**26,152**
Money Income	**34,398**	**22,680**
From Work	**30,686**	**21,401**
Wages and Salaries	21,770	16,298
Net Profit from Business	8,884	4,046
Net Profit from Farming	32	1058
From Current Transfer	**2,607**	**1,082**
Pension / Annuities and other Assistance	1,171	278
Work Compensation and Terminated Payment	16	6
Assistance from Persons Outside HH.	1,334	664
Assistance from Govt. & Organization	87	135

From Property Income	**1,105**	**197**
Income from Renting (include Licence and Copyright)	687	163
Interest and Dividends from Deposit, Bonds and Stocks	403	30
Interest from "Shares" and Loans	16	4
Non - money Income	**5,111**	**3,472**
Estimated Rental Value of Dwelling (including own dwelling)	3,687	2,332
In - kind of Goods and Services	966	845
In - kind of Foods and Beverages	459	295
Non - current Money Income	**170**	**224**
Scholarships	9	27
Inheritances/ Bequeaths and Gifts	28	41
Proceeds from Insurances	40	18
Other Receiving (lottery winnings)	93	138

APPENDIX E

The average room rates of the central medical private hospital are as follows:

Hospital list	Minimal Rate	Maximum Rate	Average Room Rate
Bangkok General	5,600	15,000	10,300.00
Piyavej	4,600	9,700	7,150.00
Bumrungrad	4,270	15,620	9,945.00
Samitivej (Sukumvit)	4,000	15,000	9,500.00
Phyathai 2	3,900	8,500	6,200.00
Phyathai 1	3,800	8,900	6,350.00
Paolo Memorial Chokchai 4	3,500	7,500	5,500.00
Chao Phya	3,250	6,150	4,700.00
Bangkok Christian	3,000	6,500	4,750.00
Rama 9 General	3,000	13,400	8,200.00
Huacheuw	2,950	6,100	4,525.00
Kasemrad Prachachuen	2,900	5,500	4,200.00
Yanhee International	2,850	5,250	4,050.00
Sukumvit	2,760	8,210	5,485.00
Kluaynamthai 1	2,750	7,350	5,050.00
Thonburi	2,600	7,200	4,900.00
Saint Louis	2,480	10,000	6,240.00
Bangkok Adventist(Mission)	2,370	5,000	3,685.00
Viphavadee	1,700	6,000	3,850.00
Vichaiyut	1,400	15,000	8,200.00
Meyo	1,050	3,300	2,175.00

The average room rates of the local medical private hospital are as follows:

Hospital list	Minimal Rate	Maximum Rate	Average Room Rate
Phyathai 3	3,500	8,500	6,000.00
Sikarin	3,160	7,450	5,305.00
Ramkhamhaeng	2,930	5,700	4,315.00
Kasemrad Bangkae	2,900	4,500	3,700.00
Nakornthon	2,600	6,500	4,550.00
B.Care General	2,490	3,950	3,220.00
Mongkutwattana	2,350	4,500	3,425.00
Ladprao General	2,300	7,000	4,650.00
Bangpakok 9 Inter	2,200	6,200	4,200.00
Vejthani	2,200	7,700	4,950.00
Samitivej Srinakarin	2,000	9,500	5,750.00
Krungdhon	1,420	2,450	1,935.00
Petcharavej	1,300	3,600	2,450.00

BIOGRAPHY

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