

**NAVIGATING CONTRADICTIONS IN NURSES'
CLINICAL ENGLISH USE IN AN EFL CONTEXT:
AN ACTIVITY THEORY PERSPECTIVE**

Joan Wan-Ting Huang*
Chiou-Lan Chern

ABSTRACT

This qualitative study used an activity system analysis from Cultural Historical Activity Theory to examine the contradictions in conventional language use in Taiwan's nursing professional practices in an EFL context. To capture diverse perspectives, the study employs semi-structured interviews with three key stakeholder groups: nurses, doctors, and foreign patients who use English as a lingua franca in Taiwan. As revealed by the current study, several forms of contradictions were evident as factors that impeded nurses from meeting the intended goals of clinical English use. These dilemmas, manifested as tensions between the object and various components of nurses' activity settings, included nurses' overreliance on machine translation (object vs. tools), conflicting use of clinical English (object vs. rule), hierarchical power asymmetry in the nursing community (object vs. division of labor), and lack of institutional support (object vs. community). Furthermore, a contradiction was also found between the central activity system (nurses' clinical English use) and its neighboring activity system (doctors' clinical English use). Drawing on the findings, implications for ENP (English for Nursing Purposes) pedagogy are discussed in this study.

Key words: English for Nursing Purposes (ENP), Taiwanese nurses' English use, activity theory, contradictions

*Joan Wan-Ting Huang, Language Center, National Chung Hsing University, Taichung, Taiwan
(othellojoan@nchu.edu.tw)*

*Chiou-Lan Chern, Department of English, National Taiwan Normal University, Taipei, Taiwan
(clchern@ntnu.edu.tw)*

INTRODUCTION

According to Richards & Schmidt (2013), ESP (English for Specific Purposes) is “a language course or program of instruction in which the content and aims of the course are fixed by the specific needs of a particular group of learners” (p.198). Based on the definition, it is not surprising that much of the attention and emphasis in ESP research has been centered on the needs analysis of learners. However, early needs analyses have been criticized for only focusing on the lexical and syntactic features in specific text types without considering social and contextual factors (Hyland, 2007; Upton, 2012). In response to a call for a more holistic and sophisticated approach to ESP investigation, ESP research development has documented a shift from micro to macro levels of ESP discourses (Johns & Makalela, 2011). More specifically, as Upton (2012) outlined in an overview of the ESP research movement, “from prioritizing ‘words and structures,’ to prioritizing ‘texts and purposes,’ to prioritizing ‘learners and genres,’ and are now more concerned with ‘contexts and interactions’” (p.26). This orientation holds that language use takes place in contexts and is viewed as a human activity that is culturally mediated and socially constructed. As Hamp-Lyons (2011) contended, “We cannot explain text, discourse or genre behavior without including in our consideration the social contexts within which text is created, students learn, and people see the need for English” (p.98). Following this line of research, this paper adopts Activity Theory as the analytical framework to shed new light on diverse and complex English for Nursing Purposes (ENP) workplace contexts.

This current study specifically examines the challenges Taiwanese nursing professionals face with English language use in clinical contexts through a sociocultural lens. Previous studies have highlighted Taiwanese nurses’ challenges when using English in clinical settings. For instance, Chen (2010) surveyed 1,051 Taiwanese nurses and found that around 70 percent had cared for foreign patients, with 96 percent identifying the language barrier as their biggest challenge. This barrier often led to anxiety and nervousness, and in severe cases, emotional stress caused some nurses to avoid

interactions with foreign patients (Kao et al., 2007; Lin et al., 2012). Consequently, these language barriers could result in inefficient patient care and poor clinical outcomes. Their challenges also extend beyond patient interactions to communication with other healthcare professionals. Lu (2020) revealed that Taiwanese nurses also struggled to master English medical discourse, including reading medical documents in English and discussing medical terms with other healthcare professionals.

The study's significance lies in its adoption of Engeström's Activity Theory as a theoretical lens to investigate how Taiwanese nurses' English use is mediated and constrained by sociocultural contexts. Although Engeström originally applied Activity Theory to workplace settings, researchers have since utilized Activity Theory to explore various issues in different workplace contexts. However, to the best of my knowledge, Activity Theory has not yet been applied in the ESP field to investigate professional English use. Moreover, since Engeström (2001) emphasizes the principle of multi-voicedness within an activity system, this study contributes to the field by integrating perspectives of multiple crucial stakeholders (i.e., nurses, doctors, and foreign patients) to provide a comprehensive view.

LITERATURE REVIEW

The Role of English in the Healthcare Industry in Taiwan

While Mandarin Chinese has traditionally been the primary language in Taiwan, English is increasingly vital in healthcare due to two major factors: diverse immigration and the use of English as a lingua franca in medical practice in Taiwan (Bosher & Stocker, 2015; Lu, 2020; Lu, 2018). In the 1990s, Taiwan's government opened its borders to workers from ASEAN countries to address a labor shortage, leading to a substantial rise in foreign nationals residing in Taiwan. Ministry of the Interior (2021a) statistics indicate that approximately three out of every 100 individuals in Taiwan are foreigners. Additionally, transnational marriages have become a significant demographic influence, constituting 8.7 percent of 121,702 marriages registered in 2020 (Ministry of the Interior, 2021b). These migration

trends have transformed Taiwan into a multiethnic and multicultural society. This also means that Taiwanese healthcare professionals have more chances than before to face patients with diverse ethnic-, cultural- and linguistic- backgrounds (Wu, 2018).

Another crucial factor contributing to the prominence of English in Taiwan's healthcare industry is its widespread use in clinical settings. Doctors predominantly write medical records, diagnoses, orders, and reports in English (Chiang-Hanisko et al., 2008). Furthermore, a common practice in hospitals involves healthcare professionals whose native language is Mandarin Chinese verbally code-switching to English when discussing medical terms (Bosher & Stocker, 2015; Lu, 2020; Lu, 2018).

Nursing English Research in Taiwan

Empirical evidence addressing the needs and challenges of nurses' English use in Taiwan has been scarce and somewhat dated. Lee (1998) surveyed two groups of participants, one group of full-time nursing students without work experience and the other group of in-service nurses, to compare and contrast these two groups' perceptions of English needs for nursing purposes. The results showed that both groups ranked understanding doctors' orders, chief complaints, terminology, and diagnosis as the most important tasks that required English. In a more recent needs analysis, Lai (2016) used a self-developed questionnaire to investigate nurses' needs for clinical English use and found that the participants ranked listening and speaking as the most frequently used skills and also the most needed improvement.

To explore why and how English was used in nursing contexts in Taiwan, Bosher and Stocker (2015) analyzed the narratives of registered nurses to unveil salient themes regarding their workplace English use. The participants in the study acknowledged that English played an important role in the nursing workplace and was used in a wide range of nursing contexts, such as "keeping abreast of medical/nursing research and new treatments," "improving quality of care," "communicating with doctors and other health-care professionals," "communicating with foreign patients, and caregivers,"

and “participating in international communities.”

Despite the importance of English ability for nursing professionals, previous studies revealed challenges Taiwanese nurses encounter in using English in clinical contexts. For example, Lu (2018) revealed a prominent challenge facing Taiwanese nurses in using non-specialist language to communicate with foreign patients due to nurses' limited vocabulary, incorrect pronunciation, unfamiliarity with accents, and passive coping strategies. Notwithstanding, the participants acknowledged that communicative competence played a crucial role in establishing rapport between nurses and patients. To effectively and appropriately accomplish communicative tasks with patients and families, nurses need not only informational language skills (e.g., giving instructions, explaining procedures, checking readiness) but also interpersonal language skills (e.g., expressing empathy, making small talk). The participants' narratives showed that the English language was a major barrier to providing foreign patients with supportive communication and interaction.

THEORETICAL FRAMEWORK

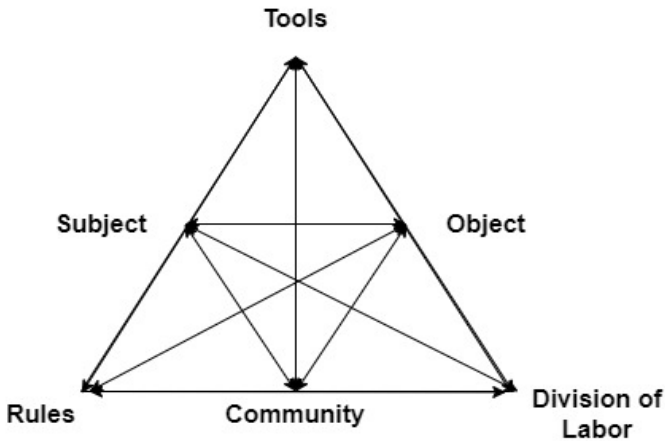
Activity Theory

Widely employed in diverse disciplines and contexts, Activity Theory offers a crucial analytical tool to examine individual activity situated in collective contexts where different components involved in the context affect one another. The present study draws on Engeström's (2000) activity model, which comprises six key requisite elements of all human activities. As can be seen in Figure 1, Engeström's model of Activity Theory is represented by a triangle diagram linked to the different interactive components within the system, including subjects, objects, tools, community, rules, division of labor, and outcomes. In this model, the subject is an individual or a group engaged in an activity, whereas the object is a goal or motive that impels subjects to participate in the activity. The tool represents mediating means, whether in material (e.g., pencils, computers, notes) or symbolic form (e.g., language, experience), that is used to transform an object into an outcome. On the other hand, community,

rules, and division of labor can be regarded as mediation through political, cultural, and contextual influences within the activity system. The community refers to the specific social group that the subjects belong to. The rules refer to norms, regulations, and conventions that enable or constrain the shared activity within the community. The division of labor refers to how responsibilities and work are shared or divided among the community. Finally, the outcome is the final product of the activity.

Figure 1

Engeström's Activity System (Based on Engeström, 2014)



Contradictions Based on the Activity Theory

The notion of contradictions, viewed as “deviations from standard scripts” (Engeström, 2000, p.964), is regarded as a significant aspect of Activity Theory. One aim that Engeström developed the activity systems model was to enable researchers to identify the internal contradictions that generate tensions within and beyond an activity system (Yamagata-Lynch, 2010). For instance, Engeström (2000) applied Activity Theory to investigate the systematic contradictions that caused tensions in the medical care of children in a hospital in Helsinki, Finland. The analysis revealed three emergent

contradictions that created tensions between the object (i.e., movement of children between primary care and the hospital) and tools (i.e., clinical pathways), between the object and rule (i.e., physician's sole responsibility for patient care), and between the object and division of labor (i.e., physicians' exclusive performance of making clinical decisions). By utilizing the insights gained from activity systems analysis, Engeström (2000) identified that the tensions in hospital patient care primarily arose from a lack of coordination and communication among healthcare providers. According to Engeström (2001), contradictions are "historically accumulating systemic tensions" (p.137), and as such, they might not be directly observable. Rather, they can be detected through a contextual and historical analysis of the conflicts and disturbances that arise in the course of subjects' daily activities.

METHODOLOGY

Research Design

This qualitative study employed Activity Theory within a sociocultural framework to investigate Taiwanese nurses' clinical English use within hospital settings. Narratives were collected through semi-structured interviews with nurses as primary participants, whereas doctors and foreign patients were secondary participants. This multi-stakeholder approach offered diverse perspectives, enhanced trustworthiness via triangulation, and reflected Activity Theory's multi-voicedness principle (Engeström, 2001).

Participants

Purposive sampling yielded sixteen participants across three stakeholder groups (nurses, doctors, and foreign patients). The primary group consisted of ten nursing professionals (Table 1) with diverse experience (1-30 years) and roles (ward nurses, nurse practitioners). Secondary participants included three doctors (Table 2), selected for their collaborative relationship with nurses, and three

non-Chinese-speaking foreign patients (Table 3), included for their first-hand experiences with nurses. Healthcare professionals were recruited from large-scale hospitals in metropolitan Taipei/New Taipei City, chosen as contexts where communication using English as a lingua franca is common due to multilingual diversity. Likewise, foreign participants recruited were those who sought medical care and treatments in large-scale hospitals in these two cities. It is also noteworthy that foreign participants here were not restricted to native English speakers because English as lingua franca is broadly referred to as “a contact language between speakers or speaker groups when at least one of them uses it as a second language” (Mauranen, 2018, p.7).

Table 1

Nurse Participants

Nurses	Age & gender	Position	Educational background	Work unit	Clinical experience
Nurse 01	27, F	ward nurse	General university	General Surgery Department	7 years
Nurse 02	40, F	clinical nurse	4-year technical university	Internal Medicine Department	22 years
Nurse 03	24, F	clinical nurse	5-year junior college and 2-year program at a technical university	Otolaryngology department	1 year
Nurse 04	42, F	nurse practitioner	5-year junior college and 2-year program at a technical university	Colon & Rectal Surgery Department	23 years
Nurse 05	33, F	nurse practitioner	4-year technical university	Internal Medicine Department	11 years
Nurse 06	25, M	ward nurse	5-year junior college	Department of Cardiovascular Surgery	4 years
Nurse 07	51, F	head nurse	5-year junior college	Department of Obstetrics and Gynecology	30 years

Nurses	Age & gender	Position	Educational background	Work unit	Clinical experience
Nurse 08	31, F	ward nurse	General university	Department of Trauma and Emergency Surgery	7 years
Nurse 09	23, F	ward nurse	5-year junior college and 2-year program at a technical university	Department of Pediatrics	1 year
Nurse 10	23, F	ward nurse	5-year junior college and 2-year program at a technical university	Department of Pulmonary Medicine	1 year

Table 2*Doctor Participants*

Doctors	Age gender	Position	Work unit	Clinical experience
Doctor 1	38, F	Attending physician	Department of Obstetrics & Gynecology	7 years
Doctor 2	36, F	Attending physician	Department of Pediatrics	7 years
Doctor 3	39, M	Attending physician	Department of Neurology	11 years

Table 3*Foreign Patient Participants*

Name	Gender	Nationality	Languages	Reason for hospital admission	Length of hospital stay
Patient 1	Female	Mexico	Spanish/English	scooter accident	7 days
Patient 2	Male	America	English	scooter accident	5 days
Patient 3	Female	America	English	scooter accident	5 days

Data Collection

Semi-structured narrative interviews were employed as the primary data collection method. Participants engaged in individual interviews, conducted either online via Google Meet or in person, at

their convenience. The interview guidelines were structured around several key themes: (1) background information: focusing on the participants' demographic and educational backgrounds, particularly their experiences with learning English for General Purposes (EGP) and English for Nursing Purposes (ENP); (2) language-specific descriptions: addressing the English skills required in the nursing workplace; (3) perceived problems and struggles: exploring the difficulties and challenges Taiwanese nurses face in using English in their work; (4) culture, policies, norms, and conventions: discussing explicit or implicit regulations within the clinical community; and (5) questions based on participants' narrative frames: allowing for elaboration on their initial responses.

Interviews with foreign patients were conducted in English, while interviews with nurses and doctors were conducted in Chinese, their first language, to gather more detailed information and prevent misunderstandings.

Data Analysis

In this current paper, Activity Theory served as a comprehensive conceptual framework that supported and directed the analysis of data and the interpretation of results. Data analysis followed a systematic, multi-stage qualitative process that identified and interpreted systemic contradictions within the nurses' clinical English use. All audio-recorded interviews were transcribed verbatim. Interviews conducted in Chinese were transcribed in Chinese first; excerpts used for reporting were subsequently translated into English.

The first analytical stage involved deductively mapping the activity system components. Transcripts were coded to identify the subject (nurses), object (clinical English use goals), tools (mediating resources), rules (norms/policies), community (hospital settings), division of labor (roles/hierarchy), and outcomes (results of the activity), establishing the system's structural elements.

The second stage focused specifically on identifying contradictions within and between these components. Guided by Engeström's (1987) conceptualization of contradictions as systemic tensions, this involved detailed coding for manifestations such as

conflicts, misalignments, disturbances, and inter-system tensions described by participants. Codes signifying similar tensions were grouped, and patterns were identified across these groupings and participant types (nurses, doctors, patients), facilitating triangulation. These patterns were then synthesized into higher-order themes, each representing a distinct systemic contradiction (e.g., tensions between the object and tools).

FINDINGS

Five themes emerged and will be discussed through various forms of contradictions within the nurse activity system.

Nurses 'Activity System vs. Doctors' Activity System

A contradiction emerged between the nurses' central activity system and the doctors' activity system of clinical English use (see Figure 2). One object of the nurse activity system is linked to communication with healthcare professionals such as doctors, demonstrated by workplace language demands such as code-switching to English medical terminology, comprehending medical records, and composing medical records. Such extensive use of English in medical practice can be attributed to the fact that English plays a crucial role in doctors' healthcare communication and medical education. This significant reliance on English within the medical field has subsequently put pressure on nurses to develop and utilize clinical English skills for effective communication with doctors.

The data from participant interviews indicated the misalignment between doctors' and nurses' general perceptions of using English for communication with healthcare professionals. Doctor participants noted that the English language was well ingrained in their medical training where they read medical textbooks and journals, used medical jargon, wrote prescriptions, orders, and medical records, and discussed in medical meetings using English. Therefore, doctors found it easy to transition from university to the workplace using English to communicate with other healthcare providers. Doctor participants also emphasized there was a lack of standardized

translations in Chinese for medical terminology and that using English medical terminology could ensure clear and accurate communication.

In contrast, nurses primarily receive their nursing education in Chinese for their disciplinary subjects. Upon entering the clinical workplace, they, however, must transition to specialized English usage to facilitate collaboration and interaction with doctors. Many nurses mentioned their difficult adjustments when initially entering the workplace:

Doctors often used a great mixture of Chinese and English. It was difficult for me to understand fully what the doctors were saying. (Nurse 10)

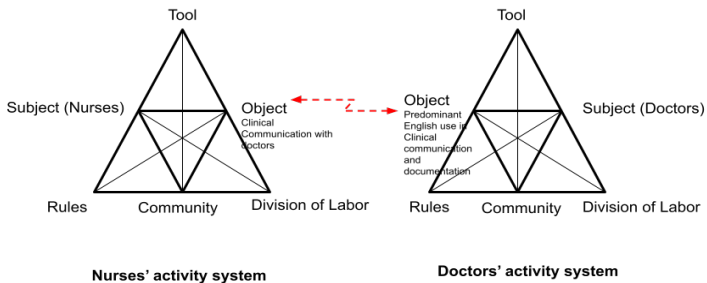
When a doctor used medical terminology to describe a patient's condition after examining the X-ray, I had no clue what the doctor meant. (Nurse 06)

Doctors' predominant use of English in written forms, namely medical records and laboratory reports, also exerted pressure on nurses:

The doctors documented patient information exclusively in English. I was under a lot of stress. (Nurse 05)

Figure 2

Contradiction between Nurses' and Doctors' Activity Systems



Machine Translation (Tools) vs. Clinical English Use (Object)

A further contradiction involved the *tools* nurses used versus the *object* of accurately comprehending clinical English (see Figure 3). Interviews revealed nurses frequently used machine translation, like Google Translate, to overcome language limitations when reading medical records or academic journals—tasks crucial for healthcare communication and professional development.

However, this reliance created a tension, as the tool often proved inadequate. In the case of nurses using Google Translate to comprehend medical records and laboratory reports, some doctor participants pointed out their concerns about machine translation inaccuracies:

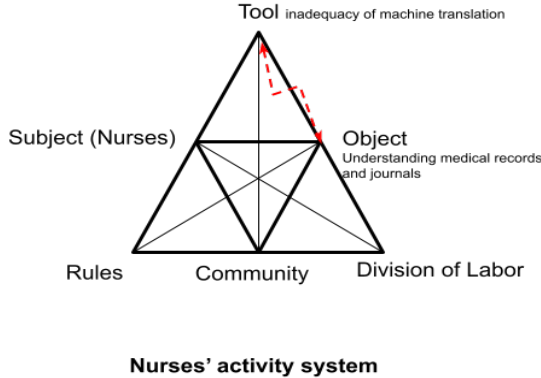
The term “dysuria” was mistakenly translated as “排尿困難” (difficulty in urination) when the correct equivalent Chinese translation should be “解尿疼痛” (painful urination).” (Doctor 1)

The content of hospital laboratory reports tends to be highly technical. Google Translate may not be able to accurately capture the nuances of grammar, leading to some misunderstandings in comprehension. (Doctor 2)

The issue of awkward translations is especially prevalent when nurses relied on machine translation to read specialized academic texts, such as published case reports and research papers. Many nurses indicated that when they used Google to translate entire database webpages or journal articles, the resulting output text was often confusing or even incomprehensible in Chinese. Generally, the translation problems encountered by nurses included mistranslation of medical terminology and syntax issues.

Figure 3

Contradiction between Machine Translation (Tools) vs. Clinical English Use (Object)



Localized Variety of Clinical Discourse (Rule) vs. Clinical English Use (Object)

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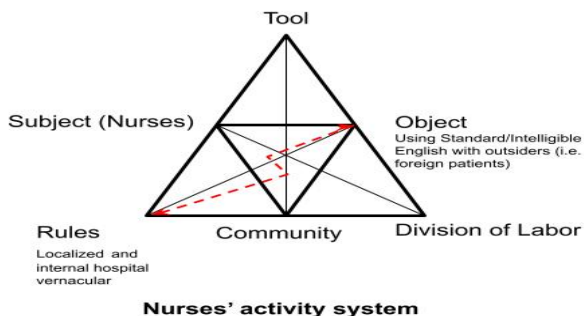
A further contradiction arose between the *object* of using standard, internationally intelligible clinical English and the established *rule* of using localized oral discourse conventions within the Taiwanese healthcare community (see Figure 4). One example is illustrated as follows: 病人已經留 bla-ca (blood culture) 和 u-ca (urine culture) 了 (The patient has done a blood culture and urine culture). According to the healthcare participants, these localized informal expressions of medical terms, such as “bla-ca” and “u-ca,” can be seen as an integration of medical abbreviations with traces of Taiwanese-accented English or Japanese influence. In some examples provided by participants, the pronunciation of some medical terms at times deviated from internationally intelligible English to a great extent. For

example, allergy is pronounced as /a-la-jee/. Such discourse convention has become a quintessential mark of the clinical community, and many healthcare professionals, whether doctors or nurses, learned to adhere to its use once they entered professional workplaces.

The tension emerged when nurses, accustomed to these internal norms, needed to communicate using standard English with outsiders (a key *object*), such as foreign patients. Nurses reported difficulty code-switching, leading to communication challenges. For instance, Patient 3 reported confusion when the nurse used the term “anti” instead of antibiotics to explain his medication. Similarly, Nurse 01 highlighted that the common clinical pronunciation of “allergy” (/aladʒɪ/) caused intelligibility problems with foreign patients, contrasting sharply with standard pronunciation. Meanwhile, nurse participants also emphasized that using standard pronunciation among healthcare professionals might prevent them from being understood by other clinical nurses, leading to a communication breakdown. This discrepancy between localized medical discourse and standard medical English has created a significant contradiction, challenging nurses to reconcile these conflicting demands in their professional communication.

Figure 4

Contradiction between Localized Variety of Clinical Discourse (Rule) vs. Clinical English Use (Object)



Preceptorship in Nursing (Division of labour) vs. Clinical English Use (Object)

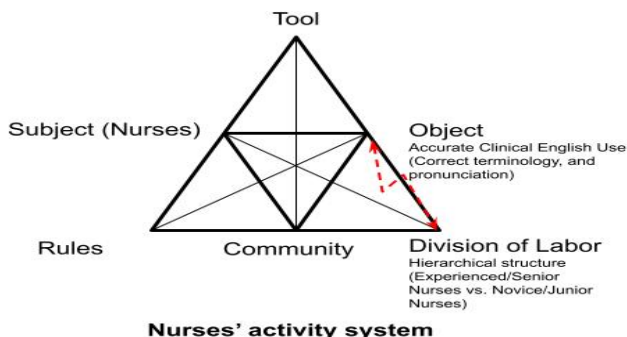
The nursing hierarchy, embedded within the *division of labour* (particularly in preceptorship), presented a contradiction affecting the *object* of accurate clinical English use (see Figure 5).

According to participants, preceptorship is vital in nursing, providing crucial learning experiences for novice nurses. New nurses are paired with experienced preceptors who offer guidance, feedback, and skill development. This practice exemplifies the division of labor component in Activity Theory, creating power dynamics and hierarchical relationships based on experience levels between preceptors and novices.

Interview findings revealed that hierarchical dynamics led novices to replicate their seniors' English errors to avoid confrontation. Nurse 10 described how her senior colleagues commonly used “The patient is not clear” to indicate unconsciousness, despite her knowing “syncope” was the appropriate medical terminology. Similarly, Nurse 09 noted seniors mispronounced “pelvic wrapping” as /wæpɪŋ/. Despite recognizing these errors, novices refrained from corrections to maintain deference to their senior counterparts.

Figure 5

Contradiction between Preceptorship in Nursing (Division of labour) vs. Clinical English Use (Object)



Lack of Institutional Support (Community) vs. Clinical English Use (Object)

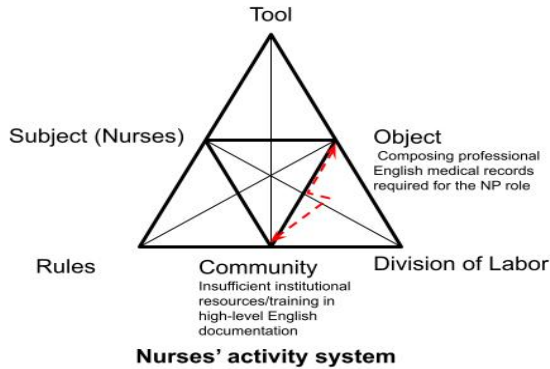
Another contradiction emerging within the nurse activity system highlights the discrepancy between the object of composing English medical records and the support from the clinical community (see Figure 6). Two nurse participants in this study advanced to nurse practitioners, similar to resident physicians, and thus had to create detailed medical records in English. They faced challenges in proficiently composing these records and noted that current training for transitioning from registered nurse to nurse practitioner focused on core nursing courses and clinical practice but often neglected language skills. The following excerpts from nurse practitioners suggested that the English language skills necessary for medical record writing were self-taught, with little support and guidance from hospitals:

In the training of becoming nurse practitioners, we were required to practice medical record writing or submit case reports. But in fact, there was no specific guidance on English writing. (Nurse 04)

During specialized training for nurse practitioners, I was only told that my choices of words and expressions were not professional enough and suggested that I refer to some books on writing medical records in English. (Nurse 05)

Figure 6

Contradiction between Lack of Institutional Support (Community) vs. Clinical English Use (Object)



DISCUSSION

This study applied Activity Theory's concept of contradictions to examine systemic tensions that hindered Taiwanese nurses' ability to achieve effective clinical English use. It sheds light on the challenges and obstacles that nurses faced in their attempts to use clinical English, revolving around the following underlying issues.

Divergent Educational Tracks Between Doctors and Nurses

This study highlighted the significant role of English in clinical settings in Taiwan, where English is used as a foreign language. This dominance of English can be attributed to the extensive use of English by doctors in fulfilling their clinical responsibilities, such as using English medical terminology as an integral part of clinical communication and composing medical documentation in English. According to Boshier and Stocker (2015), the substantial use of English in medical education and practice is associated with efforts towards internationalization aimed at creating a globally competitive medical service. Moreover, the study revealed that most nurses found it challenging to adapt to and transition into clinical English (i.e.,

using medical terminology, reading medical records). Corroborating the findings of this study, Bosher and Stocker (2015) also pointed out that doctors' extensive use of English in medical practice has placed a burden on nurses to comprehend and use English effectively in medical communication. This was also supported by Yeh and Yu's (2009) study, indicating that the use of professional medical terminology was even identified as one of the major stressors that led to newly-graduated nurses quitting their jobs within the first three months.

A significant contrast in language abilities and attitudes regarding clinical English use between doctors and nurses may be attributed in part to the divergent educational trajectories pursued by these two professions. It is noted that nurses with vocational college backgrounds make up 70 to 80 percent of entry-level nursing professionals, whereas doctors generally follow higher education tracks in Taiwan (Wang, 2019). Nurses with vocational college backgrounds are equipped with practical nursing skills more than academic subjects, such as English. Researchers have also cautioned that inadequate English teaching hours partly contributed to the insufficient English proficiency of many vocational students (Chang, 2006; Liao, 2010; Liou, 2011; You & Chen, 2014). On the contrary, EMP-related studies have revealed that medical education at tertiary levels in Taiwan has placed a great emphasis on the English language and even increasingly adopted English as the language of instruction, with teaching materials such as PowerPoint slides and textbooks available in English (Chia et al., 1999; Hwang & Lin, 2010; Tsou et al., 2016; You & Chen, 2014). However, this emphasis on English is not extended to nursing vocational education, where discipline-related subjects are primarily taught in Chinese.

The other reason that accounted for the disparity of language abilities between doctors and nurses was that vocational students typically exhibited less motivation for language learning (Hua & Beverton, 2013; Liou, 2011; Liu, 2020). Liou (2011) aimed to assess the impact of English education on students' English proficiency during four years in vocational colleges. The results indicated that the English proficiency of vocational students did not demonstrate any growth after four years, and in some cases, even a decline.

Engeström (2014) expanded an activity system to two or more interacting activity systems in the third generation of Activity Theory. As Kuutti (1996) put it, “activities are not isolated units but are more like nodes in crossing hierarchies and networks” (p.34). In the current study, doctors and nurses have a shared intended object of using clinical English to maintain effective healthcare communication and ensure patient care quality. Nurses’ main activity of clinical English use is interconnected with the doctors’ clinical English system. However, doctors’ and nurses’ distinct training paths could result in a contradiction of clinical communication in terms of English use.

Potential Pitfalls of Overreliance on Machine Translation

The challenge for healthcare professionals in EFL contexts to effectively process the volume and complexity of English reading materials integral to clinical practice and professional development is well-documented (Alanazi & Curle, 2024; Dedi, 2017; Hussin, 2009). This study found that Taiwanese nurses with limited disciplinary English reading skills frequently relied on machine translation tools like Google Translate when facing these textual demands. This heavy dependence introduced a Tool-Object contradiction, as machine translation often fails to accurately capture the nuances, context, and domain-specific terminology present in disciplinary texts.

Although recent literature on machine translation has documented a remarkable improvement in quality since the release of the neural machine translation (NMT) system by Google in late 2016 (Lee, 2022, 2023; Zhou et al., 2022), Google Translate continues to face some challenges, such as grammatical errors in longer sentences with complex structures, issues with formality, and pragmatic breakdowns (Ducar & Schocket, 2018). Additionally, other factors such as distant language pairs (e.g., English and Chinese) (Shadiev et al., 2019) and text genres and contexts (O’Brien et al., 2018) may also result in a low accuracy rate of machine translation.

In healthcare settings, the inherent limitations of machine translation can be particularly problematic. Doctor participants in this study specifically highlighted concerns about machine translation-generated inaccuracies in medical terminology translation, alongside

fluency issues that significantly impede comprehension. Patil and Davies (2014) found that Google Translate achieved only 57.7% accuracy for common medical statements across 26 languages, with potentially dangerous errors. For example, “Your child has been fitting” was translated to Swahili as “Your child is dead,” while in Polish, “Your husband has the opportunity to donate his organs” became “Your husband can donate his tools.” Such severe mistranslations highlight the grave risks associated with unverified machine translation use in clinical communication. Besides accuracy, issues like inadequate discourse fluency, lack of textual coherence, instances of cultural insensitivity, and syntactic and semantic errors were identified as significant deficiencies in the use of machine translation in healthcare communication (Delfani et al., 2024; Vieira et al., 2021).

The Conflicting Use of English Medical Terminology

A key tension identified in this study arises from the conflicting demands placed on Taiwanese nurses to navigate both the informal, localized clinical discourse prevalent within their healthcare community (*rule*) and the necessity of using standard, formal English medical terminology for documentation and external communication with healthcare outsiders such as foreign patients (*object*). These nurses struggled with appropriate contextual switching between formal and informal medical terminology based on specific audiences and situations.

Similarly, in the Korean healthcare context, Choi (2021) also documented a vernacular variety of Korean medical discourse featuring Koreanized pronunciation and a mixture of Korean English words. Choi (2021) indicated that medical terminology in Korean clinical settings is pronounced with deviation from standard pronunciation. Consequently, Korean nursing students encountered problems with being understood by other in-service nurses during clinicals when they used formal forms of medical terminology learned in schools. These examples serve to illustrate that the underlying cause of challenges faced by Taiwanese and Korean nurses in clinical English stemmed from tension between the formal communication

object and the informal discourse rules governing actual clinical practice. A complex linguistic situation in healthcare settings was also observed in the context of university hospitals in Algeria, where multilingualism, code switching, and code mixing characterize medical communication (Outenzabet & Sarnou, 2023). In these settings, French traditionally dominates formal medical instruction and documentation, while local languages (Kabyle and Algerian Arabic) serve social interactions and routine patient care. English increasingly plays a role in international research and publication. This also demonstrates how healthcare communication strategically allocates different languages and varieties based on domain, participants, and communicative purpose.

The current study reveals that both standard medical English and a local variety of colloquial medical English are linguistically present in nurses' daily use of clinical English. Nurses, therefore, need to master both to be linguistically competent in performing their nursing duties that entail English use. This finding further reinforces the significance of sociolinguistic competence, as emphasized by Boshier (2012), in identifying some of the crucial linguistic skills that nurses require in clinical settings. Boshier (2012) defined sociolinguistic competence as the ability to comprehend cultural and dialectal variations in English and adjust language use according to the audience and purpose of communication. The findings of the present study also demonstrate that organizational, cultural, and broader sociolinguistic factors significantly impact professional language use, shape communities of practice, and highlight the critical need for contextually appropriate language use. This reinforces Activity Theory's tenet that cultural and social contexts are pivotal in shaping activity systems and the contradictions.

Hierarchical Power Asymmetry Rooted in Preceptorship

The findings indicate that the Taiwanese nursing workplace features inherent power asymmetries, particularly evident in the preceptorship model. While providing essential guidance and learning opportunities for novice nurses, these mentoring relationships simultaneously introduce obstacles stemming from hierarchical

power dynamics that significantly influence clinical English usage. This highlights a critical contradiction within nurses' activity system: the deference to authority (*division of labour*) potentially conflicts with achieving accurate clinical English use (*object*).

The inherent hierarchical power dynamics embedded within preceptorship and clinical training have been extensively documented across global nursing healthcare contexts (Hussin, 2009; Ke & Hsu, 2015; Kuroda et al., 2009; Muir et al., 2013; Quek & Shorey, 2018; Terblanche & Cilliers, 2021). However, Ke and Hsu (2015) suggested that Western preceptorship models typically lean towards more parallel mentoring relationships, while Chinese contexts emphasize more superior-subordinate hierarchies. Similarly, Lu (2020) further indicated that preceptorship in Taiwan can be two sides of the same coin in developing novice nurses' professional discourse, with novice nurses receiving guidance but often hesitating to voice their concerns due to the hierarchical nature of the workplace.

Previous studies have proved Activity Theory as a robust framework for analysing these systemic conflicts related to hierarchical status and power. For example, Karimi and Mofidi (2019) examined L2 teacher identity development and also demonstrated the significant role of power relations as a mediating factor. The study found that higher-ranking members in the community could impact how L2 teachers perceived themselves. Lilley & Hardman (2017) also applied Activity Theory to view mobile phones as cultural artifacts to assist language learning through dictionary use in an EFL classroom. The study revealed an asymmetrical power structure in the classroom where the dominant role of a teacher limited students' autonomy in their own language learning. As argued by Pohio (2016), this makes the Activity Theory lens particularly suitable for examining organizational culture and espoused corporate values, thus providing a more comprehensive understanding of the organization's context.

Lack of Institutional Support in Developing Medical Documentation Skills

Another prominent issue identified in the study is that nurse practitioners' higher proficiency in language needs, namely composing medical documentation, has not been addressed in current

nursing education. This could be attributed to two plausible reasons. Firstly, the role of nurse practitioners was not officially introduced into the healthcare system until 2007, and their training has not yet been fully integrated into regular nursing education. Secondly, the undergraduate level of nursing education is primarily intended for entry-level nurses rather than more advanced nursing roles such as nurse practitioners.

Some nurse participants suggested that university graduate programs should include specific skills, such as composing medical records, tailored for nurse practitioners. However, it is important to note that a graduate degree is not required to become a nurse practitioner. In fact, a recent study by Tsay and Tung (2021) indicated that only 19% of current nurse practitioners hold a graduate degree. Additionally, while current nursing education is underdeveloped in preparing nurse practitioners with adequate clinical language skills to compose medical records, hospitals have not provided the necessary support. This is consistent with a study conducted by Chen et al. (2021), which investigated the possible reasons accounting for the low accuracy of medical records produced by 30 nurse practitioners. The survey findings indicated that a notable proportion of nurse practitioner participants had received either no training or minimal training in medical writing. Generally, the majority of nurse practitioners perceived English writing as a major challenge in this critical aspect of clinical documentation.

Without having greater institutional support, nurse practitioners' development of language competency to support their job duties was usually self-directed and self-reliant. Nurse practitioners were advised by trainers to refer to medical writing books or doctors' samples to understand the genres of medical writing. It seemed to posit that language skills developed for performing nursing tasks could be naturally acquired and internalized without instruction.

CONCLUSION

This study applied the notion of contradictions derived from Activity Theory to examine the systemic contradictions that introduce

tensions into nurses' activity of clinical English. These dilemmas, manifested as tensions between the object and various components of nurses' activity settings, included nurses' overreliance on machine translation (object vs. tools), conflicting use of clinical English (object vs. rule), hierarchical power asymmetry (object vs. division of labor) and lack of institutional support (object vs. community). Additionally, a contradiction was also observed between the central activity system of nurses and the neighbouring activity system of doctors.

The notion of contradiction allows the tensions and conflicts surrounding the activity system to be brought to light, so that these issues may be further analysed and may ultimately lead to transformational processes if the underlying problems can be resolved (Sagre et al., 2022). Drawing from the presented contradiction, this study aims to draw some implications and offer suggestions for ENP practice.

1. Strengthen foundational EGP and bridge ENP: The findings of the study demonstrated that the generally low proficiency in English impeded nurses' engagement in nursing tasks related to English use. The study advocated the crucial role of EGP courses in preparing students with a strong foundation of general language skills, as nurses would need basic linguistic knowledge about lexis and grammar to serve as mediating resources for acquiring and using the specialized language skills at the textual and discourse level. Building upon this, ENP courses should explicitly bridge this general proficiency with the specific demands of clinical communication through a highly contextualized approach. For instance, medical terminology should be taught within authentic clinical scenarios, case studies, and dialogues, rather than as isolated words. Similarly, ENP courses should utilize authentic medical documentation and research articles, explicitly teaching specialized reading strategies to enhance comprehension. This contextualized approach is crucial for nurses to effectively apply their knowledge at the discourse level, particularly in communicating with foreign patients and interpreting specialized texts.

2. **Develop machine translation literacy:** Given nurses' prevalent reliance on machine translation, nursing education should integrate explicit instruction on machine translation literacy. This should include training on the advantages and significant limitations of applying machine translation tools in clinical contexts, strategies for evaluating translation quality, ethical considerations, and techniques for effective post-editing or verification, rather than uncritical acceptance. For example, ENP educators can use the output of machine translation as a source of errors (e.g., mistranslation of medical terminology, syntactic inaccuracies) to be corrected and further revised by language learners.
3. **Cultivate sociolinguistic competence:** The findings highlight the critical need for ENP training that addresses not just language forms but also their contextually appropriate use. Thus, nursing curriculum should utilize role-plays and case studies simulating diverse communicative situations (e.g., patient explanations, inter-professional handovers, formal documentation) requiring different registers and varieties of clinical English to cultivate students' sociolinguistic awareness.
4. **Target advanced skills (e.g., composing medical documentation):** This study suggests that current nursing education may not sufficiently prepare nurse practitioners to produce professional medical documentation. To address this gap, nursing curricula should include dedicated advanced writing modules that incorporate authentic clinical materials (e.g., anonymized medical records, case reports) to teach key genre conventions, sentence structures, collocations, and rhetorical features. In entry-level ENP courses, instructors should guide students to focus on typical collocates, sentence patterns, and discourse features found in these professional texts. This focused engagement supports both explicit instruction and incidental learning across phrase, sentence, and discourse levels. Additionally, to bridge the gap between

academic preparation and real-world demands, hospitals should conduct needs analyses and provide targeted training programs based on specific language and communication tasks required in different nursing roles. These programs can include workshops on medical documentation and feedback sessions using actual workplace tasks. Collaboration between clinical educators, language specialists, and experienced nurses is key to designing training that reflects authentic communicative practices and supports continuous learning.

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CORRESPONDENCE

Joan Wan-Ting Huang, Language Center, National Chung Hsing University, Taichung, Taiwan
Email address: othellojoan@nchu.edu.tw

Chiou-Lan Chern, Department of English, National Taiwan Normal University, Taipei, Taiwan
Email address: clchern@ntnu.edu.tw

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