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Editors: Paul Robertson and Lucas Kohnke



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Foreword

The current issue of the Linguistics Journal brings thirteen articles written by researchers from different parts of the world. These thirteen articles include topics that deals with a range of linguistics research areas and presents innovative and thought-provoking findings in the field.

The features articles in this volume were written by Matt Lucas (Kansai University, Osaka, Japan), Zahra Nouri and Rezvan Rasouli (University of Tabriz, Iran), Muhammad A. Al-Quran (Yarmouk University, Jordan), Kevin King (Northern Essex Community College), Benedicta Adokarley Lomotey (University of Ghana, Ghana), Teresa Wai See Ong (Griffith University, Australia), Nada Mohammed Salem and Stefanie Pillai (University of Malaya, Malaysia), Soh Siak Bie, Tam Shu Sim and Larisa Nikitina (University of Malaya, Malaysia), Md Jahurul Islam and Iftakhar Ahmed (Georgetown University, USA), Yeonok Hong (Sejong University, Republic of Korea), Abbas H. Al-Shammari (Kuwait University, Kuwait), Kamonnate Iadkert and Azirah Hashim (University of Malaya, Malaysia) and Pei-Jung Kuo (National Chiayi University, Taiwan).

The opening article, *Agglutination, Loanwords, and Japanese Morpholexical Categoryhood: Cross-Linguistic Factors in the Grammatical Handling of Verbs and Adjectives in Written English*, by Matt Lucas, investigates how morpholexical subcategories of Japanese verbs and adjectives influence accuracy in relation to learners' recognition of L2 morphological errors, and their ability to produce appropriate written L2 forms. Matt Lucas demonstrates the problematic nature of loanwords versus non-loanwords in L2 verb and adjective usage among Japanese EFL learners. This study, though focused on the Japanese context, is an avenue to explore the potential influences of English-based loanwords in other linguistic contexts.

In the second article, *The Effect of Task Type on the Writing Accuracy of Iranian Male and Female EFL Learners*, Zahra Nouri and Rezvan Rasouli examine three types of writing tasks – personal descriptive, narrative and decision-making – with 50 Iranian intermediate learners and investigates how accuracy among male and female learners is affected by task type. The study finds that learners produce more accurate language in the personal descriptive task. No gender difference is observed in any of the three tasks.

In *A Contrastive Look at English and Arab Adjectives*, Muhammed A. Al-Quran examines attribute and predicate adjectives in English and Arabic from syntactic and semantic points of view, using contrastive analysis. The study finds that ordering adjectives is more complicated in Arabic due to their inflectional properties. The findings will benefit translators and researchers, and can raise awareness of potential issues when modifying annexation structures in Arabic versus English.

In *When-/Whenever-Conditionals and Conditional Taxonomy*, Kevin King discuss the presentation of conditionals in textbooks and websites and argues that conditional taxonomies should be revamped. In the article King argues that when and whenever are equivalent to if (in factual generic and habitual conditionals) and increasing care should be taken with notions of timeless and time-bound.

In *A Conversational Analysis of Language Practices in the FL Classroom: Data from a Ghanaian University Context*, Benedicta Adokarley Lomotey investigates the pedagogical and sociolinguistic factors that influence practices in foreign language (FL) classrooms. Lomotey finds that several factors encourage code-switching in Spanish FL classrooms, including linguistic deficiencies, time constraints and student preferences. The article ends with a call to acknowledge the learners' first language in the FL classroom and use it to teach the new language.

Teresa Wai See Ong's article, *Safeguarding Penang Hokkien in Malaysia: Attitudes and Community-Driven Efforts*, takes an ecological approach to investigate the Chinese community in Malaysia's attitude toward Penang Hokkien, and steps taken to safeguard the language. The article highlights a community-driven effort to maintain Penang Hokkien, in which participants and member of the community recognise the inseparable relationship between language and identity.

In *An Acoustic Analysis of Intonation in the Taizzi Variety of Yemeni Arabic*, Nada Mohammed Salem and Stefanie Pillai study intonation patterns of Taizzi Yemeni Arabic in two age groups (20-25 and 60-65) to discover if changes occurred after the 1962 revolution. Analysing the findings in relation to spontaneous speech, read passages, wh-questions and yes/no questions, the main difference between the groups was in terms of wh-questions. The author puts forward the explanation that this might be due to the increasing contact and interaction that Yemenis have had with foreigners for the past decades which influenced their linguistics practices.

In *Designing and Piloting a Repeated-Measures ANOVA Study on L2 Academic Writing: Methodology and Challenges*, Soh Siak Bie, Tam Shu Sim and Larisa Nikitina address the challenges of implementing repeated-measures ANOVA studies of academic writing in three task conditions. She adopts the principle of progression of tasks from simple to complex, offering insights to researchers who would like to design and implement such studies.

In *Mid-Front and Back Vowel Mergers in Mymensingh Bangla: An Acoustic Investigation*, Md Jahurul Islam and Iftikhar Ahmed study the acoustic properties of vowel categories in Mymensingh Bangla to see if two vowels merge. This novel research is the first study to confirm that the dialect does have vowel mergers. It is hoped this study will lead to further investigation of the dialects of Bangla.

In *Change in Chinese Personal Pronouns from a Typological Perspective*, by Yeonok Hong, Chinese personal pronouns are analysed from a typological perspective and a new corpus examination underwent a typological change from a two-person to a three-person language. It discusses this previously overlooked change in Chinese pronouns in great detail. The author puts

forward the argument that Chinese typological studies is an underutilised research method in humanities.

In *Social Media and English Language Learning During Covid-19: KILAW Students' Use, Attitude, and Prospective*, Abbas H. Al-Shammari studies the use of social media at Kuwait International Law School during the early stages of the Covid-19 pandemic. This quantitative study finds that students favour using social media to improve their English. It suggests that teachers incorporate social tools into teaching and learning.

In *The production of English codas by Thai speakers*, Kamonnate Iadkert and Azirah Hashim explore how Thai speakers produce English codas to express the variation in producing single and double consonant clusters. The authors discovered the first language (Thai) interference incurred in all single code phonemes. Specifically, Thai speakers displayed errors with -s suffix for plural nouns and subject-verb agreement, and -ed suffix in the past tense. The findings will have pedagogical implications for teaching pronunciation to Thai speakers.

In the issue's final article, *On the Song Double: Object Construction in Mandarin Chinese and Its Passivization Variations*, Pei-Jung Kuo discusses the Mandarin Chinese double object construction verb song, which can optionally form a verb cluster with gei. The article proposes a base-generation approach to accommodate speaker variation and the article ends with a proposal to omit any structural co-relation between the double object construction and dative construction in a wider perspective.

We hope that this issue of the journal gives our readers invaluable insights into linguistic research carried out in different context throughout the world. This issue could not have been made without the meticulous work by the Associate Editors Dr. Phan Thi, Thanh Thao, Mark B. Ulla, and William MacDonald. Finally, we would like to take this opportunity to thank the reviewers for their invaluable comments, advice, and counsel.

Dr. Lucas Kohnke
Chief Editor
The Linguistics Journal

Agglutination, Loanwords, and Japanese Morpholexical Categoryhood: Cross-linguistic Factors in the Grammatical Handling of Verbs and Adjectives in Written English

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Abstract

The present study targets the agglutinative nature of Japanese morphemes as a potential factor affecting the grammatical handling of verbs and adjectives in written English. It attempts to move beyond traditional descriptor classifications by developing sets of morpholexical subcategories in a bid to isolate specific instances of cross-linguistic influence. Through devising parameters that divide verbs and adjectives into non-loanword and loanword forms, the study set out to identify the extent to which these morpholexical subcategories might influence accuracy with respect to how well Japanese university EFL learners are able to (1) recognize English morphological errors in reading, and (2) appropriately produce their forms in English writing. Using two acceptability judgement tests and one constrained writing task, the results ($N = 151$) indicated that loanword forms, on the whole, were more problematic than non-loanword forms, suggesting that habituated loanword usage in L1 may have ramifications on L2 inflectional accuracy. Implications are discussed.

Keywords: adjectives, cross-linguistic influence, Japanese EFL learners, loanwords, verbs, written accuracy

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Introduction

The role of the mother tongue (L1) in the acquisition of a second language (L2) is hard to deny. In terms of grammatical accuracy, the impact of positive or negative transfer between L1 and L2 has formed a substantial basis for both theoretical approaches and pedagogical applications in a wide variety of linguistic settings (e.g., Izquierdo & Collins, 2008; Jarvis & Pavlenko, 2010; Miller & Chiswick, 2005; Odlin, 1997; Ringbom, 2007).

In a Japanese context, previous research has tended to isolate nouns as an important cross-linguistic variable (e.g., Iwasaki, Vinson, & Vigliocco, 2010; Kobayashi, 2008; Lucas & Yiakoumetti, 2017). In wishing to isolate and examine this variable further, previous research has divided nouns into morphological subcategories so as to identify and, ultimately, ameliorate problematic features that may be implicated in cases of negative transfer. For example, Lucas (2018) found that L1 nominal loanword forms in Japanese (e.g., バナナ [*banana*]—bananas) tended to be more challenging in terms of obligatory plural marking in written accuracy tasks than other subcategories of countable noun such as L1-only equivalents (e.g., 柿 [*kaki*]—persimmons). Consequently, if this issue is to be effectively remedied, a case could be made for raising awareness of loanword inflectional forms to a greater degree than other subcategories of nouns. Additionally, this may have implications for other languages that have similarly amassed a large corpus of lexical borrowings.

Comparatively speaking, however, previous research has paid less attention to the potential cross-linguistic influence of other content words between Japanese and English, particularly morphological subcategories found within them. The aim of the present study, therefore, is to establish the extent to which differences may exist between such subcategories of Japanese verbs and adjectives in relation to learners' abilities to (1) recognize L2 morphological errors, and (2) appropriately produce their written L2 forms; and to precisely isolate where these differences might lie so as to inform pedagogical practice. While the study centres on Japanese learners, the principles upon which it is based may also be applicable to other linguistic contexts.

Theoretical Foundations and Guiding Principles

The Role of Agglutination

From a morphological point of view, Japanese is generally classified as an agglutinative language. This means that words may be “formed by a root and multiple affixes where the

affixes are easily separated and always retain the same meaning” (Fromkin, Rodman, & Hyams, 2013, p. 379). As a result, each morpheme remains unchanged when unified with other morphemes (see examples below), making Japanese a highly regular and predictable language.

By contrast, English is widely considered a non-agglutinative—or fusional—language (Payne, 1997). As the term suggests, its morphemes are effectively “fused” together, often rendering their original forms difficult to identify. For example, the past tense *caught* bears little resemblance to the infinitive *catch*. Unlike Japanese, this results in affixes being unable to be broken down into constituent meanings.

The Potential Cross-linguistic Influence of Agglutinative and Loanword L1 Forms

Owing to the agglutination of morphemes in their native tongue, it is possible that Japanese learners may be more prone to approaching English in a similar way. The principles of agglutination could also extend to the inflectional accuracy of loanwords, as already stated in the case of nouns (Lucas, 2018).

Based on the same principles as Lucas’ (2018) investigation of nouns, the current study enquires whether an equivalent phenomenon of loanword influence might also be true for verbs and adjectives in a Japanese context. The main emphasis in this instance is the extent to which cross-linguistic influence might play a role between Japanese and English in the receptive and productive accuracy of morpholexical subcategories of verbs and nouns, as no known research has investigated this possibility in depth.

The Case of Verbs

General Background

A verb typically “denotes an action or a state of being” (Celce-Murcia & Larsen-Freeman, 1999, p. 16). Historically, Japanese had its own corpus of verbs. However, these were subsequently augmented with Chinese loanwords that were assimilated into the verbal lexicon (Kageyama, 1982). As Japan opened its doors to more foreign nations, a plethora of loanwords from other languages has since been incorporated, particularly from English. It is estimated that modern Japanese now contains tens of thousands of English-based loanwords (Stanlaw, 2004), constituting approximately 8% of its lexical base (Barrs, 2013).

Categorization of Japanese Verbs

It can be seen from the brief overview above that there are three main categories of Japanese verbs: (1) those of Japanese origin; (2) those of Sino-Japanese origin; and (3) those of entirely foreign origin (which use the block script, *katakana*). Accordingly, each has its own way of being inflected.

Non-compound Forms

Verbs of Japanese origin are referred to here as “non-compound [verb] forms” since their morphological head does not consist of a Sino-Japanese two-character compound. Rather, such verbs possess an inflectional root morpheme (sometimes referred to as a monomorphemic stem) that does not necessarily function as an independent word without the addition of an inflectional suffix. For example, the verb 食べる (*taberu—to eat*) contains the root 食べ (*tabe*), but requires the suffix る (*ru*) to function as a verb. Although verbs are not person-marked in Japanese, tense is indicated through inflectional suffixes. For example, 食べている (*tabete'iru—is eating*) becomes the present continuous form, while 食べた (*tabeta—ate*) becomes the simple past form.

Sino-Japanese Two-character Compound Forms

In this instance, Sino-Japanese verbs comprise a compound of two Chinese characters (herewith “compound [verb] forms”). These compounds function independently as nouns and are treated as verbs only when する (*suru*) is added. In its free-occurring form, *suru* means *to do*, *to make*, or *to play*. An example is 説明する (*setsumei-suru—to explain*), which contains the noun *explanation* (i.e., 説明—*setsumei*) as its head. In this sense, simply adding *suru* to create a verb from a noun is often referred to as a “light verb” (Jespersen, 1954). Although compound verb forms are also sometimes referred to as “verbal nouns” (e.g., Miyagawa, 1987), the term “compound” has been favoured here in order to clearly distinguish it from non-compound forms.

English-based Loanword Forms

Although Japanese borrows from numerous other languages such as Dutch, Portuguese, French, and German (Irwin, 2011), this study focuses solely on loanwords of English origin. One of the characteristics of loanword verbs is that they frequently “function as verbs in the source

language, even if they are treated as nouns (and are subsequently verbalized) in the borrowing language” (Wichmann & Wohlgemuth, 2008, p. 2). Furthermore, Haspelmath (2008, p. 48) states that “the borrowing language employs its own means of denominal verbalization to turn the borrowed forms into verbs.” Indeed, this is usually the case in Japanese, where loanwords may function as either verbs or nouns in English but are treated as verbs when adopted in Japanese.

Loanwords are similar to compound verb forms in that they function as verbs when *suru* is added. Examples of this are ダウンロードする (*daunrōdo-suru—to download*) and シェアする (*shiea-suru—to share*). This holds true even if originally derived from a noun. For example, デコレーションする (*dekorēshon-suru*) means *to decorate*, but uses the nominal base form of *decoration* in conjunction with *suru*.

Potential Cross-linguistic Influence for Verbal Forms

From a cross-linguistic standpoint, these three categories of verb could be significant, especially for compound and loanword forms whose borders between noun and verb are generally difficult to trace (Graffi, 2001). Similarly, as Fox, Hayashi, and Jasperson (1996, p. 203) pointed out, “bound verbal morphemes are . . . more semantically complex in English than they are in Japanese.” Owing to these differences between L1 and L2 forms, it is possible that inflectional accuracy of English verbs may prove challenging for Japanese learners. This may be particularly true for loanwords since habituated usage in L1 may result in entrenched attention (Ellis, 2006), subsequently leading to their possible mishandling in English.

The Case of Adjectives

General Background

An adjective generally “describes or denotes the qualities of something” (Celce-Murcia & Larsen-Freeman, 1999, p. 17). However, according to Francez and Koontz-Garboden (2015, p. 1), “lexical categoryhood is among the most important and vexed issues in linguistics,” and the case of adjectives would certainly appear to be no exception. The traditional functionalist view of adjectives being noun modifiers (e.g., Croft, 1991; Bhat, 1994) may, to some extent, be oversimplistic. Baker (2003, p. 16) stated that adjectives are “not inherently predicative (like verbs) or inherently referential (like nouns).” In a bid to be more specific, Baker informed us that

adjectives can appear in one of three syntactic environments and, as a result, possess specific properties. Firstly, adjectives can function as direct attributive modifiers of nouns (e.g., *a satisfied customer*); secondly, as complements of degree heads (e.g., *the food was too spicy*); or thirdly, as resultive secondary predicates (e.g., *the boxer was knocked unconscious*).

In addition to these properties, further divisions can be made in English on the basis of inflection, such as whether their basic, comparative, or superlative form is applied and, even within these, whether they are regular or irregular (e.g., *tall, taller, tallest* as opposed to *good, better, best*). However, rather than assessing competency of inflection per se, this study mainly directs its attention to whether differences between L1-L2 forms impact written accuracy. Therefore, to hone the specifications of the study, adjectives that serve only as basic, direct attributive modifiers of nouns were used as the basis of investigation. Comparative and superlative forms were consciously omitted in order to limit the number of variables involved.

Traditional Categorization of Japanese Adjectives

In order to identify any potential cross-linguistic influence by contrasting L1-L2 forms, it is important to examine adjectival categories in Japanese. Loosely speaking, most Japanese words that are equated with the notion of direct attributive modification fall into two main categories. The first is commonly referred to simply as “adjectives,” or as “*-i* adjectives,” owing to their ending in the Japanese *-i* (い) syllable (e.g., 暑 *atsui* [hot; 寒 *samui*). The second is frequently referred to as “adjectival nouns” because, in isolation, they serve as nouns. They may be referred to as “*-na* adjectives” because they require the Japanese *-na* (な) syllable when used to modify a noun (e.g., 完璧 *kanpeki-na* [perfect day]).

Categorization of Japanese Adjectives in This Study

As already outlined, the purpose of this section of the study is to examine the extent to which the difference between Japanese and English adjectival forms exert an influence on L2 morphological accuracy. Therefore, while it is helpful to understand the general background of adjectives, as well as their traditional categorization in Japanese, it is now necessary to look beyond these distinctions and identify further subcategories so that, should they exist, pinpointed instances of cross-linguistic influence may be identified.

Non-compound Forms

Similar to non-compound verbs, the term “non-compound” in relation to adjectives here refers to those of entirely Japanese origin that do not consist of a two-character compound and that are derived from a verb whose root morpheme has been inflected into its past form so that adjectival usage is enabled. For example, the verb 増える (*fueru—to increase*) may be past-inflected to 増えた (*fueta—increased*) in order to function as an adjective when modifying a noun (e.g., 増えた学生の数 [*fueta gakusei-no-kazu*]*—increased student numbers*). As with verbs, it is not always possible for the root morpheme to stand alone as a noun. In this instance, the root 増え (*fue*) is unable to function as an independent word.

Sino-Japanese Two-character Compound Verb-derived Forms

Sino-Japanese verbs consisting of a compound of two Chinese characters can be inflected into their past form to function as adjectives when used to modify nouns. As with verbs, these Sino-Japanese two-character compound verb-derived forms (herewith “compound [adjective] forms”) can operate as nouns when the past-inflected form of *suru* (i.e., した—*shita*) is removed. An example of this is 発表した結果 (*happyō-shita kekka*), which may be translated as *the announced result*. However, the compound (i.e., 発表—*happyō*) becomes *announcement* in its isolated nominal form. Thus, these two English forms (i.e., *announced* vs. *announcement*) possess rather different derivations in comparison with their Japanese equivalents.

Participle Forms

Like non-compound and compound forms, participle forms also originate from verbs but function as adjectives when used to modify a noun using the present participle (i.e., *-ing*) or past participle (i.e., *-ed*). Whereas in English participle forms provide a distinction between the cause of a state (e.g., *relaxing*) and the state itself (e.g., *relaxed*), as such, no comparable concept exists in Japanese. Some cases may be expressed using nouns that function as *-na* adjectives (e.g., 退屈な人 [*taikutsu-na hito*]*—boring person*), while others may rely on verbs as modifiers (e.g., 疲れた人 [*tsukareta hito*]*—tired person*). However, in both of these examples, it is somewhat difficult to draw a distinction between the cause of the state (i.e., *boring*; *tiring*) and the state itself (i.e., *bored*; *tired*). Although there is occasionally some degree of grammatical flexibility to

account for such differences (e.g., 退屈している人 [*taikutsu-shite'iru hito*]*—bored person*), such modifications are less common. This demonstrates how Japanese tends to be a context-sensitive language (e.g., Kashima et al., 2004), which may have morphological implications in L2 output.

Adjectival-nominal Forms

While in English adjectival and nominal usage are generally separate forms (e.g., *kind/kindness*; *patient/patience*), the same word may be used for both in Japanese. The only distinction is that an additional particle is placed between them, which is generally either *–na* (as previously explained in relation to *–na* adjectives), such as 親切な人 (*shinsetsu-na hito**—kind person*), or のある (*–no aru*), such as 忍耐のある人 (*nintai-no-arū hito**—patient person*).

English-based Loanword Forms: Inflectional vs. Non-inflectional

Haspelmath (2008, p. 50) stated that “(n)ot much is known about adjective borrowing.” While this may be true with regard to their morphologies, it is almost certainly so in relation to the impact of cross-linguistic influence on L2 accuracy. In the case of Japanese, there are two main forms of adjectival English-based loanwords: those that are inflected and those that are not.

Inflectional loanword forms usually use a nominal base in conjunction with an inflected form of *suru*. An example is プリントしたリスト (*purinto-shita risuto**—printed list*). Occasionally, a verb other than *suru* is used, such as アイロンをかけたシャツ (*airon-wo-kaketa shatsu*)*—ironed shirt*. However, what these forms have in common is that they use a Japanese verb to enable a loanword to take an adjectival inflection.

On the other hand, there is another subcategory of adjectival loanwords that are imported on the basis of their sound in English. Some consider Japanese to be a syllable-timed language in contrast to English, which may be considered a stress-timed language (Ohata, 2004). However, the crucial difference here is that they are almost always taken on in an uninflected form. For example, リサイクルペーパー (*risaikuru- pēpā*) means *recycled paper*, although the *–ed* inflection has been dropped and subsequently becomes *recycle paper* in Japanese.

Potential Cross-linguistic Influence for Adjectival Forms

From the subcategories of adjectives outlined here, it is possible that their general L1 agglutinative nature may be implicated in the degree to which subsequent L2 accuracy is observed. As is the case for verbs, there is generally little distinction in Japanese in the morphological features between nouns and adjectives (Miyagawa, 1987), which may have consequences on their inflectional accuracy in English. Similarly, it is possible that loanwords—particularly those that are non-inflectional—may be more problematic than other subcategories of adjectives owing to the potential entrenchment of their L1 forms (Ellis, 2006; Lucas & Yiakoumetti, 2017).

Establishing Parameters

In order to determine which morpholexical subcategories of verbs and adjectives might exert an influence on L2 error recognition and written L2 output, it was first necessary to establish parameters using specific terminology. This, in turn, allowed the research question to be formulated more precisely.

As already indicated, although non-compound verbs and adjectives are agglutinative in nature, their root morphemes do not necessarily function independently as single words. For this reason, all non-compound forms were consciously omitted from the study in order to prevent an overlap of parameters.

Table 1. Parameters of Variables for Verbs and Adjectives

Parameter	Verb	Adjective
Non-loanword	Compound e.g., 説明する (<i>setsumei-suru</i>) —to explain)	Compound e.g., 発表した結果 (<i>happyō-shita kekka</i>) —the announced result)
		Participle e.g., 退屈な人/ 退屈している人 (<i>taikutsu-na hito/</i> <i>taikutsu-shite'iru hito</i>) —boring/bored person)
		Adjectival-nominal e.g., 忍耐のある人 (<i>nintai-no-arū hito</i>) —patient person)
Loanword	Loanword ダウンロードする (<i>daunrōdo-suru</i>) —to download)	Inflectional loanword e.g., プリントしたリスト (<i>purinto-shita risuto</i>) —the printed list)
		Non-inflectional loanword e.g., リサイクルペーパー (<i>resaikuru-peepaa</i>) —recycled paper)

The parameters in this study are defined as “non-loanword” and “loanword” (Table 1). The term “non-loanword” refers to any Japanese verb or adjective that is not derived from an English-based loanword. Non-loanword verbs are compound forms, while non-loanword adjectives are compound, participle, and adjectival-nominal forms. Conversely, the term “loanword” refers to forms that are derived from English-based loanwords. Loanword verbs are loanwords, while loanword adjectives are inflectional loanwords and non-inflectional loanwords.

Research Question and Hypothesis

The prior lack of morpholexical subcategorization for verbs and adjectives in the specific ways detailed here enabled a research gap to be identified. Having established the parameters, the study posed the following research question:

To what extent do morpholexical subcategories of Japanese verbs and adjectives influence accuracy in relation to how well Japanese EFL learners are able to (1) recognize English morphological errors in reading, and (2) appropriately produce their forms in English writing?

In light of the postulations already outlined on the foundation of previous studies, this research question comes with an a priori hypothesis. The hypothesis posits that loanword forms will be more problematic than non-loanword forms in terms of grammatical accuracy for both L2 error recognition and L2 production. Should such cross-linguistic influence exist, the basis for remedial measures may be formed.

Method

Participants and Sampling

Participants ($N = 151$; 92 female, 59 male) were native Japanese speakers, aged 18–19 years old. Opportunity sampling was used from those enrolled in a compulsory second-semester English communication skills course at a private university in Osaka. None of the participants were English majors, but were instead drawn from eight intact classes belonging to the faculties of Commerce, Economics, Law, Literature, and Social Science. Proficiency level was determined from placement test results of the Global Test of English Communication (GTEC; <http://www.benesse.co.jp/gtec/en>). The mean score for listening was 137 ($SD = 12.62$) and for reading was 124 ($SD = 14.29$), both of which correspond to the upper A1 banding of the Common European Framework for Language (CEFR; see above website). Previous formal EFL instruction consisted of at least six years at secondary school level, although it is unlikely that prior instruction had been given on the discrepancies between morphological subcategories of verbs and adjectives, as presented here. Study-abroad experience and knowledge of other languages were believed to be negligible. In addition to written consent, participants were explicitly informed that their final grades were in no way impacted by the research and that they had the option of withdrawing at any time.

Instruments and Procedure

Three separate instruments were devised in order to test whether differences in accuracy-based performance existed between the respective subcategories of verbs and nouns.

Error Recognition Instrument 1: Verbs

The first instrument was a timed error recognition task for verbs (Appendix A). Although acceptability judgement tests remain subject to debate in terms of whether they reliably measure competence, Gass (1994, p. 307) argued that “they do, however, provide us with information about what are possible and impossible sentences in the learner-language.” Both the verb and adjective error recognition instruments were based on similar principles to those previously developed for nouns (see Lucas, 2018; Lucas & Yiakoumetti, 2017) in that they required participants to identify and correct errors relating to the target language.

The verb error recognition task was administered on paper and allotted 10 minutes. It consisted of a passage of 35 sentences, 10 of which were verb-related errors from the parameters: five compound and five loanword forms. To balance these 10 verbs, as well as to prevent validity issues, five non-compound forms were also included. In addition, eight unrelated distractor errors were incorporated, while the remaining 12 were non-error forms. Participants were required to judge whether or not each sentence was grammatically acceptable by respectively marking next to each item an “O” for appropriate or an “X” for inappropriate. Any errors identified were to be subsequently corrected by writing the amended form next to the “X,” demonstrating an apparent understanding of the error. To reduce cognitive burden, the task was presented as a continuous L2 discourse rather than a series of non-connected sentences and divided into several distinct sections with pictorial representations of the narrative.

Although impossible to determine whether participants were operating from their L1, if at all, attempts were made to ensure that forms were unequivocal in both L1 and L2. For example, the English verb *to check* may be rendered as three possible forms in Japanese: 確かめる (*tashikameru*), 確認する (*kakunin-suru*), and チェックする (*chiekku-suru*)—all of which respectively fall into the three subcategories of non-compound, compound, and loanword verbs. Therefore, wherever possible, verbs with only one L1-L2 equivalent form were incorporated into the instrument. Examples of this are *to explain*, whose L1 form is a compound (説明する—*setsumeisuru*), and *to download*, which exists only as a loanword (ダウンロードする—*daunrōdo-suru*).

Table 2. Inter-rater Reliability for Accuracy of Error Recognition of Verbal Forms

Condition	Subcategory	κ	95% CI		p	Agreement
			LL	UL		
Verb	Compound	.88	.75	1.01	< .001	Almost perfect
	Loanword	.85	.69	.99	< .001	Almost perfect
	Unrelated	.67	.47	.85	< .001	Substantial
	Non-error	.60	.36	.81	< .001	Moderate
	All	.93	.90	.95	< .001	Almost perfect

Instrumental reliability was established by applying a Cronbach's Alpha analysis to all 35 of the test items. Following Kline's (2000) criteria, it was deemed "Acceptable" ($\alpha = .72$). Using an item-by-item analysis for 20% of the sample, the inter-rater reliability was also calculated. Accordingly, the Cohen's kappa values were checked for measures of agreement against the standard scale devised by Landis and Koch (1977) and were regarded as satisfactory (Table 2).

Error Recognition Instrument 2: Adjectives

The second instrument was a timed error recognition task for adjectives (Appendix B). Following the same principles as the first instrument, it entailed a discursive passage administered on paper. However, since it comprised a greater number of sentences due to the larger amount of categories being tested, the time limit was adjusted to 12 minutes. There were 50 sentences in total. Of these, 20 contained errors relating to adjectival forms: four compound, four participle, four adjectival-nominal, four inflectional loanwords, and four non-inflectional loanwords. For the same reason as the verb instrument, four non-compound forms were also included. Of the remaining 26, 10 were unrelated distractor errors and the other 16 were non-error forms.

While it is safer to assume that participants relied more on their explicit knowledge during the completion of both recognition tasks (since it was possible to go back and review responses), it is also important to note that the boundaries between explicit and implicit knowledge are not always clearly defined (Ellis, 2008). Therefore, it is quite possible that participants may also have operated using their implicit knowledge.

Table 3. Inter-rater Reliability for Accuracy of Error Recognition of Adjectival Forms

Condition	Subcategory	κ	95% CI		p	Agreement
			LL	UL		
Adjective	Compound	.81	.63	.98	< .001	Almost perfect
	Participle	.80	.62	.98	< .001	Substantial
	Adj-nominal	.84	.69	.99	< .001	Almost perfect
	Infl. loanword	.91	.80	1.02	< .001	Almost perfect
	Non-infl. lw	.91	.73	1.10	< .001	Almost perfect
	Unrelated	.56	.35	.77	< .001	Moderate
	Non-error	.61	.40	.83	< .001	Substantial
	All	.95	.93	.96	< .001	Almost perfect

Using the same criteria as verbs, the instrumental reliability was established using a Cronbach's Alpha analysis for the 50 items and was found to be "Acceptable" ($\alpha = .79$). Again, using an item-by-item analysis for 20% of the sample, the inter-rater reliability was determined to be satisfactory (Table 3).

Production Instrument: Verbs and Adjectives

The third instrument was a constrained writing task that examined the synthesized output of both verbs and adjectives (Appendix C). This involved participants writing three short paragraphs based on a loose narrative provided from picture hints and prescribed L1 verb and adjective prompts. Five prompts from each of the respective subcategories of verb and adjective were given, resulting in a total of 35 prompts (i.e., [2 x 5 verbs] + [5 x 5 adjectives]), which were collectively divided between each of the three paragraph sections. As with the receptive instruments, non-compound verbs and adjectives were also included (five verbs and five adjectives). The narrative was presented in a variety of tenses in order to examine various usages of the verbs. This was achieved through time cues being stated at the start of each pane.

Participants were required to complete all three picture description tasks consecutively under the time pressure of 15 minutes, resulting in five minutes per paragraph. (Note that the same principles of explicit and implicit knowledge described above also apply to this productive task.) Standardized instructions specified that participants should first look at the pictures and then gain a general overview by reading all of the L1 prompts before moving on to the actual writing itself. The participants were then encouraged to use as many of the prompts for each paragraph as possible. To enhance task engagement, participants were also asked to cross out

each prompt once it was used and to indicate where it had been incorporated in the output by underlining it.

Table 4. Inter-rater Reliability for Accuracy of Written Production of Verbal and Adjectival Forms

Condition	Subcategory	Item	κ	95% CI		p	Agreement
				LL	UL		
Verb	Compound	Produced	.79	.62	.95	< .001	Substantial
		Possible	.69	.49	.89	< .001	Substantial
	Loanword	Produced	.80	.64	.96	< .001	Substantial
		Possible	.61	.41	.81	< .001	Substantial
	All	Produced	.76	.66	.86	< .001	Substantial
		Possible	.69	.58	.79	< .001	Substantial
Adjective	Compound	Produced	.76	.50	1.02	< .001	Substantial
		Possible	.66	.41	.91	< .001	Substantial
	Participle	Produced	.82	.65	.98	< .001	Almost perfect
		Possible	.87	.73	1.01	< .001	Almost perfect
	Adj-nom	Produced	.89	.74	1.04	< .001	Almost perfect
		Possible	.89	.74	1.04	< .001	Almost perfect
	Infl. lw	Produced	.65	.44	.86	< .001	Substantial
		Possible	.76	.59	.93	< .001	Substantial
	Non-infl. lw	Produced	.63	.36	.89	< .001	Substantial
		Possible	.79	.61	.96	< .001	Substantial
	All	Produced	.76	.69	.84	< .001	Substantial
		Possible	.79	.73	.86	< .001	Substantial

Measures of agreement for inter-rater reliability (Table 4) were calculated for two values: one for the total number of items that were appropriately produced (labelled “Produced”), and the other for the total number of instances that were actually possible (labelled “Possible”). Following Landis and Koch’s (1977) standard criteria, agreement was found to be satisfactory.

Following piloting, the three tasks were conducted at the start of three consecutive weekly lessons. They were supplemented by additional quantitative data from two online surveys: one for both of the receptive tasks and the other for the productive task. Qualitative data from two focus group interviews were also obtained. These were conducted after the completion of the receptive and productive tasks in both English and Japanese, at the participants’ request.

Data Calculation and Analysis

Receptive Data

The data calculation for both of the error recognition tasks was relatively straight forward owing to their predetermined number of correct and incorrect sentences. In terms of scoring, one point was assigned for each appropriate response and zero for each inappropriate response. The total number of appropriate responses for each subcategory of verb and adjective, as well as for unrelated errors, was then calculated and converted into percentages.

Productive Data

Calculating the data for the productive task was considerably more difficult in two main respects. Firstly, whether a particular translation of an L1 prompt was acceptable, and secondly, whether the spelling was recognizable. To minimize the degree of subjective judgement, several sets of criteria were devised and mutually agreed upon with the second rater. This enabled all calculations to be standardized.

As with the recognition calculations, scoring was performed in the same way. In contrast, however, since there was an indefinite amount of responses to be determined in the productive task, the total number of possible appropriate instances for verb and adjective usage was calculated and used as a base measurement against which to compare the number of actual appropriate instances. This scoring process can be illustrated with the following example taken from Pane 2:

*The mother **prepared** the party. The strawberry cake recipe on the Internet was **convenience**. However, she didn't have **whip cream** or strawberries. Her daughter was **disappointing**.*

This excerpt contains usage of four prompts. The first is 準備 (*junbi—to prepare*), correctly past-inflected to *prepared*, which receives a score of 1/1 for verbs in the subcategory of compound forms. The second is 便利 (*benri—convenient*), which has been incorrectly rendered as *convenience*, and is therefore scored as 0/1 for adjectives in the subcategory of adjectival-nominal. The third is ホイップクリーム (*hoippu-kurīmu—whipped cream*), whose inflection has been omitted, therefore resulting in a score of 0/1 for adjectives in the subcategory of non-

inflectional loanwords. Finally, the fourth is がっかり (*gakkari*—*disappointed/disappointing*), which has been inappropriately applied, scoring 0/1 for adjectives in the subcategory of participle forms.

Any other verbs or adjectives produced that were neither from the L1 prompts nor within the boundaries of the criteria were automatically disqualified. Having obtained all scores and converted them into percentages, statistical analyses were applied.

Data Analysis

To investigate the research question in the context of a within-subjects design with repeated measures, two types of statistical analyses were run. For paired comparisons, an independent-samples *t*-test was applied, whose effect sizes are reported using Cohen's *d* using Plonsky and Oswald's (2014) field-specific benchmarks: .60 (small), 1.00 (medium), 1.40 (large). For multiple comparisons, a repeated one-way analysis of variance (ANOVA) was applied. Results are reported with the alpha level set at .05. Effect sizes are reported as partial eta-squared (η_p^2). If significant, post hoc analyses were conducted using a Bonferroni correction in order to determine pairwise differences in performance. Effect sizes for these post hoc analyses are reported as Cohen's *d* and judged against the benchmarks stated above.

Results

Error Recognition of Verbs

In terms of verb recognition, the study investigated the extent to which morpholexical subcategories of L1 forms would influence the accuracy of Japanese EFL learners' performance in a written L2 error recognition task.

The descriptive statistics are shown in Table 5 and visually represented in Figure 1. A significant difference was observed between non-loanword and loanword forms ($F_{2, 450} = 34.42$, $p < .001$, $\eta_p^2 = .049$).

Table 5. Descriptive Statistics for Mean Percent Accuracy of Error Recognition of Verbal Forms

Verb	<i>M</i>	<i>SE</i>	95% CI		<i>SD</i>
			<i>LL</i>	<i>UL</i>	
Compound	80.53	2.06	76.46	84.60	25.29
Loanword	69.27	1.98	65.36	73.18	24.31
Unrelated	57.86	1.75	54.42	61.31	21.44

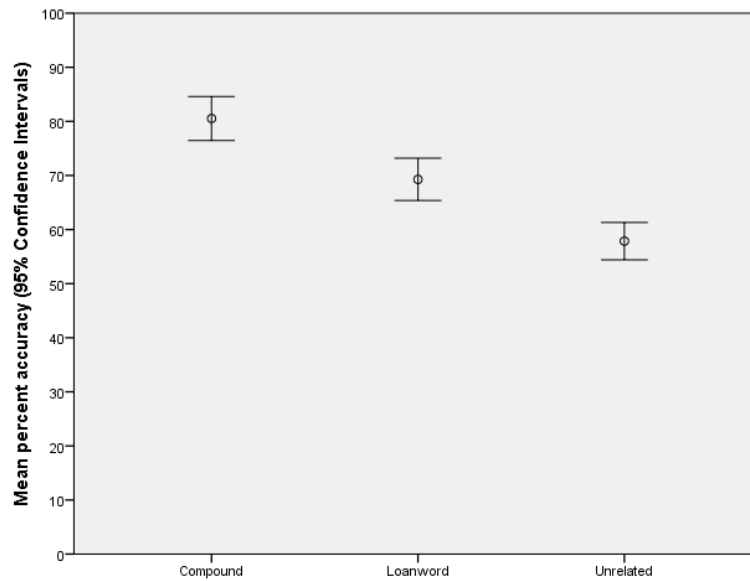


Figure 1. Accuracy of error recognition of verbal forms

Post hoc analyses indicated that there was a significant difference between all three forms: (compound/loanword: $p < .001$, $d = .44$; compound/unrelated: $p < .001$, $d = .85$; loanword/unrelated: $p < .001$, $d = .44$). Since loanword forms were more difficult than non-loanword (i.e., compound) forms, the hypothesis was supported.

Error Recognition of Adjectives

In relation to adjectives, this section of the study set out to determine the extent to which L1 morpholexical subcategories would exert an influence on L2 error recognition.

The descriptive statistics are shown in Table 6 and depicted in Figure 2. A significant difference was detected between non-loanword and loanword forms ($F_{5, 900} = 108.57$, $p < .001$, $\eta_p^2 = .310$).

Table 6. Descriptive Statistics for Mean Percent Accuracy of Error Recognition of Adjectival Forms

Adjective	<i>M</i>	<i>SE</i>	95% CI		<i>SD</i>
			<i>LL</i>	<i>UL</i>	
Compound	34.77	1.86	31.08	38.45	22.91
Participle	50.50	2.01	46.52	54.48	24.74
Adj-nominal	55.96	2.43	51.17	60.76	29.82
Infl. loanword	34.27	2.72	28.91	39.64	33.369
Non-infl. lw	6.13	1.22	3.72	8.54	15.03
Unrelated	64.17	1.22	61.76	66.59	30.89

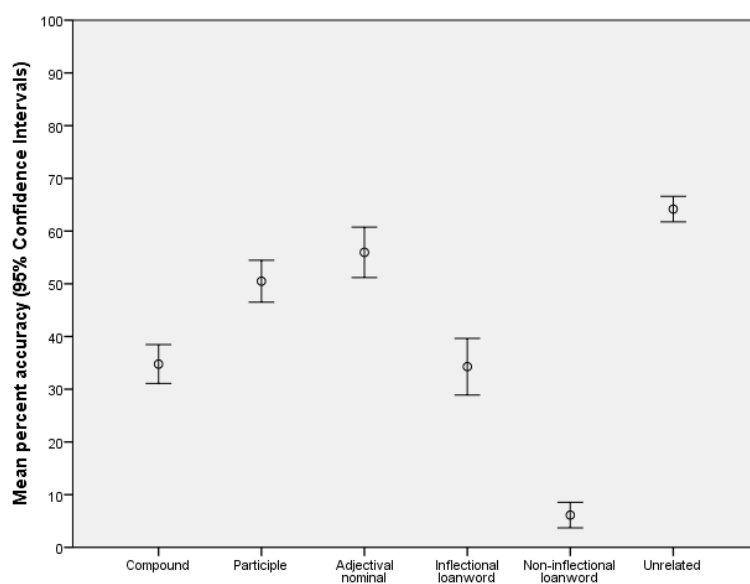


Figure 2. Accuracy of error recognition of adjectival forms

Post hoc analyses (Table 7) revealed that no significant differences existed firstly between compound and inflectional loanword forms, nor secondly between participle and adjectival-nominal forms. However, there was a significant difference between these two collective sets, as well as between both these sets and non-inflectional loanwords. Unrelated errors were also significantly different from all other forms.

Table 7. Post Hoc Bonferroni Analyses for Accuracy of Error Recognition of Adjectival Forms

Adjective	Comparison	<i>p</i>	Cohen's <i>d</i>
Compound	Participle	< .001	.61
	Adjectival-nominal	< .001	.68
	Inflectional loanword	1.00	.02
	Non-inflectional loanword	< .001	1.17
	Unrelated	< .001	1.21
Participle	Adjectival-nominal	.789	.18
	Inflectional loanword	< .001	.49
	Non-inflectional loanword	< .001	1.75
	Unrelated	< .001	.54
Adjectival-nominal	Inflectional loanword	< .001	.58
	Non-inflectional loanword	< .001	1.62
	Unrelated	.054	.28
Inflectional loanword	Non-inflectional loanword	< .001	.84
	Unrelated	< .001	.90
Unrelated	Non-inflectional	< .001	3.12

Although inflectional loanwords did not differ from compound forms, inflectional loanword errors were significantly more difficult to recognize than both participle and adjectival-nominal forms. Additionally, non-inflectional loanwords were more difficult than all other forms. All in all, the hypothesis was supported for this set of results.

Written Production of Verbs

With regard to written verb production, this section of the study aimed to establish the extent to which L1 forms would influence L2 accuracy in a constrained writing task.

The descriptive statistics are shown in Table 8 and graphed in Figure 3. There was a significant difference between the compound and loanword forms ($t_{300} = 3.67$, $p < .001$, $d = .34$).

Table 8. Descriptive Statistics for Mean Percent Accuracy of Written Production of Verbal Forms

Verb	<i>M</i>	<i>SE</i>	95% CI		<i>SD</i>
			<i>LL</i>	<i>UL</i>	
Compound	88.98	1.84	85.34	92.62	22.63
Loanword	80.31	2.24	75.90	84.73	27.47

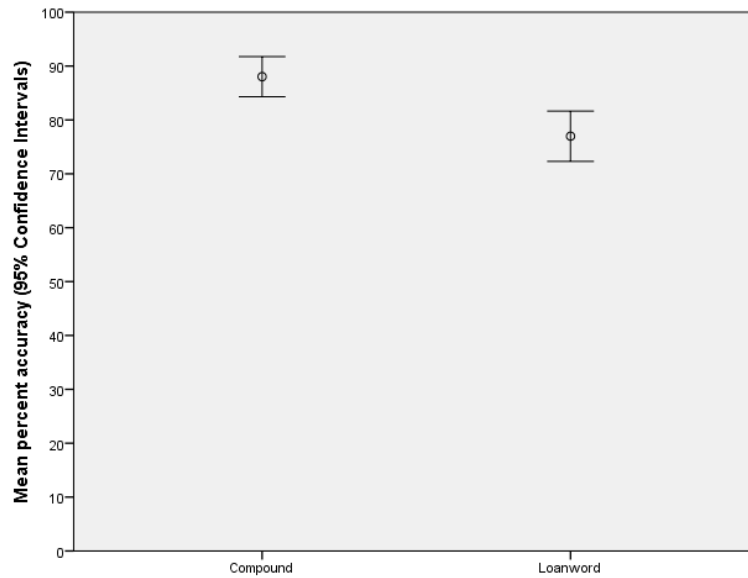


Figure 3. Accuracy of written production of verbal forms

Since loanword forms were more difficult than non-loanword (i.e., compound) forms, the hypothesis was supported.

Written Production of Adjectives

This section of the study relating to the written production of adjectives sought to investigate the extent to which L1 forms would influence L2 written accuracy.

The descriptive statistics are shown in Table 9 and plotted in Figure 4. A significant difference was found between non-loanword and loanword forms ($F_{4, 562} = 117.99, p < .001, \eta_p^2 = .46$).

Table 9. Descriptive Statistics for Mean Percent Accuracy of Written Production of Adjectival Forms

Adjective	<i>M</i>	<i>SE</i>	95% CI		<i>SD</i>
			<i>LL</i>	<i>UL</i>	
Compound	65.60	6.50	52.52	78.69	44.56
Participle	76.79	2.80	71.24	82.34	31.23
Adj-nominal	89.70	2.17	85.40	94.00	23.38
Infl. loanword	75.11	2.85	69.48	80.74	32.82
Non-infl. lw	17.27	2.16	13.01	21.53	26.15

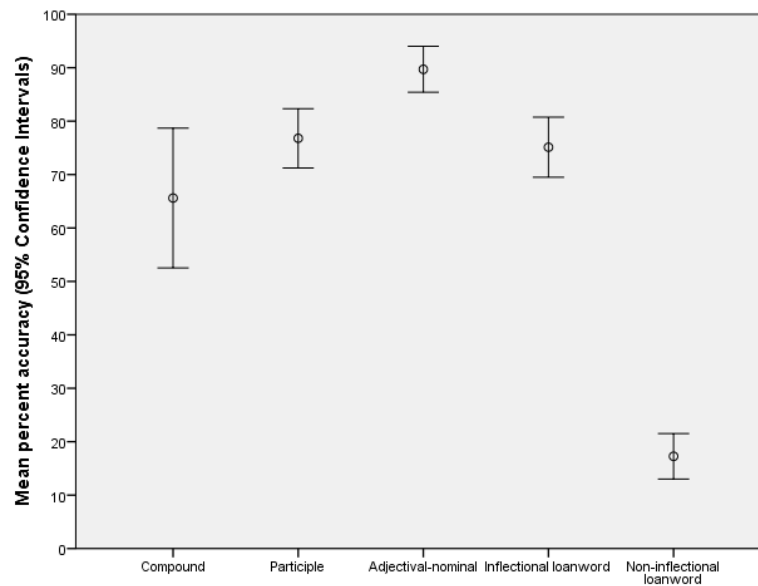


Figure 4. Accuracy of written production of adjectival forms

Post hoc analyses (Table 10) showed that although inflectional loanword forms did not differ from compound and participle forms, they were significantly more difficult than adjectival-nominal forms. However, non-inflectional loanword forms were more difficult than all other forms.

Table 10. Post Hoc Bonferroni Analyses for Accuracy of Written Production of Adjectival Forms

Adjective	Comparison	<i>p</i>	Cohen's <i>d</i>
Compound	Participle	.316	.21
	Adjectival-nominal	< .001	.51
	Inflectional loanword	.649	.17
	Non-inflectional loanword	< .001	1.01
Participle	Adjectival-nominal	.010	.37
	Inflectional loanword	1.00	.04
	Non-inflectional loanword	< .001	1.60
Adjectival-nominal	Inflectional loanword	.002	.36
	Non-inflectional loanword	< .001	2.28
Inflectional loanword	Non-inflectional loanword	< .001	1.58

This mixed set of findings means that the hypothesis was neither supported nor unsupported.

Discussion

The purpose of the study was to investigate the extent to which differences might lie between morphological subcategories of L1 verbs and adjectives in relation to Japanese EFL learners' abilities to (1) recognize L2 errors, and (2) appropriately produce their written L2 forms. The underlying reasoning behind this was to isolate specific instances of cross-linguistic influence so as to inform pedagogical practice.

Table 11. Summary of Findings in Relation to Hypothesis

	Error recognition	Production
Verbs	○	○
Adjectives	○	△

Note. ○ = hypothesis supported; △ = hypothesis neither supported nor unsupported.

Due to their habituated use in L1, the hypothesis predicted that loanword forms would be more problematic than non-loanword forms with respect to both error recognition and written production, thus presenting more of a cross-linguistic challenge to learners. The findings in relation to the hypothesis are summarized in Table 11.

Error Recognition

The findings revealed that loanword errors did indeed appear more difficult to recognize than non-loanword (i.e., compound) errors. Comments from the focus group interviews tended to mirror this, with confusion expressed in distinguishing between verbs and nouns:

Participant 2: *I sometimes get caught up in what should be the right form of loanwords.*

Sometimes I wonder if it is a verb or a noun. If I look at a sentence, I might be able to know that it is a verb when I see some kind of negation, but it is usually hard to know whether it is a noun or a verb.

Participant 3: *Yes, even though it should be a verb, I might take it to be a noun.*

As with verbs, loanword adjectives (i.e., inflectional and non-inflectional) appeared to be more problematic than non-loanword adjectives (i.e., compound, participle, and adjectival-nominal). The difficulty in successfully identifying loanwords was reflected in the interviews:

I think there is a huge influence [of Japanese] on [non-inflectional loanword] adjectives. I always just assumed that it was the same in English. (Participant 2)

I thought that スライスチーズ [suraisu-chiizu—sliced cheese] was just slice cheese. I would not have noticed [the inflection] unless someone pointed it out to me. (Participant 6)

Written Production

Although loanword verbs were more difficult to accurately produce than non-loanword verbs, it is interesting that simply adding the regular past suffixation of *-ed* was more problematic for loanwords than for non-loanwords. This may be indicative of some degree of cross-linguistic influence.

As for adjectives, inflectional loanwords yielded an equivocal set of results in that they were no more difficult to accurately produce than the non-loanword subcategories of compound and participle forms, although more difficult than adjectival-nominal forms. However, non-inflectional loanwords were far more challenging than all other subcategories. This might be attributable to L1 transfer, particularly since Japanese forms possess similar phonetic properties to their English-derived equivalents. For example, ホイップクリーム (*hoippu-kurīmu*—*whipped cream*; Appendix C, Pane 2) drops the *-ed*, yet, due to the syllable-timed nature of Japanese placing プ (*pu*) at the end of *whip* (to effectively create *whippu*), compensates for this omitted inflection.

Interpreting the Productive Findings Through the Lens of “Grammaring”

This set of findings may be better understood by contemplating Larsen-Freeman’s (2001) notion of “grammaring,” which states that the main goal of effective grammar instruction should be for learners to use structures accurately, meaningfully, and appropriately. To reflect this goal, grammaring strives to be a dynamic process (hence the term’s adoption of *-ing*) that incorporates

three key corresponding strands: form, meaning, and use. It is these three strands that may provide a theoretical framework with which to interpret the productive data.

The “form” strand, in this instance, relates to the issue of how verb and adjective forms were utilized in the writing task. Specifically, accuracy may have been compromised at the expense of narrative complexity. As Skehan (1998) pointed out in his Limited Attention Capacity Hypothesis, there may be a trade-off between how much learners can focus their attention on form and the relative degree of complexity that can be afforded in a given task. In the productive test, English translations for some of the Japanese verb prompts, such as *solve* (解決—*kaiketsu*; Pane 2), tended to be problematic. Some participants chose to exercise more complex forms, resulting in inaccuracies (e.g., *the problem has solved* instead of *the problem was solved*). For this reason, position in the narrative may correlate with frequency of errors, particularly for verb structures. This was documented in the survey, in which it was stated that verbs were viewed as the most difficult aspect of the story’s construction. Hence, it might be possible to observe a pattern of narrative complexity rather than one of grammatical knowledge or interlanguage per se.

The “meaning” strand may be connected to conceptual issues. Comparatively speaking, some of the prompts could have held more of a conceptual meaning than a lexical one. For example, one prompt that caused a particular problem was 参加する (*sanka-suru*; Pane 3), possibly due to it having no obvious matching equivalent in English. Potential interpretations of this item include *participate*, *attend*, and *join*, which resulted in multiple variations being utilized across the task. Some wrote literal translations such as *many people are joining the party*, whereas others offered circumlocutions such as *there are many people at the party*; *many people visit the house*; and *the house is filled with her friends*. A sympathetic native reader may understand these expressions, but the first example may be dispreferred for its apparent unnatural application. Another example is がっかり (*gakkari*; Pane 2), for which the use of *sad* was frequently favoured over the closer translation of *disappointed*. An interpretation of this observation is that it indicates the conceptual understanding of the word rather than a more complex linguistic one (see Malt et al., 2015). Since the types of constructions outlined in this meaning strand do not necessarily reflect morphological transfer issues—which was main the purpose of this study—statistical conclusions drawn from these items may be from a narrow, potentially biased, sample and thus need to be treated with caution.

Finally, the “use” strand may be related to issues of word frequency and word familiarity. Prompts that were lower in frequency may have influenced participants’ ability to use them. For example, the adjectival-nominal prompt 感謝 (*kansha*; Pane 3) may be used in multiple forms: as the adjectives *grateful*, *appreciative*, and *thankful*; and as the nouns *gratitude*, *appreciation*, and *thankfulness*. These latter noun-based examples may also require knowledge of collocations such as *to express gratitude* and *to show appreciation*, which could create extra difficulty (see Dodigovic, Ma, & Jing, 2017, for discussion on the problematic nature of collocations within an agglutinative context). Even when an L2 form is known, there is no guarantee that it can be successfully applied in output. Laufer (1998) accounted for this in terms of whether a learner possesses active or passive knowledge of vocabulary. In addition, Nation (2001, p. 321) stated that when it comes to collocation, “stored sequences of words are the bases of learning, knowledge, and use.” Therefore, the frequency of any given word, as well as the participants’ familiarity with multiple variations of L2 forms for the same L1 prompt, may highlight the difference between knowledge and use. This issue was reflected in some of the interview comments:

Participant 6: *I think it is a matter of being used to some words and not used to others. [Some forms] I might have seen, but I am not sure. Like simplicity and simple; I do not think I have seen simplicity very often. I am not used to it.*

Participant 7: *Yes, it is the same with sick and sickness.*

Implications for Pedagogy

Arguably, the most important finding from the study is that loanwords appear to be more problematic than other morpholexical subcategories, suggesting the need for remedial treatment. The role of cross-linguistic awareness-raising techniques in accuracy-based tasks has previously been attested in the case of nouns (e.g., Hosseinik & Sangani, 2014; Lucas & Yiakoumetti, 2017) and may provide similar merit for verbs and adjectives. Especially for higher frequency items such as verbs, awareness-raising techniques could mirror those in the two studies cited above through error recognition quizzes and L1-L2 translation exercises. Lower frequency items—particularly non-inflectional loanword adjectives—may indicate less of a pressing need

for treatment and might be best addressed in isolation as and when they arise in a given learning context. Such vigilance may prove useful for their subsequent grammatical handling.

Another important implication is the role of relative clauses in relation to verb-derived adjectives (e.g., *the forgotten items* vs. *the items [that/which] she forgot*). While it is impossible to ascertain the degree to which participants consciously avoided relative clauses, nor the motivation behind this behaviour, a descriptive analysis of the verb-derived adjective prompts nevertheless indicated that, in cases when such clauses were actually produced, only around half (49%) were accurate. Moreover, results from the survey regarding the writing task revealed that relative clauses were judged as the second-most difficult grammatical feature to produce after verbs. This strongly suggests that, for this particular set of learners at least, assistance is required in the formulation of these structures. Again, this might further incorporate the use of cross-linguistic awareness-raising practices.

Conclusion

The findings clearly illustrate the problematic nature of loanwords in contrast to non-loanwords when it comes to L2 verb and adjective usage among Japanese EFL learners. Many factors appear to be involved, including learner level, narrative complexity, conceptual meaning, word frequency and word familiarity, as well as whether explicit or implicit knowledge is utilized.

The study is not without limitations, however. Three main issues should be addressed for future replications. Firstly, the procedure could be improved by better matching word frequency with learner proficiency. This could be achieved through eliciting additional L1 items from the picture hints before participants engage in the prescribed task. Secondly, the productive data calculation and analysis could be enhanced by validating spelling criteria with native English speakers who are unfamiliar with Japanese. Thirdly, individual differences in production could be accounted for by establishing a minimum quota of data to be obtained from all three sections of the writing test before any meaningful comparison be drawn.

While remedial attention for nominal pluralization omissions appears to be more of a priority for this learner group, perhaps because of the more pervasive nature of this form in the Japanese lexicon, the study demonstrates that loanword forms—particularly those of verbs—may also warrant pedagogical consideration. Future avenues of investigation could therefore include

the effectiveness of cross-linguistic awareness-raising practices on the accuracy of loanword verb production, as well as the degree to which L1 verb-derived adjectives may impact the avoidance of L2 relative clauses and how the accuracy of such clauses may be enhanced through similar awareness-raising practices.

Finally, the findings obtained from the present study serve as a springboard for researchers in other linguistic contexts to explore the potential influence of English-based loanwords on the inflectional accuracy of morpholexical subcategories within their own language settings. Such exploration may enrich the current understanding of cross-linguistic influence involving English lexical borrowings and inform concrete directions for pedagogical applications that lie beyond the scope of Japan alone.

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Appendix A. Error Recognition Task 1: Verbs

Legend:

Non-compound
Compound
Loanword
Unrelated

Bill's Computer Story



- (1) This is Bill from California.
- (2) He's interested to computers.
- (3) Two months ago, he needed some new software.
- (4) He download a free version.
- (5) However, he experienced a big problem.
- (6) It contain a bad virus.
- (7) Then his computer crash.
- (8) He lost his important files!
- (9) He didn't want a similar problem again.
- (10) He needed to prevention it.

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- (11) Last month, Bill see an advertisement in the newspaper.
- (12) It was about a computer conference.
- (13) He decided to attendance it.
- (14) At the conference, he meet a lot of new people.
- (15) They were professional computer programmet.
- (16) Bill explanation his problem.
- (17) He told them about the computer virus.
- (18) He said that he install the file.
- (19) After that, he's computer stopped working.
- (20) They recommended a virus scan program.
- (21) He appreciation their kind advice.

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- (22) Bill wanted to know more informations about computers.
- (23) He ask his new friends some more questions.
- (24) "Have you ever program your own software?"
- (25) "Yes, many time", they replied.
- (26) "Could you teach me?", Bill requested.
- (27) "No problem!", it answered.
- (28) Later, Bill went back home.

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- (29) Now Bill is learning a lot of new skills.
- (30) His new friends is very helpful.
- (31) This month, they're support him.
- (32) Bill have many plans for his future.
- (33) He wants to becoming a computer programmer.
- (34) He hopes to development his own software company.
- (35) His dream is to be rich and famous.

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Appendix B. Error Recognition Task 2: Adjectives

Legend:

- Non-compound
- Compound
- Participle
- Adjectival-nominal
- Inflectional loanword
- Non-inflectional loanword
- Unrelated

Harry's life



(1) This old man is called Harry.
(2) He's a teing teacher.
(3) He worked for fifty years in a big school.
(4) He loved his student.
(5) They thought Harry's lessons were interest.

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(6) Harry used to be a marriage man.
(7) However, he now lives alone to a small house.
(8) The house is in the countryside.
(9) Its hide location is quiet and peaceful.
(10) His house is very attractioin.
(11) For example, the furniture in the living room is beautiful.
(12) The polish floor in the kitchen is shiny and beautiful.
(13) In fact, everything is beautifullly!

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- (14) However, Harry doesn't like cooking.
 (15) Cooking makes him feel tired.
 (16) That's why he usually make quick meals.
 (17) For example, instant mashed potatoes.
 (18) He only needs hot water and skim milk to make it.
 (19) Sometimes he also makes sandwiches.
 (20) He only needs slice cheese and bread.
 (21) It's very simplicity.
 (22) His favorite drink is tea.
 (23) He especially likes flavor tea.
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- (24) Unfortunately, Harry has some physical problems.
 (25) For example, he has an injury leg.
 (26) He can't walking far.
 (27) That's why he often gets a leg massage.
 (28) After the treatment, his massage leg always feels better.
 (29) Then he usually feels relax.
 (30) He has a massage appointment every week.
 (31) However, his therapist is busy last week.
 (32) Harry couldn't have a massage.
 (33) He was sad about the cancel appointment.
 (34) Maybe he'll be able to have a massage next week.
 (35) It's important that he doesn't become sickness.
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- (36) Last month, Harry had a disrupt experience.
 (37) He went shopping and his wallet fell out of his pocket!
 (38) A thief found the drop wallet on the floor.
 (39) Fortunately, a customer on the same shop saw what happened.
 (40) The shock customer shouted to the thief.
 (41) "You stole that old man's wallet!"
 (42) At first, a thief ignored the customer.
 (43) However, the customer continued shouting.
 (44) "I'm going to called the police!"
 (45) Then the panic thief ran from the shop.
 (46) Suddenly, the police arrived and catch him.
 (47) The thief's failure attempt to steal Harry's wallet was discovered.
 (48) As a result, the police arrested the thief.
 (49) Finally, the police returned the steal wallet to Harry.
 (50) Thanks to the police, Harry was safety.
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Appendix C. Constrained Writing Task: Verbs & Adjectives

The Birthday Party

1. 2週間前



2週間前 一歩遅く 母のため 誕生日会を計画 友達を招待
インターネットで買い物リストをチェック インターネットの良いニュース
飛んだ分: インターネットで購入 頼んだ商品: 次の日に届く
しかし、パーティーまで: あと2週間→娘: 少し迷惑→翌前: 必要

Two weeks ago, a mother

2. 昨日の午後



昨日の午後 お母さん: パーティーを準備 選択したレシピ: 手作りケーキ
レシピ: インターネットで=便利 でも、バクスターシェーカーとボイックリールと荷: ない!
娘: がっかり 忘れた物をもう一度スーパーに 問題を解決 お母さん: 満足
焼いたケーキをプレートにアレンジ 完成したケーキ: 完璧

3. 今



今 客がいっぱい参加 娘: アイロンをかけたシャツを着る
飾った部屋で皆: ケーキをシェア ミックスジュースやアイスコーヒー: 人気
雰囲気: わくわく 最近リリースされた音楽をかける リクエストした曲をダンス
娘=練習したダンスを皆に! 皆: 興奮
延長したパーティーを遅くまでエンジョイ 歓迎した客: 感謝

Tabulated Verb Prompts from the Constrained Writing Task

Non-compound		
持っていく	<i>motteiku</i>	<i>to take</i>
買う	<i>kau</i>	<i>to buy</i>
届く	<i>todoku</i>	<i>to deliver</i>
着る	<i>kiru</i>	<i>to wear</i>
掛ける	<i>kakeru</i>	<i>to play (music)</i>
Compound		
計画する	<i>keikaku-suru</i>	<i>to plan</i>
招待する	<i>shōtai-suru</i>	<i>to invite</i>
準備する	<i>junbi-suru</i>	<i>to prepare</i>
解決する	<i>kaiketsu-suru</i>	<i>to solve</i>
参加する	<i>sanka-suru</i>	<i>to join</i>
Loanword		
チェックする	<i>chiekku-suru</i>	<i>to check</i>
アレンジする	<i>arenji-suru</i>	<i>to arrange</i>
シェアする	<i>shiea-suru</i>	<i>to share</i>
ダンスする	<i>dansu-suru</i>	<i>to dance</i>
エンジョイする	<i>enjoi-suru</i>	<i>to enjoy</i>

Note. left = Japanese prompt; centre = romanization; right = English translation

Tabulated Adjective Prompts from the Constrained Writing Task

Non-compound		
頼んだ (商品)	<i>tanonda (shōhin)</i>	<i>ordered (goods)</i>
残った (分)	<i>nokotta (bun)</i>	<i>remaining (items)</i>
忘れた (物)	<i>wasureta (mono)</i>	<i>forgotten (things)</i>
焼いた (ケーキ)	<i>yaita (kēki)</i>	<i>baked (cake)</i>
飾った (部屋)	<i>kazatta (heya)</i>	<i>decorated (room)</i>
Compound		
選択した (レシピ)	<i>sentaku-shita (reshipi)</i>	<i>selected (recipe)</i>
完成した (ケーキ)	<i>kansei-shita (kēki)</i>	<i>completed (cake)</i>
練習した (ダンス)	<i>renshu-shita (dansu)</i>	<i>practised (dance)</i>
延長した (パーティー)	<i>enchō-shita (pātī)</i>	<i>extended (party)</i>
歓迎した (客)	<i>kangei-shita (kyaku)</i>	<i>welcomed (guests)</i>
Participle		
退屈	<i>taikutsu</i>	<i>bored/boring</i>
がっかり	<i>gakkari</i>	<i>disappointed/disappointing</i>
満足	<i>manzoku</i>	<i>satisfied/satisfying</i>
わくわく	<i>wakuwaku</i>	<i>excited/exciting</i>
興奮	<i>kōfun</i>	<i>excited/exciting</i>
Adjectival-nominal		
忍耐	<i>nintai</i>	<i>patient/patience</i>
便利	<i>benri</i>	<i>convenient/convenience</i>
完璧	<i>kanpeki</i>	<i>perfect/perfection</i>
人気	<i>ninki</i>	<i>popular/popularity</i>
感謝	<i>kansha</i>	<i>grateful/gratitude</i>
Inflectional loanword		
バランスの良い (メニュー)	<i>baransu-no-yoi (menyū)</i>	<i>well-balanced (menu)</i>
プリントした (リスト)	<i>purinto-shita (risuto)</i>	<i>printed (list)</i>
アイロンをかけた (シャツ)	<i>airon-wo-kaketa (shatsu)</i>	<i>ironed (shirt)</i>
リリースされた (音楽)	<i>ririsu-sareta (ongaku)</i>	<i>released (music)</i>
リクエストした (曲)	<i>rikuesuto-shita (kyoku)</i>	<i>requested (songs)</i>
Non-inflectional loanword		
スモークサーモン	<i>sumōku-sāmon</i>	<i>smoked salmon</i>
パウダーシュガー	<i>paudā-shugā</i>	<i>powdered sugar</i>
ホイップクリーム	<i>hoippu-kurīmu</i>	<i>whipped cream</i>
ミックスジュース	<i>mikkusu-jūsū</i>	<i>mixed juice</i>
アイスコーヒー	<i>aisu-kōhī</i>	<i>iced coffee</i>

Note. left = Japanese prompt; centre = romanization; right = English translation

**The Effect of Task Type on the Writing Accuracy of Iranian
Male and Female EFL Learners**

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Abstract

This study aimed to investigate the effect of task type on the writing accuracy of Iranian male and female EFL learners. Fifty intermediate Iranian EFL learners (aged 19-26) were chosen as the participants of the study, and were assigned into two groups based on their genders (25 males & 25 females). Three different types of writing tasks including, personal descriptive, narrative and decision making tasks, were given to them, each in one session; and they were asked to write a composition of at least 100 words for each task in 30 minutes. After collecting the research data, the accuracy was estimated by calculating the percentage of error free T-units to the total number of T-units. The collected data was entered into SPSS XXVI, and within-subjects and between-subjects repeated measures ANOVA were used to analyze the data. The results of within-subjects repeated measures ANOVA revealed higher accuracy in personal descriptive task, followed by narrative and decision making ones, respectively. The results of between-subjects repeated measures ANOVA did not show any significant differences in the writing accuracy of both male and female EFL learners in three task types. The findings of the study may have practical implications in designing and implementing of tasks in L2 classroom settings, EFL testing, and SLA research.

Keywords: Task type, Accuracy, EFL

Introduction

Learning a second language includes learning four substantial skills of reading, writing, speaking, and listening; and mastering each of these skills is challenging. But, among them, as Richards and Renandya (2002) declared, writing is undoubtedly the most challenging skill to master by second language learners because they are needed to consider the higher level skills of planning and organizing as well as lower level skills of spelling, punctuation, word choice, etc., simultaneously.

In recent years, Communicative Language Teaching (CLT) and one of its extensions (Task-Based Language Teaching (TBLT)) which is based on using tasks as the core unit of planning and instruction of language teaching and learning, have made the most prevalent changes to language teaching practice. As Ellis (2004) asserted, TBLT is the strong version of CLT, and the foundation for a whole language program is provided by tasks. Research in the field of task can be so broad. Different aspects of tasks can be investigated in EFL context, and their effects on EFL learners' abilities in the four main skills can be examined.

Writing is essentially needed by EFL learners to represent themselves academically and socially; therefore, it can be considered as one of the major abilities to be mastered. As most of EFL learners have problems in representing their ideas by writing accurately in English, the present study was aimed to scrutinize the effect of different task types on male and female EFL learners' the writing accuracy in order to provide a guide for EFL teachers to choose the most appropriate tasks in EFL class contexts. Accordingly, considering the aim of the study, the following research questions were addressed:

Q1: Does task type affect the writing accuracy of male EFL learners?

Q2: Does task type affect the writing accuracy of female EFL learners?

Q3: Is there a significant difference in the writing accuracy of male and female EFL learners in three task types?

And based on the above questions, the following null hypotheses were proposed:

Ho 1: Task type does not affect the writing accuracy of male EFL learners.

Ho 2: Task type does not affect the writing accuracy of female EFL learners.

Ho 3: There is no significant difference in the writing accuracy of male and female EFL learners in three task types.

Literature Review

Research studies of task-based instruction investigating task features and task implementation have revealed that various types of task goals would lead to different operations carried out within the tasks, and that these have an impact on performance. Tarone (1990) argued that as second language learners perform different tasks, their production of some grammatical, morphological and phonological forms will vary in a particular manner. This idea was confirmed by Rahimpour (2007) who argued that second language learners' performance differs from task to task. Therefore, a particular type of task assigned to a learner will result in variation of performance.

Nunan (2006) defined task as a piece of classroom activity that engages learners in understanding, producing or communicating in the target language while focusing attention on meaning rather than form. He continued, the task should be complete in itself, in a way that it should be able to stand alone including a beginning, a middle, and an end. Skehan (1998) has distinguished three aspects of performance: fluency, accuracy, and complexity. According to him, accuracy is related to the learners' ability to use language based on the aimed language norms. In this model, tasks are important, but what should be considered mainly, is what task dimension and variable promote while emphasizing fluency, accuracy, and complexity.

Tavakoli and Foster (2008) maintained that task-based L2 performance is an interesting subject in itself and worthy of empirical investigation. In the context of Iran, the effects of three types of language tasks including topic writing, picture description, and text reconstruction on accuracy, fluency and complexity aspects of EFL learners' writing performance were scrutinized by Pourdana et al. (2011). Based on the results, a high degree of accuracy and complexity in EFL learners' performance was observed on topic writing tasks, and the fluency was high in EFL learners' performance on picture description tasks. Rimani-Nikou and Eskandarsefat (2012) examined the simultaneous effects of task complexity and task types on EFL learners' the writing accuracy, fluency, and complexity. The results of the statistical analysis revealed that

accuracy and fluency of the learners' writing in decision-making tasks were affected by task complexity, but no significant effect was observed in syntactic complexity.

Unlike complexity and fluency, measures of accuracy have been more agreed-upon among researchers (Tavakoli & Skehan, 2005). Ahour et al. (2012), Arent (2003), Storch et al. (2009), Wolfe-Quintero et al. (1998), Larsen-Freeman (2006), Errasti (2003) and Rahimpour (2008) measured the aspect of accuracy in participants' writing performance by dividing the number of error free T-units by the total number of T-units.

Methodology

An experimental design was used in the present study, in which a group of Iranian EFL learners took part. The independent variable of this study was task type, and three different types of tasks; that is, personal descriptive, narrative and decision making were used (see Appendix A). Gender served as a moderating variable, and the participants' gender was the criteria for grouping them. The writing accuracy is the dependent variable, and the participants' written performance was evaluated in terms of accuracy. Fifty intermediate EFL learners of English, from six classes in Iran National Language Institute where the researchers served as instructors, were selected as the participants in this study. They were selected on the basis of their scores in Nelson Language Proficiency test by Fowler and Coe (1976) which yielded two (one all-male and the other all-female) homogeneous groups. Males' average age was 21 with the youngest and oldest being 19 and 25; respectively. Females' ages ranged between 20 and 26, and the average age equaled 20. Before the main study, the tasks were piloted with a group of 12 EFL learners similar to the final participants of the study. Based on the results of piloting, (a) the minimum number of words was found to be 100, so it was set as the acceptable minimum number of words, and (b) the minimum and the maximum time needed for writing the tasks were found to be between 25 and 35 minutes; therefore, an average time of 30 minutes was set for the actual writing session.

The participants were selected from a pool of 96 Iranian EFL learners who had been placed in the intermediate level of English class by either an institutional placement test or a final examination composed of a written examination and an oral interview. At the time of the data collection, they were studying New Interchange 2 (Richards et al., 2005), and they have been participating in English classes for at least two years.

Subsequently, one hundred and fifty written texts were collected, photocopied and given to two raters to be evaluated in terms of accuracy. Both raters had MA in the field of ELT, and had an experience in rating EFL writing. They also have been teaching English in private institutes for more than five years. The researcher had a meeting with the raters prior to giving them the students' compositions in order to train them in rating the compositions based on the guidelines for counting the T-units, taken from Casanave (1994), Polio (1997), Sotillo (2000), and Ahour et al. (2012). Furthermore, the formula for measuring accuracy was explained to them. This meeting was held in order to make sure that both raters knew exactly what T-units meant and how to measure accuracy, so that they had no difficulties in rating, and were able to rate the compositions accurately.

The raters assessed the compositions, and returned them to the researcher when they finished measuring T-units, error-free T-units, and subsequently the accuracy of each composition. Therefore, three scores were obtained by each rater as measures of T-units, error-free T-units, and accuracy. Then, the inter-rater reliability between the two raters was assessed using the Pearson product-moment correlation coefficient for each of the items (See Table 3.1). In this study, the participants' written performance was evaluated in terms of accuracy by calculating the number of error-free T-units per T-units following Arent (2003), Storch (2009), Ahour et al. (2012), and several other researchers. Hunt (1965) defined T-unit as "one main clause plus whatever subordinate clauses happen to be attached to or embedded within it". Those T-units that contained no grammatical, lexical, punctuation and spelling errors were counted as error-free T-units.

Table 3.1. *Inter-rater Reliability for T-units, Error-free T-units, and Accuracy in Three Task*

	<i>Types</i>		
	TU	EFTU	A
Pearson Correlation	.97	.83	.86
Sig. (2-tailed)	.000	.000	.000
N	150	150	150

*Note. TU=T-units, EFTU=Error-Free T-units, A=Accuracy, *p<.05*

Results

The collected data were entered into SPSS XXVI for further analysis. In order to test the first and second null hypotheses, within-subjects repeated measures ANOVA was used. In order to test the third null hypotheses, between-subjects repeated measures ANOVA was employed. The Alpha level for significance testing was set at 0.05.

Ho 1: Task type does not affect the writing accuracy of male EFL learners.

To test the first null hypothesis, accuracy of all the compositions written by male participants was considered. There were three types of writing tasks, and all the 25 male participants were required to accomplish each of them. So, the total number of raw scores for accuracy of the compositions written by male participants was 75 for three task types. Then, these raw scores were fed into computer software XXVI for further analysis, and one-way within-subjects repeated measures ANOVA was used to compare their means. Table 4.1 provides the descriptive statistics for accuracy of male participants' writing performance in three different task types.

Table 4.1. *Descriptive Statistics for Accuracy of Male Participants' Writing Performance in Three Task Types*

Accuracy	Mean	Std. Deviation	N
Narrative	.48	.11	25
Personal	.71	.14	25
Decision	.39	.10	25

As Table 4.1 represents that male participants' mean of accuracy in personal descriptive ($M=0.71$, $SD=.14$) was higher than that in narrative ($M=0.48$, $SD=.11$), and their mean of accuracy in narrative was greater than that in decision making which was ($M=0.39$, $SD=.10$). The assumption which should have been met for this test was the assumption of sphericity, so it was checked for this analysis (see Table 4.2).

Table 4.2. *Mauchly's Test of Sphericity for Accuracy of Male Participants' Writing Performance in Three Task Types*

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^a		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Accuracy	.692	8.470	2	.014	.764	.806	.500

As Table 4.2 shows, there was a violation of sphericity (*Mauchly's* $W=.692$, $p=.014$, $p<0.05$). Therefore, in order to find whether there was a significant difference among the accuracy of three task types in the test of within subject effects, the values for the Greenhouse-Geisser (Leech, Barrel, & Morgan, 2005) were considered (see Table 4.3).

Table 4.3. *Test of Within-Subjects Effects for Accuracy of Male Participants' Writing Performance in Three Task Types*

						Partial Eta
	Source	df	Mean Square	F	Sig.	Squared
Accuracy	Sphericity Assumed	2	.691	65.206	.000	.731
	Greenhouse-Geisser	1.529	.903	65.206	.000	.731
	Huynh-Feldt	1.612	.857	65.206	.000	.731
	Lower-bound	1.000	1.381	65.206	.000	.731
Error(Accurac y)	Sphericity Assumed	48	.011			
	Greenhouse-Geisser	36.696	.014			
	Huynh-Feldt	38.690	.013			
	Lower-bound	24.000	.021			

As Table 4.3 reflects, the means of the writing accuracy of male participants in three task types were significantly different ($F(1.529,36.696)=65.206$, $p=.000$, *Partial Eta squared*=.73).

The Partial Eta squared also showed that about 73% of the variances in the writing accuracy of male participants was explained by the variation in task type. Compared to the Cohen's (1988) criteria (.01=Small, .06=Medium, and .14=Large), it reflected a very large effect size.

Table 4.4 represents the means, standard errors, and 95% confidence interval for the writing accuracy of male participants' performance in three task types (Narrative=1, Personal=2, and Decision making=3).

Table 4.4. *Estimated Marginal Means for Accuracy of Male Participants' Writing Performance*

Accuracy	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.48	.023	.435	.528
2	.71	.028	.651	.767
3	.39	.020	.344	.427

*p<.05

In order to determine that the mean accuracy of which type was significantly different from the others, pairwise comparisons were conducted (see Table 4.5).

Table 4.5. *Pairwise Comparison for Accuracy of male Participants' Writing Performance in Three Task Types*

(I) Accuracy	(J) Accuracy	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
1	2	-.228*	.035	.000	-.300	-.156
	3	.096*	.020	.000	.054	.138
2	1	.228*	.035	.000	.156	.300
	3	.324*	.030	.000	.261	.386
3	1	-.096*	.020	.000	-.138	-.054

	2	-.324*	.030	.000	-.386	-.261
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As Table 4.5 demonstrates, since the significance level of pairwise comparison in case of accuracy of male participants' writing performance in three task types was lower than 0.05 (significance level $p < .05$), it could be concluded that task type affects the writing accuracy of male EFL learners.

As mentioned before, the mean of accuracy in personal descriptive ($M=0.71$, $SE=.028$) was greater than that in narrative ($M= 0.48$, $SE=.023$), and the mean of accuracy in narrative was greater than that in decision making ($M =0.39$, $SE=.020$), and their significant difference was statistically confirmed. Therefore, the first null hypothesis was rejected.

Figure 4.1 illustrates the mean of accuracy of male participants' writing performance in three task types (Narrative=1, Personal descriptive =2, and Decision making=3).

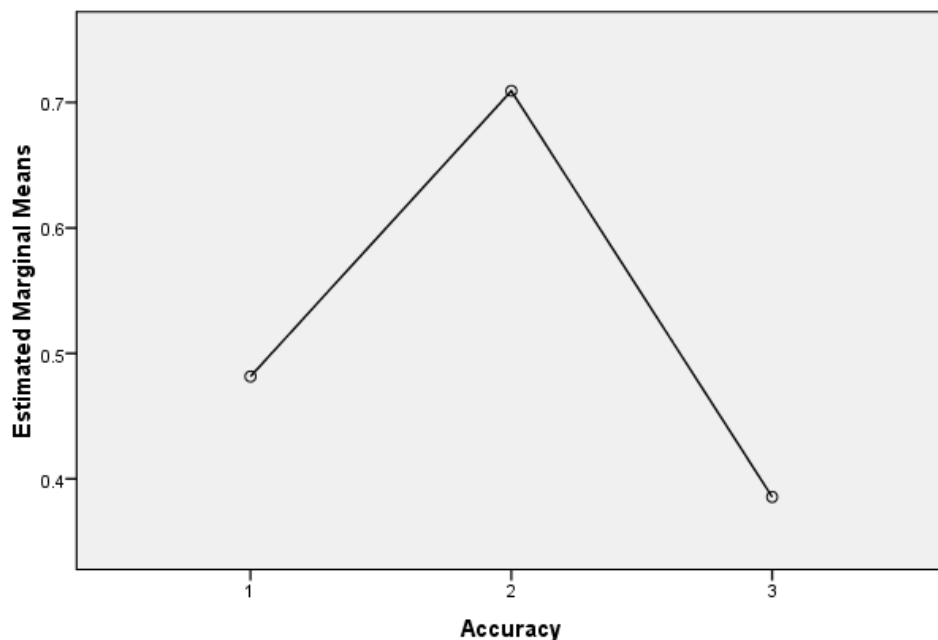


Figure 4.1. *The estimated Marginal Means for Mean of Accuracy of male Participants' Writing Performance in Three Task Types*

Ho 2: Task type does not affect the writing accuracy of female EFL learners.

To test the second null hypothesis, the accuracy of all the compositions written by female participants was considered. There were three types of writing tasks, and all the 25 female participants were required to accomplish each of them. Therefore, one way within-subjects repeated measures ANOVA was used to compare their means. Table 4.6 provides the descriptive statistics for accuracy of female participants' writing performance in three different task types.

Table 4.6. *Descriptive Statistics for Accuracy of Female Participants' Writing Performance in Three Task Types*

Accuracy	Mean	Std. Deviation	N
Narrative	.56	.187	25
Personal descriptive	.76	.125	25
Decision	.33	.100	25

As Table 4.7 shows, the assumption of sphericity was met (Mauchly's $W=.907$, $p=.325$). Therefore, in order to find whether there is a significant difference among the accuracy of three task types in the test of within subject effects, the values for the Sphericity Assumed was considered (see Table 4.8).

Table 4.7. *Mauchly's Test of Sphericity for Accuracy of Female Participants' Writing Performance in Three Task Types*

					Epsilon ^a		
Subjects	Mauchly's	Approx.	df	Sig.	Greenhouse-	Huynh-	Lower-
Effect	W	Chi-Square			Geisser	Feldt	bound
accuracy	.907	2.245	2	.325	.915	.987	.500

As Table 4.8 reflects, the mean of the writing accuracy of female participants' writing performance in three task types were significantly different ($F(2, 48)= 56.174$, $p=.000$, Partial Eta squared=.70). The Partial Eta squared also showed that about 70% of the variances in

the writing accuracy of female participants were explained in three task types. Compared to the Cohen's (1988) criteria, it reflected a very large effect size.

Table 4.8. *Test of Within-Subjects Effects for Accuracy of Female Participants' Writing Performance*

Source		df	Mean Square	F	Sig.	Partial Eta Squared
Accuracy	Sphericity Assumed	2	1.112	56.174	.000	.701
	Greenhouse-Geisser	1.830	1.215	56.174	.000	.701
	Huynh-Feldt	1.973	1.127	56.174	.000	.701
	Lower-bound	1.000	2.224	56.174	.000	.701
Error(Accuracy)	Sphericity Assumed	48	.020			
	Greenhouse-Geisser	43.916	.022			
	Huynh-Feldt	47.357	.020			
	Lower-bound	24.000	.040			

Table 4.9 represents the mean, standard error, and 95% confidence interval for the writing accuracy of female participants' performance in three task types (Narrative=1, Personal=2, and Decision making=3).

Table 4.9. *The Estimated Marginal Means for Accuracy of Female Participants' Writing Performance*

Accuracy	95% Confidence Interval			
	Mean	Std. Error	Lower Bound	Upper Bound
1	.56	.037	.479	.634
2	.76	.025	.705	.809
3	.34	.020	.294	.376

In order to determine the mean accuracy of which type was significantly different from the others, pairwise comparisons were conducted (see Table 4.10).

Table 4.10. *Pairwise Comparison for Accuracy of Female Participants' Writing Performance*

(I) accuracy	(J) accuracy	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
1	2	-.200*	.043	.000	-.289	-.111
	3	.222*	.042	.000	.134	.309
2	1	.200*	.043	.000	.111	.289
	3	.422*	.033	.000	.353	.490
3	1	-.222*	.042	.000	-.309	-.134
	2	-.422*	.033	.000	-.490	-.353

As Table 4.10 demonstrates, since the significance level of pairwise comparison in case of accuracy of female participants' writing performance in three task types was lower than alpha level ($\alpha=.05$), it could be concluded that task type affects the writing accuracy of female EFL learners.

The results showed that the mean of accuracy in personal descriptive ($M=0.76$, $SE=.025$) was different from that in narrative ($M= 0.56$, $SE=.037$), the mean accuracy in narrative was significantly different from that in decision making ($M =0.34$, $SE=.020$), and the significant difference was also found between the mean accuracy of personal and decision making tasks. Based on these results, the second null hypothesis was rejected.

Figure 4.2 illustrates the mean of accuracy of female participants' writing performance in three task types (Narrative=1, Personal descriptive =2, and Decision making=3).

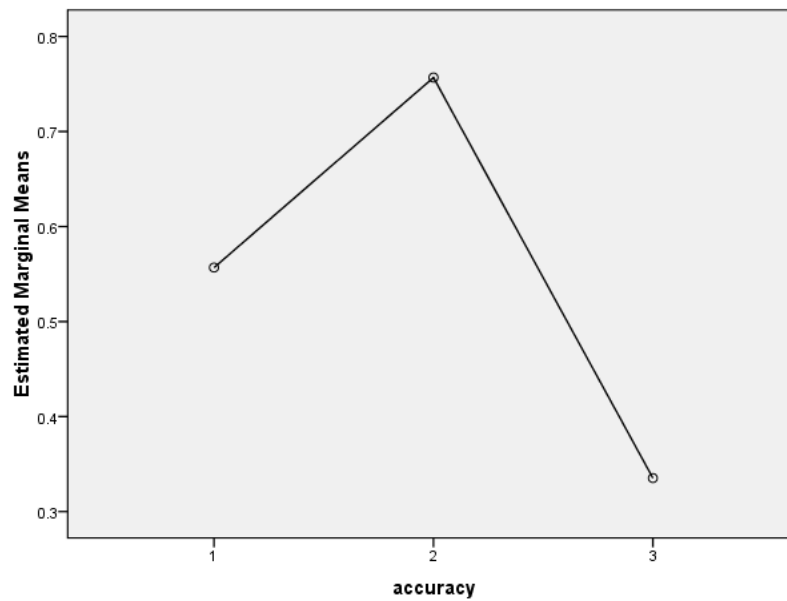


Figure 4.2. The *Estimated Marginal Means for Mean of Accuracy of Female Participants' Writing Performance in Three Task Types*

Ho 3: There is no significant difference in the writing accuracy of male and female EFL learners in three task types.

To test the third null hypothesis, one way between-subjects repeated measures ANOVA was used. Table 4.11 shows the descriptive statistics for accuracy of both male and female participants' written texts in three task types.

Table 4.11. *Descriptive Statistics for Accuracy of Both Male and Female Participants' Written Texts in Three Task Types*

Accuracy	Group	Mean	Std. Deviation	N
Narrative	male	.48	.11	25
	female	.56	.19	25
	Total	.52	.16	50
Personal Descriptive	male	.71	.14	25
	female	.76	.12	25
	Total	.73	.13	50
Decision Making	male	.38	.10	25
	Female	.33	.10	25
	Total	.36	.10	50

As Table 4.11 shows, the mean of accuracy of female participants' narrative writing ($M=.57$, $SD=.19$) was higher than that of male participants' narrative writing ($M=.48$, $SD=.11$), the mean of accuracy of female participants' personal descriptive writing ($M=0.76$, $SD=.12$) was greater than that of male participants' descriptive writing ($M=0.71$, $SD=.14$), and the mean of accuracy of male participants' decision making writing ($M=0.39$, $SD=.10$) was higher than that of female participants' decision making writing ($M=0.33$, $SD=.10$). The test of sphericity for this analysis has been shown in Table 4.12.

Table 4.12. *Mauchly's Test of Sphericity for Accuracy of Both Male and Female Participants' Writing Performance in Three Task Types*

					Epsilon ^a		
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Huynh-Feldt	Lower-bound

Accuracy	.929	3.444	2	.179	.934	.991	.500
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As Table 4.12 shows, the assumption of sphericity was met (Mauchly's $W = 0.929$, $P = .179$). For this reason, in tests of within-subjects effects (see Table 4.13), the values in Sphericity-Assumed row was considered for the trial main effect (Accuracy) and the interaction effects (Accuracy & Group).

Table 4.13. *Tests of Within-Subjects Effects for Accuracy of Both Male and Female Participants' Writing Performance in Three Task Types*

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Accuracy	Sphericity	3.496	2	1.748	115.060	.000
	Assumed					
	Greenhouse-Geisser	3.496	1.868	1.871	115.060	.000
	Huynh-Feldt	3.496	1.981	1.764	115.060	.000
	Lower-bound	3.496	1.000	3.496	115.060	.000
Accuracy Group	* Sphericity	.109	2	.054	3.585	.032
	Assumed					
	Greenhouse-Geisser	.109	1.868	.058	3.585	.035
	Huynh-Feldt	.109	1.981	.055	3.585	.032
	Lower-bound	.109	1.000	.109	3.585	.064
Error(Accuracy)		1.458	96	.015		

Greenhouse-Geisser	1.458	89.665	.016
Huynh-Feldt	1.458	95.102	.015
Lower-bound	1.458	48.000	.030

As Table 4.13 indicates, there was a significant main effect of three production tests (Accuracy) ($F(2,96)=115.060$, $p=.000$). Likewise, a significant interaction effect of three tasks by group was revealed, ($F(2,96)=3.585$, $p=.032$).

Based on the tests of between-subjects, there were no group differences ($F(1,48)= 1.030$, $p=.315$) (see Table 4.14). Therefore, the third null hypothesis was confirmed.

Table 4.14. *The Tests of between Subjects-Effects for Accuracy of Both Male and Female Participants' Writing Performance in Three Task Types*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	43.341	1	43.341	2.043E3	.000
Group	.022	1	.022	1.030	.315
Error	1.018	48	.021		

Figure 4.3 clearly shows that there was no significant difference in the the writing accuracy of male and female EFL learners in three task types.

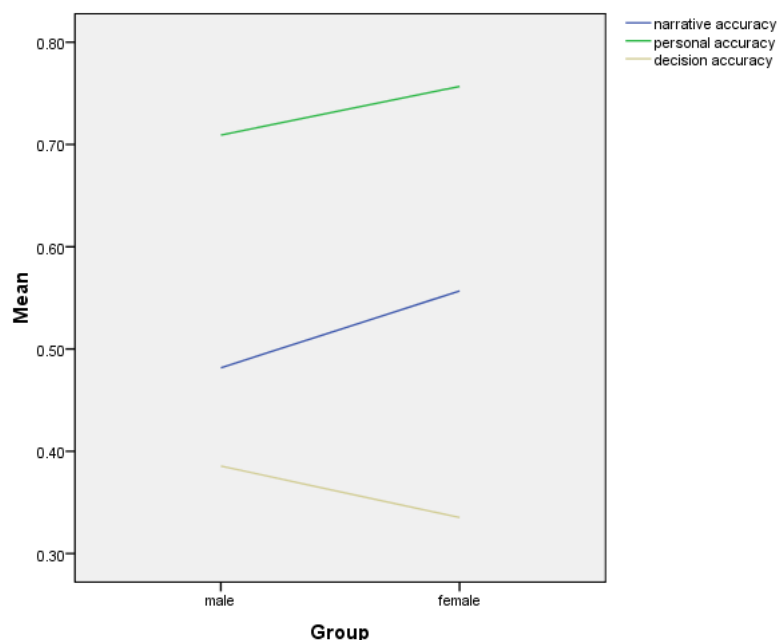


Figure 4.3. The *Estimated Marginal Means for Accuracy of Three Task Types in Male and Female Participants' Writing Performance*

The results of the analysis of the writing samples revealed that:

1. Significant differences were found in the writing accuracy of male learners among three task types. The highest writing accuracy was related to the personal task followed by narrative and decision making tasks, respectively.
2. Significant differences were found in the writing accuracy of female learners among three task types. The highest writing accuracy was related to the personal task followed by narrative and decision making tasks, respectively.
3. There were no significant differences found in the writing accuracy of male and female EFL learners in three task types.

Discussion and Conclusion

The purpose of this study was to investigate whether the accuracy aspects of male and female EFL learners' writing performance is affected by the three different task types or not. To explain and discuss the results of this study, first of all, Skehan's (1996) criteria for task grading needs to be reviewed. Skehan's (1996) criteria for task grading consisted of cognitive complexity and code complexity. His first criterion, cognitive complexity, covered two areas: cognitive familiarity and cognitive processing. Based on his criteria, three types of task were considered in

this study. The personal descriptive task could be considered to have the lowest cognitive and linguistic demands compared with the narrative and decision making tasks, for two reasons. First, the participants clearly knew their family members, their personality and education. Second, the participants were more familiar with the structure of descriptive tasks than they were with the structure of decision making and narrative writing tasks. With respect to the second area, cognitive processing, which is, "the amount of on-line computation that is required while doing the task" (Skehan, 1996, p.52), the personal descriptive task required a smaller amount of on-line computation than the decision making and narrative task for the following reasons. First, the personal descriptive task did not require as many reasoning operations as the narrative and decision making tasks. For example, the personal descriptive task only required participants to describe their family members; whereas, the decision making task required them to come up with reasons to support their positions, and narrative task asked them to understand the story based on the picture strips and explain it to the reader. Second, regarding the nature of the input material used in the task, when undertaking the personal descriptive task, the participants simply drew on ready-made knowledge since they already knew their family members. Also, the narrative task could be considered to have lower cognitive and linguistic demands compared to the decision making task. Because in narrative task, the participants just had to get the story from the picture strips, but in decision making task they had to consider all the five hotels' good points and bad points, and finally a carefully considered choice had to be made. Therefore, from the above discussion based on Skehan's (1996) criteria, it could be concluded that personal descriptive and narrative tasks could be categorized as a low demanding tasks, and decision making task could be categorized as a high demanding task. Now, with this background, in what follows, the findings obtained regarding each research question were discussed in turn. The first and second null hypotheses addressed the effects of task type on the writing accuracy of male and female EFL learners. Both male and female EFL learners' writings showed more accuracy on personal descriptive task than narrative and decision making tasks, respectively. This may be explained on the basis of the participants' L2 grammatical and lexical knowledge. The personal descriptive task required simpler vocabulary and grammatical structures. Because, in this task they were supposed to describe their family members; therefore, the vocabulary and grammatical structures for this kind of writing was familiar to them. Whereas, the narrative and decision making writing tasks required more complex grammatical structures as well as more difficult and new words.

For example, in narrative task, one of the participants had used the word '*recipe*' instead of the word '*prescription*' for the paper that the doctor had written for the patient. Therefore, because the participants may have had higher control over the simpler grammatical structures required for the personal descriptive task than for the other two more complex structures required for the narrative and decision making task, they produced language with higher accuracy in the personal descriptive task. This result was consistent with the findings of Foster and Skehan (1996) and Skehan (1998) who reported that low cognitive and linguistically demanding tasks have been more effective than high cognitive and linguistically demanding tasks in promoting accuracy.

The findings indicated that the participants produced more accurate language in the personal descriptive task than in the narrative and decision making tasks. There was no effect of gender found on the writing accuracy of Iranian EFL learners. The results also showed that different types of task led to different operations carried out within the tasks and these had an impact on performance. Regarding gender, the findings of this study rejected any significant effect of it on Iranian intermediate EFL learners' writing performance.

The findings of this study suggested that if the language teachers' purpose is to enhance intermediate male EFL learners' writing accuracy, personal task would be an appropriate activity; and if the teachers' emphasis is on the accuracy of the intermediate female EFL learners, personal descriptive is the best choice for effortlessly eliciting the required data. Therefore, the implications of the present study can be summarized as follows:

Firstly, in the context of language classes, considering accuracy, teachers should remind learners to direct some of their attention towards monitoring the grammatical accuracy. Also giving the information about the grammatical structures that are relevant to the assigned tasks to help learners apply the grammatical structures accurately would lead them to produce texts with more accuracy. Secondly, the findings provided insights on EFL testing, as being aware of the effects of different task types, the EFL examiners and syllabus designers can make use of the most appropriate tasks based on their intentions. Finally, considering the research in this field area, this study might have bridged some gaps which existed in task studies.

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Appendix A

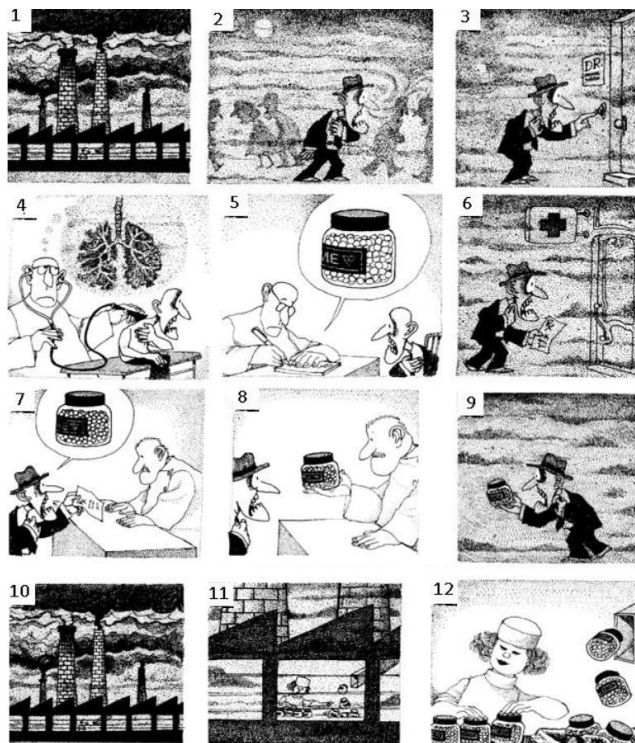
Three Task Types

A: personal Descriptive Task:

Describe your family members (include their appearance, personality, age and education). Your text should be at least 100 words.

B: Narrative Task:

Look at the pictures and write a story. Your text should be at least 100 words (dictionary using is not permitted).



C: Decision Making Task:

You are planning to go on a vacation to Italy with a friend, and want to spend two weeks together in July or August. You have decided to stay in a hotel. Your friend has already surfed the internet, picked five addresses and is now asking for advice. The hotel you choose, however, has to satisfy a number of conditions. These criteria are:

A quiet location, Located in (the vicinity of) the center, Swimming facilities, and breakfast included

None of the four addresses your friend sent you, meets all of the criteria. A carefully considered choice has to be made, however. Read the four descriptions carefully, then write a letter of at least 100 words in which you explain which hotel you think is most suitable and fits the conditions best. Keep in mind that your text does not have to reflect your personal preferences. Write a letter in which you try to convince your friend that your choice is right and support it with arguments (dictionary using is not permitted).

1. Hilton:

Location: Located in downtown area.

Description: Attractive 2-story hotel, 6 rooms with private bathrooms, terrace with view, babysitting, fitness center, no swimming pool but easy transportation to many beaches around.

Breakfast: No breakfast is served.

2. Microtel:

Location: Located in the coast of Mediterranean Sea, 180 kilometers from airports.

Description: The hotel is ideally situated 1 minute from the sea front and in the lively town center with many shops and restaurants, garden, and swimming pool.

Breakfast: No breakfast is served

3. Ritz:

Location: located in Genova

Description: At a considerable distance from the city center, but situated directly next to the coast and sea front, with a lot of activity, even at nights. Attractively priced, young and dynamic, open day and night, free parking, fitness, beach activities, bicycles available for guests, special discounts for young guests and groups.

Breakfast: Comprehensive breakfast buffet, between 8.30 and 10.30.

4. Carlton:

Location: Located in Sicily Island

Description: 800 meters from the center of the island, for those looking for peace, fully restored farm house with garden in quiet region which hasn't been discovered by mass-tourism yet. We have two rooms for our guests on the top floor, with a total of 4/5 beds, the bathroom is shared between both bedrooms.

Breakfast: Guests can prepare their own breakfast; not included.

A Contrastive Look at English and Arabic Adjectives

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Abstract

This paper attempts to examine attribute and predicate adjectives in English and Arabic from the syntactic and semantic point of view. It basically intends to highlight the areas of similarities and differences when adjectives modify both single as well as juxtaposed nouns in both languages. It also aims to show how the two languages relate or differ with respect to adjective order. This paper is inspired by the practical view of contrastive analysis where the limited sample size of a contrastive work in a particular grammatical component has the potential of providing insights into the patterns that could be problematic for language learners and translators. The limited sample size here makes no claims for perfect prediction of language difficulties or ideal mode of comparability between Arabic and English as is the case with the theoretical contrastive analysis that uses extensive accounts of similarities and differences only for the sake of contrastive analysis, with no purpose outside the domain of language such as predicting the easy and difficult features of the two languages in particular areas, namely the modification systems of adjectives as well as adjective sequencing. The results indicate that, unlike English, the adjectival system in Arabic is more complicated due to the inflectional property of adjectives, which agree with their nouns in number, gender, case, and definiteness. They also indicate that adjective ordering in Arabic is functioning. The paper concludes by highlighting the bidirectional relationship between translation and contrastive analysis. The translations of adjectival phrases may provide the data for contrastive analysis, which in turn can be used to train translators and raise their awareness about potential problems in translating English and Arabic adjectives.

Keywords: Predicate; Attributive; Interpolation; Joint annexation; Amplifying term.

Introduction

Unlike English, Arabic has traditionally three -word classes: nouns, verbs, and articles. Adjectives enjoy no separate word class in Arabic because they have no distinctive morphological shape that one can easily discern. There are actually words such as *Amīn* and *Karīm* literally “honest” and “generous” that, in certain syntactic contexts, function as proper nouns. Adjectives are considered as a subclass of noun due to the close affinity of the adjective to the noun. The way the Arab grammarians distinguish between the two is by pointing out that “an adjective can be a noun and a noun can take on the meaning of an adjective” (Stewart 2011:7). So, words functioning as adjectives can only be identified on a functional basis. “It is impossible therefore to determine whether *ādil* literally 'just', is an adjective or referring to a substantive noun”, without a syntactic (functional) basis” (Beeston 2006:45). This is so because in Arabic nouns and adjectives are morphologically identical. For example, no one can tell that *ādil* is an adjective unless someone says *rağul ādil*, literally man just, a just man in English. When this word occurs alone, it could refer to a proper noun or someone who has the quality of being just.

By contrast, adjectives in English can be identified on a morphological or syntactic basis. Many adjectives have inflectional suffixes that obviously help identify them as adjectives, whereas other forms of adjectives such as “clean” require a syntactic context, a clean car, for example, to identify it as an adjective rather than a verb. Due to its morphological distinction, English adjectives, unlike Arabic ones, are a part of speech that represents a categorical meaning of a substance. Semantic and syntactic differences can be observed between the two languages when adjectives modify both single terms as well as constructs. The latter shows interesting differences about the way adjectives modify the construct terms in Arabic and English, which largely spell the focus of this paper. The primary focus is to show the extent at which the status of the second noun in an annexation construct can determine the definitional or non-definitional status of the whole construct or phrase. This view is interesting to examine since it diverges from the way the adjectival modification system of English functions where the definite or indefinite article performs that role. It is also useful to show how vowels can signal the noun being

modified in the construct, a phenomenon that does not exist in English. This investigation may provide insights into the potential difficulties that an Arabic learner or translator may encounter.

Methodology

This study is based on what researchers call 'contrastive analysis' which is an indicative investigative approach of some distinct elements in a pair of languages. The present study concerns itself with the “applied view of analysis” which is often run within a particular linguistic component of the target language against that of the native language to predict areas of difficulty in learning a foreign language. The advantage of this kind of analysis is not confined to identifying problem areas for language learners, but also has relevance to translation as well. Since applied contrastive analysis is run to predict learner’s difficulties and provides a descriptive basis for such applications, König (1996) described this research program as ‘comparison with a purpose’ where “contrastive analysis is regarded as a limiting case of typological comparison characterized by a small sample size and a high degree of granularity (Ibid :51)”. Hawkins (1986) espouses this view of contrastive typology which seeks correlations of proprieties of some specific grammatical subsystems such as grammar and syntax. His intention is to provide explanations and link his analysis to theories of language processing.

While contrastive analysis lends itself to a special case of linguistic typology that focuses on a small sample size to arrive at results that would have the potential of being used for practical reasons, some linguists cast doubts about its efficacy in doing so. For example, Chesterman (1998: 54) contends that “contrastive analysis can predict part of the problems because a comparison does not mean the whole of the two languages get in contact”. There is therefore no way that contrastive analysis is systematic. “Even though linguists make exaggerated claims that contrastive analysis helps make students’ errors observable for analysis, the most difficult ones may be avoided by error analysis” (Ibid: 55). As an alternative, he proposed performing contrastive analysis of the two languages through translation which implies an examination of their mutual translatability. The rationale lies in the fact that the translation of specific pieces of text can provide a better picture about aspects of similarity or dissimilarity.

With this in mind, the present study makes no claims of being perfect in predicting difficulties in the target language learning or applying scientific systematic analysis of properties between two subsystems or categories of Arabic and English. With its small sample size, the

study can have the potential of providing linguists with insights into the level of comparability between English and Arabic in given respects and deepens their understanding of a given investigated grammatical component (adjectives in this case), so that linguistic knowledge from and into Arabic can be appropriately transferred. Through contrasting, linguists can also predict features that are problematic or easy for translators.

It is worthy noted here that this practical view of contrastive analysis that the present study adopts differs from the theoretical contrastive analysis that concerns itself with extensive accounts of differences and similarities, seeking to provide adequate models for cross-linguistic comparisons. Unlike the practical one, the theoretical view intends to highlight the aspects that are comparable in the two languages involved and decides on how such comparisons be carried out.

As for the transliteration system of the Arabic examples, this paper adopts ISO 233, a standard system that adheres to the principles of inflexible conversion in order to permit international information exchange in such a way that makes automatic the transmission and reconstitution of messages both by machines and men

Discussion

Since the scope of adjective is broad with many intricacies, the study will primarily tap upon some important facets of adjectives at the sentence level pertinent to the modification of single nouns as well as construct terms or juxtaposed nouns that are in closest juncture, *idāfa* in Arabic. The fundamental difference between Arabic and English is most evident in annexation structures since English has no strict sense of this concept the way Arabic does. The paper will also highlight how they relate or differ in terms of adjective order. This study is apt to deepen one's understanding of the function of this grammatical component in providing insights for translators and those interested in transferring linguistic knowledge that allow them to make informed decisions.

Adjectives Modifying Lexical Terms

Adjectives modifying nouns can be syntactically either attributive or predicative. Attributive adjectives pre -modify nouns in English, the clean house, whereas they post modify nouns in Arabic *albaitul nadīfu*, literally ‘the house the clean’, the clean house in English,

wherein the adjective is defined because it agrees with its noun in gender and definiteness. As for adjectives functioning as predicates, they tend to post modify their nouns both in Arabic and English with a notable syntactic difference. In Arabic, there is usually no explicit copula or present tense as a verb "to- be- form" to link the subject and the predicate as in a *lbaytu nadīfun*, literally ‘the house clean’, the house is clean in English. Ryding (2005:240) calls this type of sentence "equational or verbless". Arabic predicate adjectives are always indefinite and agree with nouns in gender, case, and number. English, by contrast, requires a verb to link the subject and the predicate, and adjectives do not have to agree with the nouns they modify in number, case, or gender.

In some cases, attributive adjectives do not always describe the referent of the noun directly. Quirk (2003:121), for example considers 'old' in "an old friend" as referring to the relationship that has been so long in place rather than "characterize the referent of the noun directly". Quirk says that the attributive adjective in such case describes the noun and picks some of its qualities. He points to the fact that the primary function of an adjective is that of an attribute since adjectives are primarily used to specify particular qualities on the one hand, and nouns can substitute adjectives occurring as predicates as in 'she is a friend' versus ‘she is friendly’ on the other. This is so because there are more associations with a noun than with an adjective, because nouns are solid and thus capable of multiple meanings. It follows from this that attributive adjectives, unlike nouns, do not possess a full semantic value in English since nouns can assume their positions as predicates: the friendly man- the man is a friend, Whereas an attributive adjective in Arabic can also occur predicatively without having to be substituted by a noun: *rujulun latifun*, ‘a kind man’ versus *al rujulu latifun*, literally ‘the man kind’ ,the man is kind in English. Without a syntactic context as such, it is difficult to identify *latifun* ‘kind’ as an adjective, because adjectives in Arabic can only be identified as such on a syntactic rather than morphological basis. In a word, it is easy to distinguish between ‘friend’ and ‘friendly’ as two different word classes in English, whereas such distinction is impossible on a morphological basis in Arabic without a syntactic context

Adjectives Modifying Construct Terms

Annexation or *idāfa* constructs are widely used in Arabic. It is a two-word compound in closest juncture in which the second term can be either definite or indefinite. This is similar to

the English constructs in which two nouns are juxtaposed as in the school principal, a school principal. The only difference is in the relative placing of the two terms. In Arabic, the modifier that modifies the entity comes first and never has the definite article explicitly. The rule of thumb states that a noun that is indefinite in Arabic becomes definite if annexed to a noun that is definite. For example, the word *Sahib* “an owner” is indefinite here as occurring alone. But when it is annexed to a definite noun, the restaurant, where “the” is identical with the Arabic definite article “*al*”, it gains a definitional status through the definite noun “the restaurant”. However, the definite article “*al*” is not prefixed to *Sāhib*. If the definite article is prefixed to the annexed noun *Sāhib*, the annexation construct will not hold, since the owner *al-Sāhib* requires the following word to be an adjective.

When the entity is definite, the first term (annexed) is made definite automatically by virtue of the annexing term (entity), although it never has the definite article. So, in the Arabic construct, *mudīrul madrasati*, literally ‘principal the school’, the school principal in English, the term ‘principal’ which pre-modifies the entity term, gains its definition through the annexing definite term “school”. In other words, the definitional status of the whole phrase is realized through the defined status of the entity term ‘school’. While the Arabic structure mentioned is represented by the English form “the school principal” as a parallel defined structure, it differs in one sense: in *idafa* construction, the defined annexing term with *al* ‘the’ grants definition to the entire phrase, whereas in English it is the definite article (the) that determines the definitional status of the total phrase as in the school principal.

Semantically, the annexation subsumes genitive structures such as a tree's trunk, the trunk of a tree, a trunk of the tree. While one may think that these English forms can be semantically parallel to an Arabic *idafa* structure '*sāqul šağarati*', literally ‘trunk the tree’, there is a reason to think otherwise. The English genitive form, “the trunk of a tree” has in Arabic no element of definiteness about it, because it must be taken as equivalent to “a tree trunk”. The same is true of the English form “a trunk of the tree”. Although these English forms have some definite elements as can be seen, they can have in Arabic only one indefinite equivalent '*sāqul šağarati*'. What accounts for such differences is the fact that in Arabic “it is the amplifying (annexing) term that is inherently defined, not the amplified term, that lends a defined value to the entire phrase, whereas in English “a single mark of definition or in-definition serves to mark the definitional status of the total phrase- a tree trunk versus the tree trunk” (Beeston 2006: 46). It seems that in

English and probably many other languages there is really no word for 'of' in the possessive sense that would lend a parallel form to the Arabic *idāfa* structure, similar to "principal the school"

Another reason English genitive constructs cannot be regarded as equivalent to the Arabic *idāfa* construction is the fact that, in the English genitive structures, the adjective can separate the two juxtaposed nouns, "the center's new director" versus "the new center director", where the adjective "new" in the first sentence separates the two nouns of the construct. As for the two terms of *idāfa*, they cannot be separated in Arabic because they are syntactically in closest juncture and that identifies *idāfa* as such in Arabic.

There is however a growing trend in the standard Arabic to avoid constructs phrases by means of connecting the two terms with a preposition, especially when the first term is modified with an adjective. So, the traditional view of grammar requires that adjectives modifying the first or the second term of the construct come after *idāfa*. To determine which of the two terms these adjectives modify, one needs to consider the inflectional ending of the adjectives, as in *mudīrul markazil ġadīdu*, literally 'the director the center the new', where the modifying adjective "new" shows itself clearly in terms of its inflectional ending marked with a small sign *u*. This small mark signals the nominative case and shows an inflectional ending similar to that of the first term (principal), though the annexed term cannot have the definite article itself in the *idāfa* construct. This similarity in the inflectional ending indicates that the post-modifying adjective modifies the "noun" that shares the same inflectional ending. *Thakur* (1997: 86) notes that "the syntactic relationship that a word has with other words in the sentence in Arabic manifests itself in the inflectional ending not in the place it occupies in relation to other words in that structure." This difference is spelled also by *Spencer* (1991: 21) who states that the grammatical function of a word "clearly manifests itself either in the word inflectional ending as in Arabic or word position in a sentence as in English"

The traditional grammar of Arabic is not largely observed by many writers and speakers. It seems to be somehow regularly broken by linking the two construct nouns with a preposition *min* 'from' or *li* 'for' *almudīru ljadīdu lilmarkazi*, literally, 'the director the new for the center', 'the new director of the center'. What prompts people to avoid *idāfa* constructs is probably their knowledge of grammar is insufficient, especially when it comes to the inflectional system with its intricacies and particularities. It is also possible that this transgression against the traditional

rule of Arabic is a result of direct translation from English into Arabic where juxtaposed nouns are quite typical in English.

By ignoring the inflectional nature of Arabic, the listener or reader of the above phrase cannot tell whether the "center" or the director is new, unless he or she already knows about this. Otherwise *idāfa* constructs modified with adjectives are ambiguous to interpret. Only when the modifying adjective shows an inflectional ending similar to that of the annexing term, *mudīrul markazil ġadīdi*, can one identify the adjective *aljadidi* as modifying the second term. In this case, the inflectional ending of both terms (center and new) is marked with *kasra* (a small slash appearing under the final consonant of the word), which means that the adjective this time modifies the second term.

English on the other hand shows cases of ambiguity of different nature. Lynn (1999:33) notes that "a sentence can be syntactically ambiguous when a listener or reader interprets one sentence as having more possible structures, as in *I like flying planes* "the act of flying or planes that are flying". In this kind of sentence where adjectives and nouns are morphologically similar, a sentence is bound to trigger more than one potential analysis.

At another level, attributive adjectives in English are postponed and joined with a coordinating word such as "and" if one of them happens to have a complement, whereas Arabic allows two or more adjective to occur attributively without having to be joined with a coordinating word, even if one of them happens to have a complement (Sabbag 1992:334). To illustrate the point, consider *baiytun kabīrun qarībun minal madrasati*, literally, 'a house big near the school', "a house that is big and near the school" in English. The attributive adjectives in Arabic occur without having to be postponed or conjoined with a coordinate word such as "and", whereas English does not allow the adjective with complement to occur without having to be conjoined with a coordinate such as 'and'- a person that is good and suitable for the job.

Joint Annexation

In some cases, two or more terms are involved in the annexation construct. Arabic traditional grammar requires the first term to be restricted to one term. "The other terms must come after *idāfa* and refer back to it by means of a pronoun suffix" (Ryding 2005: 154). According to the rules, each noun occurring after *idāfa* must refer back to the annexing term with an attached pronoun without having to be joined with a coordinate word *waw*, "and". In the

expression *awwalu lfasli wa 'āḥiruhu*, literally ‘beginning the term and end its’, the beginning and end of the term, the pronoun suffix (*hu*) refers back to "term". No binomial can be joined by the conjunction and annexed to a genitive. Such interpolation is syntactically ungrammatical as far as the traditional rule is concerned. The conjunction "*waw*" must occur after *idāfa* and is used with every term in the sentence as *awwalu lfasli wa 'āḥiruhu wa wasatuhu*, literally, ‘beginning the term and end its and middle its’ "the beginning, middle, and end of the term". The first term pre-modifies the annexing term whereas the other two modify it indirectly by referring back to it, each with a pronoun suffix. English on the other hand joins two or more nouns with "and", or uses a comma with every term and a conjunction with the last term.

In this type of joint construct, an adjective in Arabic can modify two or more terms: the first term that pre-modifies the annexing term and the other terms that occur after *idāfa*, as in *awwalu lfasli wa 'āḥiruhu wa wasatuhu sahlun*, literally, ‘first the semester and end its and middle its easy’, (a) the beginning, end, and middle of the semester is easy. Actually, English is syntactically more flexible in rendering this type of expression: the adjective can be used predicatively, as in (a) and attributively, as in (b) the easy beginning, end, and middle of the semester, where easy pre-modifies each term separately.

Limiting Conception of Terms

It has been mentioned earlier that the function of a definite annexing term in the *idāfa* construct is to give a defined value to the annexed term as well as the phrase as a whole. In some cases, however, this function is controversial because the annexing term appears more as one of limiting the relevance of the annexed term to a particular feature than of lending a defined value to the entire phrase. While many scholars tend to consider the annexed term in *abyadu lwaḡhi*, literally ‘white the face’, ‘white of face,’ a white-faced man, an adjective, (Beeston 2006: 47) refutes this belief contending that "*abyad*" can function both as a substantive, 'a white person', as well as adjectivally, *abyad*', and it can be annexed in either case to a term confining its applicability to a particular characteristic such as "face". So, the phrase can either refer to a substantive- meaning a person white of face, 'a white-faced person', or "an adjective that amplifies a preceding substantive such as 'youth' in 'a white-faced youth'" (Ibid: 47).

Although the limiting term in this kind of construct is always defined, it is not necessary to bring definition to the whole phrase. In other words, the annexed term may or may not be

definite, as in *ayaidul waḡhi*, ‘a white –faced person versus’ *al-abyaul alwaḡhi*, ‘the white-faced person’. In other words, when the annexing term has a limiting function, as in the above example, it is not necessary that the annexing term lend a defined value to the whole phrase. English in contrast has no such intricacies in modifying nouns. It is a single definite or indefinite mark which determines the definiteness or indefiniteness of the whole status of the phrase, a white-faced man versus the white-faced man.

Adjective Order

Swan (2005:11) states that "there is no specific set of criteria for ordering a cluster of attributive adjectives in English". Although scholars stress the need to put adjectives in a particular order, there seems to be no rule for that. It seems that people arrange adjectives in certain ways because they instinctively know that some adjectives precede or come after other adjectives.

Quirk (2003: 133) notes that the order of adjectives to "a large extent is determined by their semantic properties. For example, the emotive adjectives such as wonderful, nice, lovely should precede other central adjectives". Thus, he prefers wonderful long hair as opposed to long wonderful hair. He contends that emotive adjectives occur farther away from the head noun. It should be noted here that the distinction between what is peripheral and what is central is hazy. Adjectives for example such as presidential and wooden cannot be predicates, whereas adjectives such as angry and peaceful can occur both attributively and predicatively although these adjectives are all derived from nouns. In other words, it is wrong to say the chair is wooden, and the election is presidential, simply because these two adjectives are only peripheral. Arabic on the other hand has no restrictions as to whether an adjective should be used attributively or predicatively regardless of its etymological form.

A close look at the adjectives describing the main characteristics of a person or a thing, one can notice that there are tendencies in adjective ordering, but not standard rules that can be precisely applied to every adjective cluster. For example, adjectives modifying table in English, as in a beautiful big round old table, cuts across many typical adjective clusters where adjectives are placed according to their semantic properties as follows: size, shape, age. Having said that, there are cases where adjectives do not follow that order. For example, in this phrase; a lovely

big old triangular chair, the semantic properties of "age" precedes "shape" whereas in the above example describing the table, the semantic property "shape" precedes that of "age".

Arabic, on the other hand, has no standard rules regarding adjective order as far as single terms are concerned. Just as in English, some scholars make assumptions about the sequence of adjectives. There is no escape from admitting, however, that there is a general rule as far as annexation constructs are concerned when both terms of *idafa* need modification. Ryding (2005:214) contends that "the adjective modifying the second term is placed closest to the annexing term, then the word modifying the first term of *idafa*, in ascending order", as in *mağm'u alluğati al -arabiyyati al-lurduniyyu*, literally 'academy the language the Arabic the Jordanian', the Jordanian Arabic Language Academy. Actually, this rule is linguistically fair in having the amplifying, not the amplified term, modified first because it is the term that lends a defined value to the amplified term and the entire phrase.

On the other hand, that rule no longer holds when only one term of *idafa* needs modification. As such, only by looking at the inflectional ending of the modifier can one identify that the modifier modifies the first rather than the second term of *idafa*, since an adjective agrees with its noun in gender, number, case, and definiteness. Unlike Arabic, English coordinate adjectives clusters to modify the same head noun, as in "a wonderful, caring woman", separately. A paraphrase of it would be -she is a wonderful woman and she is a caring woman. Whereas in cumulative adjectives such as a big round old table, adjectives pile up jointly to describe the noun, each adjective semantically modifies the preceding part as a whole unit. So, the adjective "old" modifies the head noun "table"; "round" modifies 'old table'; "big" modifies "old round table", and so on

It is so apparent that attributive adjectives in English either modify the head noun separately or cumulatively regardless of their order. In the second case, each adjective in the string modifies the preceding part as a unit. Adjective order in Arabic, by contrast, can be functioning i.e., it changes the meaning of the sentence. For example, the attributive adjectives "green" and "philosophical" in *al- kitāb al- aḥḍar al- falsafī*, literally 'the book the green the philosophical', the green philosophical book, can have a difference in meaning when their order is switched into- *-al-kitāb al -falsafī al -aḥḍar*, literally 'the book the philosophical the green'. In the first order, the sentence refers either to the name of the book, the Green Book, which is

philosophical or to the green book which is the only philosophical book. In the second case, the sentence implies that there are many philosophical books, and one of them is with a green color

This difference also holds in sentences where the head noun that needs modification is indefinite. For example, the two attributive adjectives wonderful and long in "a wonderful, long hair" can in Arabic have a different semantic effect if we switch their order into, *ša' run tawī lun rā 'Iun*, literally 'hair long wonderful', a long, wonderful hair in English. In the first case, the hair is wonderful because of its length; in the second case, the hair is wonderful, not mainly because of its length, but for other qualities that the long hair shows, such as intensity of its color, shape, smoothness, and the like.

At another level, some adjectives in English "are fixed and parallel in form to their Arabic counterparts, as in the secretary general, attorney general" (Swan 2005:10). An interesting difference between Arabic and English, though relates to the fact that there are no restrictions on the occurrence of an adjective either attributively or predicatively in Arabic, whereas English allows some adjective to occur either predicatively or attributively. For example, there are adjectives such as wooden, utter, and presidential, to mention a few that can only be used as attributive in English: utter defeat, presidential elections, wooden table. Likewise, there are adjectives such as awake and afraid that can only be used as predicative: he is afraid; he is awake versus an afraid or awake kid. By contrast, there are no restrictions on the occurrence of adjectives either predicatively or attributively in Arabic.

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Contrastive Summary

Adjectives in Arabic and English can occur attributively and predicatively. While some adjectives in English can occur only predicatively and some attributively, there are no restrictions on the occurrence of adjectives in Arabic. English adjectives can be identified on a morphological and syntactic basis, whereas in Arabic only on a functional basis i.e., syntactic context is required since adjectives are inflectional agreeing with their nouns in gender, definiteness, case, and number. Unlike English, Adjectives in Arabic functioning as predicates are always indefinite and the subject is definite, and they require no copula (verb to be) to link the predicate and the subject

The semantic effect of adjective order in English is represented by the fact that each coordinate adjective in the string modifies the noun separately, whereas in cumulative cases

adjectives pile up to modify the head noun as a unit. Arabic on the other hand relies on its inflectional feature as a means of identifying modifiers and the nouns they modify.

Adjectives in Arabic can modify either the first term of *idafa* or the second term or both. However, one single adjective cannot modify both terms at once. When adjectives modify both terms, the modifier of the second term is placed right after it, and then the modifier of the first term, in ascending order. In Arabic the amplifying term that is inherently definite determines the definitional status of the entire phrase, whereas in English, it is either "a" or "the" that determines the status of the whole phrase, as in "a small car" versus "the small car".

Implications for translators and researchers

This kind of contrastive study is probably most useful in proving that direct translation from Arabic into English will not be as accurate as one may think. The nature of the grammatical systems in both languages is different. At one level, contrastive analysis raises the translator's awareness about the practical problems of similarity, that one grammatical structure such as *idafa* in Arabic may have a different signification in English. König and Gast (2009) point out that each language has its own specific structure. Of course, dictionaries, bilingual or monolingual, are not much useful in providing handy solutions for translators.

At another level, Weise (1988:189) contends that translators can benefit from contrastive analysis if "the data collected can be codified in bilingual dictionaries and grammar books as two main sources upon which translators rely". Since syntactic level is indispensable in the researcher's work, grammatical analysis is likely to deal with morphology and syntax of words. As far as adjectives are concerned, grammar books can show the morphological inflection of adjectives modifying lexical nouns or constructs in Arabic versus their English counterparts. Relying on grammar books, a translator can gain a deeper understanding of the inflectional nature of Arabic versus that of English inflection, which will help in avoiding inaccurate rendition of Arabic structures. So, a researcher contrasting adjectives in English and Arabic may discuss formal or semantic properties of lexical units and present them in a grammar book at the syntactic level as arrangements of words in sentences that rely on gender agreement, nouns and definiteness

At the other end of the scale, some scholars may need to evaluate the role of translation in serving contrastive analysis that mainly relies on spelling similarities and differences. While

scholars stress the importance of translation equivalence as one of the most useful criteria that contrastive analysis adopts, Chesterman (1998: 54) argues that “translational equivalence must be both at the surface and deep structures”. For two elements to be translationally equivalent, he maintains, they must be functionally equivalent with the deep structure. This is not easy to achieve since deep structures can be language specific. At any rate, differences between two sentences will be recognized when they are contrasted. By comparing sentences between English and Arabic, for example, a pre-nominal adjective can be made post-nominal in accordance with the grammatical rules of Arabic, and that is how equivalence is necessary for contrastive analysis studies. Since languages express meanings in different ways, it is only through functional analysis can perceived similarity provide explanations of challenging areas in translation

At any rate, translated texts can provide the data for the contrastive analysis, and the contrastive analysis might give explanations of specific difficulties that might be challenging in translation. The findings of the contrastive analysis, on the other hand, can be used in translation workshops to train translators and raise their awareness of the potential problems such as the intricacies of modifying annexation structures in Arabic versus their counterparts in English. Since Arabic and English are two remote languages, and structural differences are blatantly clear as indicated, the findings of such analysis may necessarily entail a construction of a new theory of translation, since a number of linguistic features in Arabic have no parallel forms in English and can thus be language-specific. These are just some instances that can provide insights into the nature of difficulties one may encounter in contrastive analysis. These insights, of course, are missing in studies of monolingual corpora that illustrate differences or similarities between elements of the same linguistic system.

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When-/whenever- conditionals and conditional taxonomy**Kevin King**

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The presentation of conditionals in textbooks and on websites all too often exhibits carelessness and/or error. One vastly overstated claim is that *when/whenever* can signal a conditional sentence, that these words may be substituted for *if* in factual generic and habitual conditionals where the simple present tense is employed in both the protasis (*if*-clause) and the apodosis (main clause.) The concepts of timelessness and time-bound are underdetermined, and the conditional taxonomy that backgrounds the teaching of *when*-conditionality is faulty.

Keywords: Factual, Habitual, Inference, Timeless, Conditional, Taxonomy

Notoriously difficult for L2 learners, conditionals remain endlessly fascinating for philosophers and linguists as well as language teachers. Counterfactual-conditional thinking is strongly linked to the philosophical question of free will. And truth-functionality in counterfactual conditionals has perplexed philosophers from Frege (1890s) to Goodman and Quine (1980s.) But such thinking is as important pragmatically as philosophically. A language tutor in the U.S. who meets via Skype with a student in China at a prearranged time will find it hard to figure out how daylight savings time change will affect both participants without asking herself the counterfactual question: *What would the time be for my student be if, via daylight savings time, the clock here had not been turned back one hour?*

For the English language learner, conditionals are particularly difficult due to the complex sequence of tenses in the four types of conditionals that are further complicated by the mixing of types. Mastering the rules and spontaneously producing grammatical utterances takes a great deal of study and practice, as any ESL teacher will tell you.

Methodology

Qualitative research design for this study involves secondary sources and communication with website managers and authors along with reflection on the responses. Most salient in this regard are the textbooks of Celce-Murcia and Larsen-Freeman (1983, 2016), whose work is the most commonly cited source and authority on the classification of *when* and *whenever* conditionals.

Taxonomic Problems

The viability of *when/whenever* conditionals depends on where they fit in conditional taxonomies. This entails first examining the two most prominent of these. Celce-Murcia and Larsen-Freeman divide factual conditionals into three types: generic, habitual, and inference. Generic factials express relationships that are true and unchanging (normally scientific); they are timeless. Habituals are timeless and differ from generics in that the relationships they describe are based on habit; they are typically true. Implicit and explicit conditionals express inferences about specific time-bound relationships (2016, p. 580-581).

Table 1

Factual conditional taxonomy

Conditional Type	Description/Distinction	Time/Location Relation	When-whenever substitution
Generic	Relationships that are true and unchanging	Timeless	Yes
Habitual	Relationship based on habit and are typically true	Timeless	Yes

Implicit	Express inference	Time-bound in <i>if</i> - No clause or location-bound (clause not mentioned) ¹
Explicit	Express inference	Time-bound in <i>if</i> - No clause ²

One of the more vexing aspects of the taxonomy is how severely undetermined are the concepts of *timeless* and *time-bound*. Asked to clarify the distinction of these concepts, Larsen-Freeman (personal communication, October 16, 2016) replied, “Timeless means that it is not bound to a specific time,” which does little to disambiguate the meaning of binding.

The final category in the Celce-Murcia/Larsen-Freeman taxonomy is inference conditionals (implicit and explicit), which refer to “specific time-bound events or states in the *if*-clause.” *When* cannot substitute for *if* without changing the meaning while generic and habitual truth conditionals are not thus limited, (2016, p. 581). Alas, as for these two characteristics, contradictions abound.

Inferential conditionals are often identifiable by the explicit or implicit feature: *if x, then y*. The prototypical example of inference is, “If there is smoke, there is fire.” The Brooklyn College ‘Smart Tutor’, for instance, uses this conditional to explain inference in modus tollens (*Modus tollens*). Yet Larsen-Freeman claims that this example is not an inferential but a generic factual conditional (personal communication, October 16, 2016). From a semantic point of view, it would be hard to be more wrong. It is quite plain to the general discourse community that smoke often occurs with no accompanying fire, so there is no ‘fact’ here. Scientifically put, when there is little or no oxygen present, fuels smoke without igniting. The most plausible reason for

¹ One would assume that, as in the case of the *if*-clause, ‘location-bound’ would refer to the *if*-clause.

² Both Celce-Murcia/Larsen-Freeman (2016, p. 581) and Miller incorrectly employ the term ‘result clause.’ To wit: “If that was a homerun, it was Trout who hit it.” The result cannot precede the antecedent; time does not flow backwards. An iconic example is Nelson Goodman’s, “If the light is on, someone flipped the switch” (1983). Nicholas Rescher offers the example, “If the grass is wet, then it has rained” (2007, p. 26) and notes that while conditionals can represent cause and effect, many do not; e.g., “If tomorrow is Sunday, today must be Monday” (p. 26-27).

Larsen-Freeman's claim is that, by her lights, inferential conditionals are time-bound and do not brook *when*-substitution, while in this case, the sentence is timeless and *when*-substitution clearly works:

- (1) When there is smoke, there is fire.

Larsen Freeman thus finds herself in the uncomfortable situation of insisting on a taxonomic rule that flies in the face of semantics. And this is not an isolated example. A similar problem emerges with physicist Arthur Eddington's postulate:

- (2) a. *If* time is an arrow, then it moves in only one direction.
b. ?*When* time is an arrow, then it moves in only one direction.

This is clearly an inference, consistent with the taxonomic rule that in inference conditionals *when* cannot be substituted for *if*.³ But, like the preceding example, there is no reference to a specific time (indeed, time as a generality is the point of the utterance), so it is not time-bound, as inference conditionals are alleged to be.

The following inferential conditional (*when*-substitution is not possible) also defies taxonomic definition. It is not time-bound in the *if*-clause (or in the conjunction of actions/events, and *love* in the present simple tense is semantically timeless.)

- (3) a. *If* God loves all creatures, he loves my dog Cujo.
b. ?*When* God loves all creatures, he loves my dog Cujo.

Conversely, there are clear location-bound implicit inferentials where *when*-substitution works:

- (4) a. *If* someone is at the North Pole, every direction in which he moves leads southward.

³ A Google Search of "When time is an arrow" yields only one result. "Whenever time is an arrow" yields zero results. "If time is an arrow" yields 81,000 results.

- b. When someone is at the North Pole, every direction in which he moves leads southward.

Said movement is obviously not a ‘habit’ predicable of anyone.

The following sentence (A) is a timeless habitual factual according to the Celce-Murcia/Larsen-Freeman definition, while sentence (B) is clearly habitual, given its parallel structure, but is bound to specific times, leaving it homeless in the taxonomy. The main clause is neither implied nor inferred but stated as fact.

- (5) a. If Sally does the dishes, Desmond always dries them.
b. *If* Sally does the dishes on Tuesday, Desmond dries them on Wednesday.⁴

Habitual factual conditionals, according to Celce-Murcia and Larsen-Freeman, express past or present relationships that are *typically true*. Consider:

- (6) a. If you go on a low-carb diet, you lose weight.
b. If you go on a low-carb diet, you don’t lose weight.

Both a. and its inverse, b., can be logically asserted but both cannot be true. Perhaps the definition of habitual factual conditionals should be amended to be expressive of “either past or present relationships that are asserted to be typically true.” But the larger and undiscussed issue is what the authors mean by ‘typically true’, how that differs from ‘true’ simpliciter, and why truth in its varying degrees matters.

The hedge perhaps is left inchoate due to the unexplored taxonomic problems of assertions that were once considered *fact* by a large discourse community but according to the same or similar authorities no longer are (a., b.) and assertions that are taken as fact by some but not so by others (c.). The necessity of truth leaves no place for these in the taxonomy.

⁴ Note that ‘*when*-substitution’ here works, as it should in habitual conditionals.

Now location bound, where do they fit in the taxonomy? Semantics recoil at the suggestion that they are now inferential. It would behoove the authors to flesh out both the role of “location-bound” in determining the classification of a conditional and the concepts of timeless and time-bound, referencing the appropriate clause or clauses of the conditional and explaining what “it” refers to in Larsen-Freeman’s reply, since the notion of timeless/time-bound for all students and most teachers is far from transparent.

More problems arise when taxonomic criteria conflict, which occurs with some frequency when generic fact appears also to be inferential. For instance:

(10) *If* all crows are black, red-tailed birds are not crows.

While the *if*-sentence seems to express inference,⁶ it clearly expresses a true and unchanging relationship—crows are always black and all red-tailed birds are not crows at all times. Further, the state in the *if*-clause is timeless, while inference conditionals are time-bound in the *if*-clause. Moreover, Celce-Murcia and Larsen-Freeman assert that implicit inference conditionals “are conversational in flavor” (2016, p. 580), and there is nothing conversational about the *if*-sentence here.

Moreover, lacking a home in the taxonomy are questions like, “If he escaped, how did he do it?” The sentence is clearly not generic or habitual, which leaves only inferential, and it appears to refer to a non-explicit time-bound event. However, *when* may be substituted for *if*, which we are told is not possible in inferential conditionals, and not only does the sentence appear semantically non-inferential, but as Declerck and Reed point out, “Conditionals with a non-assertive Q-clause [main clause] are never inferential” (2002, p. 45).⁷ Note that the sentence may be used to describe a fact (he did escape) or an uncertainty. Either way, the conditional—with its sequence of present tenses—has no place in the Celce-Murcia/Larsen-Freeman taxonomy.

The second prominent conditional taxonomy is Julia Miller’s. She defines ‘timeless’ as ‘outside of time’ and ‘time-bound’ as “referring to present, past, or different times” (2019).

⁶ In classes in Logic the iconic sentence is considered inferential.

⁷ cf. similar structures: “If Casey struck out, why did some of the fans cheer?”, where ‘when’ substitution is possible: *When Casey struck out, why did some of the fans cheer?*

Table 2***Factual conditional taxonomy by Miller (2019)***

Timeless		Time-bound	
Generic	Habitual		
Outside time	Present or past time	All times	Past time
Present tense	Present or past tense; or would + infinitive	Same or different tenses or modals	Past tense + modal + have + past participle
e.g. If you heat water to 100C, it boils	e.g. If I estimate the results first, it always helps. If we misinterpreted the results, we indicated this immediately	e.g. If you create a spreadsheet, you can formulate the results more easily. If you legislate for X, it could occur. If you researched the area, you must have realized the problem before we did.	e.g. If they financed the project, they may have distributed the product too.

Miller acknowledges that her taxonomy is based on that of Celce-Murcia and Larsen-Freeman, but it differs in several respects. It separates time-bound factual conditionals into two categories: implications and inferences, but how an implication differs from an inference is not explained. Time-bound tenses may be modals, same tense, or different tenses, but for ‘implications’ there are no examples with present tense in both clauses so that we might see how she distinguishes habituais from implications, all of the examples for which latter contain modals in the main clauses. Inferences are exclusively about the past, so present and future events must

be described as ‘implied’ and not ‘inferred,’ an opinion that is not widely shared. Moreover, there is no mention of either location-binding or truth in assertions.

Miller does not explain the difference between ‘outside time’ (generic) and ‘timeless’ (habitual.) Nor does she define or explicate the perplexing phrase ‘outside of time.’ The following factual conditional is clearly habitual but the relationship of protasis to apodosis is just as clearly bound in time:

(11) If Pontius ate fish, it was on Friday.

When and whenever conditionals (WWE)

From the linguistic arena comes the contention that in generic and habitual (factual) conditionals, ‘when’ and ‘whenever’ can be substituted for ‘if’ without changing the basic meaning of the sentence. This section is dedicated to demonstrating the errancy of this, albeit minor, pillar of ESL pedagogy, which has been widely disseminated via textbooks and is rife on the Internet. For pedagogical purposes, the error needs to be corrected.

The WWE conditional fallacy appears to have its roots in Celce-Murcia and Larsen-Freeman’s influential and valuable *Grammar Book* (1983, 2016).⁸ These authors along with other *when*-conditional advocates have four major hurdles to clear from the get-go. First, why would a speaker with a long list of conjunctions available to signal a conditional idea unambiguously (*if, iff, supposing, and, or, provided that, given that, etc.*), choose a time-word (*when, whenever*) instead? To do so would be to ask the interlocutor to process the antecedent and the main clause, noting that they are both in the present tense and that they represent a general truth or habit and then conclude that the speaker meant to communicate a conditional relationship between the two clauses and not a time-relationship.

⁸ Others in this camp include Marcella Frank (1972), Michael Swan (2002), and perhaps most prominently, Nicholas Rescher (2007), who holds that the aspect of conditionalization is often disguised, that *when*-conditionals include statements such as, “Wherever he goes, they follow him” (If he goes someplace, they follow him.) Even descriptive statements can contain a conditional message, e.g., “Dogs are mammals” means that if a creature is a dog, then it is a mammal (p. 3). Obviously, with this sort of loose criteria, *when* and *whenever* may be considered conditionals. However, for all but theoretical purposes, Rescher may be considered off the conditional reservation. No ESL text maintains that “Dogs are mammals” is a conditional. Notably missing from this camp are Quirk and Greenbaum (1973).

The second hurdle is why we use the expression “*If and when*” if *when* by itself can represent a condition? A *Google Search* of ‘*If and when*’ yields 26,300,000 results. Six out of ten of the results on the first page of a search of “If and when I need” are factual conditionals, including these habitual factials:

- (12) a. *If and when* I need a tow, I know that flack (*sic*) has the knowledge and skill to get my bike or truck home safe [...]
b. They are the first on my list to call *if and when* I need new doors and windows.

Third, if it is the case that *when* and *if* mean the same thing in generic factual statements (e.g., If water reaches 32°F, it boils.), isn’t it just as logical to claim that *if* is a time word as it is to claim that *when* is a conditional?

Fourth, that [*if*-x = *when*-x = *whenever*-x] is a hard epistemic pill to swallow. First there is an expectancy implied in *when* that is not implied in *if*. Second, *when* and *whenever* are normally distinct, with the latter implying intermittency, interruption, or repetition. And if Rescher (2007) is right, *whenever* implies a generalization that is not present in *if*. While it is clear that these distinctions sometimes seem to disappear with generic and habitual factual conditionals, it is *prima facie* much more difficult to claim that in those two conditional types they always do.

One popular text, Freire and Jones’ *Q: Skills for Success, Listening and Speaking 4*, makes a number of specious claims, beginning with, “Conditional clauses can also begin with *when* or *whenever* to describe a general truth or habit” (2015, p. 195). The example they give is completely misinterpreted:

- (13) a. “When I **practice** in the afternoon, I **take** my soccer ball with me.
b. (I only take my soccer ball to school when I practice in the afternoon)”
[p. 195].

The parenthetical paraphrase is faulty in that there are three possible interpretations, none of which are represented by the original sentence. 1-Given the placement of “only,” the sentence

actually means that the speaker does not kick or bounce the ball but merely takes it. 2-All balls except the soccer ball are necessarily excluded. 3-The authors misplaced a modifier and meant to say that the speaker takes the soccer ball “only when” he/she practices in the afternoon, an equally erroneous inference.

The authors then claim that *real conditionals* can be used to express advice:

(14) “When you throw the ball, remember to lean forward a bit” (p. 195).

But this sentence expresses only co-occurrence. It is not a conditional. If it were, then one would be able to substitute *if* for *when* without changing the meaning.

(15) ?*If* you throw the ball, remember to lean forward a bit.

Freire and Jones make the same mistake in their example of real conditionals expressing *instructions*:

(16) “When I pick you up from practice, remember to bring your equipment with you” (2015, p. 196).

This again is co-occurrence, not conditional, for the meaning is substantially changed by substituting *if* for *when*:

(17) ?*If* I pick you up from practice, remember to bring your equipment with you.

Via the Internet, we have the same claim at Englishpage.com—that *if* and *when* are used interchangeably in the Present Real Conditional. “Using ‘if’ suggests that something happens less frequently. Using ‘when’ suggests that something happens regularly.

Examples:

- **When** I have a day off from work, I usually go to the beach.

- *I regularly have days off from work.*
- **If** I have a day off from work, I usually go to the beach.
- *I rarely have days off from work”* (Present Conditionals).

The interpretation of the *if*-sentence to mean “rarely” is a heterodox stretch to say the least, but consider as well as situation where ‘when’ cannot mean ‘regularly’:

- (18) a. **When** I have a day off from work, which happens from time to time, I go to the beach.
 b. **If** I have a day off from work, which happens from time to time, I go to the beach.

Obviously, the frequency of going to the beach in both examples is the same, and the site’s *if* and *when* distinction (rarely/regularly) fails.

On another prominent website, *Grammar-Quizzes.com*, Julia Sevastopoulos revised her September 2016 stance that *when*- could be synonymous with *if*- after communication with this author (October 5, 2016). *If/when*, we are told now (2019) can express a routine response to a situation; *when* expresses more certainty than *if*. But that, ipso facto, is an admission that the meanings are not synonymous. Further, the idea of certainty needs to be tempered, acknowledging that at times the notion of expectancy is more accurate, especially in view of Nicholas Rescher’s admonition, “And saying ‘When inflation comes, prices rise’ or ‘When in doubt, he punts’ issues no assurance that the antecedent circumstance will be realized, but rather uses ‘when’ in the sense of ‘whenever’ to effect a generalization” (2007, p. 20).

Returning to Celce-Murcia and Larsen-Freeman, we have the claim that: “for both generic and habitual conditionals it is possible to substitute *when* or *whenever* for *if* and still express more or less the same idea” (2016, p. 580). The illegitimacy of the claim is clear in the following examples where *when* may be substituted but *whenever* results in semantic nonsense:

- (19) a. *If* you are an opium addict, you ingest opium.

- b. *When* you are an opium addict, you ingest opium.
- c. ?*Whenever* you are an opium addict, you ingest opium.⁹

- (20)
- a. *If* you are rich, the whole world is your oyster.
 - b. *When* you are rich, the whole world is your oyster.
 - c. ?*Whenever* you are rich, the whole world is your oyster.

- (21)
- a. *If* God is in heaven, all is well with the world.
 - b. ?*When* God is in heaven, all is well with the world.
 - c. ?*Whenever* God is in heaven, all is well with the world.

I would hazard that even the *when*-sentence immediately above semantically differs from the *if*-sentence in that it implies that God is at times on sabbatical. The *if*-sentence, perhaps idiomatic, implies that God is always in heaven.

Habitual factual conditionals, which brook WVE-substitution, are also timeless, but they differ from generic factual conditionals in that “the relationship is based on habit instead of physical laws” (2016, p. 580). Celce-Murcia and Larsen Freeman misstate their premise here: generic factual conditionals are not based *only* on physical laws; Larsen-Freeman admits as much in personal correspondence (October 16, 2016). We can overlook the careless wording, moving to more fundamental problems. Consider:

- (22) *Habit/Repeated Event*: My wife has the habit of spending the money I make.

We can express this as a conditional:

- a. *If* I make money, my wife spends it.

⁹ Further examples:

- If* a dog is dead, it doesn’t run.
- When* a dog is dead, it doesn’t run.
- ?*Whenever* a dog is dead, it doesn’t run.

This is not inferential. It follows from the truism: dead dogs do not run.

- If* you are a football hero, you are popular.
- When* you are a football hero, you are popular.
- ?*Whenever* you are a football hero, you are popular.

cf.

b. *When/whenever* I make money, my wife spends it.

On the Celce-Murcia and Larsen-Freeman conditional presumption, minute or no change in the meaning should obtain via *when*-substitution. But the *when*- sentence stresses or implies an immediacy that is absent in the *if*- sentence. Further, some doubt about money-making is expressed in the *if*- sentence that is equally absent in the *when*- sentence.

Finally, the whole *when-conditional* edifice teeters upon considering the inverse of *if* and *when* statements in habitual factual conditionals.

(23) a. *If* I need beer, I go to the liquor store.

b. *When* I need beer, I go to the liquor store.

The inverse of the *if*-statement is coherent, but the inverse of the *when*-word statements is not.

(24) a. *If* I don't need beer, I don't go to the liquor store.

b. ?*Whenever* I don't need beer, I don't go to the liquor store.

c. ?*When* I don't need beer, I don't go to the liquor store.

And:

(25) a. *If* I need to file a tax return, I do it.

b. *When* I need to file a tax return, I do it.

The inverse:

(26) a. *If* I don't need to file a tax return, I don't do it.

b. ?*When* I don't need to file a tax return, I don't do it.

c. ?*Whenever* I don't need to file a tax return, I don't do it.

Exceptions to the contention that *when* and *whenever* are interchangeable with *if* in generic and habitual factual conditionals are numerous enough to warrant abandonment of the notion. Simply put, *if* and *when/whenever* map differently onto interpretations of meaning.¹⁰

Pedagogical implications

English language teachers and learners alike need to be aware of the error of instructing that in some sentences *when* and *whenever* can introduce a conditional with the same meaning as a sentence using *if*. It is hard to overestimate the reach and influence of Celce-Murcia and Larsen-Freeman's valuable *Grammar Book* in teacher-training, website instruction, and in ELT grammar textbooks. The authors need to reconsider their stance on the issue, as it influences, in a very constructive way, so many English language teachers.

Conclusion

In sum, none of the problems heretofore encountered are intractable. Moving forward, a number of steps may be taken to right, as it were, the conditional-teaching vessel. Conditional taxonomies should be carefully revamped, omitting the contention that *when* and *whenever* are equivalent to *if* in generic factual conditionals and habitual factual conditionals. More care must be taken in the presentation of conditionals; examples must be coherent, and more attention needs to be given to the notions of timeless and time-bound, explicating the difference with examples that students and teachers might find ambiguous. The role of location binding likewise needs more clarity. Elucidating these roles and differences is crucial, for the presumptive possibility of WWE conditionals in many cases depends on it. Also, the role of truth in conditional taxonomies needs reconsideration. Websites can provide a quick fix for some of these problems; with textbooks, new editions may address them.

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¹⁰ Barbara Dancygier (1999) echoed this contention.

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**A Conversational Analysis of Language Practices in the FL Classroom:
Data from a Ghanaian University Context**

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Abstract

Despite long-held anti-L1 attitudes that have dominated foreign language (FL) pedagogy for several decades, research shows that attempts to forbid own language use in the FL classroom have not been successful. Indeed, several researchers report that codeswitching is still an integral part of the foreign language teaching process in many countries around the globe (V. Cook, 2001; Lucas & Katz, 1994). Through the use of classroom observations and audio recordings at a Ghanaian public university, the author examines the pedagogical and sociolinguistic factors that influence language practices in the FLC. The data was analysed drawing on conversation analysis. The findings show that some of the factors that motivate code-switching in the FL classroom are linguistic trouble, learner confidence, and focus on meaning. Codeswitching also serves for sociolinguistic functions such as group bonding between students.

Keywords: language choice, Spanish FL classroom interaction; code-switching; Spanish FL pedagogy, conversation analysis

Introduction

The history of research on foreign language (FL) teaching has long been marked by an intense debate on language practices in the FL classroom. These debates which have lasted over 100 years (Hall & Cook, 2012) have been characterised by two tenets; namely, the monolingual

method and the bilingual method. Proponents of the monolingual approach, which has been the most dominant since the late nineteenth century, posit that the use of the L1 in the FL classroom should be avoided because it has debilitating effects on the language learning process. This tenet has different forms: the stronger version calls for a total ban on the L1 whereas the weaker form suggests its minimal use. Cook (2001) points out a third version which emphasises the benefits of the L2 rather than the negative effects of the L1: i.e., it postulates the *maximal* use of the L2 in the classroom.

Conversely, scholars who support the bilingual method argue that codeswitching (CS)¹¹ should be allowed in the FL classroom since language alternation is a natural consequence of language contact in multilingual contexts and it is an occurrence of the ‘real world’ (see Macaro 2005; see also Atkinson, 1987; Butzkamm, 1998; Jingxia, 2010; Moore, 2002). Drawing on Walsh’s (2002) description of the FL classroom as “a social context in its own right” (p.4), Rathert (2012) also notes that the FL classroom is “one discourse setting among others with a specific linguistic choice, and discourse in the FL classroom contains CS due to needs to interact, to initiate or keep communication flowing in the classroom” (p. 9).

In this paper, the author examines the merits of both schools of thought within the context of a hitherto unexplored Ghanaian setting with the aim of providing additional empirical evidence to the age-old debate on language practices in the FL classroom.

A review of the literature on own-language use

In recent years, there has been a shift from the monolingual approach to a growing interest in the bilingual method (Ariffin & Susanti Husin, 2011; Ferguson, 2003; Mitchell, 1988; Then & Ting, 2009; Yusuf, 2009). Mitchell (1988) carried out a two-stage research project on the teaching of second languages in Scotland using the communicative approach. Firstly, 59 language teachers in 20 schools were interviewed about their perceptions of the concept of communicative competence. Secondly, French instruction was observed in four secondary schools in central Scotland. The findings indicated that teachers considered the L1 to be appropriate for organizational instructions (such as seating and distribution of course materials). Other domains such as activity instructions, teaching grammar, teaching background, handling

¹¹ Going from one language to the other in mid speech when both speakers know the same two languages (Cook, 1991; as cited in Qing, 2012).

issues of discipline and explaining meaning, were considered by many as being inappropriate for FL use (Mitchell, 1988).

Additionally, Eldridge (1996) examined the code-switching of young learners (aged 11-13) of ESL in a Turkish secondary School. One hundred instances of codeswitching were transcribed for analysis. The participants were also interviewed about their CS habits and their perceptions about CS. The author found that CS was used for elicitation of equivalent items; floor-holding, metalanguage, reiteration, socializing, establishing group identity, and conflict control etc. The author concludes that there is lack of empirical evidence in support of the monolingual method, and that “the majority of code-switching in the classroom is highly purposeful, and related to pedagogical goals” (p. 303).

Ferguson (2003) provides a useful summary of the various existing studies on the functions of classroom code-switching in post-colonial contexts. He notes that CS helps pupils to understand the subject matter of their lessons. It is also used for classroom management discourse and interpersonal relations. More recently, Then and Ting (2009) investigated the functions of teacher code-switching in Malaysian English and science secondary school classrooms. The data which was obtained from two English lessons and a science lesson was analysed using Gumperz's (1982) semantic model. The findings revealed that code-switching was frequently used in the content-based lessons for reiteration and message qualification. The authors conclude that CS is indispensable for the achievement of teaching goals in content-based lessons involving students who are not proficient in the instructional language.

In addition, there has been a surge of studies related to the benefits of the *partial* use of the mother tongue in the FLC (Antón & DiCamilla, 1998; Butzkamm, 1998; V. Cook, 2001; Widdowson, 2003). Antón and DiCamilla (1998) analysed the use of the L1 in the collaborative interaction of English adult learners of Spanish from a psychological perspective using a writing task. They found that the L1 is used for task definition, for the maintenance of intersubjectivity, for scaffolding and for the purpose of externalizing one's inner speech. The authors conclude that the L1 contributes to scaffolding and increases learner interest in demanding reasoning tasks.

Other researchers have investigated the phenomenon from a purely attitudinal perspective; i.e., by examining the language beliefs and attitudes of students and teachers. Ríos & Campos (2013) conducted a survey among Costa Rican EFL students (20) and English teachers (10). The aim of the study was to investigate the effects of the use of the L1 on learners' TL competence.

They report that whereas some students believed code-switching ‘propitiates linguistic laziness’ and could therefore be an obstacle for L2 learning, the majority (70%) of the intermediate students strongly believed that codeswitching positively influenced their FL learning (p. 384). The participants believed CS between Spanish and English is not necessarily debilitating so long as students do not rely on it as their only learning strategy (p. 386). Similar beliefs were reported by the instructor participants. Sixty percent considered CS as a ‘part of language learning’ which was advantageous for bilinguals due to its function as a communicative strategy (p. 385).

Additional research (Atkinson, 1987; Juárez & Oxbrow, 2008; Schweers Jr., 1999) shows that it is the preferred learning strategy in most language classrooms. Schweers (1999) conducted a study among monolingual Spanish-speaking EFL students and teachers at the University of Puerto Rico. The research consisted of a survey and a recording of a 35-minute sample from three classes. The aim was to investigate the frequency and functions of teacher CS and students’ attitudes to CS. The majority of the student participants (88.7%) felt Spanish should be used in their English classes. Eighty six percent indicated they would like it (Spanish) to be used in explaining difficult concepts, defining new vocabulary items and checking for comprehension.

On their part, Juárez and Oxbrow (2008) carried out a survey among native Spanish speakers who were first-year EFL students of the University of Las Palmas de Gran Canarias. The aim was to examine if learners considered the use of the mother tongue and translation as a beneficial language learning strategy in a monolingual context. They found that contrary to the teachers’ efforts to discourage the use of the L1, 92 % of the student participants indicated that they believed that translation was a useful strategy in their learning process (p. 97).

This brief literature review demonstrates the mounting body of evidence that exists in support of the bilingual paradigm shift. Nonetheless, due to the significant variety of L2 classrooms across the world, additional research from varied classroom databases and unexplored contexts are still needed in order to attain deeper insights regarding actual practices in the language classroom and to connect the dots between research, theory and practice. As Hall and Cook (2012) point out, language learning is an international activity and it is important to note that “what is in vogue in the literature does not necessarily reflect what is actually happening in all parts of the world” (p. 272).

Objectives

Despite the longstanding debate on the topic, not much empirical evidence has been produced from an African University context. Of the existing literature, a greater part focuses on language alternation between African indigenous languages and English from a socio-psychological perspective (e.g., Adejunmobi, 2004; Amuzu, 2005; Essizewa, 2007; Barnabas Forson, 1979; Barn Forson, 1988; Yevudey, 2009) while others focus on CS from a pedagogical perspective (e.g., Agbozo, 2015; Amekor, 2009; Arthur, 1996; Asilevi, 2008; Sampson Kobla Ezuh, 2008; Sampson kobla Ezuh, 2014; Ferguson, 2003; Modupeola, 2013). However, with the exception of the unpublished thesis of Ezuh (2014) which reports on findings from a class which was predominantly made up of Francophone students of EFL at the Ghana Institute of Languages, these studies were carried out in primary and secondary school settings rather than university FL classrooms. The present study aims to bridge this gap by investigating the pedagogical and sociolinguistic factors that influence language practices in a Ghanaian University context.

Method

The research setting, data and analytical approach are described below.

Research Setting

The research was conducted in a public university situated in Ghana. Ghana is a multilingual country with 81 languages, 73 of which are indigenous and 8 are non-indigenous (Simons & Fennig, 2017). Most Ghanaians have one or two indigenous languages as their L1. However, due to colonization, English is used as the country's national language. It is also the main medium of instruction from the preschool level through to the tertiary levels. According to the 2010 Ghanaian census, there are 9,800,000 L2 users of English in Ghana. The participants of this study are therefore L3 (or L4, L5 etc.) users of Spanish. Due to the multifarious linguistic background of the present research setting, the authors will use the terms 'own language' and 'new language'. Cook (2010) defines own language as "the language which the students already know and through which (if allowed), they can approach the new language"(p. xxii). The new language is "the language being learned" (xxi–xxii). The own language of the participants of this study is English, whereas the new language is Spanish.

Research Data

The data for this research was collated from an audio recording of six Spanish classes at a Ghanaian public University. Due to space constraints, only 3 of the 6 classroom recordings were selected for the present analysis. The selection was done taking into consideration the three main subject areas taught at the university, namely: literature, civilization, and grammar. Oral classes were excluded because the goal of oral lessons is to improve speaking skills in the new language and thus the use of CS in these classes is minimal. Equally, oral lessons involve less extensive interactions than the classes selected for this research and the use of CS is more polemic in content-based lessons.

Although there is no official institutional policy on language use in the research setting from which the data was gathered, there is an undocumented institutional preference for the monolingual approach. The classroom recordings included second, third, and fourth year lessons. First year students were not included in the study because the main medium of instruction for that level is English. The official time allocated for each class was two hours. The recordings were transcribed using the Jefferson system of transcription notation which illustrates what is said as well as how it is said. This transcription convention was chosen because it offers an in depth account of the complex nature of interaction. The extracts used for the present analysis were selected by identifying themes that captured essential patterns and details about the data in relation to the overall research objective. Further information on the data are summarised in Table 1.

Table 1. Data Sampling Information

Class	Level	Subject	Native Speaker / Non Native Speaker	Classroom activity	No of students
1)	200	SPAN 201-Grammar and Translation I	Native Speaker Lecturer	Verbs 'ser' and 'estar'	85

2)	200	SPAN 205-Spanish History and Civilization	Non-Native Speaker Lecturer	The ‘Renacimiento’, ‘Barroco’ and ‘Picaresque’ Movements	85
3)	300	SPAN 313-Latin American Studies I	Non-Native Speaker Lecturer	Independence of Latin America and the Formation of New Republics	34
4)	400	SPAN 411-Latin American Literature: Prose	Non-Native Speaker Lecturer	Presentations on various literary movements of Latin American Literature	3

Analytical Approach

The author employed the Conversation Analysis (CA) methodological approach to CS in the analysis of the extracts from the L2 classroom interactions. Hutchby and Wooffitt (2008) define CA as “the study of recorded, naturally occurring talk-in-interaction” (p. 11). It focuses on the procedures and collaborative efforts employed by interlocutors for effective communication (Wei, 2002, p. 177). The CA methodology is upheld by four principles.

According to the first CA principle, there is ‘*rational design in interaction*’ (Üstünel & Seedhouse, 2005, p. 309). In other words, talk in interaction is “systematically organized, deeply ordered and methodic” (p. 309). As Üstünel & Seedhouse point out, this perspective has two implications for the analysis of CS in L2 classrooms. Firstly, turns in the L2 reflect the evolving connection between pedagogy and interaction. Secondly, CS is not a random occurrence, but rather, it is an avenue of orienting towards this connection (p. 309). In other words, the language of participants in L2 classroom interaction is determined not only by sequential issues but also in relation to the pedagogical focus.

The second principle of CA is that contributions to interaction are *context-shaped* and *context-renewing*. The third principle holds that “no order of detail can be dismissed, a priori, as disorderly, accidental or irrelevant” (Üstünel & Seedhouse, 2005) and the fourth stipulates that

analysis is bottom-up and data-driven. Üstünel & Seedhouse (2005) explain that by applying the classic question in a CA analysis of data: “Why that, right now?” to a study on CS in L2 classrooms, the researcher arrives at the answer(s) to the question “Why that, in that language, right now?”(p. 310). In other words, the Conversation Analysis approach “encapsulates the perspective of interaction as social/pedagogical action (‘why that’) which is expressed in a particular language in a developing sequence (‘right now’)” (p. 310).

The CA approach was advantageous for the purposes of the present study because of the distinctive and reflexive relationship between pedagogy and interaction. The CA approach thus affords an essential channel for investigating the motives, effects and functions of language choice in the FL classroom.

Findings

The results from the analysis are presented below.

The association between pedagogical focus and language practices in the FLC.

The Spanish FL classroom at the present research context is an institutional setting with specific institutional goals which is the teaching of a foreign language as well as the culture and history of its speakers. As with any other human activity, language and communication are indispensable requirements for the achievement of these goals. The FL classroom, as compared to other classrooms, is unique because the FL is the means through which the desired lesson contents are taught and it is also the pedagogical focus in itself (i.e., students learn the language with the desire to understand and speak it). As Long (1983) puts it, language is “both the vehicle and object of instruction” (p.9, cited in Seedhouse, 2009, p. 2). The analysis of the data revealed that the language choices of the participants of the classroom interactions were modified whenever there was trouble; that is, whenever the means of communicating and transmitting the lesson contents was deemed insufficient. In the extract below which was taken from a second year civilization class, the lecturer invited contributions in the students own language in order to get the lesson going.

Extract 1: SPAN205

- 1 P¹²: El Poema del Mío Cid... ¿de qué trata? (0.4) ¿Alguien tiene una idea? Habéis visto este poema, El Mío Cid. Sí, ¿de qué trata? (0.3) → *Okay English, in English... Do you know the author? El mío cid. Who is the author? Who is the author? ¿El autor, cómo se llama?*
- 2 E¹³: Anonymous
- 3 P: Es anónimo. No sabemos quién fue el autor.

The dominant classroom interaction pattern is teacher-students oriented. The sequence in extract 1 demonstrates the relationship between pedagogy, interaction, and language choice. P introduces the pedagogical focus which is a discussion about the Mío Cid. The sequence organisation reflects the influence of pedagogic focus on language choice in that although P invites the class to take turns, the learners do not respond to his invitation. Since an answer is needed in order to proceed, P switches codes after a few seconds pause with the presumption that students are not participating due to his initial language choice which was the new language. The alternation of language codes was thus necessitated by the nature of classroom interaction. Classroom interactions have a unique structure in terms of sequence organisation. As Sinclair and Coulthard (1975) note, “classrooms use the interaction sequence Initiation, Response and Feedback (IRF) which is peculiar to teaching whichever language it is done in” (as cited in Cook, 2001). Subsequently, a missing link in the sequence (in this case ‘response’) impedes the progression of the lesson. The lesson advances when E takes the turn in line 2. The response in English suggests that students’ reluctance or delay in contributing was indeed due to language limitations. This supports Butzkamm’s (1998) assertion that the mother tongue (or own language) is “an absolute necessity for the pupils to clarify their ideas and get them across to the class” and, in its absence, discussions in the FL classroom “will invariably suffer and degrade” (pp. 90-91). In the above extract therefore, P uses CS in order to encourage the turn taking of the students and this is especially important in an interactive lesson which requires active participation from students. Cooperative interaction is important for the ongoing content-based lesson which, unlike grammar or oral lessons, requires extensive contributions from the learners.

¹² Profesor ‘teacher’

¹³ Estudiante ‘student’

Once P attains the effects of the language alternation (i.e., eliciting students' contributions), s/he repeats the answer in Spanish and this reinforces the new language as the main medium of instruction. P thus encourages students to show affiliation by using the new language. This creates room for students who can respond with the new language to do so. A similar occurrence is observed in the following extract in which P uses CS to invite pupil contributions.

Extract 2: SPAN205

- 1 P: Ahora, errrr la semana pasada, o sea, el jueves pasado, qué habéis hecho con vuestro profesor. ¿Qué habéis hecho? ¿Alguien recuerda? (.) ¿Lo que habéis hecho? (0.4)? ¿Quién recuerda? Algo, lo que sea. → *En español o en inglés. En inglés, podéis decirlo en inglés.* Sí, adelante. En inglés. Voluntario (.) Qué habéis visto, habéis aprendido. (0.7) ¿Nadie recuerda? ¿Sí, te llamas cómo?
- 2 E: Me llamo XXX
- 3 P: Sí XXX. Ahah. ¿Qué recuerdas?
- 4 E: We looked at the literature of Spain, () the Catalan language and then also the other languages that follow ()

P's questions place the sequence within the teacher's pedagogical plan for the lesson, which was to encourage a recall of the contents of the previous lesson and to subsequently add additional information from the new topic for the day while inviting students to practice the new language. This learning environment reflects P's input to the language learning process and the facilitation of language output through interaction.

Extract 3: SPAN411

- 1 E1: Por ejemplo, la medida de Galtón es eliminación que es algo como *harsh...*
- 2 P: Wow I understand. Muy bien eh
- 3 E1: Ahaaa. Pero la medida de Vasconcelos es muy↓
- 4 P: Pacífica.
- 5 E1: Pacífica.
- 6 P: Sí

- 7 E2: Pero dije que erh...tiene...tengo...tengo una problema ...
- 8 P: Un problema
- 9 E2: Un problema con la meta. Es para desaparecer los negros y los indígenas.
- 10 E1: Pues es ()
- 11 E2: [Sí no tengo un problema con...
- 12 E1: ¿Puedo explicar en inglés? →
- 13 P: Sí, sí, sí puedes.
- 14 E1: > < *That's the system that they have in the Latin American countries. There are inferior people and there are superior people.*

Extract 2 is from a Latin American studies class. The pedagogical focus is to invite the students to share their opinions and once more, practice the new language within the context of the topic for the day. Such interactive context based lessons promote positive responses and motivation because the teacher engages with the ideas and personal experiences of the students. However, a deficit is observed in the students' grammar and lexical repertoire. In Line 1, E1 uses a one-word CS for floor-holding and this enables her to keep the interaction going. P does not offer the new language equivalent. This helps to avoid a disruptive interruption of the student's flow of thought. This inaction, in this first instance, is recommendable because although language teachers need to correct their students' errors in order to improve their output, frequent interruptions and corrections could discourage students and reduce their risk-taking. Thus, P rather shows affiliation by acknowledging understanding in the own language before switching to validate E1's contribution in the new language ('*muy bien, eh*'). This encourages E who uses the exclamation '*ahaaa*' to signify relief and satisfaction about P's act of agreement and confirmation. However, in the next turn, E1 encounters trouble once more. This time, P offers the new language equivalent, which E1 repeats. Line 7 which is a contribution from E2 also demonstrates the emergence of yet another trouble which is grammatical in this case. There are instances of both learner initiated self-repair (regarding the conjugation of the verb 'tener') and teacher initiated other-repair (gender agreement in Line 8). The type of correction used by P is short repair; that is, it is precise and reduces the undesirable effects of interruption such as the fear of negative evaluation.

E1 reinitiates the turn taking. However, the transition of speakers shows there is an overlap due to the interruptions from E2. This overlap constitutes a defiance of the one-party-at-a-time normative speech and signifies a disaffiliation between E1 and E2. E1's analysis of the degree of disaffiliation positions her/him in a defensive state. S/he feels disabled and handicapped by her deficiencies in the new language, and is prompted to make a request to be allowed to use the own language. P's repetitive use of the affirmative (*sí, sí, sí*) in Line 13 demonstrates his/her recognition and understanding of the need for a communicative strategy and probably, for an efficient time saving device. Additionally, the use of CS becomes necessary because the smooth flow which is characteristic of natural interactions (see V. Cook, 2001, p. 413) is inhibited by the student's linguistic limitations. Resorting to code-switching thus offers a 'safe-space' (Arthur, 1996) which enables learners' contribution to classroom discussions and enhances their engagement with the curriculum. In Cook's words "*Naturam expelles furca, tamen usque recurret*: like nature, the L1 creeps back in, however many times you throw it out with a pitchfork" (2001, p. 405). A similar situation can be observed in Extract 4.

Extract 4: SPAN411

- 1 E: Una vez convencido que existan razas superiores y razas inferiores, que los
 () y que además la diferencia entre las razas se deben a su distinta naturaleza biológica. No pienso que quería eliminar (.) → erm in English...
- 2 P: Puedes.
- 3 E: *I think se¹⁴ in my opinion, he thought, erh he thought that it's not only the blacks and the natives who are inferior but there are characteristics in the superior races that also have to be eliminated. That was the reason why...*
- 4 P: *But* no ha dicho...en lo que tú estás leyendo no ha dicho...no está ahí...no ha
 dicho que los supuestos superiores también tengan...tienen estos genes.

In the above extracts, the initial attempts made by the learners to use the new language demonstrates their affiliation with the pedagogical focus of the lesson; (i.e., to express their ideas

¹⁴ That (Akan)

while practicing the new language). This desire is however inhibited by their lack of proficiency in the new language. The numerous instances of trouble keeps the institutional business from progressing¹⁵ and creates the need for a communication (time saving) strategy. E feels handicapped by his/ her inability to communicate due to linguistic barriers and as a result, insisting on the use of the L2 would deprive the learner of the ability to express himself/herself. Learners therefore seek permission to use the own language which demonstrates that it is their preferred learning strategy when it comes to argumentative topics. This can be illustrated further with the extract below:

Extract 5: SPAN411

- 1 E1: Galtón estaba convencido que existían razas superiores e inferiores que poseían atributos no solo físicos pero también intelectuales, morales y sociales.
So I think se he was trying to make the race better by eliminating genes which are not good in both the superior race and the inferior race ::
- 2 P: *Yeah I understand your point. But do you share her point of view?*
- 3 E2: *No.*
- 4 P: *Why no? Because erh...okay you wanted to say something. One second eh. Juana you wanted to say something.*
- 5 E2: *Las...esta cita está hablando sobre la razón las blancas...*
- 6 P: *¿Qué?*
- 7 E2: *...superior. Dice que los at ↓*
- 8 P: *Atributos, mmmm*
- 9 E2: *los atributos físicos, intelectuales, morales, sociales, son la razón que la distinción supuesto entre las razas superiores e inferiores. Sí, ¿entendéis?*
- 10 P: *→ You can explain in English. Escuchad.*
- 11 E2: *Okay sure. He's saying...he's saying that like their biological...there's a biological basis for these distinctions between the races, that has like resulted in physical, intellectual, moral and social differences that make certain races better than others ::*

¹⁵ Perhaps, it is in this vein that Cook points out that “dismissing the L1 out of hand restricts the possibilities for language teaching” (V. Cook, 2001, p. 414).

- 12 E1: *But he also said se the superior races and the inferior races...*
- 13 E2: *He's just saying those traits distinguish the two. He's not...*
- 14 E1: *But then he goes on to say he'll modify the () and he'll "mejorar" the () I believe it's not only for the inferior races but also for the superior races who also had genes which were not good and could be inherited.*

The above extract demonstrates that the students' use of CS is not a demonstration of linguistic laziness. Many foreign language learners desire to communicate in the TL (see Author, in press; also Sampson Kobla Ezuh, 2008). However, the need to communicate effectively overrides the desire to practice the new language. Actually, the use of CS in the above extract is teacher-induced (see Seedhouse, 2009) since it is P who suggests a switch to the own language. An interesting observation here is the one-word CS in Spanish (*mejorar*)¹⁶ which demonstrates a desire to continue using the new language. Such students who are willing to take risks can be considered as highly motivated students. On the other hand, students with low motivation might refuse to participate in class discussions as can be observed in the following extract in which P allocates E a turn.

Extract 6: SPAN411

- 1 P: No, no digas no lo sé, entonces ¿no sabes lo que has dicho? ¿Puedes explicárselo en inglés? →
- 2 E: *It's a process to eliminate erm, los negros y (h) the weak (.) It's a process like a genetic process to eliminate those who are not from good lineage or...it's about...yeah strong.*

Students who experience communicative apprehension, which is a conceptual building block of foreign language anxiety (see Horwitz, Horwitz, & Cope, 1986), manifest behavioural patterns such as communication avoidance and communication withdrawal. As MacIntyre and Gardner (1991) explain, the anxious student may “perceive the second language as an uncomfortable experience” ... and be “less willing to try uncertain or novel linguistic forms” (p.

¹⁶ and even Akan (se)

113). In the content-based classes from which the data were collected, the institutional goal is to teach both form and content and interactive communication is imperative for the attainment of this goal. The extracts however show that the quality of teacher-student and student-student interactions are undermined by learners' linguistic limitations, hesitance to take risks, and fear of negative evaluation¹⁷. As a result of these factors which pose significant obstacles to achieving pedagogical focus and overall institutional goals, there was a compromise on the teaching approach; i.e., the language choice of the classroom.

In fact, Stern (1992) notes that the most appropriate balance of intra- and crosslingual approaches will depend on the specific purpose and context of learning. In line with his assertion, it remains clear that intralingual strategies should dominate if communicative proficiency (e.g., orals, grammar) in the new language is the principal goal of teaching and learning. Nonetheless, in the present data in which the teaching of literature and civilization are the goals of learning, crosslingual strategies should be an important part of classroom life (p. 301). In other words, given the reflexive relationship between pedagogy and interaction, the organisation of the interaction should vary as the pedagogical focus varies (Seedhouse, 2009, p. 2).

The pedagogic functions of own-language use.

The analysis of the data showed that teacher initiated or induced CS¹⁸ was also used for reasons other than linguistic deficiencies. In the following extract, P alternates language to explain the lesson contents and to check comprehension.

Extract 7: SPAN201

- 1 P: *You're not having the class right now, you're not even in the class, you're not doing the class right now. Is it future? It is, do you see the future there?*
Entonces ese futuro en español es presente, vale? Presente. Ese Voy, voy, voy

¹⁷ Horwitz, Horwitz and Cope define this as an "apprehension about others' evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively" (Horwitz, Horwitz and Cope 1986, 128).

¹⁸ CS is defined as initiated when the speaker herself or himself alternates codes. It is however described as induced when the teacher switches codes in a bid to encourage learners to take a turn in the new language (Üstünel & Seedhouse, 2005, p. 303).

I'm coming, yes? Or I can be even sitting and say 'coming, coming, meba'¹⁹, meba, voy, voy, voy, voy, voy, voy, voy' vale? no 'estoy yendo, estoy yendo' ¿vale, entendido, sí?

In the extract above, P alternates codes between the new language, the own language and even the common indigenous language shared by the students. This is an extra step taken to ensure comprehension by juxtaposing the linguistic structures of the three languages. The use of Akan serves for reiteration as it situates the subject matter within the cultural context of the learners.

This is what Jacobson (1990) terms the 'New Concurrent Method', i.e., the use of code-switching by the teacher at key points for particular purposes such as the explanation of important concepts, classroom organisation and discipline (as cited in V. Cook, 2001). As Cook explains, with this method, "the language classroom becomes a real L2 use situation in which both languages are concurrent, not a pretend L2 monolingual situation" (V. Cook, 2001).

Extract 8: SPAN411

- 1 P: Y llegó un momento en que los grandes hacendados o latifundistas... ¿lo llamáis en inglés *land owner*?
- 2 C: Sí
- 3 P: *Or large land owner, right?* Que tiene grandes extensiones de tierra, ¿sí? ¿Cómo se dice eso, eh? En inglés. ¿Eh? ¿Eh? No ¿*landlord*? No ¿*landlord*. *Land*...? Juana eh (risa) alguien está hablando. *Land* ¿qué? *land owner*, sí.
- 4 E: *Real bosses of the land* (h)
- 5 P: ¿Eh?
- 6 E: *Real bosses of the land* (h)
- 7 P: *Real bosses of the land* () okay. *Land owners* son los latifundistas o en el Perú se llaman los gamonales eh

The teacher induced CS illustrated in the extract above serves for eliciting vocabulary equivalents and it also helps to ensure comprehension by drawing on previous knowledge in the

¹⁹ Am coming (Akan)

own language. Stern describes this process in language learning as “natural language behaviour” which is an “indisputable fact of life” (1992, p. 282; as cited in V. Cook, 2001) because learners will inevitably resort to their own language as a reference system for the new language. Another example of comparison between the own language and the new language is illustrated in Extract 9. The teacher navigates the language options with the pedagogical focus in view.

Extract 9: SPAN201

- 1 P: En inglés, sois muy egoístas, ‘*mine, mine, mine, mine, mine*’ pero en español
no usamos posesivos, no usamos posesivos. *Because whose is the leg, if its not yours?*
- 2 C: [laughter]
- 3 P: O no? Sí o no? Yo digo ‘me me’, yo ‘me he roto la pierna’, sí? *I have Headache ...*
- 4 E: Tengo dolor de cabeza.
- 5 P: Tengo dolor de cabeza, muy bien. Más natural, me duele ...
- 6 C: La cabeza
- 7 P: La cabeza. *Because its mine, its not yours, its mine so I don't need to say it*, entendéis? Sí? Entonces estoy ‘hasta las narices’, sí, no ‘hasta mis narices’, *because its obviously yours*, sí. [inaudible] pero cuando es tuya, es obvio, es obvio, sí, sí?

Furthermore, teacher initiated CS plays other functions such as classroom management. In extract 10, it is used for discipline as the teacher reprimands the learner for misconduct. This is what Goffman (1974) describes as “a shift of ‘frame’; i.e., a movement from lesson content toward some 'off-lesson' concern (e.g., disciplining a pupil and gaining and focusing pupils' attention)” (as cited in Üstünel & Seedhouse, 2005, p. 308).

Extract 10: SPAN201

- 1 P: Okay. estar harta, estar hasta las narices, sí? Estoy hasta las narices,

estar harta, bien. No habléis así, no habléis así. *You were pushing your friend, yes, to the centre but you were keeping, you were hiding. Its unfair, no es justo.*
Vale. Último grupo.

Aside the pedagogical focus, CS in the FL classroom plays some socio-psychological roles as well. For example, it functions as a kind of ‘relationship definer’ and serves to differentiate between formal and informal interactions. Whereas teacher-student interactions were characterised by attempts to use the new language, student-student interactions were marked by the use of the own language.

Extract 11: SPAN201

- 1 P: Escribimos la escena err, escribimos. Vale, un minuto para terminar el texto, un minuto para terminar el texto. Un minuto.

G1: [group discussion]

- 2 E1: *So let's start. No no no, let's start.* Oye, qué tal?
3 E2: Estamos bien.
4 E1: A dónde compra, ¿a dónde compraste tu camiseta? Parece viejo...
5 E3: *You can do your face some way bi²⁰ like this.*
6 E1: *Yeah.*

G2: [group discussion]

- 7 E1: *Are you guys going to bring something up?*
8 E2: *You too you should also bring something.*
9 E1: *Abi²¹ I'm thinking, or are you guys in your thinking mode.*
10 E2: *We are also thinking, yes.*

²⁰ Kind of (Of pidgin English origin)

²¹ But (Of pidgin English origin)

11 E3: *Kwai bebre wor etchre, misi kwai bebre wor book wei etchre.*²²

12 E2: *Wu dier wu, ooo no!*²³

As can be observed above, not only does the own language ‘creep in’ during teacher-student interactions but also, learners overlooked the monolingual policy, that is, they abandoned the effort to use the L2 during student-student interactions and collaborative learning. Thus, the outward L2 nature of the classroom is just an illusion which covers up the presence of the L1 in the minds of the students. This assertion is demonstrated by the fact that the moment the parties in the FL classroom interaction change from teacher-student to student-student, the language practices also assume a different nature: the students ‘automatically’ swap from the new language to the own language. Indeed, Cook (1999) notes that it is futile to apply the L1 restriction in classes where the students share a common L1 because “L2 users have the L1 permanently present in their minds” and “every activity the students carry out visibly in the L2 also involves the invisible L1” (p. 202).

Certainly, CS in the foreign language classroom is influenced by multiple and complex factors (i.e., pedagogical, social and psychological). When students alternate codes in the FL classroom, they often do so unconsciously and it is normally for pedagogical reasons. However, learners also switch codes for reasons which are not directly linked to the pedagogical focus. In the following extract, for example, the student alternates codes for a humorous effect and also for emphasis. This is characteristic of the code-switching habits of the wider multilingual Ghanaian context.

Extract 12: SPAN411

- 1 E: Raza síntesis es la mezcla de razas.
- 2 P: Muy bien
- 3 E: Todos las razas [sic].
- 4 P: Muy bien
- 5 E: No hay excepción. Negros, *all of them* (risa).
- 6 P: Todos ellos.

²² There is lots of space at the back. I say there is lots of space behind this book (Akan)

²³ As for you, oh no (Akan)

Finally, the data also showed that learners used CS as ‘muletillas’²⁴ which function as a communicative strategy²⁵.

Extract 13: SPAN313

E1: Pienso que ella piensa que Dios ha creado ella así entonces no entiende por qué la sociedad, erh, quiere que ella cambia su manera de like su manera de hacer cosas.

Such strategies could improve learners’ communication competence in the new language because they help to keep the conversation flowing and thereby reduce anxiety while increasing speaker confidence. As students’ proficiency increases, however, it would be beneficial for them to learn the Spanish versions of these expressions.

Conclusion

The present study shows that language practices in the Spanish FL classrooms at the UG were motivated principally by linguistic deficiencies, as well as other factors such as the need for effective classroom management and rapport building. The data showed that although the monolingual approach is desirable, it lacks feasibility as it poses considerable challenges to teacher-student interactions. Additionally, in the majority of the classes observed, code-switching was common due to time constraints and student preference.

The FL classroom has a dual focus on form and content. This unique feature of the L2 classroom is what makes the monolingual approach impracticable because it is difficult to comply with the method particularly in conversational classes. Because learner utterances are potentially subject to teacher and peer evaluation which provokes FLA, learners abandon the focus on form in order to satisfy the demands of meaningful conversation. That is, they are unable to maintain a concurrent dual focus on both form and meaning. Consequently, the present

²⁴ Filler words; temporary aids

²⁵ “The conscious employment of verbal or nonverbal mechanisms for communicating an idea when precise linguistic forms are for reasons not readily available to the learner at a point in communication” (Brown 1982, as cited in Sampson Kobla Ezuh, 2008).

research highlights the difficulties faced by both teachers and learners in the effort to juggle the multiple tasks in content based FL classrooms.

Compelling students to use the new language when they feel genuinely challenged to do so would imply overlooking the pedagogical focus of the lesson; i.e., in relation to content based classes such as literature and civilization. On the other hand, the present study showed that the use of CS reduced tension and enabled students to participate actively in classroom lessons while reducing communication breakdown and the anticipation of mutual embarrassment. It seems evident that premature attempts to reduce the use of CS would impede second language learning since it facilitates teacher-student interaction, promotes comprehension of the lesson contents and improves communicative competence. In the words of Butzkamm, “people become free in the use of a language only through the free use of the language ”(1998, p. 97).

Although the usage of CS can be detrimental especially for beginners who might over-rely on its usage, it is a stepping stone to the ultimate goal of learning the FL and therefore, it could be beneficial if learners use it tactically as a communicative strategy. Students CS patterns (especially in regards to silence fillers) can be examined with the goal of identifying the specific linguistic deficiencies of the learners in order to teach them the equivalents in the new language. If CS will be used by learners anyway, then it should be done with the pedagogical focus (the learning of the foreign language) in view.

Additionally, in order to maximise the use of the L2, considerations should be given to the relationship between learners’ proficiency, instructional levels, lesson contents, and number of hours assigned to classroom lessons when designing curriculums and making classroom policies. If the maximal use of the new language is the preferred method, then content based lessons such as civilization and literature should be assigned more hours than oral lessons for example. This would enable teachers to adopt other helpful teaching techniques such as scaffolding without having to worry about time constraints. Increasing the time allocations would also enable teachers to focus on the language structure as well as the lesson contents.

In sum, the data suggests that the indispensable role of the own language needs to be acknowledged in order to achieve the goal of effectively teaching a new language. Forbidding its usage would imply depriving learners of an essential resource that could bridge the gap between their ‘learning experience’ and ‘effective L2 user status’.

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**Safeguarding Penang Hokkien in Malaysia:
Attitudes and Community-Driven Efforts**

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Abstract

Language maintenance and language shift is an important topic of research in today's globalised world because many languages of small communities are disappearing at an alarming rate. In the case of Malaysia, similar fate is happening to the Chinese community, the country's largest minority group, as their community languages are overtaken by dominant languages. Hence, this study employs an ecological approach to investigate the Chinese community's attitudes towards Penang Hokkien, the most widely spoken Chinese community language in Penang, and their efforts to safeguard it. Interviews were conducted with 46 participants from the Chinese community in Penang. The findings show that the participants held positive attitudes towards Penang Hokkien despite evidence of language shift taking place. Their positive attitudes were exhibited through their efforts to speak and use Penang Hokkien in various aspects of their everyday lives. This data set is part of a larger study on the efforts to maintain Chinese community languages in Penang.

Keywords: language maintenance, language attitudes, community languages, Penang Hokkien, Malaysia

Introduction

Among the 7000 languages spoken in the world today, approximately 90% will be severely endangered and vanish within the next century (Krauss, 1992; UNESCO Ad Hoc Expert

Group on Endangered Languages, 2003). This alarming rate, which is caused by transnational migration and social mobility, has received increasing attention from society in recent years. As the younger generation are shifting to speak dominant languages, many small communities are facing pressure to safeguard their community languages. They have questioned whether there is a future for their community languages and if they should continue to maintain them when the world is heading towards a future in which societies speak one of a few dominant languages. The result of such language loss is the extinction of unique cultural and historical knowledge (Block, 2008).

A similar situation is occurring within the Chinese community in Malaysia. Their community languages, like other community languages in Malaysia, currently face a range of challenges in terms of language maintenance. Recent studies, such as Ding (2016), Ting and Puah (2010), and Wang (2010, 2016, 2017), have shown a 180-degree shift in the everyday language use of the younger generation Chinese from Chinese community languages to Mandarin Chinese and/or English. This situation is motivated by a combination of social, political, and cultural influences, including the Malaysian Federal Government's explicit allowance of the teaching of Mandarin Chinese through its national education system due to the economic value it offers. To shed light, Mandarin Chinese is used as the main medium of instruction in Chinese-medium primary and independent secondary schools (Wang, 2017). This provision sits in accordance with the Federal Constitution and National Language Acts 1963/1967, which states that all Malaysians are allowed to speak, learn, and teach any languages other than the national and official language of Malaysia, Bahasa Melayu. More than 90% of Chinese parents in Malaysia are sending their children to Chinese-medium primary schools (Gill, 2014), which has also seen a rise in the enrolment rate of non-Chinese students in recent years ("Government to present Chinese schools", 2013; J. Y. Y. Tan, 2015). Further, the Malaysian mass media has strongly supported the learning of Mandarin Chinese (Wang, 2016). This situation has led to the use of Chinese community languages being discouraged in many public spaces (Wang, 2009), which has caused sociolinguistic realignment in many Chinese families in Malaysia (Ding, 2016; Wang, 2017). These circumstances raise questions regarding the survival of Chinese community languages in Malaysian society.

In Penang, a state in northern Peninsular Malaysia that has a long-established history of Chinese settlement, it is unclear whether Penang Hokkien, the most widely spoken Chinese

community language there (“Dialects and Languages”, 2017), will continue to survive in this globalised era. This situation calls for an investigation into the Chinese community’s attitudes towards Penang Hokkien and their efforts to safeguard it. To clarify, Penang Hokkien differs from other varieties of Hokkien due to its distinctive phonology and vocabulary (Ong, 2019a). Although the phonology of Penang Hokkien is based on the present-day language of Chiang-chiu in Fujian province, China, its vocabulary is strongly influenced by Malay, Cantonese, and English.

This study begins by briefly explaining the sociolinguistic background of Malaysia and its language policy and continues by discussing the ecological approach taken to the study and the research design. The analysis of the data reveals that the participants from the Chinese community in Penang hold positive attitudes towards Penang Hokkien, which are exhibited through their efforts to safeguard it. The findings also show that their endeavours are largely community-driven and go beyond the influences of power and politics.

Sociolinguistic Background of Malaysia and Its Language Policy

Situated in Southeast Asia, Malaysia has a population of 32.6 million people (Department of Statistics, 2019a). Before independence, Malaysia fell under the rule of the European colonials. The Portuguese and Dutch first arrived and established trading ports, but then the British took over and controlled Malaya²⁶ until independence in 1957. The British were keen on building their colonial economy in Malaya; however, the Malays were considered as “lazy, unwilling to work for wages and therefore could not be considered a potential pool of labour for the colonial economy” (Andaya & Andaya, 2016, p. 182). Thus, the British welcomed migration from China and India. Under British rule, these migrants were encouraged to work in their own ‘spaces’, leading to a lack of socialising between ethnic groups (Asmah, 2007). The Chinese established businesses, the Indians worked in rubber plantations, and the Malays remained in rural areas as fishermen and farmers (Ong, 2018). Contrary to British expectations, the Chinese and Indians did not return to their homeland at the end of British rule, but settled in Malaya.

As a result of British colonial rule and migration waves from China and India, Malaysia became a multilingual and multiethnic country (Asmah, 1992). Bahasa Melayu has long been used as the language of trading and communication among the kingdoms in the Malay

²⁶ Before independence, Malaysia was known as Federation of Malaya.

Archipelago (Asmah, 1987). After independence, it became central to nation building (Malaysia Country Report, 2016). English operated as the language of administration under the British until independence (Albury, 2018). When the Chinese and Indian migrants came to Malaya, they brought along their community languages, such as Hokkien, Cantonese, Hakka, Teochew, Hainan, Taishan, Tamil, Hindu, Punjabi, and Malayalam (Malaysia Country Report, 2016). The incorporation of Sabah and Sarawak into the Malaysian Federation after independence in 1957 saw a further increase in diversity. Presently, the *Bumiputera* (translated as ‘sons of the soil’ to refer to the Malays, Indigenous people, and natives of Sabah and Sarawak) constitutes 69.3% of the population (Department of Statistics, 2019a). The Chinese and Indians form 22.8% and 6.9% respectively and the remaining 1% is made up of other ethnicities.

Despite the diverse ethnicities in Malaysia, its government policy is structured in a way that provides more privileges to the *Bumiputera* (Albury, 2019) than the Chinese and Indians in terms of education and employment opportunities in government departments (David & Govindasamy, 2005). The policy defines Malaysia in Malay cultural concepts (Albury, 2018)—(i) Bahasa Melayu shall be the language of *Tanah Melayu* (translated as ‘Malay land’) and thus, is used “as a vehicle for bonding citizens” (Rappa & Wee, 2006, p. 37), (ii) Islam acts as the national religion, and (iii) customary land rights are given to the *Bumiputera*. Despite the policy being often viewed as “having racial bias” (Ting & Mahadhir, 2009, p. 113), questioning it is considered seditious and punishable under the Sedition Act 1948 (Nik, 1981). As Bahasa Melayu is instituted in the Federal Constitution as Malaysia’s sole national and official language, it is used as the key language of administration, education, and law. This codification affirms that Bahasa Melayu holds the highest linguistic capacity in Malaysia. In addition, *Dewan Bahasa dan Pustaka* (translated as ‘The Institute of Language and Literature’) was established in 1956 to focus on developing and refining the language. As the former colonial language, English continues its role as the country’s non-official language due to its prestige as an international language. It is taught from pre-schools until tertiary level education and used in many private sectors and daily communication. For the Chinese and Indian communities, their language rights are provided through Chinese- and Tamil-medium education at the primary level, where children can learn Mandarin Chinese and Tamil in school.

Although Malaysians are able to enjoy a rich linguistic diversity, the country’s language policy continues to observe a tension between the global and local (May, 2014). Some

policymakers demand that Bahasa Melayu continues prospering in the country, as it serves as a language of national identity. Others fight for English because it is a language of international prestige and economy. As a result of this tension, the government implemented a bilingual policy for teaching science and mathematics in the country's education system (Rahim, 2016). Contrary to the policy, both public and private universities in Malaysia are now turning to English-medium instruction due to its significance at the international level (Gill, 2014). Despite Bahasa Melayu having more than 200 million speakers and being the ninth most spoken language in the world, it is not perceived by the non-*Bumiputera* as the language of unity because it is too closely connected to the *Bumiputera* ethnicity and Islam (Coluzzi, 2017). Thus, the Chinese continue to use their community languages in everyday life. In recent years, due to the rise of economic performance in China, many of the younger generation Chinese are speaking Mandarin Chinese as their mother tongue (Albury, 2017; Vollmann & Soon, 2018). Conversely, the Indians have shifted to speaking English, a language of internationalism, rather than Bahasa Melayu (Gill, 2014). As the policy continues to regulate, mixed languages and code-switching commonly take place in informal conversations (Asmah, 1992; Coluzzi, 2017). The use of *Manglish* and *Bahasa Rojak* (translated as 'mixed languages') in Malaysian society often overcomes ethnic divides and upholds the characteristics of Malaysian-ness²⁷ (Albury, 2017). Thus, it remains questionable whether Malaysia's language policy poses a threat to or saviour of each ethnic group in safeguarding their community languages (Coluzzi, 2017).

Research Design

Approach

This study takes an ecological approach (Haugen, 1972) to guide the investigation of the Chinese community's attitudes towards Penang Hokkien and their efforts to safeguard it despite Malaysia's language policy favouring the *Bumiputera*. According to Haugen (1972, p. 325), language ecology is defined as "the study of interactions between any given language and its environment". The term relies on an analogy between two sets of elements: the interactions between living organisms and their natural environment, and the interactions between language and their speech community. In Haugen's definition, a language is similar to a living organism,

²⁷ Malaysian-ness in this context refers to the qualities of being a Malaysian, which celebrates the diversity of languages and cultures.

which has a life span of growing, changing, falling ill, and dying. In other words, a language should not be regarded as a set of rules that is separate from its speakers. Instead, it should be understood in relation to its speakers in a community—language attitudes, ideologies, and the identity of speakers are important factors influencing the language behaviour of the community (Hatoss, 2013). The integration of social, cultural, and historical aspects of the community is also vital in establishing the language environment. As Haugen (1972) points out, the community who uses, learns, and transmits the language to others is responsible for shaping its language ecology. In return, the ecology also shapes the community socially, culturally, linguistically, and psychologically (Hatoss, 2013).

Since the notion of language ecology was introduced, many scholars, such as Hornberger (1998, 2004), Mühlhäusler (1996, 2000, 2001, 2003), and Mufwene (2001, 2005, 2008), have employed it to study the interactions between language and its environment. Some have used the notion as a metaphor, while others reference it to biological ecology. Due to its versatility, as Wendel (2005, p. 51) argues, an ecological approach to studying languages is valuable because it encompasses “the complex web of relationships that exist between the environment, languages, and their speakers”. In the present day, many socio and applied linguists are acknowledging the use of language ecology as a contemporary way of moving forward with the study of language. It is employed in many fields, such as language planning and policy (Pennycook, 2004), language acquisition (Leather & van Dam, 2003, p. 13), language ideology (Fleming, 2017), and language maintenance and language shift (Edwards, 2001; Fettes, 1997).

In the current study, the ecological approach serves as a valuable conceptual framework to capture the complexity of the relationship between Penang Hokkien and the Chinese community in Penang. The complexity of this multilingual setting is also demonstrated through the variety of languages spoken and taught, as mentioned in the previous section. Overall, the language attitudes, ideologies, and identity of the Penang community need to be considered in this complex language ecology because they usually have bidirectional interrelationship with each other (Hatoss, 2013).

Aims and research questions

Through an ecological approach, this study aimed to explore (i) the Chinese community’s attitudes to Penang Hokkien, and (ii) their efforts to safeguard it. Based on these aims, this study

sought to answer the following research questions:

- What attitudes do the Chinese community in Penang have towards Penang Hokkien?
- How do they maintain Penang Hokkien to ensure its survival?

Research site

Penang (see Figure 1), known as the “Cinderella of the Straits Settlements” (Yeap, 2019), was selected as an appropriate research site for this study due to its Chinese-community’s long-established history. It began in the 17th century during the Manchu invasion of the Fujian province in China (Ong, 2019c). The Chinese were looking for a place to escape when they found a port in George Town, which is the capital of Penang. The port was established by the British for trading purposes and thus, attracted many Chinese merchants. Among the goods traded were cotton and opium from the Indian subcontinent, pepper and betel nut from Aceh, tin from Phuket, rice from Burma, tobacco from Sumatra, and copper from Japan (Yeap, 2019). The Chinese traded with the Europeans and redistributed the goods back to China. Consequently, they set up shops in George Town to expand their business. During the 18th century, tin mining industry was established in Taiping, Perak, which attracted more Chinese migrants to work as labourers. When the tin mining industry halted, these migrants moved to bigger cities, such as Penang, looking for work opportunities. Ultimately, they married and settled in Penang. Many of the Chinese families in Penang today have lived there for generations.

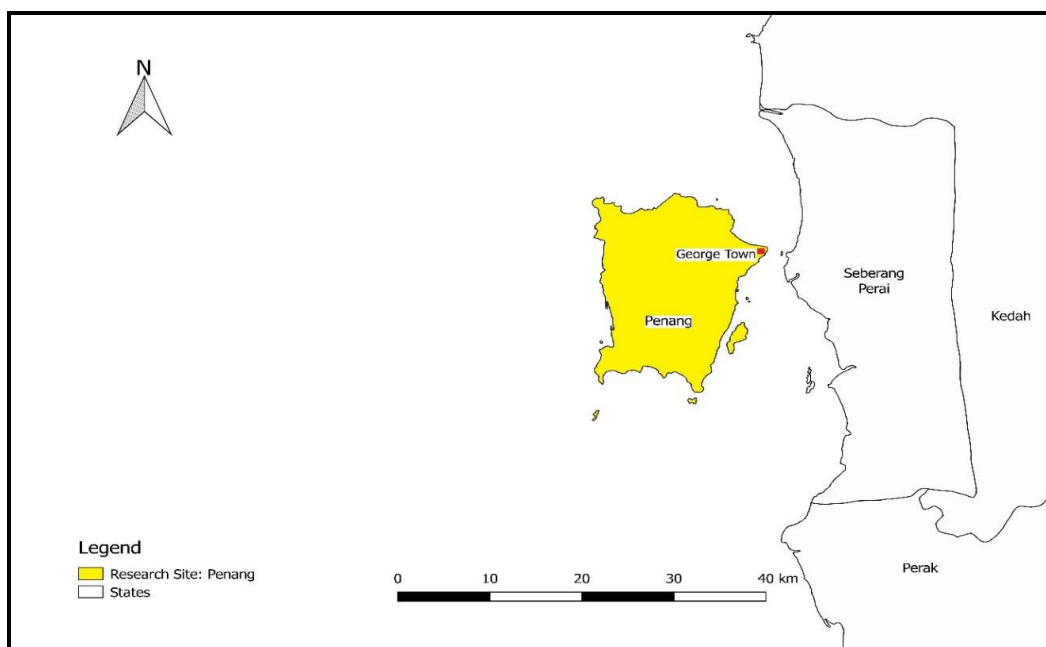


Figure 1. Penang.²⁸

When the Chinese moved to Penang, they brought along their community languages. The first batch of migrants mostly came from Fujian province and they spoke Hokkien. The second and third waves came from other provinces and therefore, they spoke other community languages, such as Cantonese, Hakka, Teochew, Hainan, and Taishan. Meanwhile, Hokkien slowly evolved by incorporating Bahasa Melayu vocabulary and local pronunciation and today, it is known as Penang Hokkien. According to the Department of Statistics (2019b), Penang has a population of 1.77 million with Malays forming its majority (42.8%), followed by Chinese (39.1%), Indians (9.4%), and other ethnicities (8.7%). Within the Chinese ethnicity, the Hokkiens formed the biggest group (approximately 64%) (Department of Statistics, 2010). Thus, Penang Hokkien became the most widely spoken Chinese community language in Penang (“Dialects and Languages”, 2017). Despite Penang Hokkien playing an important role in the linguistic scenery of Penang, it is not taught in schools (Ong, 2018). As noted above, only Mandarin Chinese is taught and has gradually become an important language of communication for many Chinese families in Penang today (Wang, 2017).

²⁸ Source: Generated by Kretzer, M. M. (2018), using Global Administrative Areas (GADM).

Participants

In this study, the process of recruiting participants from the Chinese community in Penang was undertaken using a purposeful sampling strategy, which recruits only relevant and information-rich participants (Flick, 2014; Patton, 2002). The participants were recruited based on two criteria:

1. Each participant must be able to speak Penang Hokkien.
2. He/she must meet one of the following age groups:
 - Group 1—age 70 and above
 - Group 2—age 50—69
 - Group 3—age 30—49

As past studies such as Albury (2017) and Wang (2017) have demonstrated, the younger generation today is shifting towards speaking Mandarin Chinese. Hence, they were not recruited because they would not be able to provide the information needed for this study.

The recruitment process went smoothly due to the researcher's insider position within the Chinese community in Penang. According to Kusow (2003), an insider has the advantage of easy access to the community studied and in-depth engagement with them. Nevertheless, the insider must engage critically and not based on "an assumed shared knowledge" (DeLyser, 2001, p. 444). The insider must always be aware of the complexities of the 'space of betweenness' that a researcher occupies during fieldwork (Ong, 2019b). In this study, the researcher acted as an insider who grew up in Penang and used her connections within the Chinese community to recruit the participants. This led the participants to consider her as part of their community and someone who understands the Chinese culture and local practices. They did not see her as an outsider who intended to 'steal' information regarding the community. Their friendliness provided her with an advantage in terms of insights that an outsider researcher may not be able to access. Ultimately, a total of 46 participants were recruited for this study. Their profiles are listed in the Appendix.

Procedure

This study was conducted in 2016 as part of a larger study. Traditional language maintenance and language shift studies often employ a quantitative methodology that relies on surveys and questionnaires for statistical data (Manosuthikit, 2018). However, their findings

generally do not provide lived experiences related to language contact. To move towards understanding lived experiences, this study employed a qualitative methodology, which enables the researcher to study the social problem through the eyes of the participants (Denzin & Lincoln, 2000). To collect qualitative data for this study, semi-structured interviews were utilised. Semi-structured interviews allow the researcher to develop a close relationship with the participants during the interviewing while being assisted by an interview guide to ensure consistency (Cohen & Manion, 1994; Patton, 2015). After the recruitment process, semi-structured interviews were conducted with the participants, either in their homes or the interviewer's home. Most of the interviews were conducted in English to align with the language used for publications associated with the study. However, there were several interviews conducted in Penang Hokkien because some participants were not fluent in English. Each interview lasted between half an hour and an hour, depending on the length of responses given by the participants. The interview questions were related to the participants' attitudes to Penang Hokkien and their efforts to maintain it. After conducting the interviews, all interview data were transcribed verbatim and the morphosyntax was not corrected to retain authenticity. Participants were given pseudonyms to maintain confidentiality. The data underwent content analysis in the form of thematic analysis (Braun & Clarke, 2006), which enables the researcher to discover a deeper meaning from the data (Dörnyei, 2007). Because the researcher had an insider position within the Chinese community in Penang, she constantly reminded herself about the a priori assumptions and beliefs to avoid certain interesting aspects of the data being overlooked or neglected. The findings are then reported.

Findings and Discussion

Attitudes towards Penang Hokkien

The participants were asked the same question regarding Penang Hokkien: *Do you like using Penang Hokkien in everyday life and why?* The majority of the responses were highly positive due to the role of Penang Hokkien as a dominant language for everyday communication in Penang. Not only the Chinese community speaks Penang Hokkien, the Malays and Indians also speak the language. As Bolton explained,

The problem in Penang is everybody born here, no matter if you are Hakka or Teochew, you can speak Penang Hokkien. Even the strangers opposite Maybank, the

people who came from Kuala Lumpur, the Malays, the Indians, the trishaw man, the taxi man, you can see they speak Penang Hokkien. Don't ever scold the Malays in Penang Hokkien, they flare back at you. This is a true story, a Malay lady never speak Penang Hokkien but two ladies were gossiping about her, she shouted and scolded back in Penang Hokkien! I was so surprised!

Stephan added:

When I moved to Penang, it's all Penang Hokkien. I had cultural shock, I tried to adjust, Penang Hokkien was a new language to me. In Penang, Penang Hokkien is so commonly spoken. Everyone is Hokkienised. In fact, I have a friend whose origin is Cantonese but he has been Hokkienised until he can't speak Cantonese and even his name is written according to Penang Hokkien pronunciation. I think Penang Hokkien in Penang is very strong, it is unique.

Michael further mentioned:

Once you meet someone in Penang, usually you will speak Penang Hokkien and that is quite automatic for you to do that. This is a natural reaction as it's the main language for communication. Sometimes, you can also see two Cantonese people speaking Penang Hokkien instead. This is the same situation at home where everyone speaks Penang Hokkien. It's like a trend. Why is this happening? It is because in Penang, the majority of people are Hokkiens and it's the majority language.

The three extracts show that regardless of the subethnic group's origins, the Chinese community in Penang always use Penang Hokkien as their main medium of communication. This aligns with Khor's (2003) study, which shows that out of the 811 Chinese students surveyed, 90.8% claimed that Penang Hokkien is the lingua franca in their residential areas. Thus, Penang Hokkien adopts the role of an everyday language of communication not only lie in Penang, but also in northern Penang, as evident in Justin's statement:

Penang Hokkien may not be as official as Mandarin Chinese and English but the sure fact is that it is a common language used in Penang and the northern region.

Further, some participants stressed the significance of Penang Hokkien as part of a local identity. Marco stated:

With these community languages, they really reflect your locality. Penang Hokkien is being Penang Hokkien. It sounds very different from other Hokkiens because it's very colloquial and fusion. And I think that's why I like it because it really gives you an identity as a Penangite. You know, only Penang people speak like that. So I think that's great.

In addition, Alan said:

We represent Penang, we are Penang Hokkien speakers, we show that we come from Penang, not Negeri Sembilan, they have different slangs from us and we don't understand them.

Emily emphasised:

Penang Hokkien gives that unique feature of Penang. We can continue to preserve it so that the identity of Penang will be preserved. It will also give the state itself an identity.

Based on the three extracts, it is clear that the participants viewed the use of Penang Hokkien as having two essential roles: it reflects a Penangite identity, and gives Penang city an identity that differs from other cities in Malaysia because Penang Hokkien has a unique accent that differs from other Hokkiens spoken in southern Malaysia, Singapore, and Taiwan.

The positive responses from the participants also referred to the future needs to maintain Penang Hokkien, as mentioned by Lisa:

Chinese community languages are in danger of extinction. They are important and should be maintained among the ethnic groups. If each ethnic community strives to maintain their language, then it is possible that the language will continue to be used for generations to come. I feel that Penang should continue to promote Penang Hokkien. It is a unique language, recognised by its tone and borrowed words.

Lisa's excerpt calls for the normativity of language maintenance, as exerted by Benjamin:

I regard Penang Hokkien as the intangible heritage and cultural asset of Penang that is distinct from Hokkiens spoken elsewhere. Singapore Hokkien may be regarded as a community language but it bears greater resemblance to Taiwanese Hokkien than Penang Hokkien. It is important to preserve and continue developing Penang Hokkien as a language unique to the northern part of Malaysia for our own cultural identity.

Benjamin's excerpt supports Penang Hokkien as an integral part of the culture and identity of the Chinese community in Penang, similar to Giles, Bourhis, and Taylor's (1977, p. 307) argument that a language serves as "a symbol of ethnic identity and cultural solidarity". Hence, it needs to be maintained for future generation.

To sum up, the interview extracts demonstrate that the participants regarded Penang Hokkien as closely linked to Penang in terms of it being a meaningful community language that provides them with a sense of belonging to the Penang's Chinese community, despite evidence of language shift taking place within the Chinese community in Malaysia. They also reveal the positioning in which the participants' responses were related to the context of Penang as their hometown and connection to their past, present, and future. Such responses provide rich empirical data about the participants' efforts to maintain Penang Hokkien, which will be reported in the next section.

Efforts to safeguard Penang Hokkien

When the participants were asked about their efforts to maintain Penang Hokkien, their responses were related to community-driven efforts rather than influences from the government. As Marco said:

The Penang Government doesn't have the expertise to actually go out and do the preservation of community languages in Penang but they can promote. I don't see experts who have proposed to the government but it will be interesting if there are groups out there, they should contact the government. I mean this is part of preserving your local heritage. Definitely Penang Hokkien is a local heritage. I don't believe in the government especially for cultural things, I prefer if things like these are community driven and come from the civil society.

Through Marco's statement, it is understood that the use of community languages in Penang is considered as part of cultural heritage maintenance, which supports Fishman's (2002, p. 5) statement that language is "part and parcel of the bulk of any culture". This section reports the participants' efforts to maintain Penang Hokkien according to five categories: language classes, literacy materials, religious use, movie production, and public promotion.

Language classes

Growing up in a multilingual environment holds the myth of becoming multilinguals. In reality, languages overlap and collide. Works of translanguaging and code-switching have demonstrated it is often the case that messy language practice takes place in the home, education, and work domains (King, 2018), and the outcome is that the society usually speaks only global languages and abandons their community languages. In other cases, some may grow up speaking their maternal community language and are not taught their paternal community languages because children are usually cared for by mothers. These challenges hinder community languages being learned by and passed on to the next generation. Hence, one of the ways to pick up community languages and develop fluency later in life is through adult language classes. In Australia, language classes were conducted to teach Wiradjuri, an Aboriginal language, to adult learners in the community and at the University of Sydney's Koori Centre (McNaboe & Poetsch, 2010). In Hawaii, the University of Hawaii offers an excellent six years Hawaiian language courses for those interested to learn a second language (Hinton, 2011).

In the case of the Chinese community in Penang, Penang Hokkien classes are organised by the *Leong San Tong Khoo* clan association to cater to various audiences, as stated by Bolton:

There are Penang Hokkien classes catering for doctors and nurses who were transferred from other states and the Government department and council. They have it at 4pm, after office hours for the Malay staffs at the service counter in Komtar (name of the Penang Government building), then at the police station, they will teach Penang Hokkien to all the policemen and even make a Penang Hokkien play. The private classes are mostly for doctors and professionals from other states who come to work in Penang.

It is not uncommon for adults to pick up a second language when settling in a new place and use it in real life situations, such as at work. Thus, the Penang Hokkien language classes for adults aligns with one of the goals in Malaysia Education Blueprint 2015—2025 (Higher Education)—Nation of Lifelong Learning—that encourages Malaysians of all ages to always seek learning opportunities to enrich themselves.

Literacy materials

As Batibo (2009) claims, language documentation is vital for not only immediate use but

also for future generation. It usually includes the script of the language as well as cultural and ecological knowledge, which can provide support to endangered languages for revitalisation purposes. There are several reasons why language documentation is important (UNESCO Ad Hoc Expert Group on Endangered Languages, 2003; Child Language Research and Revitalisation Working Group, 2017): (i) it deepens human intellectual knowledge, (ii) it adds another aspect to our existing knowledge, (iii) the process of documentation assists in locating native or near-native speakers to re-motivate the use of their linguistic and cultural knowledge, and (iv) it can impact the attitudes of young speakers and create awareness among them.

Although Penang Hokkien has not reached the endangered level that certain indigenous languages are facing, some participants have made a particular effort to document the language. As Suzy suggests:

The track of losing the language, I think documentation is very important. If you are able to document a language, you do not need to feel worry that you could lose it. Intangible culture heritage including language is something very organic. Organic means you stand tall, you expand, you fall down, you might die. But between you are dead and you are born again, there's a gap of documentation. Once you are able to document the steps and more important the information there, you'll be able to revive that cultural heritage if the community wants it.

In 2016, a Penang Hokkien-English dictionary was published by Tan Siew Imm, a lecturer from a private college in Malaysia, to help those interested in learning Penang Hokkien (see Figure 2). This dictionary is available in most bookstores in Malaysia.

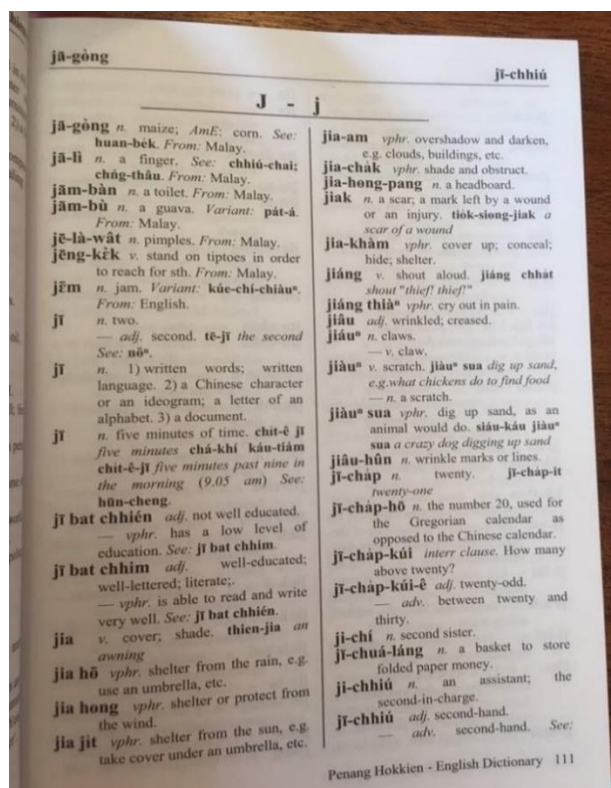


Figure 2. A sample page of Penang Hokkien-English Dictionary by Tan Siew Imm.

In addition to the dictionary, Elizabeth has compiled a wordlist to self-learn Penang Hokkien, which she freely gave away to anyone interested in the language. Eventually, as the wordlist grew, she decided to publish it as a dictionary. She explained that her version comes with illustrative sentences for ambiguous words, such as *liao* and *la*.²⁹ Elizabeth is currently looking for funds to assist her publication. Bolton is also working on a Penang Hokkien proverb book. His reason for doing so was because today's youth no longer know Penang Hokkien proverbs, as they learn proverbs in Bahasa Melayu, English, and Mandarin Chinese at school. Thus, this proverb book will reintroduce Penang Hokkien proverbs to the community before they are forgotten and disappeared.

Religious use

In addition to language classes and documentation, Penang Hokkien is used as a medium

²⁹ Particles *liao* and *la* are common word endings in Penang Hokkien that originated from Malaysian English (Manglish). Elizabeth explained that *liao* has eight functions, which cannot be expressed in English or Bahasa Melayu. On the other hand, *la* is a typical insertion in Malaysian conversation and differs in meaning depending on the context (Goddard, 1994).

in religious places in Penang. This is not uncommon, and Gal (1979) and Wiley (1998) argue that religion is a facilitating factor for community language maintenance. In Australia, Pauwels (1980, 1983) found that many parents and grandparents of Dutch origins are still teaching their children to say prayers in Dutch and the children can recite fragments of the prayers in Dutch. Similarly, in Balik Pulau, a town in Penang, Malaysia, Wang (2016) found that although Mandarin Chinese is the main language of communication in a Catholic church, Hakka, a Chinese community language, is still used by the older generation parishioners for prayer sessions and Bible reading.

In Penang, devotees can experience Penang Hokkien chanting at the Penang Buddhist Association. The chanting scripts are written using the Latin alphabet and based on Penang Hokkien pronunciation. In some Buddhist temples, dharma talks are also conducted in Penang Hokkien to cater to devotees from the older generation who are not fluent in Mandarin Chinese. Mark stated:

When I preach to the devotees, I will use my own community language which is Penang Hokkien. When I conduct a talk, community languages are used and it depends on the crowd and locality.

In some Christian churches, weekly sermons are conducted in Penang Hokkien, as highlighted by Robert:

I will see the church's needs. When I go to Medan (a city in Indonesia), there are a lot of Chinese people and they speak in Hokkien. I speak Penang Hokkien to them because they understand Penang Hokkien. If it's a Penang Hokkien church, I will definitely preach in Penang Hokkien.

Further, prayer groups are also held using Penang Hokkien. Annette explained how she started learning to pray in Penang Hokkien with her prayer group:

How to say "I want to call upon our Father-in-Heaven"? What is *our Father-in-Heaven* in Penang Hokkien? You know, if I say *our papa*, it's not right. It's *tipeh*. I was really frustrated and I told my prayer group my frustration. So I say, "Why not we all learn in Penang Hokkien? The easiest way to learn is through singing."

According to Annette, the terminology used for prayers differs from daily conversation. To learn the standard terminology, she borrowed a Penang Hokkien hymn book from another church and started singing the hymns. She mentioned that when she started singing the hymns

with her prayer group, it sounded like they were singing a vulgar language. However, as they persisted to continue learning, today they are able to pray and sing hymns using Penang Hokkien.

Movie production

Leuner's Polish migration study (2007) demonstrates that mass media, such as newspapers, radio programmes, and television broadcasts, plays a role in encouraging the community to maintain their community languages and cultures in host countries. This is because mass media has the power to penetrate a culture more deeply into the community than any other technology (Alia, 2010). Moriaty (2009) found that watching Irish television channel has an indirect effect on language practices of non-Irish speaking university students. In addition, mass media enables the community to strengthen important kinship affiliations with their homeland (Forde, Foxwell, & Meadows, 2009).

In relation to Penang Hokkien, which was initially a community language brought into Malaya by the Chinese migrants, mass media was used as a channel to safeguard the language. A Penang-born filmmaker produced a Penang Hokkien movie entitled *Hai Kinn Sin Loo* (translated as 'You Mean the World to Me', see Figure 3). This movie, filmed in several popular locations in Penang, was the first Malaysian movie produced entirely in Penang Hokkien and released in cinemas across Malaysia in May 2017. When conducting the audition for the child actor, the filmmaker mentioned that only 50% of over a hundred children auditioned could speak fluent Penang Hokkien, which raises the urgent issue of maintaining Penang Hokkien (J. Tan, 2017).



Figure 3. Penang Hokkien movie poster³⁰

Public promotion

In 1979, the Singapore government launched the “Speak Mandarin Campaign”, which sought to make all Singaporean Chinese abandon their community languages and adopt Mandarin Chinese as their main language of communication (Ng, 2010). The government promoted the campaign in all domains, including education and mass media, and involved various grassroots organisations. Consequently, most young Singaporean Chinese today speak only Mandarin Chinese and English and are unable to communicate using their ancestral community languages (Gupta & Siew, 1995). Although linguistic diversity is lost, the context demonstrates that public promotion plays an important role in language maintenance and language shift.

Hence, for language maintenance of Penang Hokkien, awareness-raising events have been conducted by the participants and promoted through social media in recent years. Steven said:

We promote mostly in Facebook. Through Facebook, the younger generation knows our website. As we know, Facebook is mostly used by the younger generation, so they tend to learn Penang Hokkien through our online resources. I encountered some foreigners like Japanese and Thais in Facebook and they started to learn Penang

³⁰ Source: Reproduced with permission from AstroShaw Sdn. Bhd., www.astraoshaw.com.my © 2017, AstroShaw.

Hokkien!

In 2016, the Hokkien Language Association held public talks to encourage the community to value Penang Hokkien. The message given away was that once the community starts to realise the cultural value in Penang Hokkien, they will be less likely to perceive it as a low-variety language and more likely to learn and speak it in their everyday life. If they do not value the language, there will be fewer speakers as time passes and the risk to a severe and irreversible language shift increases. Other Hokkien related clan associations in Penang also hold regular promotional activities to encourage the community to communicate using Penang Hokkien in the home setting.

Conclusion

This study began with an impetus to investigate the attitudes of the Chinese community in Penang to Penang Hokkien and their efforts to safeguard it due to language shift taking place in Malaysia, as evidenced by recent studies. Language ecology encompasses all aspects of the speakers in a community; thus, in employing an ecological approach for this investigation, the findings have demonstrated the participants' dynamic and positive attitudes towards Penang Hokkien due to its cultural significance and centrality to local identity. Despite Malaysia's language policy favouring the *Bumiputera* and evidence of the younger generation Chinese shifting to Mandarin Chinese in recent years, the participants have made efforts to maintain Penang Hokkien, which were observed as community-driven and not motivated by politics and power. Their efforts were nonetheless mostly functionable in private domains only.

In concluding this study, the ecological approach has assisted in demonstrating the diversity and complexity of the Chinese community in Penang in using Penang Hokkien in their everyday life. It has challenged traditional approaches to studying language maintenance, which usually focus on quantitative factors, and showed the needs to incorporate rich linguistic repertoires in the current language ecology of Penang. The findings have also revealed how the participants renegotiated and constructed their social status and cultural and ethnolinguistic identity in a multilingual setting, which indirectly recognises the inseparable relationship between language and identity. Finally, the ecological approach has allowed a better understanding of how the participants, representing the Chinese community in Penang, dealt with the country's language policy and multilingual issues while maintaining their community

language. It is hoped that this approach will inspire future studies to look into complex issues of language maintenance and language shift, such as how new linguistic and identity resources assist in negotiating multiple connections while accommodating to constant and rapidly changing language constellations.

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Appendix

Participants' Profile

Gender: Male

Name	Age	Languages Spoken	Ethnic Group
Daniel	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese	Cantonese
Marco	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien	Bumiputera
Adrian	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Teochew	Teochew
Naresh	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese	Hokkien
Sam	2	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Teochew	Teochew
William	2	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Teochew	Hokkien
Nicholas	2	Bahasa Melayu, English, Tamil	Indian
Justin	2	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Hakka	Hakka
Adam	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Teochew	Teochew
Kenneth	1	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese	Cantonese
Stephan	3	Bahasa Melayu, English, Mandarin Chinese, Cantonese, Hakka	Hakka
Benjamin	2	Bahasa Melayu, English, Penang Hokkien	Hokkien
Wayne	3	Bahasa Melayu, English, Mandarin Chinese, Penang	Teochew

		Hokkien, Cantonese, Teochew	
Steven	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese	Hokkien
Bolton	1	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Teochew	Hokkien
Nick	1	English, Penang Hokkien	Hokkien
Andrew	1	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Hakka	Hakka
Michael	2	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Hainan, Taishan	Cantonese
Smith	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Hainan, Korean, French	Hainan
Gareth	1	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Teochew	Teochew
Jackson	2	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Teochew, Hainan	Hainan
Peter	2	Bahasa Melayu, English, Penang Hokkien, Hainan	Hainan
Toby	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Taishan	Cantonese
Alan	1	Bahasa Melayu, English, Penang Hokkien	Hokkien
Ian	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese	Hokkien
Timmy	1	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Teochew	Teochew
Luke	1	English, Mandarin Chinese, Cantonese	Cantonese
Mark	2	Mandarin Chinese, Penang Hokkien, Cantonese, Hainan	Hainan
Robert	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese	Hokkien
Cliff	2	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese	Hainan

Gary	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien Hokkien, Hakka, Teochew
Andy	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Hakka
Graham	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Teochew

Gender: Female

Name	Age Group	Languages Spoken	Ethnic Group
Michelle	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Hakka	Hakka
Suzy	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Thai, Swedish	Hokkien
Elizabeth	3	English, Mandarin Chinese, Penang Hokkien	New Zealander
Lisa	2	Bahasa Melayu, English, Penang Hokkien	Hokkien
Adriana	3	Mandarin Chinese, Penang Hokkien, Cantonese, Teochew	Hokkien
Emily	3	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese	Hokkien
Irene	1	Penang Hokkien, Cantonese	Cantonese
Mary	1	Bahasa Melayu, Mandarin Chinese, Penang Hokkien, Cantonese	Cantonese
Annette	2	Bahasa Melayu, English, Mandarin Chinese, Penang Hokkien, Cantonese, Teochew	Hokkien
Sue	2	Bahasa Melayu, English, Mandarin Chinese, Penang Teochew	Teochew

		Hokkien, Cantonese, Teochew
Bora	3	Bahasa Melayu, Mandarin Chinese, Penang Hokkien, Hakka Cantonese, Hakka
Agnes	3	Bahasa Melayu, English, Mandarin Chinese, Penang Taishan Hokkien, Cantonese
Heather	2	Bahasa Melayu, English, Mandarin Chinese, Penang Hainan Hokkien, Hainan

An Acoustic Analysis of Intonation in the Taizzi variety of Yemeni Arabic

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Abstract

This paper examines the intonation patterns of the Taizzi variety of Yemeni Arabic (TYA). Data were elicited from 30 female TYA speakers from two age groups: 20 to 25 years and 60 to 65 years old. These two groups of speakers were chosen to see if there were differences due to changes that took place following the 1962 revolution in Yemen which brought about changes in the education system. The fundamental frequency (F0) of global and local contours of utterances in two main different speaking contexts were analysed: read text and more spontaneously produced speech. The latter included (i) talking about one of the topics assigned to them, and (ii) producing interrogatives. The findings revealed that statements found to display global and local F0 declining patterns, whereas *yes/no* questions showed a global F0 increase and a local declination. The only difference between the two groups of speakers appeared in terms of *wh*-questions, where there was a local F0 increase in the younger speakers' output differing from the local F0 declination of their older counterparts.

Keywords: Intonation; Arabic, Taizzi, Yemeni Arabic, fundamental frequency

Introduction

In Arabic studies, the focus has mainly been on the segmental features of the different varieties of Arabic. Several varieties of Arabic have investigated the prosodic features perceptually, and in recent years, from an acoustic perspective. For example, Hellmuth (2006) conducted an acoustic study on the intonation of Egyptian Arabic while de Jong and Zawaydeh (1999) investigated the word level stress of Jordanian Arabic. However, the Yemeni Arabic variety remains understudied in terms of prosody. Thus, this study aims to address this gap by examining the intonation of the Taizzi variety of Yemeni Arabic (henceforth TYA).

Standard Arabic (SA) is the official language of Yemen. SA is the official language in all Arabic speaking countries but there are different varieties of Arabic spoken in different parts of the Arab world with TYA being one of these varieties. TYA is the language spoken by all Yemenis except for the citizens in the provinces of Mahra and Socotra, who speak different languages that are unintelligible to the speakers of TYA. SA is not regarded as the mother tongue of Yemenis. Rather, they are brought up using their regional variety of Yemeni Arabic in all informal occasions. SA is learnt in schools as part of their education and is used only in formal written and spoken contexts (e.g., in news broadcasts). There are four main varieties associated with Yemeni Arabic: Sana'ani, Hadhrami, Tihami and Taizzi. San'ani Yemeni is spoken in the north while Hadhrami Yemeni is spoken in the east. Tihami Yemeni is spoken in the west and TYA is spoken in the south.

Prior to 1962, Yemen was under the Imamate rule for over a thousand years. It could be said that Yemen was kept in deliberate isolation (McLaughlin, 2007; Burrowes, 2010; Rabi, 2014), until the revolution in 1962 which deposed the imam, and led to the establishment of a republican rule in the country. The establishment of new educational institutions in the 1970s and 1980s was accompanied by the need for experts in the field of education. This resulted in the government employing people who came from different parts of the world, including other Arabic-speaking countries. According to Niebuhr and Hoekstra (2015), old speakers whose original or native language influences and shapes their lives may display certain features that may not exist among younger speakers due to mass media and tourism that were relatively restricted then. Therefore, the increasing contact and interaction that Yemenis had with Arabic speakers from different countries with the opening up of education could have influenced speakers' linguistic practices, resulting in variation in the linguistic patterns of older and younger

Yemenis. One of these difference may be in the intonation patterns of TYA speakers. However, there is a dearth of published research on this area. In relation to this, this paper examines the intonation patterns of TYA. In particular, the following questions are addressed:

1. What are the features of the intonational patterns of the Taizzi variety of Yemeni Arabic in terms of the patterns of pitch contours and pitch peak alignment?
2. To what extent is there a difference between the intonational patterns of the younger generation and older generation of Taizzi Yemeni Arabic speakers?

Intonation in Arabic

Some languages use a falling pitch at the end of a grammatical unit, such as in a statement. In contrast, an incomplete utterance will have a rising pitch which indicates an incomplete utterance, and that some information is still to come (Ladefoged & Johnson, 2011). However, a general rule cannot be applied to all languages since not all languages employ the same rising intonational patterns in questions or falling intonation in statements. In fact, in some languages pitch movements occur quite freely, and the tonal placement is prone to unusual degree of variability (Lehtinen, 2008).

Previous studies on spoken varieties of Arabic indicate that there is considerable difference in their intonation patterns (Chahal & Hellmuth, 2014). As an example, in Palestinian Arabic, El-Isa (1982) found that intonation consists of three main classes where each class is subdivided into different tones which possess their own tonal, grammatical, and contextual features. These classes are:

- (i) the falling tone (subdivided into 'high fall', 'mid fall' and 'low fall')
- (ii) the rising tone (subdivided into 'high rise', 'mid rise' and 'low rise')
- (iii) level tone (subdivided into 'high level' and 'low level' tones).

Speakers of Palestinian Arabic were found to utilize different tonal patterns to convey meaning, express attitudes and differentiate between grammatical structures. For example, the following utterance from El-Isa (1982, p. 224) can be associated with a HL or LL tone depending on its attitudinal function:

- (i) Kultlu ru;ḥ (HL tone)

I asked him to go away (implying before he regrets staying)

- (ii) Kultlu ru;ḥ (LL tone)

I asked him to go away (implying that the misunderstanding is finished at that point)

Differences in intonation patterns were also reported in other varieties of Arabic. For instance, Belmekki and Bencharef (2016) found that in the Temouchent dialect of Algerian Arabic, there was a rising-falling (H+L%) intonation in *wh*-questions and a rising tone (H+H) in commands. Moroccan Arabic, however, was found to be unlike other Arabic varieties as it does not have pitch accents linked to stressed syllables. In this variety of Arabic, intonational phrases in declarative sentences were found to display “a high (%H) boundary tone at the left edge and rising (LH%) or falling (HL%) boundary tones at the right edge” (Burdin, Phillips-Bourass, Turnbull, Yasavul, Clopper and Tonhauser, 2015, p. 259). The final LH% tone results in a “high plateau” between the initial and final tone of the phrase whereas the final HL% tone results in a trough between the initial and final boundary tones (Burdin, et al., 2015, p. 259).

El Zarka (2018) presents a comparison of the pitch accent inventories of statements from different Arabic varieties reported in different studies where it can be seen that there is variability in the pitch accents of these varieties as shown in Table 1.

Table 1. Pitch accents in different Arabic varieties (from El Zarka, 2018, p. 4)

Varieties	Studies	Pitch accents
Egyptian Arabic	Rastegar-El Zarka (1997)	H*L
	Rifaat (2005)	H, LH, HL, L
	Hellmuth (2006)	LH*
	El Zarka (2013)	LHL
Jordanian Arabic	de Jong and Zawaydeh (1999)	H*, L*, H+L*
Lebanese Arabic	Chahal (2001)	H*, !H*, L*, L+H*, L+!H*, H+!H*
Emirati Arabic	Blodgett et al. (2007)	H*/!H*, (LH)*
Sana’ani Arabic	Hellmuth (2014)	H*, L*, L+H*, L*+H, ?LH*L, ?H+H*
Hijazi Arabic	Alzaidi (2014)	H*, L+H*, L*

As shown in Table 1, the intonation of Egyptian Arabic possesses an intonational structure that is produced by a mechanism of rising and falling pitch resulting in contradictory tones that achieve significant functions in communication. This succession of rises and falls throughout the intonational contour distinguishes Egyptian Arabic from languages like English

and German. Hellmuth (2006, p. 82) provides an example which shows that every content word in Egyptian Arabic has a default pitch accent (LH*):

ʕashan	xatrak	ʔna	Haddiik	ik kiilu	bi	sitta	saay
in order	sake-your	I	will-give-you	the kilo	for	six	piasters
LH*	LH*H		LH*	LH*		LH*	LH*H-L%

For your sake, I will give you the kilo for six piasters.

This example shows that although sentences in Egyptian Arabic end with a falling tone, the prominent syllables are frequently accompanied by a rising H* tone. This tendency of pitch accents appearing on every content word is similar to Sana'ani Yemeni as seen in Table 1. However, the latter shows more variation compared to the Egyptian Arabic variety (Hellmuth, 2014). In Egyptian Arabic, there is a regular declination in the pitch contour across utterances with a final lowering for confirmation or completion of information. Thus, the pitch peak of the final stressed syllable in Hellmuth (2006) is lower than any expected declining pattern with a peak alignment appearing later in the stressed syllable unlike in El Zarka (1997) where the alignment appeared to be much earlier. In a comparison of the Sana'ani and Egyptian varieties, Hellmuth (2014) distinguishes between the LH* and the L*H tones and treats them as two different phonological choices. The former is limited only to nuclear positions in Sana'ani Arabic *yes/no* questions and the latter is the default rising pattern in other utterances. Thus, whereas the rising tone in Egyptian Arabic is LH*, the rising tone in Sana'ani Arabic is L*H and LH* occurs only in the *yes/no* questions of this variety. This leads to the classification of Sana'ani Arabic as an L*, and Egyptian Arabic as an H* language (Hedberg and Sosa, 2008).

Emirati Arabic shows a similarity to Egyptian Arabic in that despite the occurrence of both rising and declining global patterns in sentences, there are no low pitch accents where the prominent syllables are always accompanied by a high tone. As shown in Table 1, there are two main pitch accents, namely, a high pitch accent (H*) and a rising pitch accent (LH*). As for boundary tones, this variety employs four bitonal tones (Blodgett et al., 2007, p. 1140):

- (i) fall from a high pitch accent to a low-low boundary tone (LL%)
- (ii) rise from a high in a (LH)* pitch accent to a high-high boundary tone (HH%)
- (iii) a flat contour (HL%) following a (LH)*
- (iv) fall-rise sequence (LH%) following a high pitch accent.

On the other hand, in Najdi Arabic, a variety spoken in Riyadh in Saudi Arabia, the H* tone also seems to be prevalent (see Alzaidi, 2014 in Table 1). However, in *yes/no* questions in this variety, there are two boundary tones, which are H-H% and L-H%, where the former tone is more commonly used, and shows a steep rising contour with a higher pitch range. In contrast, the L-H% tone has a less steep rising contour with a lower overall pitch range (Almalki & Morrill, 2016). The use of the H-H% boundary tone is also used to mark questions in Lebanese Arabic (Chahal, 2001). The high tone also seems to characterize declaratives in Lebanese Arabic where content words occur with a frequent H* tone (see Table 1). de Jong and Zawaydeh (1999) found that the most consistent intonational pattern in Jordanian Arabic is LL% contours for statements where the occurrence of both high and low pitch accents is common. As for interrogative statements, a rising LH% boundary tone is the frequent tone unlike Lebanese Arabic which shows a high HH% boundary tone. de Jong and Zawaydeh (1999) compared English and Arabic by comparing the patterns of questions in both these languages. In Arabic, there was an appearance of low-high contours at the end of questions whereas in English there was a high-rising contour typically found in English questions.

In a further description of the tonal events in interrogative statements, Hellmuth, Louriz, Chlahani and Almbark (2015) analysed the phrase-final rise-fall tones in Moroccan Arabic polar questions based on the alignment of the F0 peak of this tonal movement. Their findings support those of Burdin et al. (2015) that the intonational contour in Moroccan Arabic is not associated with pitch accents. This is because the pitch peak is not consistently aligned to the accented syllable. However, the language displays edge-aligned pitch accents that consistently appear on the rightmost foot and not on the final syllable of the utterance. The analysis of intonational contours in interrogative statements was also focused upon in Hellmuth (2018) who compared F0 contours in *yes/no*-questions and coordinated questions (consisting of two contrasted items) across eight Arabic varieties (Moroccan, Tunisian, Egyptian, Jordanian, Syrian, Iraqi, Kuwaiti and Omani Arabic). In *yes/no*-questions, Moroccan Arabic shows a distinctive rise-fall nuclear contour while Tunisian Arabic displays a rise-plateau contour. However, a plain rise is seen in all other varieties. As for the coordinated questions, Moroccan Arabic shows a single rise-fall over the three words bearing the nuclear contour. Jordanian Arabic also displays a similar contour to Moroccan Arabic but with a delayed peak. However, in Iraqi Arabic there is a falling contour over the last three words. Tunisian, Egyptian, Syrian, Kuwaiti and Omani Arabic, on the other

hand, show a higher peak on the first contrasted item than on the second. These findings suggest that prosodic marking of questions in Arabic is diverse, and that it is possible to differentiate between Arabic dialects based on their different intonational contours.

Method

Participants

All the participants live in the city of Taizz in Yemen. Although Taizz is known for being the most important commercial centre, the significance of this city for the current study lies in the fact that it was the capital of the country from 1948 to 1962, namely until the revolution. The speakers' parents and spouses are also from the city of Taizz and all the speakers in this study were born and educated in Taizz. They speak only TYA in their homes. However, the younger speakers started studying Standard Arabic in schools from primary to high school and English as a foreign language from the age of 12 to 13 years old. As mentioned earlier, this study attempts to compare the prosody of two different generations of TYA. The first group represents the present generation and comprises 15 undergraduate students from a local university. All the participants were females and their ages ranged between 20 to 25 years. The second group that represented the older generation comprised another 15 Yemeni speakers aged between 60 and 65 years of age. They have always lived in the city of Taizz. They received the kind of education which was available during the Imamate rule or before the 1962 revolution. This was mainly based on religious schools in which children memorized the holy Quran. The social and political instability, and the occurrence of a civil war in the country during which the data were collected was the main reason for limiting the participants to female speakers as only females were available in the safe places during the data collection period.

Table 2. Background of speakers

YYG						YOG					
Speaker	Sex	Age	Native language	Education	Foreign Language	Speaker	Sex	Age	Native language	Education	Foreign Language
1	F	25	TYA	History	Basic	1	F	63	TYA	Quran	None

					Englis					Memoriz	
					h					ing	
2	F	23	TYA	History	Basic	2	F	65	TYA	Quran	None
					Englis					Memoriz	
					h					ing	
3	F	22	TYA	Islamic	Basic	3	F	61	TYA	Quran	None
				Studies	Englis					Memoriz	
					h					ing	
4	F	24	TYA	Islamic	Basic	4	F	60	TYA	Quran	None
				Studies	Englis					Memoriz	
					h					ing	
5	F	23	TYA	Islamic	Basic	5	F	65	TYA	Quran	None
				Studies	Englis					Memoriz	
					h					ing	
6	F	21	TYA	Arabic	Basic	6	F	62	TYA	Quran	None
				language	Englis					Memoriz	
					h					ing	
7	F	24	TYA	Tourism	Basic	7	F	60	TYA	Quran	None
					Englis					Memoriz	
					h					ing	
8	F	21	TYA	Geography	Basic	8	F	61	TYA	Quran	None
					Englis					Memoriz	
					h					ing	
9	F	25	TYA	Geography	Basic	9	F	61	TYA	Quran	None
					Englis					Memoriz	
					h					ing	
10	F	20	TYA	Social	Basic	10	F	64	TYA	Quran	None
				Studies	Englis					Memoriz	
					h					ing	
11	F	22	TYA	Business	Basic	11	F	65	TYA	Quran	None
				Administra	Englis					Memoriz	

12	F	24	TYA	Psychology	Basic English	12	F	61	TYA	Quran Memorizing	None
13	F	23	TYA	Accounting	Basic English	13	F	63	TYA	Quran Memorizing	None
14	F	24	TYA	Accounting	Basic English	14	F	64	TYA	Quran Memorizing	None
15	F	21	TYA	Accounting	Basic English	15	F	64	TYA	Quran Memorizing	None

Materials and data analysis

Different speaking contexts were used to elicit data for this study. Providing a read text to the participants is a useful method of collecting data. However, according to Arvaniti (2009), the speech produced by reading does not reflect the real prosody of a language given that reading and speaking have different and distinguished prosodic characteristics. Feagin (2008), on the other hand, considered that participants reading the same material would results in recordings of similar sounds and utterances for all participants. A fixed text is useful to compare between dialects or even speakers of the same dialect, as long as the text employed is as natural as possible. Thus, in this study, a read text was used to obtain the same utterances from all speakers. It was also necessary to obtain data from spontaneous conversations to compare the prosodic features produced in self-conscious reading and a more naturalistic speaking context. In addition to statements in the first two contexts, interrogatives were also elicited to compare them with the statements produced in the other two speaking contexts.

The speakers were audio recorded individually using a digital recorder (Zoom H2n) in a quiet, curtained and carpeted room away from any noise or distraction. All the participants were aware of the recordings and the purpose of their participation. Prior to the recordings, the speakers were asked to provide written consent to be recorded, and they were informed about

their right to withdraw from the study if they wanted to. The participants requested that the recordings not to be played back to other people except for the purpose of analysis for the study.

Read text

A read text enables participants to read the same utterances that can provide a consistent and comparable material. The text was derived from the speech of a TYA speaker. The TYA speaker was asked to speak spontaneously about the weather in Yemen. Subsequently, her monologue was orthographically transcribed and used as the read text. This method helped to create a more familiar and relevant text for the speakers, and accordingly resulting in more natural production by the speakers. At the same time, the speakers of both generations did not face any difficulties in reading a passage written in their regional variety. The eight utterances of the text were examined for each speaker of from the younger (YYG) and older generation (YOG). A total of 120 utterances were analysed for each group resulting in 240 utterances for both groups of speakers.

Spontaneous speech: Talking on a given topic

The speakers were asked to talk about one of the topics presented to them like a special event in their lives, ways of spending their spare time, a memorable vacation, working, cooking, marriage or studying. Given that people's interests are different, providing a number of different topics is important to give the participants the chance to select a topic that matches their interests, (Milroy & Gordon, 2003). The topics presented in this study were selected to match the general interests of female speakers. Although studying and working might not be a preferred topic for the older participants, the other topics seemed to be appropriate for women of all ages. The speakers were recorded when they felt prepared and comfortable, and after they had the time to think about what they wanted to say.

Ten utterances were extracted for each YYG and YOG speaker. Although some speakers managed to sustain their speech for a long time with a greater number of utterances, ten utterances were found to be the suitable number of utterances to be selected for analysis of spontaneous speech as that was the maximum number of utterances that were found to be produced by all the speakers without stuttering, stumbles, very long pauses or unnecessarily

lengthened sounds. A total of 150 utterances were analysed for each group resulting in an analysis of a total of 300 utterances for both groups of speakers.

Spontaneous speech: Yes/no and wh-questions

Both *yes/no* and *wh*-questions were elicited. For *yes/no* questions, the speakers were involved in a question and answer game. They were asked to guess what animal the interviewer was thinking of by asking *yes/no* questions. For the *wh*-questions, the speakers were asked to take on the role of the interviewer and ask questions which began with *men* ‘who’, *eish* ‘what’, *fein* ‘where’, *mitta* ‘when’ and *keif* ‘how’. Five *yes/no* questions and five *wh*-questions were analysed for each YYG and YOG speaker resulting in an analysis of a total of 300 interrogative statements for both groups of speakers.

Data analysis

All the recorded data were opened in wideband spectrograms and analysed using PRAAT version 5.3.17 (Boersma and Weenink, 2012). In order to analyse the intonational patterns of TYA, the study tracked the intonation contours on the spectrogram to examine the realizations of different intonational patterns in different types of utterances. In autosegmental-metrical theory, F0 is not perceived as a contour that changes according to the general shape or pattern. Rather, it is seen as sequence of distinct events and the most important tonal events that characterize the pitch contour is a string of one or more pitch accents that associates prominent syllables (marked as H* or L*), and in this study these events are particularly examined in the last accented syllable as this syllable is the most prominent syllable in TYA. These events occur within relevant boundary tones (marked as H% or L%).

The model is autosegmental for having different tiers for segments represented by vowels and consonants, and tones represented by high and low tones. On the other hand, it is metrical because it considers that those tiers occur within phonological constituents that are arranged in a hierarchical organization. These constituents include the intonational phrase (IP), the intermediate phrase (ip), the accentual phrase (AP), the word and the syllable. Phonetically, in those constituents or units, pitch moves up and down in some kind of a systematic way that gives a language a distinguished melodic pattern. The duration of syllables will be reduced or fully produced according to the stress and rhythmic patterns of a language; and some segments will be

produced more prominently than others. These constituents are acoustically signalled by pitch or F0 reset that mark the boundaries of those units and the F0 pattern that gradually stretches over their length marks the coherence of those prosodic units.

Since the local events in the pitch contour (Rao, 2008) are targets that reflect the pattern of pitch in the entire utterance, two intonation patterns were examined. These were the contours of local intonation (the nucleus which was taken as the major unit of information) and global intonation (the entire utterance). Both the global and local contours are viewed as independent of each other (Gårding, 1993). It is a common practice to examine the pitch patterns on the accented syllable (nucleus) of an utterance since that syllable is the place where a considerable amount of pitch movements occurs (e.g. Ladefoged & Johnson, 2011). The last accented syllable of the utterance was taken as the local scope, and the entire utterance was taken as the global scope of the visual inspection. The nucleus was not only analysed by means of visual inspection, but by looking at the mean F0 and calculating the starting and the ending pitch of that syllable. The purpose of which is to capture the slight differences that cannot be recognized visually and can only be identified through acoustic measurements.

Following the analysis of the intonation contours of the different types of sentences, the F0 alignment patterns were examined in order to investigate how the F0 is aligned to the nucleus among the two groups of speakers to find out the possible differences in their tonal realizations even if the pattern appeared to be visually comparable. The duration of the nucleus was measured from the beginning of that nucleus (the last accented syllable) to the F0 peak and then expressed as a ratio to the total duration of that syllable to investigate the synchronization of F0 contour with the accented syllable. The values obtained from both groups were compared for significant differences using independent *t-tests*. However, it has to be acknowledged that it was not ideal to compare peak alignment over syllables which are not segmentally identical.

Findings and discussion

The findings of this study show that, unlike the other Arabic dialects, TYA does not show variability in pitch accents in the different speaking contexts, where the H*L% seem to be the consistent tone in all utterances with the only exception of the *wh*-questions of YYG which have a L*H% tone. In other words, a high pitch accent accompanies the nucleus (last accented syllable) of the utterances, with a final low tone showing a local declination, while in YOG *wh*-

questions, a low pitch accent accompanies the nucleus with a final high tone showing a local rising tone.

The global pattern also does not show much variability where the intonational contour shows a declination in all the utterances except for *yes/no* questions which displays a global rising pattern. What seems to be surprising in this study though is the comparable patterns of both groups of speakers despite the very different backgrounds of the speakers that were expected to be reflected in the speakers' patterns. All the global and local patterns of the utterances are similar for both older and younger generations, however, the only difference is seen in the *wh*-questions of YYG which show a contrasting pattern from their older counterparts in their local contour. These findings are discussed in the following sections.

Pitch contours spontaneous speech

There was a general pattern found for speakers of both groups where the majority of utterances ended with a falling tone. Although the majority of utterances displayed a falling tone pattern, there was a general tendency of ending the last accented syllable with a higher pitch than the beginning of that syllable. Table 3 shows the average F0 values of the onset and offset of the accented syllable for both YYG and YOG speakers. The findings in Table 3 are illustrated in Figure 1 which shows the pattern in which the accented syllable began and ended for both YYG and YOG. It can be seen that regardless of the falling pitch that occurs within the syllable, the speakers tended to end the syllable with a higher pitch than its beginning.

Table 3. Average onset and offset F0 values of YYG and YOG speakers in spontaneous speech

	F0 in syllable onset (Hz)	F0 in syllable offset (Hz)
YYG	187	219
YOG	182	201

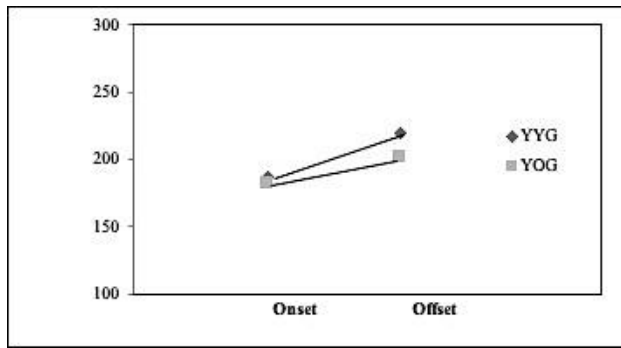


Figure 1. Onset and offset F0 of last syllable in spontaneous speech

Pitch variations and F0 peak alignment in the spontaneous speech context

As mentioned previously, the most common pitch movements occurred in the last accented syllable. Therefore, this syllable was taken as the unit of analysis, and the focus was on the fundamental frequency contour of that syllable. The mean F0 in the nucleus or the last accented syllable were measured for every speaker's utterances. In order to quantify the speakers' differences in F0 alignment, the duration from the beginning of the accented syllable to the F0 peak were calculated and expressed as a ratio to the total duration of that syllable. Table 4 presents the average values of F0 and F0 peak/ trough in the nucleus as well as the ratio of the total duration of that syllable for both YYG and YOG speakers. The results show that while the mean F0 values were higher for YOG, the YYG displayed higher pitch peaks. In terms of mean F0, a significant difference was found between the two groups of speakers ($t(28)=4.4$, $p=0.0006$), indicating that the YOG speakers had higher average pitch values than their younger counterparts.

Table 4. Average F0 values, F0 peak and F0 alignment in the spontaneous speech of YYG and YOG speakers

	F0 (Hz)	F0 peak (Hz)	Ratio
YYG	183	222	0.43
YOG	197	214	0.46

In relation, the ratios of the F0 peak to the total duration of the syllable was calculated. Both groups had low values which indicate an early occurrence of the pitch peak in the syllable.

No significant difference was found between the ratios of both groups ($t(28)=0.9$, $p=0.1$). Thus, the pitch or F0 peak for both groups tended to occur towards the beginning of the syllable. Figure 2 shows an example of the early occurrence of the pitch peak.

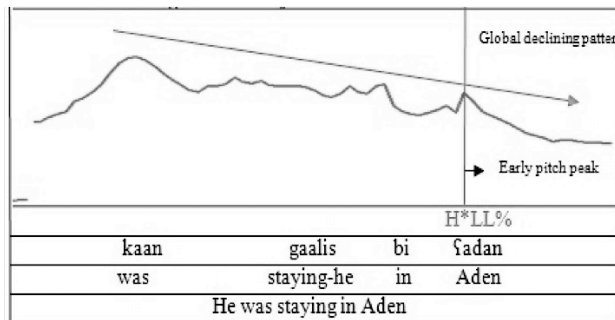


Figure 2. F0 alignment extracted from YYG speaker 9

Pitch contours in the read text context

The pitch contours of the read passage utterances produced by speakers of both groups were analysed in order to identify the intonational patterns of a fixed and consistent material. Like the spontaneous speech, the speakers of both groups produced the utterances with a falling tone. However, the declination in the read passage utterances is steeper than that of the spontaneous speech utterances based on the onset and offset F0 values of the utterances as shown in Figure 3.

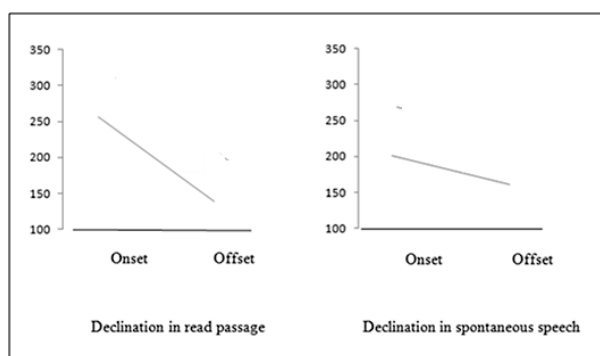


Figure 3. Declination lines in the read text and spontaneous speech of YYG and YOG speakers

Table 5 shows the average F0 values of the onset and offset of the accented syllable for both YYG and YOG speakers. The speakers tended to end the syllable with a much lower pitch

than its beginning. This could explain the steep declination of F0 of the read passage utterances compared to the spontaneous speech utterances which had displayed a higher pitch in the last syllable offset despite the global falling tone of the utterance resulting in less global declination.

Table 5. Average onset and offset F0 values of YYG and YOG speakers in read text

	F0 in syllable onset	F0 in syllable offset
YYG	167	93
YOG	163	92

Pitch variations and F0 peak alignment in the read text context

The pitch variations and F0 alignment in the last accented syllable were analysed for every speaker's utterances of the read passage. Table 6 presents the average F0 and F0 peak values and the ratio of the total duration of the syllable for both YYG and YOG speakers. The results show that both YYG and YOG speakers have comparable values of F0. No significant difference was found between the F0 values of both groups ($t(28)1.9$, $p=0.08$). As for F0 alignment, both groups display very low values which indicate an early occurrence of the pitch peak in the syllable. No significant difference was found between YYG and YOG speakers ($t(28)=1.2$, $p=0.2$). Thus, the pitch or F0 peak for both groups seems to occur towards the beginning of the syllable. This early occurrence of peak in the syllable in declarative sentences in both speaking contexts is similar to the findings of El Zarka (1997) who found that Egyptian Arabic displays pitch peaks in the beginning of the syllable unlike Hellmuth (2006) who found that the pitch peaks occur in a delayed position in the syllables of Egyptian Arabic.

Table 6. Average F0 values, F0 peak and F0 alignment in read text of YYG and YOG speakers

	F0 (Hz)	F0 peak (Hz)	Ratio
YYG	151	209	0.27
YOG	149	201	0.23

Pitch contours of wh-questions

For these types of question, there seemed to be a general tendency for YYG to have a declining pitch from the beginning to the end of the utterance, however, those questions ended with a rising tone. Figure 4 shows an example of the intonational pattern in YYG *wh*-questions.

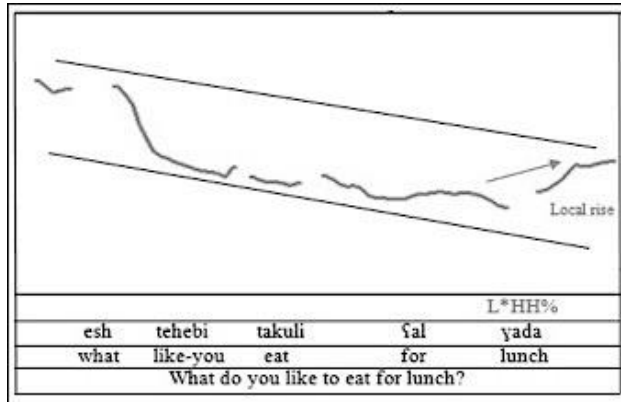


Figure 4. Pitch contour of questions by YYG speaker 2

As for the YOG speakers, they displayed a different pattern in producing the *wh*-questions which appears to be similar to the intonational contour in the Temouchent dialect of Algerian Arabic in this type of questions (Belmekki & Bencharef, 2016). It appears that those questions are produced with a falling tone like the declarative statements seen in spontaneous speech but with a steeper declination. The last syllable shows a major pitch variation and ends with a lower pitch than the beginning of that syllable. This can be seen in Figure 5, which shows an example of this pattern in YOG *wh*-questions, where the pattern illustrated is a typical contour for these types of utterances in this variety based on auditory impressions.

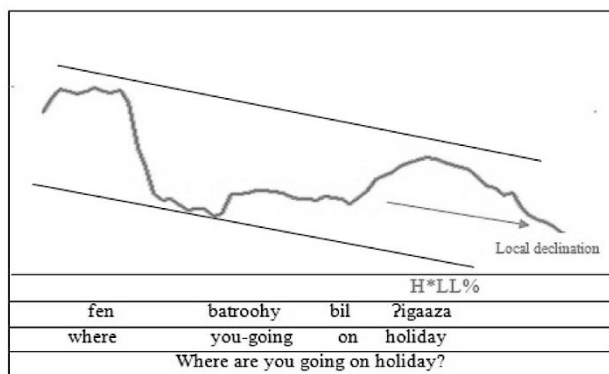


Figure 5. Pitch contour of *wh*-question produced by YOG speaker

To compare the pattern of pitch movement in the last syllable of both YYG and YOG speakers, the syllable onset and offset F0 are reported in Table 7.

Table 7. Average onset and offset F0 values of YYG and YOG speakers' *wh*-questions

	F0 in syllable onset	F0 in syllable offset
YYG	173	274
YOG	169	88

Figure 6 shows a contrast in the pitch patterns of the YYG and YOG speakers in producing *wh*-questions. It appears that the YYG speakers display a rising tone towards the end of the utterance, and the last syllable ends with a much higher pitch than the syllable onset. For the YOG speakers, *wh*-questions are produced with a clear falling tone that ends with a very low pitch in the offset of the last syllable.

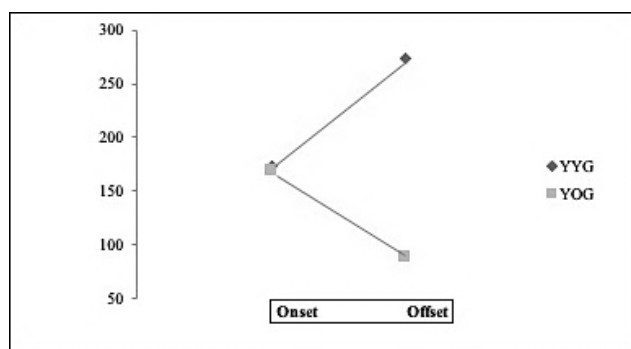


Figure 6. Onset and offset F0 of last syllable in *wh*-questions

Pitch variations and F0 peak alignment in wh-questions

Table 8 presents the average values obtained from both YYG and YOG speakers. The average F0 values and the ratios of both groups of speakers were not compared for significant differences as each group displayed a completely different pattern of pitch movement where one shows a rising tone with an F0 trough as the major point of pitch variation. The other group has a falling tone with an F0 peak as the major point of pitch variation. Yet, it should be noted that the ratios for both groups of speakers appeared to be low indicating an early occurrence of the F0 peak/trough in the last accented syllable of the utterance.

Table 8. Average F0 values, F0 peak and F0 alignment in *wh*-questions of YYG and YOG speakers

	F0 (Hz)	F0peak/trough (HZ)	Ratio
YYG	178	156	0.3
YOG	167	196	0.2

Pitch contours in yes/no questions

The pitch patterns of *yes/no* questions were analysed for the YYG and YOG speakers. For these types of question, both groups of speakers displayed a different pitch pattern from the other forms of utterances as seen in Figure 7. Figure 7 illustrates an example of the pattern in which the speakers produced the *yes/no* questions where, globally, it appears that there is a gradual rise in the intonational contour which appears to end with a falling tone after a very high pitch rise. This distinct high rise-fall movement of pitch is also seen in Moroccan *yes/no* questions where pitch rises relatively high before it falls at the end of the utterance, unlike the Egyptian, Jordanian, Syrian, Iraqi, Kuwaiti and Omani Arabic varieties which all display a plain rise in *yes/no* questions (Hellmuth, 2018). However, the grid lines do not seem to be parallel as the top line shows a higher rise than the base line. This pattern implies that the Yemeni speakers seem to compensate for the absence of an interrogative marker by a distinct intonational pattern that distinguishes declarative questions from declarative statements. The pitch pattern of the last accented syllable of both groups was compared by calculating the syllable onset and offset values as shown in Table 9.

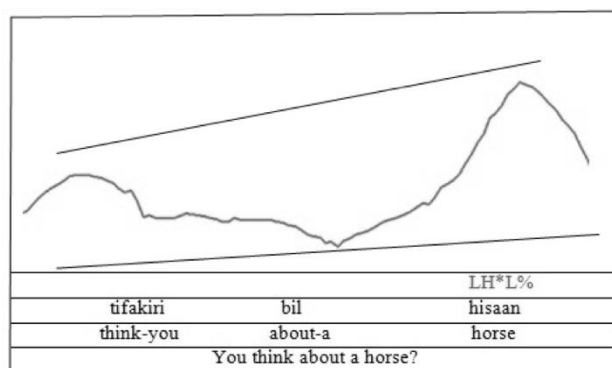


Figure 7. Pitch contour of *yes/no* question by YOG speaker 7

Table 9. Average onset and offset F0 values of YYG and YOG speakers in *yes/no* questions

	F0 in syllable onset	F0 in syllable offset
YYG	222	225
YOG	204	239

Figure 8 shows the pattern of pitch movement in the last accented syllable of YYG and YOG speakers. It shows that both groups start and end the syllable with a high pitch. However, the syllable onset and offset pitch of YYG speakers seem to be somewhat similar compared to the YOG syllables which seem to end with a slightly higher pitch than the syllable onset.

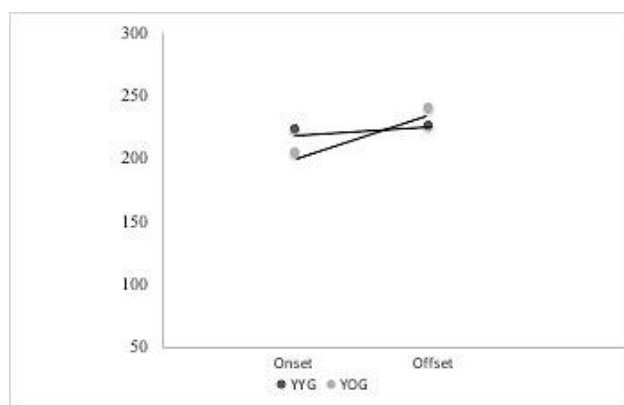


Figure 8. Onset and offset F0 of last syllable in *yes/no* questions

Pitch variations and F0 peak alignment in yes/no questions

Pitch variations and F0 peak alignment were also analysed for the *yes/no* questions. Table 10 presents the average values obtained from both YYG and YOG speakers. The results show that the mean F0 values and F0 peaks of both groups are quite high compared to the other forms of utterances seen earlier. A significant difference between YYG and YOG speakers was found ($t(28)=2.43$, $p=0.02$), denoting that although pitch values are high for both groups, the YYG speakers display higher F0 values than their older counterparts.

Table 10. Average F0 values, F0 peak and F0 alignment in *yes/no* questions of YYG and YOG speakers

	F0 (Hz)	F0 peak (Hz)	Ratio
YYG	289	394	0.9
YOG	272	290	0.6

As for the results of the F0 peak, both groups displayed values which indicate the occurrence of the pitch peak after the midpoint of the syllable. No significant difference was found between the ratios of both groups ($t(28)=4.8$, $p=0.0002$). Thus, the pitch or F0 peak of YYG speakers seem to occur towards the end of the syllable (after about 170 milliseconds in a 200 millisecond of a stressed syllable). In comparison, the F0 peak of YOG speakers occurred slightly after the midpoint of the syllable as can be seen in Figure 9 which compares between the occurrences of the pitch peaks for YYG and YOG speakers.

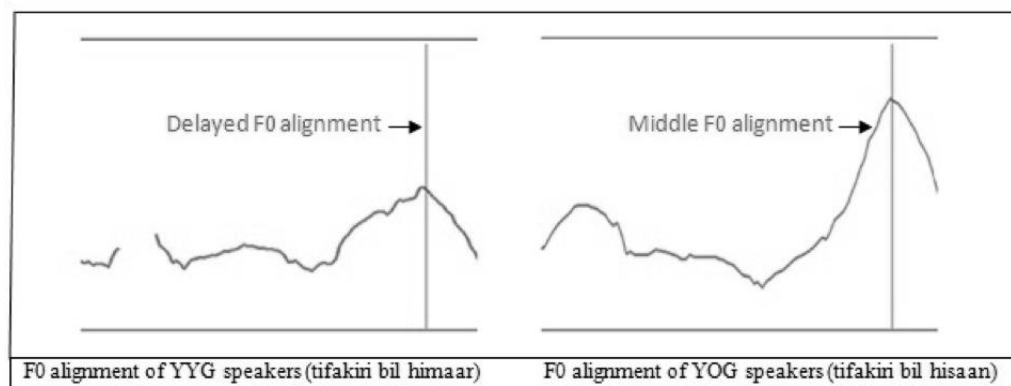


Figure 9. Differences in F0 alignment between YYG and YOG speakers

It can be seen from all the previous findings that in TYA intonational contours, the pitch peak is consistently aligned to the nucleus of the utterances. Therefore, the TYA contour is associated with pitch accents which are different from the contours found in Moroccan Arabic which does not show evidence of pitch accents (Burdin et al., 2015; Hellmuth et al., 2015). However, similar to El Zarka (1997), the peak occurred in an early position in the utterances of all speaking contexts in TYA. This is with the exception of the *yes/no* questions where the peak occurred in a delayed position in the syllables. There is also a general tendency to display a high pitch accent since a high tone seems to appear on the nucleus of the majority of TYA utterances. Although Hellmuth (2014) described Sana'ani Arabic (which is also a variety of Yemeni) as an L* language, TYA can be considered as an H* language sharing this feature with other non-Yemeni Arabic varieties like Egyptian (Hellmuth, 2014), Emirati (Blodgett et al., 2007) and Najdi (Alzaidi, 2014). This shows that pitch patterns can be used to differentiate between Arabic varieties as suggested by Hellmuth (2018).

Generally, the intonational contour of TYA shows some similarities with the patterns of other Arabic varieties like Moroccan and Tunisian *yes/no* questions, where a high rise-fall tone movement characterizes the contour of these types of questions (Hellmuth, 2018). The same pattern was seen in this study where this high rise-fall action was described as a compensating action for the absence of an interrogative marker. Perhaps this similarity is due to the comparable structure of *yes/no* questions in these dialects. However, although *wh*-questions of YOG showed a rise-fall action similar to *wh*-questions in the Temouchent dialect of Algerian Arabic (Belmekki & Bencharef, 2016), the YYG displayed a different and contrasting pattern where a fall-rise action was employed in this type of questions. This feature appears to be the most distinguishing feature in TYA. This is because it is the only form that differentiated between the two age groups of TYA. Therefore, although TYA can be regarded as an H* language, the L* tone is the one that is found to distinguish the speech of the younger speakers of TYA from the older speakers.

Summary and conclusion

This study presented the findings related to intonational patterns in spontaneous speech, read passage, *wh*-questions and *yes/no* questions produced by YYG and YOG speakers. Table 11 summarizes the findings in the three speaking contexts. The results presented in Table 11 show

that in terms of the spontaneous speech, the YYG and YOG utterances have a gradual declination of the pitch contour. Although the YOG speakers displayed more pitch variations in the last accented syllable than the YYG speakers, the F0 alignment was similar for both groups where it had an early occurrence in the syllable. As for the read passage, the utterances displayed much steeper global declination than the spontaneous speech utterances. Thus, for both groups, F0 alignment had a tendency to occur towards the beginning of the last accented syllable.

Table 11. Summary of findings

Group	Spontaneous Speech		Read Text		Interrogatives	
	F0 Contour	F0 Alignment	F0 Contour	F0 Alignment	F0 Contour	F0 Alignment
YYG	Global and local declination H*L%	Early in the syllable	Steeper global and local declination H*L%	Early in the syllable	Global declination and local rising tone (wh-questions), L*H%	Delayed occurrence in the syllable
YOG	Global and local declination H*L%	Early in the syllable	Steeper global and local declination H*L%	Early in the syllable	Global rising tone and local declination (yes-no questions), H*L%	Slightly after midpoint of syllable

As shown in Table 11, *wh*-questions displayed different patterns for speakers of both groups. The YYG speakers showed a global declination of the utterances, but with the last accented syllable ending in a rising tone. The YOG speakers, on the other hand, also displayed a global F0 declination but with the last accented syllable ending in a falling tone. It has to be noted that *wh*-questions of YYG, which is the only speaking context that displayed differences from the other group, can be considered as a unique intonational pattern not only because it contrasts with the final falling tone of the YOG, but also because it is different from other Arabic varieties. This is because descriptions of Arabic tend to describe a falling contour over the whole *wh*-question utterance (El Zarka, 2018).

As for *yes/no* questions, speakers of both groups exhibited a global F0 increase. However, the last accented syllable showed a prominent pitch variation with a falling tone. The YYG speakers displayed more pitch variations than their older counterparts and their F0 alignment had a delayed position in the syllable whereas the YOG speakers' F0 alignment appeared slightly after the midpoint of the syllable.

Thus, the global and local contours are independent of each other which appeared to be true in TYA, where some cases displayed a global declination with a local rising tone and other cases exhibited a global rise with a local falling tone. However, it was the local contour of the last accented syllable that captured the distinct patterns of TYA intonation between both groups. When compared to Hellmuth's (2014) study of Sana'ani Arabic, the latter was described as displaying a frequent L* tone in different utterances. In this study, on the other hand, H* appeared to be the frequent tone that accompanied the prominent syllables in the utterances.

The implications of these findings on the intonation patterns in relation to age differences is that despite the different circumstances in which the speakers in both groups lived and were educated, their prosodic output in TYA did not appear to be different. This is contradictory to what might have been expected, which is that the younger generation would adopt new linguistic features whilst the older generation would tend to maintain older forms (Trudgill, 1988). It was assumed that the increasing contact and interaction that Yemenis had with foreigners for decades after the revolution and the generally different environment that accompanied that phase might have influenced the speakers' linguistic practices. Thus, the younger speakers were expected to show variations from the older Yemenis who lived in a very different environment and barely had contact with non-Yemeni speakers.

However, the expected variation was not evident in the intonation patterns of the TYA speakers in this study. This could be because TYA is a local Arabic variety used in a local social network of TYA speakers and, thus, can be considered as a marker of local identity that distinguishes TYA speakers from other Arabic speaking areas (Milroy, 1980; Chambers, 2003). Further, communication with non-TYA Arabic speakers is likely to be in a more standard form of Arabic for mutual intelligibility. Thus, despite all the changes that occurred in Yemen and the small number of non-Yemenis did not form a significant proportion of the society to be able to influence TYA (Thomason, 2001). In addition, speakers from different parts of the world who came to Yemen to contribute to the educational process in the country, very likely had little contact with the local communities beyond the educational domain and the instructive medium in schools. Therefore, it is possible that the features of TYA has remained relatively unchanged. However, there is also a possibility that the Standard Arabic spoken by TYA speakers may be influenced by speakers of other varieties of Arabic. This is something that would need further investigation. Further studies on the other phonological and other linguistic features of TYA would also need to be done to examine if there have been changes due to the influence of other varieties of Arabic. It is also recommended that future studies include both males and females to provide a better insight of TYA and their use of SA.

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Appendix A

READ TEXT

بصراحة الجو بتعز ما فيش زيه. يعني بالبرد مثلا يكون الجو محتمل كثير مش زي صنعا البرد فيه لا يطاق. وحتى بالصيف مع انه بالفترة الاخيرة زاد الحمى مرّة بس برضو يظل الجو روعة زيادة لما يجي مطر. تلاقي الكل يخرج برع. محد يشتي يجلس داخل البيت.

bis^ʕaraaḥa algaw bItayez maafijS zayo TYA^ʕni bilbard maTalan yIkuwn algaw muḥtamal kaTijr
muS zay san^ʕaa albard fijbeh laa yut^ʕaaq wḥata bis^ʕe:f ma^ʕʔino bilfatra al^ʕxijra zaad alḥama
marra bas bard^ʕo yiD^ʕal algaw raw^ʕa ziTYAada lama yigi mat^ʕar tilaaqi alkol yixrog bara^ʕ
maḥad yiSti yigles daaxel albe:t

Frankly the weather in Taizz is unmatched. I mean in winter, for instance, the weather is quite tolerable, unlike Sana'a where the cold is unbearable. Even in summer, although lately it has become much hotter, still the weather is amazing especially when it rains. You find everyone goes outside. No one wants to stay at home.

Designing and Piloting a Repeated-Measures ANOVA Study on L2 Academic Writing: Methodology and Challenges

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Abstract

This article highlights methodological challenges inherent in implementing a repeated-measures ANOVA study on L2 academic writing and suggests possible solutions to these challenges. The RM-ANOVA design is employed when the same participants are measured more than once. Therefore, a repeated-measures ANOVA study with its several sessions of data collection and multiple variables requires a meticulous planning and well-planned implementation. This article highlights important considerations that researchers might want to pay attention to while designing and implementing a repeated-measures ANOVA study. These considerations pertain to selecting and operationalizing the study's variables, recruiting the participants, selecting an appropriate research instrument and ensuring that the data are reliable and valid.

Keywords: L2 academic writing; research methods; RM-ANOVA design; university students

Introduction

Task-based language teaching (TBLT) provides a framework for second language (L2) researchers and practitioners to design class tasks that are meaningful for the language learners,

that promote L2 communication in the classroom and enhance the learners' use of authentic language while performing the tasks (Willis & Willis, 2008). A cognitive model of task-based instruction—the Cognition Hypothesis—asserts that pedagogical tasks with increased cognitive demands will help to achieve two pedagogical aims. Firstly, these tasks will nudge the language learners to produce more accurate and complex language. Secondly, they will stimulate the learners to engage in a lengthier interaction and heighten their attention to, and memory of, the linguistic input (Robinson, 2003a, 2003b). The literature on the Cognition Hypothesis portrays task complexity as an important cognitive factor that needs to be properly addressed while designing a task. This is because this creates more learning opportunities and strengthens attentional mechanism for L2 production, development and acquisition (Robinson, 2003b, 2005, 2007).

The Cognition Hypothesis and its associated Triadic Componential Framework (TCF) provides a taxonomic system for pedagogical task design and implementation. Three broad classificatory categories, namely, task complexity, task condition and task difficulty are each guided by two continuums (Robinson, 2001a, 2003b, 2005, 2007). A key component—task complexity and its resource-directing and resource-dispersing continuums—can be operated according to the -/+ continua to determine the cognitive complexity of a task and its emphasis on L2 production, development and acquisition³¹. Causal reasoning demands is one of the resource-directing factors that promotes L2 production. However, as a review of scholarly literature shows, it is a greatly underexplored factor. Not only does the cognitive factor or causal reasoning demands requires empirical validation, but also the interactive factor that refers to the number of participants in the task (or the task condition) is of the utmost importance.

It is possible that the scarcity of studies that address this important topic in the literature on L2 academic writing is due to the methodological considerations and challenges that researchers have to face both at the research design and research implementation stages. Such a study would require a complex research design that involves a meticulous planning and thorough execution to allow for a smooth implementation and eventual success of the research project. Therefore, the current article focuses on the methodological issues that need to be addressed while designing a study that aims to examine the effects of -/+ causal reasoning demands across

³¹ The continuum +/-, which is attached to the assessed components in a study on L2 academic writing, indicates that “there is relatively more versus relatively less” of the component (Robinson 2001b, p.30). The components may be the task complexity, the number of participants, the allocated time, etc.

different +/- number of participant groupings (i.e., individual, dyadic and triadic) on the L2 written modality. The dependent variables for the writing modality in a study highlighted here are Complexity, Accuracy and Fluency (CAF) in the L2 written production.

To be more specific, among the variables, Complexity refers to the number of clauses the learner connects or includes within a sentence (Foster & Skehan, 1996). This construct in L2 production shows the development of the restructuring process within the L2 learners' interlanguage systems (Skehan, 1996). Accuracy refers to the learner's ability to exercise the maximum level of control to prevent errors during a language performance (Ellis, 2003). Fluency refers to the learner's ability to use the language with a high number of words (Larsen-Freeman, 2006).

This article is structured as follows. Firstly, it reviews the methodology and statistical procedures employed in the earlier studies on the effects of task complexity on the L2 individual written production in terms of Complexity, Accuracy and Fluency. Then, it highlights important considerations that researchers might want to attend to while designing, piloting and implementing a repeated-measures ANOVA (RM-ANOVA) study. The article gives examples of the challenges that could be faced during data collection and data analysis procedures. While the actual findings are not reported here, the article gives several examples from a study that adopted the RM-ANOVA research design. The article provides suggestions to possible actions that could help to successfully overcome these challenges. In short, this article might offer a useful guidance to novice researchers who would like to implement their own RM-ANOVA study.

Review of Literature

Earlier research studies have employed various methodologies, instruments and statistical procedures to investigate the effects of task features on L2 academic writing. Ishikawa (2007) employed a one-way ANOVA to examine the effects of *Here* and *Now* on the Complexity, Accuracy and Fluency (CAF) measures in the L2 narrative written output produced by 54 Japanese third-year high school students. The *Here* and *Now* variable was manipulated with the availability of the cartoon strip. The findings revealed that more complex tasks resulted in higher CAF indices. This finding was compatible with the Cognition Hypothesis that postulates that cognitively more complex tasks would have positive effects on the quality of the L2 production. However, it is not clear if the resource-dispersing variable—*planning time*—was included in the

study by Ishikawa. Therefore, it could be suggested that the results could be due to the effects of the pre-task *planning time*, which might have lessened the complexity level of the resource-directing *here and now*. This issue was also noted by Skehan (2009).

Kuiken and Vedder (2007) employed a repeated measures ANOVA (RM-ANOVA) design to investigate the effects of task complexity with *-/+ number of elements*, and *-/+ number of reasoning demands* on the language performance. The participants were Dutch learners of French and Italian who were instructed to write a letter about the choice of the holiday destination. The independent variables included 3 elements to reason the choice of the holiday destination for the non-complex writing task and 6 elements for the complex writing task. The assessment was based on the general versus specific measures of writing proficiency. In the study, accuracy was examined by counting the type of errors made in the L2 texts, whereas lexical complexity was inspected by distinguishing the frequent words from infrequent ones. The results revealed that the complex writing task led to a significant decrease of errors and yielded a lexically more complex text. The effects of task complexity on higher accuracy could be mainly attributed to lower ratios of lexical errors in the more complex task.

A study by Ruiz-Funes (2015) examined the effects of task complexity and several learner-related variables in essay writing. The researcher focused on the CAF measures and the participants were L2/foreign language (FL) groups with advanced and intermediate language proficiency. Similar to Ishikawa's (2007) finding, Ruiz-Funes detected a positive impact of the increased task complexity on syntactic complexity, accuracy and fluency with the advanced level learners. The results also revealed that the complex tasks yielded a higher syntactic complexity but had a lower accuracy and fluency. However, it was also found that there were positive changes in syntactic complexity, accuracy and fluency in the complex task writings of the advanced learners.

A series of later studies by Kuiken and Vedder (2008, 2009, 2011, 2012) employed a RM-MANOVA analysis to investigate the effects of task complexity, manipulated with $\pm$ *number of elements* and $\pm$ *reasoning demands*, and *high* and *low* proficiency learners in the L2 written and spoken production. The findings from these studies showed positive impacts of increasing task complexity mostly on accuracy. However, they did not indicate any effect on syntactic complexity and lexical variation. It was found that increasing task complexity along resource-directing variables led to higher accuracy in the L2 written output. Also, the findings

indicated that the learners performed with a higher accuracy in complex tasks and there were decreases in the lexical errors. This result contradicted the findings regarding the lexical variation. One of the studies indicated that the effects of task complexity on L2 academic written production was not dependent on the oral and written production modes. As the earlier studies indicated, positive impacts on accuracy were repeatedly identified in the written L2 productions; however, there was no statistically significant effect on the lexical variety. Also, in the written L2 production mode there was no effect on the syntactic complexity. These results might be due to different task types employed in the studies, which might have affected the learners' attention and dispersed it to different dimensions of the L2 production (Skehan, 2009).

In a more recent study, Frear and Bitchener (2015) partially replicated Kuiken and Vedder's (2012) operationalized *reasoning demands* variable with three letter-writing tasks, each at a different level of task complexity. They examined the effects of increasing task complexity on the lexical and syntactic complexity in the writing by 34 non-native speakers of English. The researchers found that the L2 production in the writing task with lower complexity had a larger number of adverbial clauses while the medium and high complexity tasks yielded less adverbial clauses. Overall, the study detected increases in the lexical complexity between low complexity and high complexity writing tasks. However, the increase in the lexical complexity did not lead to the increase in the syntactic complexity. As Frear and Bitchener noted, these results did not support the Cognition Hypothesis. They suggested that these findings could be due to the nature of the tasks, which required a different communication function. Also, there was no statistically significant difference in the ratio of dependent clauses to t-units across all types of the dependent clauses. When the ratio of the dependent clauses to t-units for each type of the dependent clause was analyzed separately, there occurred a decrease in adverbial dependent clauses in the tasks with higher complexity. Rahimi (2018) employed the paired samples *t*-tests and Wilcoxon Signed Ranks tests to investigate the effects of increasing reasoning demands and the number of elements on CAF indices. In the study, two argumentative tasks were adapted from Révész (2011); the participants were 60 upper-intermediate FL learners of English in Iran. The findings showed that increasing task complexity produced a larger number of subordinate clauses with a greater lexical and syntactic complexity but also with a reduced writing accuracy.

To sum up, the earlier studies that employed statistical analyses to examine the effects of task complexity and task condition on individual learners' L2 academic writing were conducted

with different kinds of participants. This might have affected the findings due to the variability of the overall mean scores that could stem from the participants' individual differences. Therefore, to increase the accuracy of the statistical analysis it would be advisable to conduct a study among the same group of participants. This would require implementing an RM-ANOVA design. In other words, an RM-ANOVA study could be a better analytical tool to examine the effects of the task design variable (i.e., *task complexity: $\pm$ causal reasoning demands*) and the task implementation variable (i.e., *task condition: $\pm$ number of participants*) on L2 individual argumentative written production and measures of the CAF indices.

This article demonstrates how an RM-ANOVA study could be designed, piloted and implemented. It also highlights the methodological challenges and possible solutions when implementing such a study. The investigation of the effects of task complexity level (i.e., *simple* versus *complex*) and task condition (i.e., *individual*, *dyadic* and *triadic*) on the L2 individual academic writing (an argumentative essay in this particular case) was guided by the following research question: Is there a statistically significant effect of task complexity (simple vs complex task) and task condition (individual vs dyadic vs triadic groupings) on *lexical* and *syntactic Complexities*, *grammatical Accuracy* and *Fluency* in L2 individual academic writing? The following sections highlight important considerations that researchers have to address while designing an RM-ANOVA study.

Designing an RM-ANOVA Study: Methodological Considerations

Operationalizing the Variable and Proposing the Relationship among the Variables

Studies employing an RM-ANOVA design assess relationships among several variables. Moreover, the RM-ANOVA design can be implemented either with only the within-group variables or in a combination of the within- and between-groups variables. As advised by Larson-Hall (2015), in order to make the research design and the study's variables clear to the reader, researchers might want to provide a design box that visually presents their RM-ANOVA analysis and variables.

In the current article, the RM-ANOVA analysis investigated whether there was a statistically significant difference in the L2 individual writing (i.e., the argumentative essays) in three different task conditions (i.e., *individual*, *dyadic* and *triadic*) which were performed by the

same group of participants. Figure 1 depicts the research design and variables in the current study.

Dependent Variables	Independent Variable & Moderator Variable	
Continuous Variable	Categorical Variable	
L2 Individual Writing - Lexical complexity and Syntactic Complexity - Grammatical Accuracy - Fluency	Within-groups variable	Between-groups variable
	Independent variables Task Complexity - Simple Task with 2 causes and 2 effects - Complex Task with 6 causes and 6 effects	Moderator variables Task Condition - Individual - No peer discussion, individual writing - Dyadic - 15 minutes discussion, individual writing - Triadic - 15 minutes discussion, individual writing

Figure 1: Design box of the current 2 x 3 RM-ANOVA study

To be more specific, the independent variable—task complexity—had two levels (*simple* and *complex*) and it was the within-groups variable. The moderator variable—task condition—indicated that the same participants performed the task in the *individual*, *dyadic* and *triadic* grouping. This variable was the between-groups variable. The independent and moderator variables were categorical variables because the former represented the levels of task complexity

while the latter represented the conditions of the task implementation. As for the dependent variables, the L2 individual writing was operationalized using the global measures of Complexity, Accuracy and Fluency (CAF). Each of the dependent variables was measured on a continuous scale.

Complexity, Accuracy and Fluency Measures and their Analysis

The writing quality of the argumentative academic writing tasks is usually assessed by the global measures of Complexity, Accuracy, and Fluency (CAF). The researchers might want to explain how the CAF were measured in their study. A detailed explanation of the CAF measures in this particular study is given in Table 1.

Table 1: Global CAF Measures of the academic writing quality

Global Measures	CAF Examples
Complexity	Lexical complexity: Measured by a mean segmental type-token ratio. Example: Lexical complexity <i>A man walked through the underbridge. He was robbed at the underbridge.</i> Different words/Total words (10/12)
Syntactic complexity (Foster & Skehan, 1996)	Syntactic complexity: Measured by the number of S-nodes per T-unit in the written text. Example: <i>The picture shows that a man walked through the underbridge. He was robbed at the underbridge by a group of unknown people.</i> S-nodes/ T-units (3/2)
Accuracy (Ellis, 2003)	Accuracy: Measured by the number of error-free T-units per T-unit in the text. Example: <i>A man walked through the underbridge. He was robbed at the underbridge</i>

by a group of unknown people. Then, he went to the police station to lodge a report. He tell the police that he recognized a man's face.

- Error-free T-units/ total T-units (3/4)

Fluency Fluency: Measured by the number of words per composition or per T-unit.
(Larsen-Freeman,
2006)

In the present study, two types of complexity were measured—Lexical complexity and Syntactic complexity. As stated earlier, complexity refers to the number of clauses the learner connects or includes within a sentence (Foster & Skehan, 1996). Accuracy is the learner's ability to exercise the maximum level of control to prevent errors during a language performance (Ellis, 2003) while Fluency is the learner's ability to use the language with a high number of words (Larsen-Freeman, 2006).

Steps in the Data Collection, Management and Analysis

Next, due to a complex nature of an RM-ANOVA design, which involves not only multiple variables but also several data collection sessions, it would be helpful if researchers could provide a graphical representations of the steps in the data collection, management and analysis. Figure 2 offers a visual representation of the steps in the data collection, management and analysis adopted in the current study. Moreover, as can be seen from Figure 2, the graphical representation of RM-ANOVA design could be integrated with the visualization of the overall research design of the study (e.g., mono- or mixed-methods).

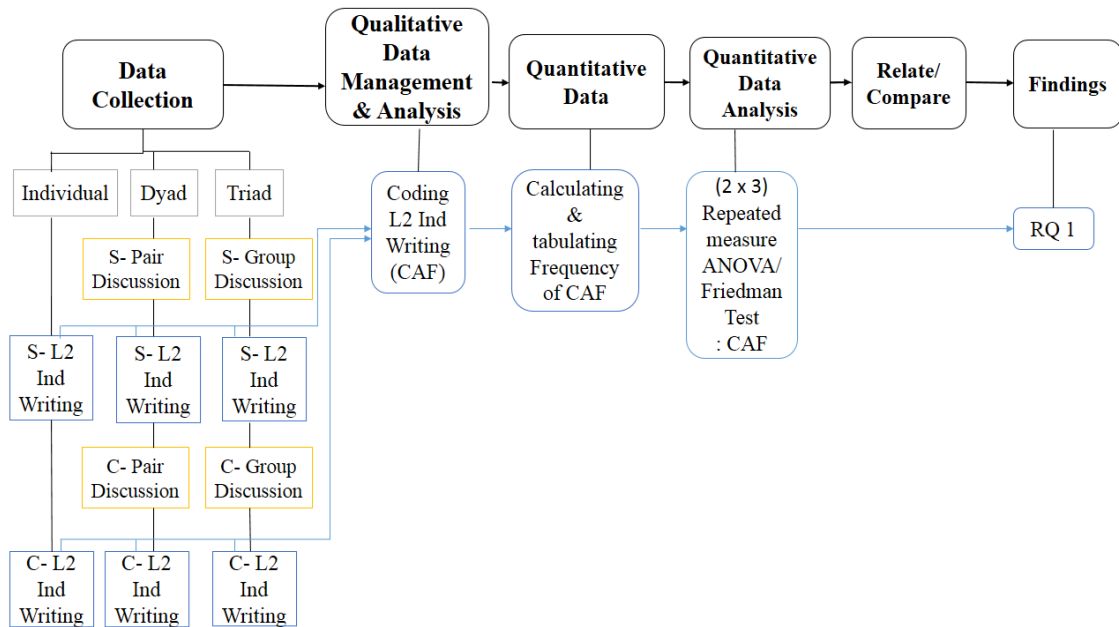


Figure 2: Steps in the data collection, data management and data analysis

As can be seen from Figure 2, the data were collected in three sessions and in three task condition settings—*individual*, *dyadic* and *triadic*. The individual session was set as a baseline for the further analysis; each participant wrote an essay involving one *simple* and one *complex* task, without any peer interaction. The findings were then compared with the findings from the L2 individual written production in the dyadic and triadic settings, which involved the intervention or a peer discussion session prior to the doing the task. In other words, in the dyadic and triadic sessions, the participants were required to have a group discussion before writing their individual essays. The written production (i.e., the written L2 texts) were coded to enable the measurement of the CAF indices. The frequencies of CAF measures were tabulated and analyzed using the Statistical Package Social Science (SPSS) Version 21.

To sum up, at the initial stage of developing an RM-ANOVA study, the main considerations would be: 1) defining and operationalizing the variables in the study, 2) choosing appropriate research instruments and analytical tools and 3) planning the data collection sessions. Other considerations include addressing research ethics and planning the logistics (i.e., the scale and the timing of the data collection sessions). The following section focuses on the second step, which is choosing an appropriate research instrument.

Developing a Research Instrument

When choosing the research instrument (i.e., the type of essay), researchers may want to consider the educational context where their study is conducted. In a Malaysia education context, where the current study took place, it could be advisable to select an argumentative type of an essay for the L2 writing task. There are two main reasons for this choice. Firstly, the argumentative writing task requires the learners to use their logic and reasoning to generate an argument; therefore, in the Triadic Componential Framework (Robinson, 2001a, 2001b, 2007; Robinson & Gilabert, 2007) increasing the resource-directing variable, *reasoning demands* is considered a cognitively more complex task.

Secondly, the argumentative writing genre is often employed in the academic writing courses at the tertiary level in Malaysia (e.g., Veerappan, Yusof and Aris, 2013) and other educational contexts (e.g., Khodabandeh et al., 2013). Therefore, at the tertiary level settings, participants in a study could be familiar and comfortable with being given an argumentative writing task stimulus rather than being provided a series of pictures for their writing task. Therefore, while designing the current RM-ANOVA study argumentative-based topics were considered as the most suitable to be used as prompts for the L2 individual academic writing in all three types of settings (i.e., individual, dyadic and triadic) and also for the peer interaction sessions (i.e., dyadic and triadic).

Research literature offers ample support for using argumentative writing tasks. For example, Long (2015) proposed that tasks should be analytical in nature in order to stimulate learner's attentional mechanisms and memory resources. Argumentative writing tasks allow bringing out the learners' ability to understand, analyze, evaluate, explain and justify an issue when they take a different position on the topic (Duff, 1985; Long, 1990). Besides, as noted in several studies (Duff, 1985; Long, 2015), argumentative writing tasks allow learners to maintain different positions during the interaction to reach a consensus and eventually succeed in their writing task. Importantly, Foster and Skehan (1996) pointed out that an argumentative-based task that incorporates 'critical decision-making' elements would allow yielding the most constant patterns of the linguistic features and CAF measures. In a similar vein, other researchers (e.g., Ellis, 2003; Robinson, 2001a, 2005) argued that tasks that prompt reasoning are considered cognitively more complex than tasks with decreased reasoning demands (Halford, Cowan, & Andrews, 2007). The chosen research instrument needs to be tested in a pilot study. The

following section addresses issues pertaining the pilot study phase of the RM-ANOVA research project.

Pilot Study

A pilot study is necessary to conduct in order to identify and prevent potential problems that might arise in the actual study (Loewen and Plonsky, 2015). It would allow avoiding costly mistakes (time-wise and resources-wise) that might arise due to deficiencies in the research design and data elicitation devices, such as research instruments. During a pilot study various aspects of the future study are assessed and tested, including the research settings, the potential participants, the research instruments and the analytical tools. An RM-ANOVA study might need more than one pilot study due to its complex research design, which includes multiple variables, multiple data collection settings and different timings. In the current study, three rounds of pilot studies were conducted before carrying out the actual study.

To be more specific, Pilot Study 1 tested the suitability of the intended group of participants in terms of their English language proficiency level which is required for completing the tasks. It also evaluated the appropriateness of the complexity level of the argumentative writing tasks. This pilot study revealed that the participants with a low English level proficiency or those who had obtained Bands 1 and 2 of The Malaysian University English Test (MUET) were not able to complete the simple written task within a stipulated time (1 hour). They also struggled to understand the demands and instructions for the tasks. Therefore, it was decided to limit the participation in the actual study to only the learners at an intermediate level (i.e., MUET Bands 3 and 4).

During Pilot Study 2, the main focus was on the concept and design of the task complexity as well as the implementation of the argumentative essay writing tasks. A group of 15 ESL students at their intermediate levels of proficiency (MUET bands 3 to 4) completed two argumentative writing tasks: one simple task and one complex task in three different task conditions—*individual*, *dyadic* and *triadic*. The pilot study results showed that the learners were able to complete both simple and complex tasks in all three types of settings or task conditions. After each writing session the researcher had a casual conversation with the participants to seek their perceptions of the complexity level of the tasks as well as their preferences for the topics of

the argumentative essays. The participants deemed the task complexity levels as appropriate, with 2 causes and 2 effects for the simple task and 4 causes and 4 effects for the complex tasks.

To verify the appropriateness of the task complexity parameters, the researcher identified several possible topics for the argumentative essays based on her discussion with the participants and emailed these topics to Peter Robinson. This action aimed to check the feasibility of the task complexity for the simple (2 causes and 2 effects) and complex (4 causes and 4 effects) L2 writing tasks. Robinson suggested to increase the complexity level for the complex tasks to 6 causes and 6 effects. As for the essay topic, the participants suggested several themes that they considered engaging and relevant to real life. These themes included parenting, relationship, academic achievement, freedom, technology intervention and mobile pedagogy.

Based on the findings, some amendments were made for the next round of the pilot study. The complexity levels for the argumentative tasks were modified—2 causes and 2 effects for the simple task and 6 causes and 6 effects for the complex task. Time for the individual writing task was limited to 40 minutes whereas the peer discussion was limited to 15 minutes. Both simple and complex tasks were discussed in the dyadic and triadic groupings.

Finally, Pilot Study 3 was conducted to verify the appropriateness and feasibility of the amendments made on the basis of the two earlier pilot studies. It tested the feasibility and suitability of the tasks, selection of the argumentative essay topics, task complexity levels, time given to complete the tasks, settings and peer groupings arrangements. The participants were a different group of 15 ESL learners (MUET bands 3 and 4). The findings of the Pilot Study 3 showed that the participants were able to produce a complete argumentative writing (both for the simple and complex tasks) and that the research instrument and the data collection procedures were appropriate.

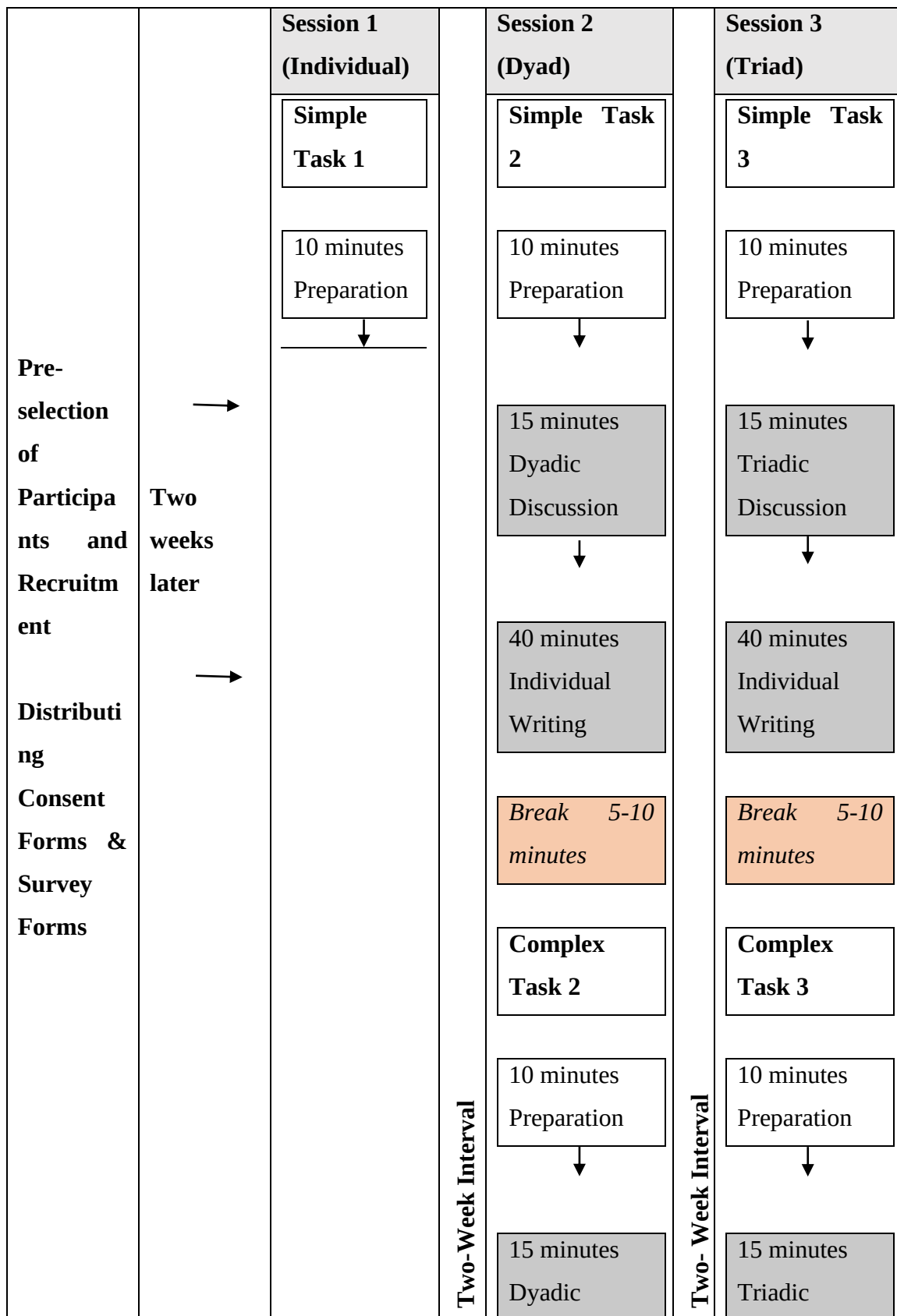
The Actual Study

Data Collection and Participants

The actual study was conducted in a private university in Malaysia. The recruitment of participants commenced after getting the official permission from the Dean of the Faculty. Purposive sampling was adopted to recruit the participants. The criteria for participation in the study were as follows: participants must be L2 learners of English, must have obtained the minimum MUET band 3, and must be students at a local university.

To recruit the participants, the researcher distributed photocopied forms seeking personal particulars from potential participants and requested the interested students to return the form to the researcher. In the form, the potential participants were asked to give their name, state their mother tongue, indicate their age, gender, degree majors, proficiency level in the English level (assessed in MUET or IELTS results), and stated their hometown and contact number. Also, it was stated in the form that as a small token of appreciation, the participants in the study would receive a certificate of participation upon the completion of all three L2 writing sessions.

Prior to each data collection session, the researcher consulted the participants about possible dates and times via WhatsApp. The sessions were set based on the students' availability. Figure 3 offers a detailed visual depiction of the steps involved in the data collection procedure. Initially, 126 students expressed their interest and willingness to participate in the study. However, out of the 126 students only 43 attended the first round of data collection. Furthermore, 7 of these 43 participants did not appear in the second and third sessions.



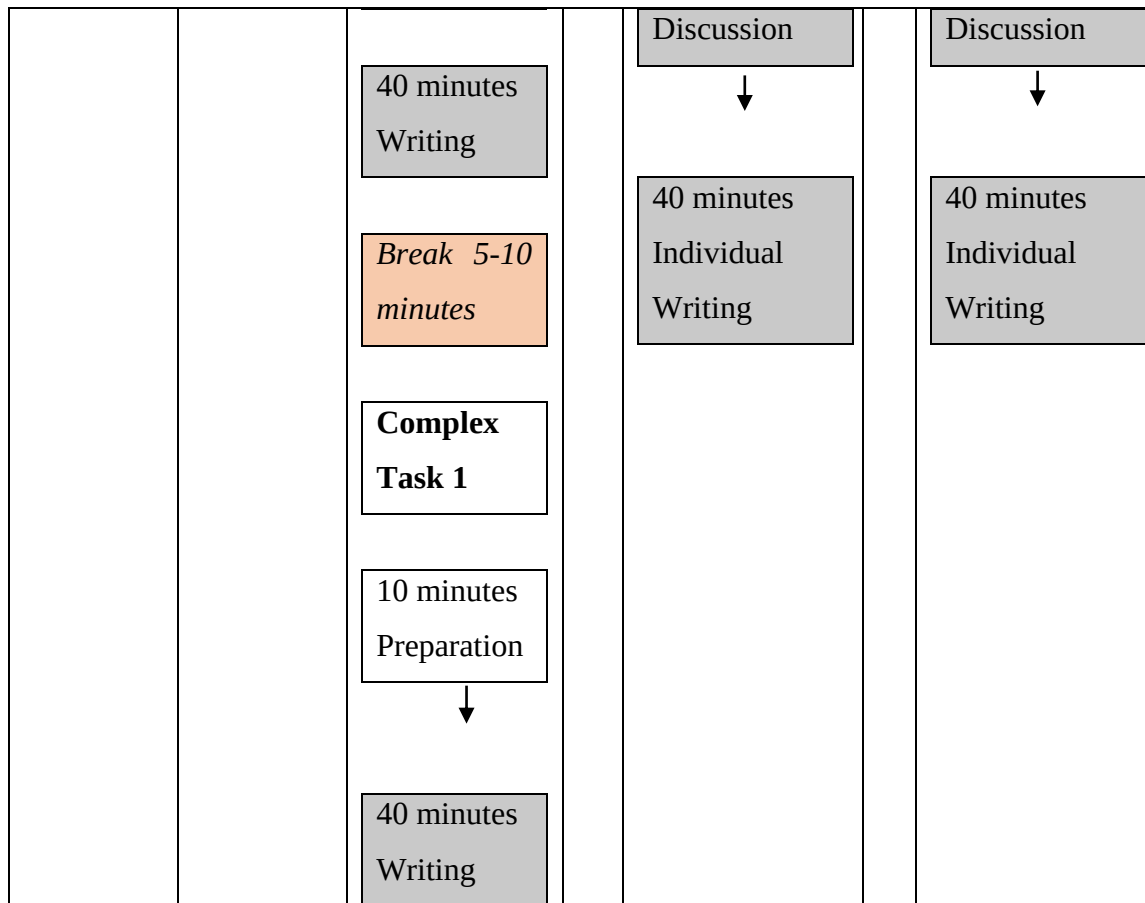


Figure 3: Data Collection Procedures

The remaining 36 ($N=36$) participants who took part in the study were all from the same university but various academic programs, such as Civil Engineering, Materials and Manufacturing Engineering, Mechatronics Engineering, Chemical Engineering, Broadcasting, Graphic Design and Multimedia, Accounting, International Business and Actuarial Science.

Developing Good Rapport between the Researcher and Participants

Building trust and good rapport with the participants prior to and during the implementation of an RM-ANOVA study is important in order to maintain the participants' interest and good will throughout the research project and beyond (e.g., for later sharing of the findings with the participants). For this purpose, the researcher explained the importance of the study and highlighted how this research and its findings could contribute to developing a better curriculum and how they could inform pedagogical decisions regarding the choice of the teaching materials and classroom activities. In the current study, the 36 participants who stayed

throughout the several data collection sessions over a two months period were committed due to their sense of responsibility and understanding the value of the study for the betterment of the English language course. Also, the researcher thanked the students in person for participating in each writing session and reminded them about the upcoming data collection session via the WhatsApp messages; she reiterated the importance and value of their presence and feedback in the writing session.

It should be noted that in order to retain the participants a proper organization of the data collection sessions needs to be considered by the researcher and planned in advance. This includes scheduling short breaks between the session, finding comfortable settings and appropriate timing. The next section addresses these issues.

Keeping Participants Alert through the Data Collection Session

Another challenge is keeping the participants alert throughout the writing sessions. This is especially important in view that the students might come to the data collection sessions after their lectures and tutorials and they might be tired from their day-time activities. In the current study, the participants were required to complete two writing tasks in one session, which took approximately two hours. To maintain the energy level of the students, short breaks and refreshments were provided. It cannot be stressed strongly enough that researcher's sincere concern for the participants' well-being, such as providing some light food and having a short chat with them during the break, will go a long way in facilitating and even enabling the implementation of an RM-ANOVA study.

Performing the RM-ANOVA Test and Reporting the Results

The current article does not aim to report and discuss the statistical results from the actual RM-ANOVA study that was carried out by the first author of this article. The main aim of this paper is to highlight methodological challenges and issues that might arise while designing and implementing an RM-ANOVA study on academic L2 writing. However, it is important to remind that researchers must be aware of the hidden assumptions underlying statistical tests. These assumptions must be checked and fulfilled before implementing the actual statistical analysis. In order to give legitimacy to the findings from the RM-ANOVA statistical procedure,

researchers must ensure that the assumptions for this statistical analysis had been tested and met before the data were analyzed.

As Larson-Hall (2015) reminded, besides the standard statistical assumptions, which are a normal distribution and equal variances for all groups, there is one important additional assumption for the RM-ANOVA test known as sphericity. This concept is complex but, basically, sphericity “measures whether differences between the variances of a single participant’s data are equal” (Larson-Hall, 2015, p. 326). Researchers usually employ the Mauchly’s test to assess sphericity. If this assumption is not observed, then either the Greenhouse–Geisser or Huynh–Feldt correction can be used as an option to remedy the analysis.

However, statisticians and methodologists warn that the Mauchly’s test is not a very robust and powerful analysis (Howell 2002 as cited in Larson-Hall, 2015). Therefore, it is advisable that even if the sphericity assumption is observed according to the results from the Mauchly’s test researchers still might want to use either the Greenhouse–Geisser correction or the Huynh–Feldt correction, preferably the former one as more conservative. The Greenhouse–Geisser and Huynh–Feldt correction values are available in the SPSS reports of the RM-ANOVA results. The researchers might want to include these results when reporting their statistical findings (see Larson-Hall, 2015 for more details).

Finally, when reporting the statistical results, it would be good to provide graphic depictions of the findings (see Larson-Hall, 2015). This would help the readers not only get a better general impression of the findings but it also offers an effective way to summarize and present the study’s results in a clear manner at both the group and individual levels.

Challenges while Implementing an RM-ANOVA Study

Like any research project, an RM-ANOVA study is bound to pose challenges to researchers. These challenges include not only devising the research instrument and recruiting the participants, as highlighted earlier in this article, but also minimizing the participants’ attrition throughout the research project. The following section is devoted to these issues.

Recruiting Participants

Recruiting the participants for this study was the main challenge. The participants were selected on voluntary basis or their willingness and interest to be a part of the study. The

participants were from the same university but from different academic programs and courses. As a result, they had different timetables for the lectures and tutorials. This made it quite challenging to arrange the dyadic and triadic L2 writing sessions. Therefore, deciding whether the participants would come from the same or different university programs and courses could be important for a smoother implementation of the research project.

Participants' Attrition and No-show

Attrition of the participants was another major challenge. From the initial 126 students who showed their interest in the study, only 36 were able to provide the full set of the data. As ethical considerations would require participation in a research project must be entirely voluntary and the participants can withdraw from the study at any time they wish. To deal with the challenge of participants' attrition, which might jeopardize the success of an RM-ANOVA study, the negative consequences of the participants' attrition must be foreseen and minimized by the researcher. This is especially important for an RM-ANOVA study as the analysis of the within-group data demands that the same people participate in each and every session of the data collection.

In addition, the participants' non-show is a serious challenge. When some participants are absent on specific data collection days the dyadic and triadic settings cannot be well-formed. This is because the groupings are planned in advance. Therefore, to avoid losing the much needed data, the session needs to be re-scheduled. To minimize this challenge it is desirable to establish a good rapport between the researcher and the participants.

Preventing the Carryover Effects

Participating in a study with multiple data collection sessions, as it is required in a RM-ANOVA design, can be quite demanding for the participants. To prevent the research fatigue, the loss of motivation and to minimize the carryover effect, the data collection schedule in the current study was planned with two-week intervals between each data collection point. However, the caveat is that longer intervals might increase the attrition rate. To reduce this possibility, the researcher explained to the participants the consequences and negative effects to the research project if they would withdraw half-way through the project or do not attend the writing sessions. This highlights the challenge of creating the 'study *participants*' in a true meaning of this word

and to make the students realize that they are important and valuable stakeholders in the research project.

Conclusions

An RM-ANOVA study requires a meticulous design and well-planned execution. The steps taken by the researcher beginning from the development of the research design throughout the data analysis and reporting the findings can ‘make or break’ the success of an RM-ANOVA research project.

As this article has highlighted, the challenges while implementing the RM-ANOVA study ranged from the participant recruitment phase to the research instrument developing stage and to the data collection phase. Arranging and grouping the participants for the dyadic and triadic L2 writing sessions was one of the main challenges at the data collection phase. Maintaining the participants’ interest throughout the study was another issue that needed to be properly addressed by the researcher. Moreover, keeping the participants alert and keen during the group discussions and immediately following writing sessions was of a paramount importance for obtaining valid and reliable data and implementing the research project.

As Larson-Hall (2015) notes, research designs that incorporate repeated measures, such as the RM-ANOVA design, are “quite desirable, as they increase the statistical power of a test” (p.323). The current article described issues and challenges in a study that adopted the principle of natural progression of task complexity from simple to complex. Future studies that adopt an RM-ANOVA design might want to investigate the consequences of the reverse change in task complexity from complex to simple. It is much hoped that methodological issues and challenges highlighted in the current article, as well as suggestions provided, would help researchers in their efforts to design and implement future RM-ANOVA studies.

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Mid-front and back vowel mergers in Mymensingh Bangla: An acoustic investigation**Md Jahurul Islam and Iftakhar Ahmed**

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jahirju30@gmail.com**Abstract**

Vowel mergers constitute an important part in the study of synchronic language variation as well as of diachronic language change. Mergers can provide crucial information about how the surface forms of vowels are correlated or indexed with different social factors. While there have been numerous studies on vowel mergers in world languages, there has been no such attempt to investigate mergers in the dialects of Bangla. This study explored the acoustic properties of the vowel categories in Mymensingh dialect of Bangla (MSB) to investigate the claim of two potential vowel mergers in MSB: /e-æ/ and /o-u/ (compared to Standard Colloquial Bangla (SCB)). Production data were collected from 7 MSB speakers (with some supplementary data from 3 more) who read out a list of Bangla words; the total number of MSB vowel tokens collected was 1159. As control data, a small corpus of freely available SCB speech (1384 tokens) was used as points of reference for the MSB vowels. F1 and F2 values were obtained from vowel midpoints using Praat (Boersma and Weenink, 2017). Two statistical tools were used to compare the distance and overlap between the members of the target pairs (/e-æ/ and /o-u/): Adjusted-Euclidean distance derived from linear mixed-effects models (Nycz and Hall-Lew, 2013) and Pillai score (Hall-Lew, 2010). Results indicated that MSB speakers have a strong tendency to form an /e-æ/ merger except when a process of metaphony (Shamim, 2011) is involved. Vowel /o/ showed an interesting trend of two-way mergers; some word classes showed /o/-raising to form a merger with /u/ while some others were lowered to form a merger with /ɔ/.

Keywords: Vowel merger, Mymensingh Bangla, Standard Colloquial Bangla, Language variation, Acoustic description

Introduction

Vowel mergers are a widely studied phenomenon in world languages (Loakes, Hajek , & Fletcher, 2017; Watson & Clark, 2012; Irons, 2007; Loakes, Hajek & Fletcher, 2014). Studying vowel mergers can provide crucial information that can be useful both from the synchronic and the diachronic perspectives. Synchronically, vowel mergers can reveal how certain vowels, in their surface forms, are correlated or indexed with certain social parameters in a given speech community, thereby revealing interesting sociolinguistic information. In terms of the study of language changes (i.e., diachronic changes), being able to know how the concerned speech sounds systematically varied in a society and what social factors were correlated with those speech segments is an important thing.

Vowel mergers constitute a very interesting and widely studied topic in sociophonetics. Numerous studies have reported vowel mergers from English and other languages of the world. Loakes, Hajek, and Fletcher (2017) investigated the merger of two front vowels /ɛ/ and /æ/ before a lateral segment in Australian English. Australian English has also been reported to have a merger between /e/ and /æ/ before a [l] sound, and Loakes, Hajek and Fletcher (2014) investigated the claim with empirical data and confirmed that the merger is primarily a characteristic of the Victoria region. A merger between the central NURSE and SQUARE vowels (sociophoneticians often use a standard lexical set to refer to the vowels concerned, after Wells (1982)) were reported from the English dialects the north-west England (Watson & Clark 2012). Irons' (2007) studied non-urban Kentucky, USA English dialect to investigate the spread of a low back vowel merger in American English. Another well-known merger in American English is the low back vowel merger which involves a loss of distinction between the COT and the CAUGHT vowels (Majors, 2005); Majors studied the diffusion of this merger in the state of Missouri, USA.

While there are many studies reporting vowel mergers in English dialects across the world, studies taking interest in mergers in other language are relatively scarce. Once such study was performed by Eychenne and Jang (2015) who investigated the status of the merger between the mid front unrounded vowels [e] and [ɛ] in three Korean dialects (Seoul, Daegu,

and Gwangju). The authors studied the merger from both production and perception perspectives with a balanced corpus. The study found evidence that the distinction between /e/ and /ɛ/ is neutralized in general with some gender differences. Their perception data revealed that only females speakers of the Seoul Korean tend to discriminate the two vowels on the F1 (first formant) plane. Eychenne and Jang concluded that the merger was motivated by a very low functional load of the two vowels, accompanied by some phonetic similarities.

Now, sociophonetic studies on the dialects of Bangla is scarce in the literature despite the fact that Bangla has a huge native speaker base (about 260 million). Even though native speakers of Bangla would often report merger-like situations in many dialects, there have not been any formal investigations to verify them with empirical evidence. The current study attempts to contribute to this gap in the literature with an investigation into the reports of vowel mergers in Mymensingh Bangla (in Bangladesh).

The Mymensingh dialect of Bangla (MSB) has been reported to have several differences with the Standard Colloquial Bangla (SCB) in terms of the vowels. In the description of Ahmed (2016), while the MSB peripheral vowels remain similar to the SCB system, the mid vowels are realized differently, mostly in the form of mergers with other vowel categories. For example, vowel /e/ and /æ/ form a merger for a wide range of word classes; similarly, vowel /o/ in many word classes raises to form a merger with /u/. The reports of these two vowel mergers in MSB are, however, found only in impressionistic accounts of MSB lacking any empirical evidence. We, in this study, investigated if empirical data can corroborate the reports of vowel mergers in MSB. With production data from both MSB and SCB, we conducted acoustic analyses of the two vowel systems. To our knowledge, this study is the first attempt to acoustically analyze MSB vowels and their merger situations.

The rest of the paper is organized in the following way: Section 2 provides a general background of the vowel systems in SCB and MSB with reports of potential vowel mergers in MSB. Section 3 provides the details of the methodology followed in collecting, processing, and analyzing the data while Section 4 reports the results of the study. Finally, Section 5 provides a general discussion of the results, along with their implications.

Background

Bangla (SCB) vowel system

The SCB vowel system has been widely attested to have seven monophthongs (Morshed, 1972; Alam, Habib & Khan, 2008; Khan, 2010; Shamim, 2011; Thompson, 2012; Sarker, 2004; Barman, 2011; Huq, 2002; Islam, 2018) which are symmetrically distributed in the vowel space. (SCB has also been reported to have seven phonemically contrastive nasal counterparts to the oral vowels (Morshed, 1972; Alam et al., 2008; Shamim, 2011; Thompson, 2012; Islam, 2018); they are, however, not the subject of the investigation in this study.)

Morshed (1972) reported the following seven vowels in SCB: /i, e, æ, a, ɔ, o, u/; figure 1 provides the vowel chart he provided. As the figure shows, the vowel chart comprises two high vowels, one low vowel, and four mid vowels which are further divided into high-mid and low-mid groups. The contrasts are achieved simply by means of vowel height and backness.

	Front	Central	Back
High	i		u
High-mid	e		o
Low-mid	æ		ɔ
Low		a	

Figure 1: SCB vowel system (Morshed, 1972, p. 24)

Alam et al. (2008) studied the acoustic properties of Bangla vowels and reported the same seven SCB oral vowels as Morshed (1972) did. Figure 2 provides the list of the contrastive oral vowels (along with their nasal counterparts). This chart is based on the acoustic parameters representing the height and backness of the vowels in the form of the first formant (F1) and the second formant (F2), respectively. The distributions of the vowels are broadly similar to the schematic one in figure 1.

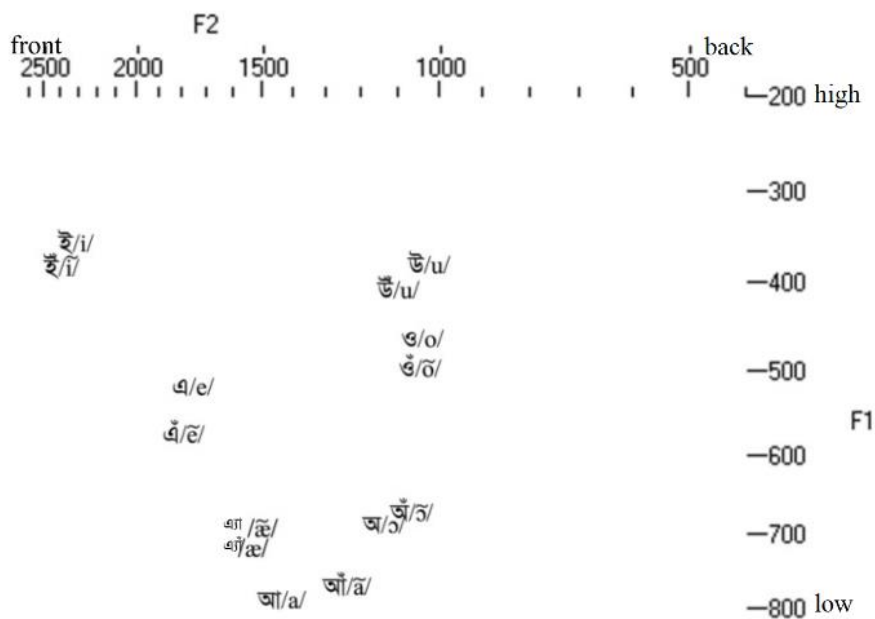


Figure 2: Acoustic space of SCB vowels (Alam et al., 2008, p. 8)

Based on contrastive phonological features, Shamim (2011) also provided a seven-vowel scheme for SCB; figure 3 presents the scheme of the proposed feature system. A key difference between this system and the other two (reported above) is how vowel /æ/ is represented; Shamim preferred /ε/ while Morshed (1972) and Alam et al. (2008) used /æ/ in their descriptions. An advantage of preferring /ε/ to /æ/ is that phonological alternations, like metaphony (Shamim 2011), between /e/ and /ε/ can be captured easily with a binary representation of the ATR feature.

	i	e	ε	u	o	ɔ	a
high	+	–	–	+	–	–	–
low	–	–	–	–	–	–	+
ATR	+	+	–	+	+	–	–
round	–	–	–	+	+	+	–
back	–	–	–	+	+	+	+

Figure 3: Featural configuration of SCB vowels (Shamim, 2011, p. 9)

The current study, however, does not engage in the /ɛ/ vs. /æ/ debate since it intends to investigate the phonetic properties primarily to analyze the potential vowel merger situations in MSB (and not to do a featural analysis). The key point here is that while the low-mid front vowel and the high-mid front vowel are kept distinct as categories in SCB, they are merged in MSB, at least in some environments (details in the following section). However, for the sake of consistency, we use /æ/ through the rest of the paper.

MSB vowel system

As a regional dialect of Bangla, MSB is conventionally assumed to have a similar seven-vowel system like SCB; no explicit description of MSB vowels is available in current literature though. For example, the Noakhali dialect has also been reported to have an SCB-like vowel system (Morshed, 1972; Rashel, 2011). Since there have not been any reports of a different vowels system for MSB, we assume an SCB-like seven-vowel system for MSB in this study.

Reports of potential vowel mergers in MSB

There has not been much work on the sociolinguistic patterning of vowels in MSB. Reports of sociolinguistic variation, however, can often be found in the impressionistic description of vowel perceptions and native speaker intuitions by SCB speakers (Ahmed, 2016). For example, SCB speakers consistently perceive that high-mid front vowel /e/ is realized as /æ/ in MSB. Commonly cited examples include words like /neṭa/ → [næṭa] ‘leader,’ /ʃena/ → [ʃæna] ‘soldier,’ and /elaka/ → [æləka] ‘region.’ Thus, the distinction between the two mid front vowels is assumed to be neutralized in these cases. A similar phenomenon occurs between the high back /u/ and the high-mid back /o/ vowel where the /o/ is assumed to raise towards /u/ to form a merger. Commonly cited examples include /ʃona/ ‘to listen,’ /dʒog/ ‘addition,’ /b^hor/ ‘dawn,’ which are realized on the surface as [ʃuna], [dʒug], and [bur], respectively. (There is a consonant alternation too in /b^hor/ → [bur], which is beyond the scope of the current study.) These two cases appear to indicate towards two vowel merger situations: the /e/ tends to lower and get merged with /æ/ whereas /o/ tends to raise and get merged with /u/.

While the mergers in MSB reported above has been widely attested in the perception of the SCB speakers (Ahmed 2016), there has not been any evidence from any empirical investigations to confirm or negate these claims. In fact, there have been no attempts so far investigating the acoustic properties of MSB vowels using production data, and, therefore, this study inquired into the two potential vowel mergers in MSB to better understand the reported merger situations. We begin with the following two hypotheses:

Hypotheses:

- **H1:** The distinction between the vowels /e/ and /æ/ is merged in MSB speech; this is predicted to be a downward movement; the high-mid vowel /e/ moves down towards /æ/'s space to form the merger.
- **H2:** The distinction between the vowels /o/ and /u/ is merged in MSB speech; this is predicted to be an upward movement; the high-mid vowel /o/ moves up to /u/'s space to form the merger (unlike the scenario in /e – æ/).

Method

Participants

The participants in this study included seven native speakers of MSB including three female and 4 male speakers. The age range of the participants was from 17 to 60. In terms of their age, the speakers were put into three groups: 3 young (17-25), 2 middle-aged (25–50) and 2 older (55+) participants. 3 of the seven speakers were students, 2 were in private service, 1 was in farming and agriculture and the other one was a housewife. The participants were recruited via social and personal networks of the author which is a standard practice in sociophonetics. The crucial aspect here was to ensure the inclusion of a variety of speakers as far as possible based on age, sex, education and profession. As for their education, 2 of them completed a bachelor's degree, 3 completed high school (12th grade) education and the rest 2 completed elementary (5th grade) education. All the participants resided in the Mymensingh district for most of their lives; they did not have much exposure to SCB.

Table 1: Participants in the main phase of data collection

ID	Age	Sex	Education	Occupation
01M	65	Male	Elementary	Farming
02M	15	Male	High school	Student
03M	18	Male	High school	Student
04F	21	Female	High school	Student
05M	32	Male	Bachelor's	Private service
06F	45	Female	Bachelor's	Private service
07F	60	Female	Elementary	Housewife

Some supplementary data (115 tokens) were collected from 3 additional adult speakers outside the main phase of data collection to account for any effect of vowel metaphony (Shamim, 2011).

Words elicited

A list of eighty real Bangla words was developed to be elicited from each of the seven participants. Two criteria were followed while developing the list: 1) words that have at least one of the four vowels being studied (/e, æ, o, u/) for the merger situation and that are often perceived to undergo mergers (based on native speaker intuition), and 2) words having at least one of the three remaining vowels. Thus, the list comprised of words representing all the 7 vowels in the Bangla inventory; even though the vowels of primary concern were /e, æ, o, u/, the other vowels were also elicited to facilitate the vowel normalization process. Most words were either mono- or di-syllabic, with several tri-syllabic words. It should be noted that the list included the words that are reported to undergo merging since the primary objective here was to investigate if the acoustic properties could provide evidence of merger to confirm the earlier claims. (Some supplementary data were collected later to see if MSB involves mergers in cases other than the reported ones.) The complete list of the words and their glosses are provided in the appendix.

Recording

The words were recorded in isolation; the participants read out the words printed on flashcards where each flashcard had one word printed on them. The order words appeared was completely randomized for each participant. The sessions were conducted by one of the present authors in Mymensingh, Bangladesh. Participants' productions were recorded on a Zoom H1 hand-held voice recorder with a sample rate of 44100 Hz (at 16 bit).

Data processing

The recorded audio was forced-aligned with Bangla Forced-aligner (Islam, in prep) built on the Montreal-Forced Aligner (McAuliffe et al., 2017). Any incorrect phoneme boundaries in the output TextGrids manually were inspected and corrected. A Praat script (Boersma and Weenink, 2017) was developed to measure and record the F1 and F2 values from all the vowels in the data; the values were extracted from vowel midpoints to avoid any co-articulatory effect from the neighboring segments. Any apparently faulty formant measurements were manually reviewed and corrected. The total number of valid tokens were 1044 (this included vowels from the other parts of the multisyllabic words).

SCB data

It was necessary to include some SCB data so that they can be used as points of reference for analyzing the trends in MSB vowel distributions. For this purpose, a small corpus of SCB conversational speech was developed by collecting 7 sound clips freely available news-reading sound clips from YouTube. The TV news-presenters' speech was deemed suitable because this domain typically adopts the standard variety (Bell 1983; Ferguson 1959; Arvaniti, 2006). The sampling rate of all the audio clips was 44.1 kHz per second; each of the clips came from a different speaker. The recordings were of variable lengths ranging from 2 to 5 minutes (with a total of 23 minutes). All the speakers were adult females. No personal or demographic information of the speakers was collected (they were not available in the source, anyway). However, the speakers can still be described with the characteristics news-presenters typically have in Bangladesh: educated adults, presumably between 18 and 40 years of age. The recordings were processed in the same way the MSB data were done. A total of 1384 vowel tokens were extracted from the SCB data.

Data analysis

Data were analyzed in R (R Core Team, 2017); formant values were normalized following Lobanov method (Thomas & Kendall, 2007; Lobanov, 1971) using phonR package (McCloy, 2016), and mixed-effects models were performed in the lme4 package (Bates, Machler, Bolker & Walker, 2015). To identify any indication of vowel merger in the data, the distributions of the F1 and F2 values from the members in the pairs /e - æ/ and /o - u/ were compared and analyzed. Two types of statistics were used in the investigation. First, the degree of proximity between the distributions of the vowels was compared using the Adjusted-Euclidean distance (ED-Adj) statistic (Nycz & Hall-Lew, 2013). The other statistic was the Pillai score (Hay, Warren, & Drager, 2006; Hall-Lew, 2010) which compared the degree of overlap between the distributions of the members of a vowel pair.

Results

First, to provide a general idea of the overall distribution of the MSB vowels, figure 4 shows the distribution of all the MSB and SCB vowels in this study. The x-axis represents the Lobanov normalized F1 value while the y-axis represents the normalized F2 value. Each point in the plot represents one vowel token; the colors refer to different vowel categories (seven of them). The mean F1 and F2 values for each category are shown with IPA symbols with ellipses around them circling values within one standard deviation.

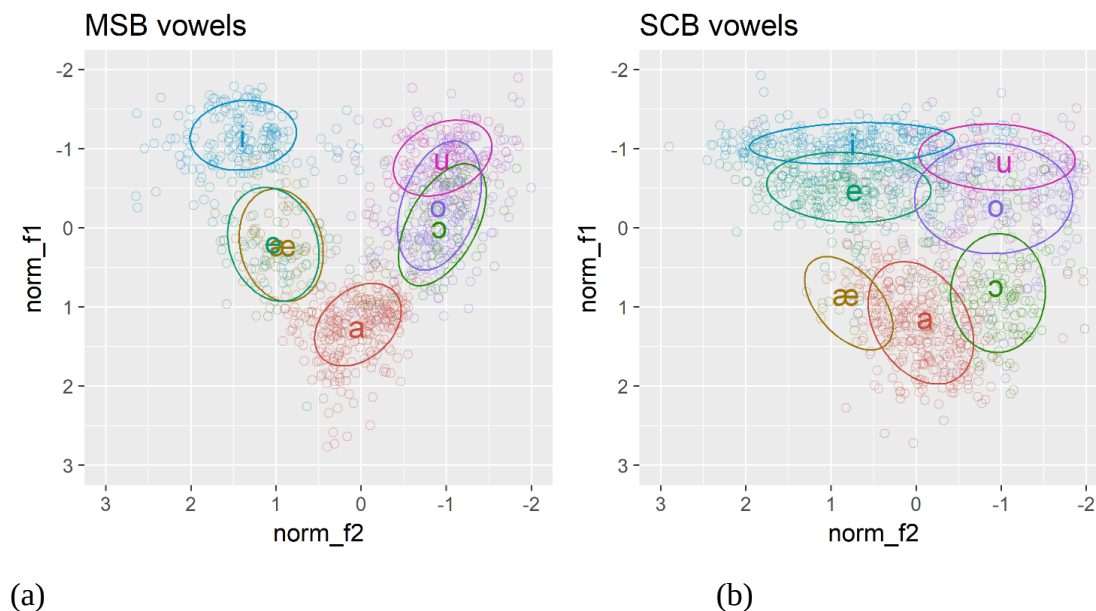


Figure 4: Vowel distributions in MSB and SCB

Figure 4 indicates to some general tendencies in MSB in comparison to SCB. A noticeable phenomenon in MSB is that the distributions of the two mid-front vowels /e/ and /æ/ have a lot of overlap between them while, in SCB, these two categories have widely distinct distributions (as predicted by our initial assumptions). Also, the /ɔ/ and /o/ categories in MSB indicates to greatly overlapped distributions, unlike SCB. The distributions of /o/ and /u/ appear to have a considerable overlap both in MSB and SCB. The following sections delve deeper into the distributions of these vowel pairs in detail.

Front vowels

As figure 4(a) indicated, /e/ and /æ/ have widely similar distributions in MSB. The ellipses for these two vowel categories form a nearly complete overlap. On the other hand, the vowel clouds for these vowels are completely distinct in SCB (figure 4(b)). Thus, the data indicate that for the given word classes, MSB speakers have the vowels /e/ and /æ/ merged into one single category. This trend is nearly uniform across all the seven speakers, as it can be observed in the density plots in figure 5 which shows the area of overlap between the distribution of /e/ and /æ/ in MSB across speakers. As figure 5 reveals, the kernels of the distributions for /e/ and /æ/ are nearly identical for all the speakers.

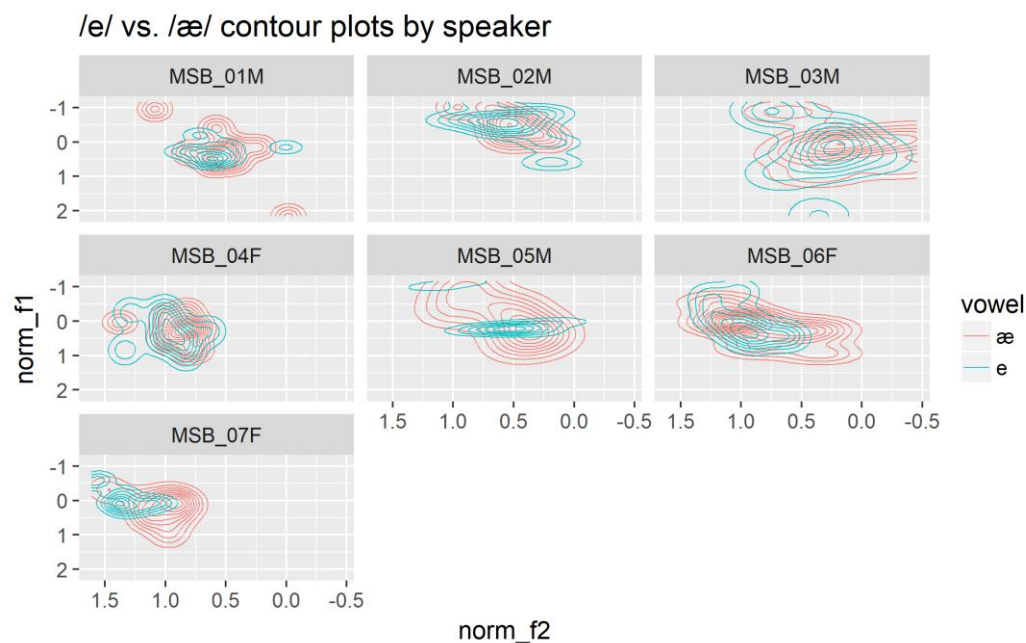


Figure 5: Density distributions across MSB speakers in /e/ and /æ/

Now, to quantitatively compare the similarities or dissimilarities between these two vowels, two statistics were used: Adjusted-Euclidean distance (Nycz & Hall-Lew, 2013) and Pillai score (Hall-Lew, 2010).

Adjusted-Euclidean distance

The Adjusted-Euclidean distance (henceforth, ED-Adj) is a measure of distance between vowel categories (Nycz & Hall-Lew, 2013) and it has been used in Nycz (2011; 2013). In Euclidean distance, which is a simpler statistic of reflecting the distance between two points, the distance between vowels is calculated using the Pythagorean theorem where the distance between the mean F1 or F2 values is the length of the hypotenuse (Baranowski, 2007; Dinkin, 2009). ED-Adj, on the other hand, is obtained from a mixed-effects model which takes into account various fixed and random effects (Nycz & Hall-Lew, 2013 for the mathematical details). Since the ED-Adj reflects the distance between vowel categories after accounting for the fixed effects (e.g., phonological environment) and random effects (e.g., vowel class), it is a better and more reliable statistic than a simpler Euclidean distance. The ED-Adj value can still be expressed in Hz for F1 or F2 where a lower ED-Adj indicates that the vowel categories are closer to each other while a higher value would indicate that the vowel categories are distant apart. Though the value by itself is not directly interpretable to indicate any merger but comparing it with related scenario can provide useful information.

Figure 6 shows the adjusted Euclidean distance for F1 between vowels /e/ and /æ/ (and between /o/ and /u/) averaged over speakers in MSB and SCB, obtained from linear mixed-effects models. In the first mixed-effects model (null model), PHONOLOGICAL ENVIRONMENT was included as the fixed effect and WORD and SPEAKER as the random effects. In the other model (predictor model), VOWEL CATEGORY was added as a fixed effect (predictor variable). The two models were compared with ‘anova’ function in R (R Core Team, 2017) to see if F1 is significantly affected by VOWEL CATEGORY membership even when the fixed and random effects are taken into account.

In figure 6, the x-axis refers to the vowel pairs being compared, while the y-axis refers to the ED-Adj value for F1 between the members of the vowel pair. Colors differentiate the two dialects (MSB vs. SCB). As the figure reveals, there is a clear difference between MSB and SCB in terms of the ED-Adj value between /e/ and /æ/. The difference between the

predictor and the null models was no statistically significant ($df = 1$, $\text{Chisq} = 0.128$, $p = 0.72$) which provides strong evidence that /e/ and /æ/ in MSB are not different on the F1 dimension. Contrarily, the predictor model was significantly better for SCB vowels ($df = 1$, $\text{Chisq} = 134.5$, $p < 0.001$), providing clear evidence that /e/ and /æ/ are completely distinct categories in SCB. (In MSB, results were similar for F2 as well ($df = 1$, $\text{Chisq} = 0.39$, $p = 0.53$), but here we were mainly interested in the F1 dimension because the mergers are predicted to be affected primarily by F1).

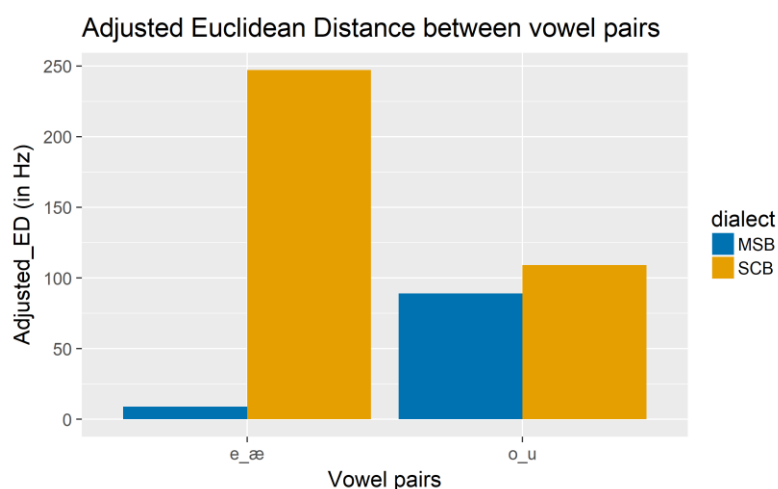


Figure 6: Adjusted Euclidean distance for F1 between vowels pairs in MSB and SCB

The adjusted distance of means between /e/ and /æ/ in MSB was below 20 Hz whereas, in SCB, the distance was considerably large (about 250 Hz). It should be obvious that a difference of 250 Hz in F1 is enough to form separate perceptual categories (see figure 2 from Alam et al., 2008, which indicates a distance of about 200 Hz between /e/ and /æ/ in SCB); contrarily, a distance of 20 Hz should not be perceptually significant to Bangla speakers. Therefore, this is a strong suggestion that /e/ and /æ/ form a merger in MSB. (The scenario for /o-u/ apparently does not indicate any merger; but, we will come back to this issue in section 4.2).

Pillai Score

An alternative statistic for investigating vowel mergers is the Pillai-Bartlett statistic (Baayen, 2008, p. 158) which was introduced in vowel merger studies by Hay, Warren, and Drager (2006). This measure has traditionally been called Pillai score which employs a

Multivariate Analysis of Variance (MANOVA) to obtain a value that can be interpreted to understand the degree of overlap between the distributions of vowel clusters (Hall-Lew, 2010 for the mathematical details). One big advantage of Pillai statistic is that a MANOVA model is capable of handling two dependent variables which is exactly what is needed for vowel descriptions: F1 and F2. Another advantage is the direct interpretability of the Pillai score itself; the value can be between 0 and 1, and “a higher Pillai value indicates a lower degree of overlap between two vowel clusters in F1/F2 space” (Hall-Lew, 2010, p. 1). Therefore, a value close to 0 would indicate a vowel merger while a value close to 1 would mean completely distinct vowel categories. On top of these, MANOVA can take into account the internal variability in the data and provide results of statistical significance to indicate while results are more credible to consider.

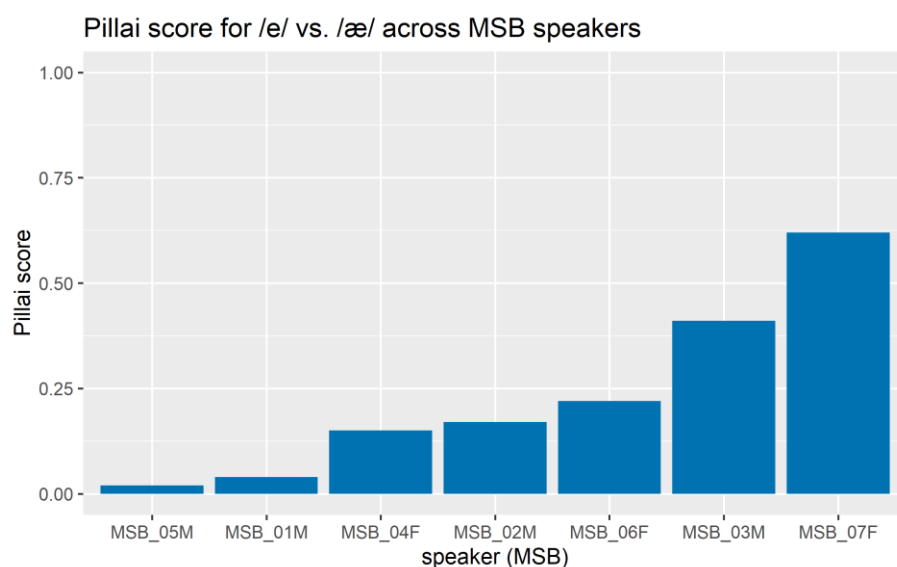


Figure 7: Pillai scores across MSB speakers for /e/ and /æ/

The overall Pillai score was 0.03 (not statistically significant), which indicates that the vowel difference between /e/ and /æ/ does not significantly affect the mean F1 and F2 values ($F = 1.64$, num df = 2, den df = 126, $p = 0.196$). Since a Pillai score indicates a vowel merger, this is a strong indication that there is no difference between /e/ and /æ/ in MSB; that is, MSB does have an /e/-/æ/ merger.

Figure 7 shows the Pillai scores for the distribution of /e/ and /æ/ across all the seven MSB speakers. Pillai scores for none of the speakers, except MSB_07F, was statistically

significant. Thus, as the figure indicates, five of the seven speakers had less than a 25% difference between their /e/ and /æ/ vowels, and they form a merger. It should be noted that even though speaker MSB_07F's Pillai score was found statistically significant, the difference was most probably not caused by F1; as figure 5 showed, the kernels of the density of /e/ and /æ/ have very similar F1, but they are different in terms of the F2 values. Thus, this speaker also nears to the /e/-/æ/ merger.

Now, we predicted that /e/ vowels do not undergo merging with /æ/ when the following or preceding vowel is a high (or [+ATR]) vowel (a process called metaphony or ATR harmony, by Shamim, 2011). That is, an /e/ vowel in words like /beʃi/ 'much' will not undergo lowering towards /æ/ (while an /e/ in /ʃena/ 'soldier' does). Figure 8 shows the F1 and F2 density distributions of the (lowered) /e/ vowels in comparison to the one of /e/ vowels involved in a metaphony process; the blue lines indicate the metaphony cases while the red lines refer to the non-metaphony cases. As figure 8 reveals, the /e/ vowels involved in the metaphony/harmony process retains a considerably higher F1 range compared to the rest of the tokens. This strongly indicates that the merger of /e/ and /æ/ is a conditioned one where the /e/ merges with /æ/ if there the preceding or following vowel is a [−ATR] vowel.

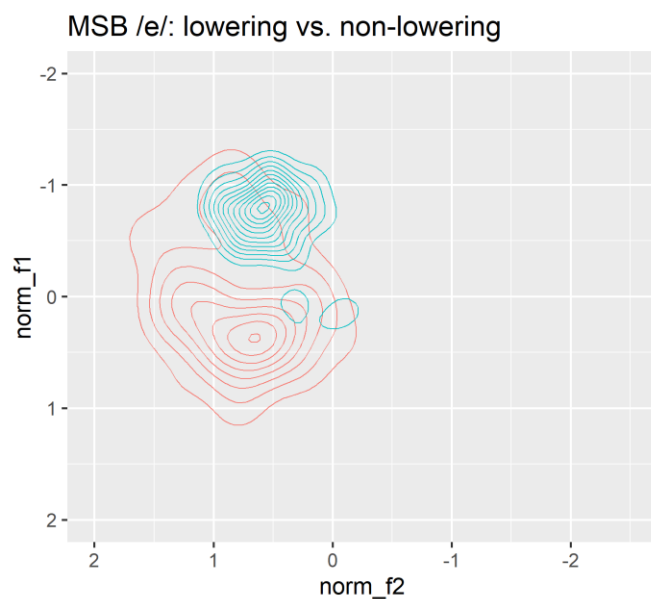


Figure 8: Density distribution of metaphony (blue) vs. non-metaphony (red) cases of /e/ vowels in MSB

Back vowels

The scenario for the MSB back vowel pair /o-u/ is not as clear as the /e-æ/ pair. As figure 4 indicated, the /o/ category appears to advance towards the /u/ category, but most of the /o/ tokens are still distinct from the distribution of /u/. Interestingly, /o/ appears to have a greater overlap with the /ɔ/ category instead whereas in /o/ and /ɔ/ were nearly distinct in SCB (see figure 4b). This subtlety in MSB might have to do with the variable behavior of the word classes with /o/ vowels.

To have a better view of the scenario, figure 9 shows the density distribution of /o/ vowel tokens in MSB. Since there are two general kernels in the figure, it indicates that /o/ has a bimodal distribution with the possibility that some tokens undergo lowering or raising (maybe some do not change much).

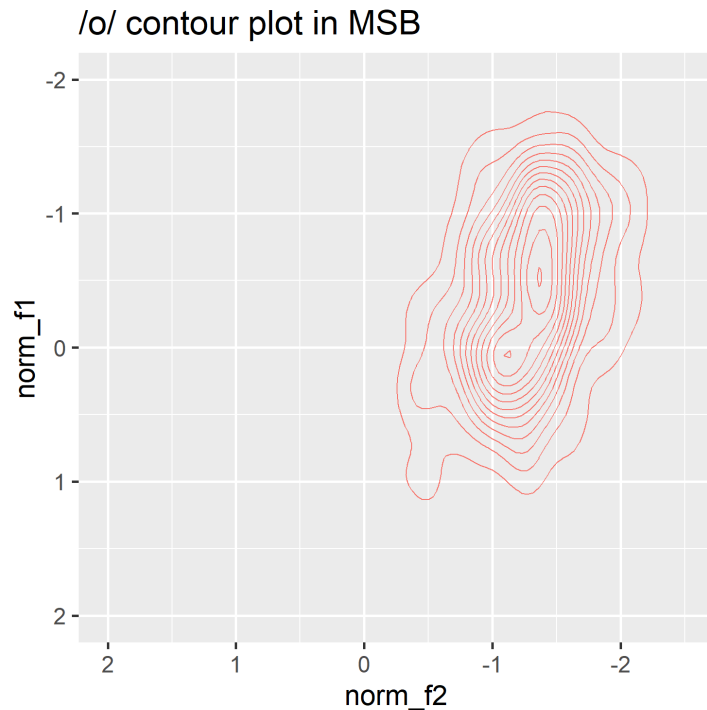


Figure 9: Density distribution of all /o/ tokens in MSB

As for the lowered-/o/ and /ɔ/, mixed-effects models comparison, again, indicated no statistically significant difference between the F1 distributions in lowering-/o/ and /ɔ/ in terms of F1 (df = 1, Chisq = 3.97, p = 0.058); the ED-Adj was 56 Hz (that is, the average F1 value for lowering-/o/ was 56 Hz less than that for /ɔ/). It should be noted that the p-value was very marginal in this case, and the tendency towards a merger is not as strong here as it was for the pair raising-/o/ and /u/. The Pillai score was 0.04 (F = 4.11, num df = 2, den df = 170, p < 0.018) which also provides evidence that the lowered-/o/ forms a merger with /ɔ/ in MSB.

Discussion and conclusion

We started our investigation with two hypotheses. First, the MSB data would reveal a merger between /e/ and /æ/; and, in terms of directionality, /e/ would lower towards /æ/. With evidence from the Adjusted-Euclidean distance from mixed-effects models and Pillai scores from MANOVA models, the first part of this hypothesis was confirmed; /e/ and /æ/ vowels in MSB indeed revealed very similar distribution in terms of the F1 and F2 distributions. Regarding the directionality, both /e/ and /æ/ changed their original position (as in SCB), to form the merger in a place in between (compared with SCB data in figure 4). This scenario can be considered as an example of merger-by-approximation (Trudgill & Foxcroft, 1978; Hall-Lew, 2010) where “the productions of the two vowel classes become increasingly produced ... at increasingly similar points in the vowel space, so that both vowel classes ‘move’ towards one another” (Hall-Lew, 2010, p. 8).

Evidence confirmed our second hypothesis as well, though partially. As an interesting fact, it was found that tokens of a single vowel category approached two opposite directions to form mergers (or near mergers) with the neighboring vowel classes. Some tokens of /o/ underwent raising to get merged with the higher vowel /u/, while some others underwent lowering to get merged with the lower (low-mid) vowel /ɔ/. This partially acts as an example of merger-by-transfer (Trudgill & Foxcroft, 1978; Hall-Lew, 2010) where “the lexical members of one vowel class become gradually ‘transferred’ to the other vowel class”, and the merger here consists of “movement through the lexicon, rather than movement through vowel space” (Hall-Lew, 2010: 8).

Now, it would be a matter of interest to explain what conditioning factors are affecting or determining which /o/ tokens travel in which direction. We tried to find a general

phonological rule to see if the immediate phonological environment or the preceding/following vowels might have any conditioning role into this phenomenon, but we could not find any generalizable trend. At this point, we predict that this could be conditioned lexically. Future studies might have a deeper look into this issue with more data.

The results reported in this study are interesting in at least two ways. First, this study confirms that the Mymensingh Dialect of Bangla has vowel mergers, a phenomenon which has not previously been confirmed from any dialects of Bangla. This indicates that other dialects of Bangla can also have such mergers. With more studies in future, we can gain a more general understanding of the most frequent merger systems in Bangla. And second, the results reported here reveals interesting trends of vowel mergers where we can see multiple instances of mergers in the vowel system at the same point of time. While most studies in existing literature have focused primarily on a single vowel merger situation, it is interesting to see two mergers at the same time, one pretty stable (/e-æ/) while the other being variable (/o-u/) and lexically conditioned.

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Appendix

Words elicited:

Bangla Word	IPA	Gloss
ভোর	/b ^h or/	dawn
কোটি	/koti/	crore
চোর	/tʃor/	thief
যোগ	/jog/	addition
শোক	/ʃok/	to mourn
কোণ	/kon/	angle
আলো	/alo/	light
খোলা	/k ^h ola/	open
শোনা	/ʃona/	to hear
গোল	/gol/	round
বেতন	/beton/	salary
সেনা	/ʃena/	soldier
দেশ	/d̪eʃ/	country
কে	/ke/	who
এলাকা	/elaka/	area/region
নেতা	/neta/	leader
বেশ	/beʃ/	quite
যে	/je/	that
মেঘ	/meg ^h /	cloud
দেনা	/d̪ena/	debt
অনীহা	/ʌniha/	reluctance
অনুরোধ	/onurod ^h /	request
অন্যায়	/ʌnnaj/	unjust

অপরিচিত	/ʔporicito/	unknown
অরুচি	/ʔrutʃi/	loss of appetite
অলক্ষ্মী	/ʔlokk ^{hi} /	one responsible for misfortune
অসুখ	/ʔʃuk ^h /	sickness
অসুবিধা	/ʔʃubid ^h a/	inconvenience
মসলিন	/moslin/	a type of fine fabric
কফি	/kʔfi/	coffee
অংশী	/onʃi/	partners
অঙ্গীকার	/onʃgikar/	promise
অত্যাচার	/ottatʃar/	oppression
অনুমান	/onuman/	guess
অন্য	/onno/	other
অভিজ্ঞ	/ob ^h iggo/	experienced
অভ্যাস	/obb ^h aʃ/	habit
প্রকট	/prokʔt/	severe
প্রকাশ	/prokaʃ/	to reveal
প্রথম	/proʔ ^h om/	first
হজুর	/huzur/	a salutation
জুতা	/dʒuʔta/	shoe
সুর	/ʃur/	melody
চুল	/tʃul/	hair
ভুল	/ b ^h ul/	wrong
লুট	/luʔt/	to rob
মুচী	/mutʃi/	cobbler
মুখ	/muk ^h /	mouth

ফুল	/p ^h ul/	flower
চুন	/tʃun/	lime
নাম	/nam/	name
আশা	/aʃa/	hope
আসন	/aʃon/	seat
কাক	/kak/	crow
কাচ	/katʃ/	glass
জাম	/dʒam/	berry
জাল	/dʒal/	net
দাতা	/daʈa/	donor
দাম	/d̪am/	price
ডাব	/d̪ab/	young coconut
বিরাগ	/birag/	anger
বিমান	/biman/	airplane
বিবি	/bibi/	wife
বিনাশ	/binaʃ/	destruction
বিনা	/bina/	without
মাছি	/matʃ ^h i/	mosquito
নাতি	/naʈi/	grandson
পরিচয়	/poritʃoj/	identity
পানি	/pani/	water
মরি	/mori/	to die (1p)
ব্যবহার	/bæbohar/	use
ব্যাকরণ	/bækəron/	grammar
ন্যায়	/næj/	justice
ব্যয়	/bæj/	expenditure

খেলা	/k ^h æla/	games
বেলা	/bæla/	daytime
শ্যামল	/ʃæmɔl/	green
ব্যাস	/bæʃ/	diameter
জ্যামিতি	/dʒæmiti/	geometry

Supplementary data:

Bangla Word	IPA	Gloss
কেজি	/kedʒi/	kilogram
বেশি	/beʃi/	excess
ছেনি	/seni/	a rice cutter
তেরিশ	/tɛtɾiʃ/	thirty three
দেবী	/d̪eβi/	goddess
দেশি	/d̪eʃi/	countryman
নেত্রী	/net̪ɾi/	leader
কেলু	/kelu/	pine
গেরুয়া	/gerua/	gold color
খেজুর	/k ^h edʒur/	Date fruit
সেতু	/ʃet̪u/	bridge
তৈতুল	/tɛt̪ul/	tamarind
পেটুক	/pet̪uk/	glutton
বেলুন	/belun/	balloon
মেরু	/meru/	axis
লেবু	/lebu/	lemon
সেলুন	/selun/	saloon
ঢেকুর	/d̪ ^h ekur/	pale

গরু	/goru/	cow
পটু	/poɽu/	skilled
পশু	/poʃu/	beast
বন্দুক	/bonɽuk/	gun
বস্তু	/boʃtu/	substance
নদী	/noɽi/	river
বসি	/boʃi/	(I) sit
কবিতা	/kobiɽa/	poem
ছবি	/tʃʰobi/	picture
গভীর	/gobʰir/	deep
অভিযোগে	/obʰidʒoge/	complain
ছিলেন	/tʃʰilen/	was
থাকবেন	/tʰakben/	will
দুপুরে	/ɽupure/	noon
পহেলা	/pohela/	the first day of <u>Bengali</u> <u>calendar</u>
বাড়িতে	/bariɽe/	at home
ভূতে	/bʰuɽe/	ghost
যুগে	/dʒuge/	era
শুরুতে	/ʃurute/	very beginning
সকালে	/ʃokale/	dawn

Change in Chinese Personal Pronouns from a Typological Perspective

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Abstract

Chinese personal pronouns have undergone many changes since ancient times. In particular, a much larger number of personal pronouns existed in the ancient period and the middle period compared to today. An in-depth analysis of previously overlooked changes in Chinese personal pronouns from a typological perspective, based on previous diachronic research and a new corpus examination of *Lunyu*, *Mengzi*, and *Shishuo Xinyu*, was performed in this study. The typological perspective can be a very useful approach for exploring changes in Chinese personal pronouns and the features of Chinese personal pronouns. It can also be applied to compare the personal pronouns used in Standard Chinese with those in the world's other languages to more clearly understand the nature of the universality and particularity of Chinese. The results indicate that Chinese personal pronouns underwent changes entailing an overall typological change from a two-person language to a three-person language, as well as changes in how case and number were distinguished as Chinese converted to a language that distinguishes gender in third-person pronouns.

Keywords: Personal pronoun, Typology, Singular, Plural, Case, Gender, Honorific

Introduction

Most of the world's languages have personal pronouns as a grammatical category and specify person through a wide variety of forms. Therefore, personal pronouns are an important grammatical element to show the features of a given language—here, Chinese—and observe

their universality and particularity in comparison with the world's other languages. In Contemporary Chinese, personal pronouns are divided into three, one for each grammatical person category: *wǒ* 我, *nǐ* 你, and *tā* 他/*tā* 她/*tā* 它. In their plural forms, the plural suffix *men* 们 is added, to make *wǒmen* 我们, *nǐmen* 你们, and *tāmen* 他们/ *tāmen* 她们/ *tāmen* 它们. This Chinese personal pronoun system has been in use since the beginning of Modern Chinese times. In the Archaic Chinese and Middle Chinese periods, however, Chinese personal pronouns had different characteristics, as in the past, Chinese was a two-person language, in contrast to the three-person language it is at present. The issues of whether personal pronouns distinguish singular and plural, have honorific forms, distinguish gender, and so on, are important for understanding their characteristics. The typological perspective can be a very useful approach for exploring changes in Chinese personal pronouns and the features of Chinese personal pronouns; this is because typological research compensates for the limitations of previous studies, which simply listed the words used as personal pronouns, and also helps to examine the meaning of word changes. Also, the typological approach can compare the personal pronouns used in Standard Chinese with those in the world's other languages to more clearly understand the nature of the universality and particularity of Chinese, as mentioned above. Therefore, this study aims to look at the meaning of changes in the Chinese personal pronoun system from a typological perspective based on previous diachronic research and a new corpus examination of *Lunyu* 论语 (The Analects of Confucius), *Mengzi* 孟子 (Mencius), and *Shishuo Xinyu* 世说新语 (A New Account of the Tales of the World)ⁱ performed in this paper.

Diachronic Change in Chinese Personal Pronouns

First-Person Pronoun Change

According to Zhang (2001), the first-person pronouns that appeared in oracle bone script (甲骨文) are *wǒ* 我, *yú* 余, and *zhèn* 朕; of these, *wǒ* 我 was used as a first-person singular pronoun, while *yú* 余 and *zhèn* 朕 were used as first-person plural pronouns. Unlike *wǒ* 我, which can be used in the nominative, objective, and possessive cases, *yú* 余 was mainly used in the nominative and objective cases and was not used in the possessive case; when the first-person possessive case was used, *zhèn* 朕 was used. According to the *corpus survey* of first-person pronouns in *Lunyu* and *Mengzi* performed in this paper, *yú* 余 and *zhèn* 朕 are barely used

in these works, which represent a later period, while *yú* 予 and *wú* 吾 appear newly: *yú* 余 1 time in *Lunyu* and 2 times in *Mengzi*, and *zhèn* 朕 7 times in *Lunyu* and 5 times in *Mengzi*. On the other hand, *wǒ* 我 appears many times as a first-person pronoun: 46 times in *Lunyu* and 156 times in *Mengzi*, while *wú* 吾, which does not appear at all in oracle bone script, appears 113 times in *Lunyu* and 122 times in *Mengzi*, and *yú* 予 appears 23 times in *Lunyu* and 44 times in *Mengzi*.

Table 1 Occurrences of first-person pronouns in *Lunyu*, *Mengzi* and *Shishuo Xinyu*

	<i>wǒ</i> 我	<i>yú</i> 余	<i>zhèn</i> 朕	<i>wú</i> 吾	<i>yú</i> 予
<i>Lunyu</i>	46	1	7	113	23
<i>Mengzi</i>	156	2	5	122	44
<i>Shishuo Xinyu</i>	85	5	3	43	2

From this, it can be inferred that a change in these common words occurred. Looking at these usages in *Mengzi*, *wǒ* 我 is still seen in the nominative case, possessive, and objective cases, but a trend is seen in which *wú* 吾 is used in the nominative and possessive cases only and not the objective case. Similarly, *yú* 予 was often used in the nominative and objective cases and not in the possessive case. Further, *wǒ* 我 and *wú* 吾 also could be used without distinction as to singular or plural; on the other hand *yú* 予 could not be used in the plural, and only appeared in the singular. In the middle-period text *Shishuo Xinyu*, *wǒ* 我, *wú* 吾, *yú* 余, *yú* 予, and *zhèn* 朕 all appear as first-person pronouns, and *wǒ* 我 can still be used in the nominative, possessive, and objective cases. Further, where *wú* 吾 appeared more than *wǒ* 我 in the ancient-period text *Lunyu*, in *Shishuo Xinyu*, it appears 43 times, markedly less than the 85 times that *wǒ* 我 appears. Also, while it is still used in the nominative and possessive cases, it is no longer used in the

objective case in this text. In addition, *yú* 余, *shēn* 身, *yú* 予, and *zhèn* 朕 appear only 5, 10, 2, and 3 times, respectively. That is, most first-person pronoun usages in the middle period were handled by *wǒ* 我 or *wú* 吾. Analysis of examples of *yú* 余 and *yú* 予 shows that they were mostly used in the nominative case; *zhèn* 朕 was only used when the emperor referred to himself, and only in the nominative case. Also, *shēn* 身, which appeared newly in the middle period, was frequently seen attached to the end of *wǒ* 我 or *wú* 吾, mainly in the nominative case.ⁱⁱ While *wǒ* 我 could refer to either the singular or the plural, *wú* 吾 had only a singular usage, and the same for *yú* 余, *shēn* 身, *yú* 予, and *zhèn* 朕. Afterward, in the modern period, first-person pronouns were integrated and reduced to *wǒ* 我, which can be used as both singular and plural, in the nominative, possessive, and objective cases. That is, *wǒ* 我, which is not influenced by case or number distinctions and shows the highest use frequency from the ancient to the middle period, is used as a first-person pronoun in modern Standard Chinese as well. Later, *mén* 們 became Chinese's plurality marker, and was added to distinguish singular and plural in Standard Chinese.

Second-Person Pronoun Change

The frequency of second-person pronouns in oracle bone script is very low, but where they do appear, *ěr* 爾, *rǔ* 汝, and *nǎi* 乃 are the pronouns used. According to Zhang (2001), *rǔ* 汝 and *nǎi* 乃 were mainly used in the singular, but *ěr* 爾 was used mostly in cases that are generally interpreted as plural. These pronouns show a difference in case as well: *rǔ* 汝 was used in the nominative and objective cases, *nǎi* 乃 in the possessive case, and *ěr* 爾 could be used in the nominative, objective, or possessive case. Later, in *Lunyu* and *Mengzi*, *nǎi* 乃 disappeared, while *ěr* 爾 and *rǔ* 汝 were still used; also in this period, *zǐ* 子 started to be used as a second-person pronoun, and appeared more than *ěr* 爾 or *rǔ* 汝 in the period: while *ěr* 爾 appears 7 times in *Lunyu* and 6 times in *Mengzi* and *rǔ* 汝 appears 13 times in *Lunyu* and 2 times in *Mengzi*, *zǐ* 子 appears 12 times in *Lunyu* and 46 times in *Mengzi*. As in the previous period, *ěr* 爾 was used in the nominative, objective, and possessive cases, and could be expressed as both singular and plural, while *rǔ* 汝 showed a tendency to be used only in the nominative and objective cases, with singular number. The newly appearing *zǐ* 子 could appear in the nominative, objective, and

possessive cases, but only in the singular and not the plural. In the middle-period text *Shishuo Xinyu*, *ěr* 爾 and *rǔ* 汝 were used as second-person pronouns; *ěr* 爾 was still used in the nominative, objective, and possessive cases, while *rǔ* 汝 was used in the nominative and objective but not the possessive case. As for singular and plural usages, as in the previous period, *ěr* 爾 was used in both the singular and plural, while *rǔ* 汝 was used only in the singular.

Table 2 Occurrences of second-person pronouns in *Lunyu*, *Mengzi*, and *Shishuo Xinyu*

	<i>ěr</i> 爾	<i>rǔ</i> 汝	<i>zi</i> 子
<i>Lunyu</i>	7	13	12
<i>Mengzi</i>	6	2	46
<i>Shishuo Xinyu</i>	10	58	0

If this is the case, when did the second-person pronoun *ěr* 爾, which was normally used without distinguishing case and number, begin to be replaced by the second-person pronoun *nǐ* 你, which is used in modern Chinese? According to Lǚshuxiang 呂叔湘 (1990), *ěr* 爾 had already begun to be replaced by *ěr* 尔 in cursive script after the Han and Jin (漢晉) Dynasties (202–420 BC). Also, in the Tang Dynasty (618–907) *Beiqishu* 北齊書 (the Book of Northern Qi) ⁱⁱⁱ used *ěr* 爾, *ěr* 尔, and *nǐ* 你. However, the morphologically complex *ěr* 爾 began to be replaced by *ěr* 尔, and subsequently the *nǐ* 你 form, which is a combination of *ěr* 尔 and *rén* 人, appeared. After this, in the modern period, *ěr* 爾 and *ěr* 尔 began to be used in integrated form as *nǐ* 你. And in the Yuan dynasty (1271–1368), the honorific *nín* 您 appeared. Regarding this, Wangli 王力 (1944) explains that when *nín* 您 was first used in *Hanyu Yufashi* (汉语语法史), it was used with a plural meaning, but later it was endowed with an honorific meaning; Lǚshuxiang 呂叔湘 further states that *nín* 您 was endowed with an honorific meaning as a syneresis of *nǐ lǎo* 你老 (=你老人家). In short, similar to the first-person pronouns, second-person pronoun *ěr* 爾, which was not distinguished by case or number, was commonly used from Archaic Chinese to Middle Chinese but was replaced by *nǐ* 你 in Modern Chinese. The honorific *nín* 您 was also

differentiated from *nǐ* 你. Later, *men* 們 became Chinese's plurality marker, and was added to distinguish singular and plural in Standard Chinese.

Third-Person Pronoun Change

Guo (1980) and Zhang (2006) divided Chinese third-person pronouns into four periods: Archaic Chinese 上古漢語, Middle Chinese 中古漢語, Modern Chinese 近代漢語, and Contemporary Chinese 現代漢語.^{iv} According to Zhang (2006), the Archaic period used *jué* 厥, *qí* 其, *zhī* 之, and *bǐ* 彼 as demonstrative pronouns indicating distal objects, which then developed into third-person pronouns. As such, there is no clear distinction between demonstrative pronouns and personal pronouns in this period. These pronouns were used differently in accordance with case distinctions: *jué* 厥 was mainly used in the possessive case, and from the Han (漢) period, it was gradually integrated into *qí* 其. Like *jué* 厥, this period's *qí* 其 was mainly possessive, but it was also used in the nominative and objective cases in more situations than *jué* 厥; *zhī* 之 was mainly used in the objective case, and *bǐ* 彼 in the nominative and objective cases. Because most of these pronouns also served the function of demonstrative pronouns, in most cases they cannot be seen as truly performing the function of personal pronouns. Also, in this period, there were many cases where people felt no need to use third-person pronouns, and instead repeated the name or noun-referent of the thing being referred to. Thus, the third-person pronouns were used as demonstrative pronouns in most cases, and cases where they were used as personal pronouns were only a minority.

Entering the middle period, there was an expansion of the usage range of *qí* 其 from the ancient period. Third-person pronouns such as *qú* 渠, *yī* 伊, *tā* 他, and *ta* 佗 also first appeared in this period; *qú* 渠 and *yī* 伊 were used often in the Tang period, and *tā* 他 appears often in Buddhist scriptures: *qú* 渠 was often used as a subject or object, and its usage range expanded, but it remained most commonly used in the Cantonese and Hakka regions; and *yī* 伊, mainly indicating the nominative and objective cases, gradually disappeared in the northern region after *ta* 他, came to be used as a personal pronoun. It still remained common in Cantonese and Hakka, but on this point, Chen (1986) noted that other third-person pronouns which are different from Standard Chinese *tā* 他 also exist in dialects, for example *qí* 其, *qú* 佢, *lī* 俚, and *yī* 伊, which

developed from *qí* 其, *qú* 渠, and *zhī* 之. In this period, *qú* 渠, *yī* 伊, *tā* 他, and *tā* 佗 performed the roles of both demonstrative pronouns and personal pronouns, as in the previous era.

In Modern Chinese, third-person pronouns include *tā* 他, *tā* 她, *tā* 它, *tā* 祂, and *tā* 恁. According to Li (2012), *tā* 他 changed from meaning ‘different’ to meaning ‘other person’ starting at the end of the Han (漢) period. Starting in the Tang (唐) period, it was used widely in nominative, objective, and possessive cases. In the modern period, its personal pronoun usage became common. That is, it can be said that *tā* 他 appeared for the first time as a special-use personal pronoun that indicates the third person.

In the first half of the 20th century, *tā* 他 could refer to a person or a thing; such a person could be male or female, and it could also refer to the plural. According to Guo(1980), *tā* 她 and *tā* 它 began to be used due to the influence of Western literature and the need for translation: *tā* 祂 was created because there was thought to be a need for a third-person pronoun which did not refer to a person or a thing but a god or the Christian God in the process of translating the Bible, while *tā* 恁 was used as a pronoun which had the honorific meaning of *tā* 他. Zhang (2006) reports that the poet and linguist Liu Bannong (劉半農) first proposed that *tā* 她 must be used as the female third-person pronoun in 1918 and was the first to use *tā* 她. Later, the female third-person pronoun *tā* 她 began to be distinguished from *tā* 他, and people started to feel the need for a neuter pronoun which did not have a gender. Because of this, *tā* 它 came into being. Still later, in Standard Chinese, *tā* 他, *tā* 她, and *tā* 它 began to be used as a third-person pronoun system, with the plural marker *men* 們 used to distinguish singular and plural. At this point, the current personal pronoun system was in place.

Typological Examination of Chinese Personal Pronouns

Previous studies on the Chinese personal pronouns described in section 2 provide sufficient data to examine which words were used as personal pronouns. However, there is a lack of studies or knowledge on these personal pronouns’ case, person, number, honorific, gender, etc., all of which are important from the perspective of treating Chinese in world language typology theory; on the integration of the various personal pronouns into *wǒ* 我, *nǐ* 你, and *tā* 他, or on the appearance of the *tā* 她 and *tā* 它 usages in the modern period and the appearances of

plural personal pronouns created by adding the plural marker *men* 们. Therefore, this paper will reanalyze the data from the previous studies based on the typological theory described below. This is because the goal of this paper is to examine the typological meaning of Chinese personal pronoun changes, unlike previous studies that simply examined changes in word use through diachronic observation.

Personal Pronouns and Case

According to Blake (1994), case is the grammatical function or relationship that a noun phrase in a sentence has with other words. According to traditional definitions of case, there must be a clear morphological marker, and languages of this type are called case languages. In contrast, languages that do not have clear morphological markers show a noun's main function by word order; languages of this type are called caseless languages or case pattern languages.^v Within this framework, case implementation methods for individual languages can be broadly summarized in three types.

Case Implementation Methods

- a. Noun phrase markers
- b. Cross-references
- c. Word order

In languages that have morphological markers and are categorized as case languages, case is shown by noun phrase markers or cross-references. Case implementation by noun phrase marker refers to cases where morphological markers appear in noun phrases, whereas a cross-reference is when information about a noun is shown in a verb or auxiliary verb. A typical example of a cross-reference is the subject-verb agreement commonly seen in European languages.

The distinction between case and caseless languages is that different types of case implementation are seen, also varying according to whether a word is a noun or a pronoun. A typical example is English: a normal noun in English is not inflected according to change in case, and therefore word order is a very important means of showing the relationships within a sentence.^{vi}

(1) The man loves Mary.

OBJ

(2) Mary meets the man.

NOM

As seen in the example above, English nouns have the same form in the nominative case and the objective case, and their functions are distinguished by position. More specifically, word position is centered on the verb; the noun which comes before the verb is in the nominative case, while the noun which comes after the verb is in the objective case. However, as an exception, the possessive case is indicated by a case marker ('s) rather than word order.

(3) The man loves Mary's sister.

POSS

Despite this defining role of word order, however, English first-person and third-person pronouns also show morphological changes in the nominative, possessive, and objective cases.^{vii} See (4-7).

(4) He likes his friend.

(5) We love him.

(6) She loves me.

(7) I love her.

All three methods are used to implement case in English. For normal nouns, case is indicated by order; for pronouns, morphological case changes are seen; for third-person singular present tense, the cross-reference phenomenon is seen.^{viii}

What about modern Chinese? Like English, modern Chinese nouns do not show inflection according to changes in case; therefore, word order plays an important role in showing relationships within a sentence.

(8) 小王 喜欢 妹妹。

Xiǎowáng xǐhuan mèimei

Xiaowang likes sister

Xiaowang likes a sister.

(9) 妹妹 喜欢 小王。

Mèimei xǐhuan Xiǎowáng

A sister likes Xiaowang

A sister likes Xiaowang.

As shown in (8-9), the nominative and objective have the same form. Like English, Chinese nouns also use a possessive case marker, *de* 的, to show the possessive case.

(10) 这 是 妹妹 的 书包。

Zhè shì mèimei de shūbāo

This is sister POSS schoolbag

This is a sister's schoolbag.

Like nouns, the nominative and objective cases of pronouns are also distinguished by word order. The possessive case is shown by using the possessive case marker *de* 的.

(11) 我 喜欢 她。

Wǒ xǐhuan tā

I like her

I like her.

(12) 她 喜欢 我。

Tā xǐhuan wǒ

She likes me

She likes me.

(13) 这 是 我 的 书包。

Zhè shì wǒ de shūbāo

This is my POSS schoolbag
This is my schoolbag.

In short, Chinese pronouns have features of a caseless language, that is, one which does not use case markers, in the nominative and objective cases, while the possessive case is shown by adding the case marker *de* 的. Chinese case types can be explained as existing because *wǒ* 我 and *ěr* 爾, which can be used in the nominative, objective, and possessive cases without distinction, survived in the competition with other words that indicated persons. As seen in section 2, out of the ancient period first-person pronouns *wǒ* 我, *yú* 余, *zhèn* 朕, *yú* 予, and *wú* 吾, the pronoun *wǒ* 我 could be used in the nominative, objective, and possessive cases without distinction as to case, while *yú* 余 was not used in the possessive case, *wú* 吾 was not used in the objective case, and *zhèn* 朕 and *yú* 予 both showed a tendency to be used only in the nominative case. In the middle period as well, *wǒ* 我 allowed for all usages without distinction as to case, *wú* 吾 was not used in the objective case, and the newly appearing *shēn* 身 was mainly used only in the nominative case. As a result, the role of the first-person pronoun was occupied by *wǒ* 我, which can be used in the nominative, objective, and possessive cases, without case distinctions. Arriving at modern Chinese, the first-person pronoun then has the characteristic of caselessness.

As for second-person pronouns, *ěr* 爾, *rǔ* 汝, and *nǎi* 乃, which appeared in the ancient period, show differences in terms of case distinction. *ěr* 爾 could be used in the nominative, objective, and possessive cases, but *rǔ* 汝 was only used in the nominative and objective cases and did not appear in the possessive case; in contrast, *nǎi* 乃 appeared only in the possessive case. Later, in the middle period, *ěr* 爾 and *rǔ* 汝 were used as second-person pronouns; *ěr* 爾 was still used in the nominative, objective, and possessive cases, and *rǔ* 汝 was used in the nominative and objective cases but not the possessive case. Still later, starting in the modern period, *ěr* 爾, which was used without case distinction, was simplified, and *nǐ* 你 became common as a second-person pronoun. Chinese second-person pronouns can thus be said to be caseless.

In third-person pronouns, a case distinction existed in the ancient and middle periods. It is known that there was a distinction according to case, in that *jué* 厥 was used in the possessive

case, *zhī* 之 was mainly used in the objective case, and *bǐ* 彼 was mainly used in the nominative and objective cases. As pointed out previously, before the modern period, these words performed the roles of demonstrative pronouns and personal pronouns; *tā* 他 appeared in the modern period, in which these pronouns came to show features of personal pronouns, and developed similarly to the first- and second-person features. Its nominative case and objective case are the same, while its possessive case is expressed by adding *de* 的. That is, before the modern period, Chinese personal pronouns taken together reflected features of a case language, which uses different words to distinguish cases, while after the modern period, a three-person system was put in place distinguishing and distinguished by *wǒ* 我, *nǐ* 你, and *tā* 他, and personal pronouns showed features which belonged to the caseless or case pattern language type, in which word order plays an important role.

Personal Pronouns and Person

A contentious issue in language typology theory related to the grammatical person of pronouns is whether pronouns used in, or to express, the third person should be recognized as personal pronouns.^{ix} Bhat (2004; 2005) proposed that the world's languages could be categorized as either two-person or three-person languages. Here, the core of the distinction is whether third-person pronouns are recognized as personal pronouns. In a two-person language, first- and second-person pronouns are quite similar, while the third-person pronouns have different aspects, and therefore are seen as belonging to the demonstrative pronoun or anaphor category as opposed to being “true” third-person pronouns. In a three-person language, in contrast, third-person pronouns are handled the same as first- and second-person pronouns. Therefore, the point of this discussion is to understand if Chinese third-person pronouns are closer to the form of anaphors and demonstrative pronouns^x or if they are more similar to first- and second-person pronouns.

Therefore, this paper aims to deal with the problem of whether the third-person pronouns presented in previous studies have features which distinguish them from demonstrative pronouns and should be recognized as personal pronouns, with the same status as first- and second-person pronouns. To do so, the paper looks in more detail at the usages of *zhī* 之, *qí* 其, *bǐ* 彼, and *jué* 厥 in the ancient period, *qú* 渠, *yī* 伊, and *tā* 他 in the middle period, and *tā* 他, *tā* 她, and *tā* 它在 in

the modern period.

Previous studies show that third-person pronouns were not used often in the ancient period. Unlike first- and second-person pronouns, in cases when third-person pronouns could be used it was more normal to directly mention a person's name or title. Therefore, little need to use third-person pronouns was felt and specialized third-person pronouns did not develop. However, gradually, words used as demonstrative pronouns took on the role of personal pronouns, and third-person pronouns proper began to exist. Examples include *jué* 厥, *qí* 其, *zhī* 之, and *bǐ* 彼, which had been used as distal demonstrative pronouns in ancient Chinese. Looking at the usage distribution of these words in the ancient period, it appears that they are mostly used as demonstrative pronouns, but there are also occasional examples of their being used in the third person, in terms of syntax, morphology, and phonology; for example, *qú* 渠, *yī* 伊, *tā* 他, and *tā* 佗, which appeared in the middle period, still had their original function as demonstrative pronouns, but gradually also came to be used as third-person pronouns.^{xi,xii} Many scholars believe that third-person pronouns with usage the same as first- and second-person pronouns did not exist before the modern period, and that they instead had features that were different from first- and second-person pronouns.^{xiii} However, after the modern period, *tā* 他 gradually began to be used only for persons, and third-person pronoun usages arose. Also, due to the introduction of English and the needs of the translation process, special-use third-person pronouns came to be differentiated into words expressing gender, number, etc. By going through this process, the *tā* 他, *tā* 她 and *tā* 它 used in modern Standard Chinese came to have syntactic and morphological features closer to the first- and second-person pronouns *wǒ* 我 and *nǐ* 你 than the demonstrative pronouns *zhè* 这 and *nà* 那. For example, Chinese third-person pronouns use *men* 们 and *de* 的 to respectively show plurality and possession, like first- and second-person pronouns. Also, they are like personal pronouns in that they are not used together with classifier–noun combinations, unlike demonstrative pronouns, which can be combined with “classifier + noun.”

In short, in the modern period, Chinese third-person pronouns have come to have equivalent functions to first- and second-person pronouns and no longer also perform the function of demonstrative pronouns. This implies that in the past, Chinese was a two-person language, which then in the modern period changed to a three-person language. Because Chinese's third-person pronouns gradually developed during the process of translation of English

literature, they can be considered the result of being influenced by English, which is a three-person language.

Personal Pronouns and Number

Daniel (2005) examined methods for expressing plurality across in 260 languages.^{xiv} According to that study's categories, there is a marked difference between Chinese's former and current methods of expression of plurality. This is because the plurality marker *men* 们 that is seen in modern Chinese did not exist in the past. But if this is the case, by what method did Chinese express plurality in the past?

The first-person pronouns used in the ancient period and the middle period included *wǒ* 我, *yú* 余, *wú* 吾, *yú* 予, and *zhèn* 朕. In the ancient period *wǒ* 我 and *wú* 吾 could be used in both the singular and plural, while *yú* 余, *yú* 予, and *zhèn* 朕 could only be used in the singular; in contrast, in the middle period, *wú* 吾 could only be used in the singular, and the only first-person pronoun which could be used without distinguishing singular or plural was *wǒ* 我. Later, first-person pronouns were integrated into *wǒ* 我, which is used without distinguishing singular or plural. Then, to fill the usage gap, the plurality marker *men* 们 came to be added to distinguish singular and plural.

The second-person pronouns that appeared in the ancient and middle periods include *ěr* 爾, *rǔ* 汝, *nǎi* 乃, and *zǐ* 子. Of these, *rǔ* 汝, *nǎi* 乃, and *zǐ* 子 could be used only in the singular, while *ěr* 爾 initially could be used only in the plural and then later came to be used in both the singular and the plural. Later, second-person pronouns were integrated into *ěr* 爾, and the same word started to be used without distinguishing singular or plural, in the same way as with first-person pronouns. Then, as with the first person, the plurality marker *men* 们 appeared and was added to distinguish singular and plural. Thus, in this first- and second-person pronoun change, the pronouns changed from a type that distinguished person and number through the pronoun itself to one that did not distinguish number, but used noun affixes on stems distinguished according to person.

If so, how did third-person pronouns distinguish singular and plural? An examination of *jué* 厥, *qí* 其, *zhī* 之, *bǐ* 彼, *zhū* 諸, and *fū* 夫, which were used in the ancient period, shows that

singular and plural were not distinguished in third-person pronouns in this period. This is because these forms could refer to the plural without a separate marker. However, sometimes when the plural was expressed, there were cases where *bèi* 輩, *děng* 等, and *men* 们 were applied at the end of the pronoun. Lǚ (1985) reported that in ancient Chinese, when several objects were spoken of, words that indicate groups were used, such as *cáo* 曹, *shǔ* 屬, *děng* 等 and *bèi* 輩—especially the latter two, which were used after normal nouns to indicate groups, sometimes after personal pronouns. Later, *jué* 厥, *qí* 其, *zhī* 之, *bǐ* 彼, *zhū* 諸, and *fū* 夫, which appeared in the middle period, still had the same form for singular and plural. However, it was not that plurality markers never existed. As mentioned before, Li(2003) reported that *děng* 等, *shǔ* 屬, *chái* 侪, *cáo* 曹 and *bèi* 輩 were used as plurality markers in Archaic Chinese, and *mǐ* 弭, *wěi* 伟, *mèn* 懣, *mán* 瞞, *mén* 们, *měi* 每 and *men* 们 in Middle Chinese.^{xv} However, because demonstrative pronouns and third-person pronouns added their singular and plural functions in this period, their plural markers were distributed very sparsely, and there are not many examples thereof: in most cases *jué* 厥, *qí* 其, *zhī* 之, *bǐ* 彼, *zhū* 諸, and *fū* 夫 were used in both the singular and the plural. Indeed, even after most personal pronouns were integrated into *tā* 他, it could indicate both singular and plural. At first, *tā* 她 and *tā* 它, differentiated from *tā* 他 due to the influence of Western languages, indicated both singular and plural. However, *tā* 他, *tā* 她, and *tā* 它, which appeared in Contemporary Chinese, had been gradually combined with *men* 们^{xvi} as a plurality marker since the Ming period, and the cases where they expressed plurality expanded over the subsequent centuries. This change clarified the distinction between singular and plural, with *men* 们 being added for the plural. In most cases, until the modern period, Chinese third-person pronouns performed both the singular and plural functions. However, plural expressions in modern Chinese add a plurality affix (also used for nouns) to a stem that is distinguished according to person. This discussion shows that Contemporary Chinese first-, second-, and third-person pronouns all have features that belong to the 6th of the categories presented by Daniel (2005).

Personal Pronouns and Honorifics

Helmbrecht (2005) observed how honorific systems appear in personal pronouns;

according to him, this occurs as the number of personal pronouns increases—the fact that Southeast Asian languages developed a large number of pronouns according to honorific rules is one piece of circumstantial evidence for this. This section examines whether this observation can also be applied to ancient and middle-period Chinese, which had a larger number of personal pronouns than modern Chinese.

The ancient and middle-period first-person pronouns *wǒ* 我, *yú* 余, *wú* 吾, and *yú* 予 could all be used in the context of subordinate/superior relationships, without regard to honorifics. In contrast, *zhèn* 朕 had the feature of only being usable when a king referred to himself. The second-person pronouns *ěr* 爾, *rǔ* 汝, *nǎi* 乃 and *zǐ* 子 could also be used in subordinate/superior relationships. Later, the first-person pronouns were integrated into *wǒ* 我 and second-person pronouns were integrated into *ěr* 爾, which in turn evolved into the usages of *wǒ* 我 and *nǐ* 你 in the Contemporary Chinese. The disregard of honorifics in the use of modern Chinese *wǒ* 我 and *nǐ* 你 is also an inheritance from past usage. Only as *nín* 您 appeared in the Yuan Dynasty did there arise an honorific second-person pronoun for subordinates to refer to superiors. The appearance of this honorific pronoun has a deep relationship with the fact that Chinese people do not use second-person pronouns often; *ěr* 爾, *rǔ* 汝, and *nǎi* 乃 all appear much less than first-person pronouns in Archaic Chinese and Middle Chinese. Many or most second-person pronouns were used by superiors speaking to subordinates, who in turn avoided using second-person pronouns with superiors, instead addressing them by their title, rank, relationship with the speaker, etc. However, in the modern period, there has been an increase in cases in which superiors are addressed by person pronouns rather than by their position, leading to the use of honorifics by the subordinate to address the superior. Because of this, *nín* 您, a combined sound form of *nǐlǎo* 你老, appeared and was used as an honorific second-person pronoun.

Most of the change occurred in third-person pronouns. In the ancient period, third-person pronouns *zhī* 之, *qí* 其, *bǐ* 彼, and *jué* 厥 existed, and in the middle period, *qú* 渠, *yī* 伊, and *tā* 他. In the modern period, *tā* 他, *tā* 她, and *tā* 它 have existed. A comparison of these usages shows that they are distinguished by differences not in honorifics but in their applicability across the constituents of a sentence, that is, whether they act as a grammatical subject, object, or are

used in the possessive case to act as an adnominal phrase. In the modern period, *tā* 祂 and *tā* 您 appeared. As noted, *tā* 祂 was created due to the need for a special-use third-person pronoun to refer to gods or the Christian God when translating the Bible; as for *tā* 您, there are examples of its being used as the honorific version of *tā* 他. However, *tā* 祂 remained limited to Bible translations, and *tā* 您, the honorific of *tā* 他, did not become widely used and disappeared. Thus, *tā* 他, which became the modern specialized third-person pronoun, was used with almost no distinction as to honorifics in modern Chinese. Ultimately in Chinese, an honorific rule did not develop, and modern Chinese's special-use third-person pronouns *tā* 他, *tā* 她, and *tā* 它 can be used without regard to the degree of honoring performed. However, in modern Chinese, there is a constraint on using third-person pronouns when expressing courtesy: Chinese people avoid using third-person pronouns on formal occasions when the listener's rank is higher than the speaker's.^{xvii}

In conclusion, the development of a large number of pronouns in the ancient period and middle period cannot be seen as being caused by the development of an honorific system; the influence of case and number distinctions was greater. Since the advent of the modern period, the use of second and third-person pronouns has increased and the honorific system involving *nín* 您 and *tā* 您 has appeared, but it is still not much used, because there are more cases where title, rank, or relationship is used rather than personal pronouns, especially when the listener's rank is higher than the speaker's. In short, Chinese pronouns function such that Chinese essentially belongs among the languages that did not develop an honorific system either in the past or the present.

Pronouns and Gender

As for gender distinctions in personal pronouns, Greenberg (1963) observed how gender is distinguished in 378 languages.^{xviii} According to that investigation, the overwhelming majority of languages do not distinguish gender for any grammatical person. The next most numerous are languages that distinguish gender only in third-person singular pronouns, and after that are languages that distinguish gender in third-person singular and plural pronouns; a further 18 languages also distinguish gender in the first person and the second person. If so, what kind of gender-related features did Chinese have from the ancient period to the modern period, and how

have they changed? The ancient and middle-period first-person pronouns *wǒ* 我, *yú* 余, *wú* 吾, and *yú* 予 showed only partial case and number distinction, and no gender distinction. The same goes for the ancient and middle-period second-person pronouns *ěr* 爾, *rǔ* 汝, *nǎi* 乃, and *zǐ* 子. Similarly, third-person pronouns also did not distinguish gender in the ancient and middle periods. The ancient period's *zhī* 之, *qí* 其, *bǐ* 彼 and *jué* 厥 could all be used without gender distinction, as gender distinctions had not come to be viewed as salient, because Chinese personal pronouns originated from demonstrative pronouns. The middle period usages *qú* 渠, *yī* 伊, and *tā* 他 were the same: they could also refer to a man or a woman, without distinction. In the modern period, most of the third-person pronouns were integrated into *tā* 他, as noted, which became the specialized third-person pronoun. Even for some time afterward, Chinese personal pronouns did not make clear gender distinctions. The Chinese language of this period thus shared a common feature of the world's languages in that there was no gender distinction in personal pronouns; there are more cases in which gender distinctions do not exist in the personal pronouns of the world's languages than cases in which they do exist, according to Greenberg (1963).

In the modern period, the usage of *tā* 他 came to be differentiated from the usage of *tā* 她 and began to differentiate gender. Afterward, a third-person pronoun system composed of *tā* 他, *tā* 她, and *tā* 它 was completed, in which *tā* 他 was used when referring to a man while *tā* 她 was used while referring to a woman. In short, modern Chinese's third-person pronouns are distinguished by gender. However, some scholars have raised doubts about this point. According to these scholars, because modern Chinese has *tā* 他, *tā* 她, and *tā* 它, it can simply be seen as distinguishing gender per se; however, because they all have the same pronunciation, in the spoken language they are not distinguished, and so scholars raise the problem of whether Chinese can be seen as having a completely formed gender distinction considering that third-person pronouns are only distinguished in the written language. This paper holds that the *tā* 他, *tā* 她, and *tā* 它 used as third-person pronouns in modern Chinese arose due to the needs of translations from English, which has a strict third-person pronoun gender distinction; thus, the gender differences in third-person pronouns that appear in the Chinese written language system are recognized as showing the existence of gender distinction. Also, even though their pronunciations are the same, all people who say or hear these pronouns distinguish between male

pronoun *tā* 他 and female pronoun *tā* 她 as they use and understand the words. Therefore, modern Chinese's third-person pronoun system can be seen as having gender distinction. In this respect, this paper found that modern Chinese's third-person pronoun features belong in the second of the categories created by Greenberg (1963), in which gender is distinguished in third-person pronouns only and both the singular and the plural distinguish gender. That is, Chinese personal pronouns are such that Chinese belonged to the languages which do not distinguish gender in the ancient period and the middle period, but since the modern period, it has changed to a language type system, which distinguishes gender in third-person pronouns only.

In modern Chinese, people can use the third-person pronoun *tā* 他 not only when referring to males but also when referring to a mix of males and females or in cases when gender cannot be distinguished. Also, *tā* 她, which refers to females in Chinese, can be used to refer to objects that one respects, loves, or considers precious, as well as beautiful objects and landscapes. These usages are almost the same as English third-person pronoun usages, and it shows that the usages of modern Chinese third-person pronouns *tā* 他, *tā* 她, and *tā* 它 which appear in the English translation process have been influenced by English personal pronouns even in terms of how they are used.

Conclusion

Chinese personal pronouns have undergone many changes from the ancient period to the modern period. In the ancient and middle periods, the number of words for personal pronouns was very large compared to modern Chinese. Since the modern period, Chinese personal pronouns have each been integrated into the *wǒ* 我, *nǐ* 你, and *tā* 他 personal pronouns of modern Standard Chinese, and the language came to have a three-person language system. When considering that in the past Chinese was a two-person language, this three-person language system shows that typological changes occurred in Chinese personal pronouns.

The research in this paper shows that most of the third-person pronouns that existed in the ancient Chinese period arose by expansion from demonstrative pronouns. The ancient period third-person pronouns *zhī* 之, *qí* 其, *bǐ* 彼, and *jué* 厥 had distinct characteristics of demonstrative pronouns, different from the first- and second-person pronouns in terms of morphology, syntax, and phonology. As a result, third-person pronouns did not exist in this

period as they do in modern Chinese. For this reason, Chinese in the ancient period belongs among the two-person languages. During the middle period, new third-person pronouns such as *qú* 渠, *yī* 伊, and *tā* 他 appeared, but they still had distinct characteristics of demonstrative pronouns. As the Modern period arrived, most third-person pronouns began to be integrated into *tā* 他. Starting at that time, Chinese specialized third-person pronoun usages began to find their place in Chinese. In Contemporary Chinese, third-person pronouns are differentiated by gender, and *tā* 他, *tā* 她, and *tā* 它 are all used. They have similar features to first- and second-person pronouns in terms of morphology and syntax, leading to the appearance of a three-person language. This process of change in modern Chinese third-person pronouns is not only seen in changes to systems for case, number, and gender. In Contemporary Chinese, which has a case marker for the possessive case but not the nominative and objective cases, case is implemented by word order, without any special morphological device; in contrast, Archaic Chinese and Middle Chinese showed the characteristics of a case language, which uses different words to distinguish cases. As for number, in the past, different forms were used to show singular and plural, but each personal pronoun employed a form that could be used without distinguishing number, and strict number distinctions were not required. In the modern period, the plurality marker *men* 们 has been used, and distinction between singular and plural in personal pronouns has thus appeared again. Also, a feature of gender was created in the modern period in order to translate Western personal pronouns, which are distinguished by gender. After this, *tā* 他, *tā* 她, and *tā* 它, which correspond to ‘he’, ‘she’, and ‘it’, came to be used as third-person pronouns, and Chinese personal pronouns came to only distinguish gender in the third person.

Compared to other fields of Chinese linguistics, Chinese typological studies are rather lacking in research results. However, typology as a research method has great power to approach the ultimate goal of understanding of the human that is pursued by the humanities. This paper has analyzed Chinese personal pronouns on a deeper level by using a typological perspective to discuss previously overlooked processes of change in Chinese personal pronouns. And we have explained changes in Chinese personal pronouns over time and the characteristics of Modern Chinese personal pronouns relative to those of other languages. Among the changes in the personal pronouns used by the Chinese language that emerged after the modern period, the typological changes that distinguish number and gender were the result of the influence of

Western literature and the need for translation. Therefore, the use of third-person pronouns in Chinese often has characteristics similar to that of third-person pronouns in English. Moving forward, we plan to conduct a study to analyze the characteristics of the Chinese pronouns that have changed into three in-person linguistic forms and their similarities and differences with the characteristics of pronouns in English that have influenced the change, so that we can analyze the characteristics of Modern Chinese in more depth. Such research could serve as a useful resource for ongoing language research to identify changes in the individual languages and to identify the causes and characteristics of such changes. Aside from its research contribution, we hope that this study can also be used as a teaching material to explain to learners of Chinese as a foreign language some important characteristics of personal pronouns in Chinese.

Note

1. The CCL Ancient Chinese (Center for Chinese Linguistics, PKU Yuliaoku (CCL 语料库): Gudai Hanyu 古代汉语) is one corpus of searchable Chinese corpora created and managed by Peking University. http://ccl.pku.edu.cn8080/ccl_corpus/index.jsp
2. One example each appears of use in the objective and possessive cases.
3. A history book written by Li Baiyao at the command of the emperor during China's Tang period.
4. Periodization for written Chinese (Peyraube 1996, p. 164)
 - Pre-Archaic Chinese: language of the oracle bone inscriptions; 14th–11th c. BCE
 - Early Archaic Chinese: 10th–6th c. BCE
 - Late Archaic Chinese: 5th–2nd c. BCE
 - Pre-Medieval Chinese: (transition period) 1st c. BCE–1st c. CE
 - Early Medieval Chinese: 2nd–6th c. CE
 - Late Medieval Chinese: 7th–mid-13th c. CE
 - Pre-Modern: (transition period) mid-13th–14th c. CE
 - Modern: 15th–mid-19th c. CE
 - Contemporary: mid-19th–20th c. CE
5. English, Chinese, Vietnamese, and Thai belong to this category; Blake (1994, p. 14).
6. Unlike Old English, in modern English morphological markers for case have mostly disappeared. For nouns, word order plays an important role.

7. English's second-person pronoun uses the same word in the nominative and objective cases. That is, English's second-person pronoun is distinguished in terms of case by word order, like a noun, and case is expressed by noun inflection only for the possessive case.
8. English also has partial cross-reference methods. For example, in the third-person present tense, a cross-reference phenomenon and a matching phenomenon occur between the subject and the verb.
 - (1) a. He (She) comes.
 - b. I (you, we, they) come.
 - c. He (I, we, you, they) came.
9. In most of the world's languages, first- and second-person pronouns belong to the category of personal pronouns, but there is a continuing controversy over whether third-person pronouns must necessarily be seen as belonging to the personal pronoun category. Because of this, when personal pronoun systems are discussed, the presence of a third-person pronoun in an individual language is a typologically very important feature.
10. Demonstrative pronouns are pronouns that refer to things or places. They have a three-level meaning system related to area in which, for example, the Korean *i* 이, *geu* 그, and *jeo* 저 express close (proximal), middle (medial), and far (distal) demonstratives.
11. In the world's languages, there are many cases where third-person pronouns are morphologically different from first- and second-person pronouns and show more similar features to demonstrative pronouns. Korean is one language of this type.
12. Regarding this, Baek Eunhui (2010) performed a study on ancient Chinese personal pronouns which showed that the reason that first- and second-person pronouns are included but third-person pronouns are not is because third-person pronouns cannot be categorized by a system with the same usages and phonemes.
13. First-person and second-person pronouns have phonological similarities. Wang (1980, p. 260) compiled the phonemes of first- and second-person pronouns in Chinese as follows, and showed that they correspond to each other.

First-person pronouns	我 [ŋa]	予 [dǐa]	朕 [dǐəm]
Second-person pronouns	爾 [ŋǐa]	汝 [ŋǐa]	乃 [nə]

Moreover, vocabulary used as possessives and vocabulary not used as possessives are similar, given that they are clearly divided between first-person and second-person pronouns. In contrast to this, third-person pronouns have no phonological similarities with first-person and second-person pronouns. Thus, no strict classification exists in regard to possessives.

14. Daniel's (2005) results, in more detail, are as follows.

- (1) 25 languages: The stem is fixed and person and number are distinguished by affixes.
- (2) 114 languages: Person and number distinctions are expressed by the pronoun stem itself.
- (3) 47 languages: Person and number are expressed by the stem itself, and additional plurality affixes are used (only on pronouns).
- (4) 22 languages: Person and number are expressed by the stem itself, and additional plurality affixes are used (on nouns too).
- (5) 23 languages: Stems that are distinguished according to person are combined with plurality affixes (only on pronouns).
- (6) 19 languages: Stems that are distinguished according to person are combined with plurality affixes (on nouns too).

15. After the Ming Dynasty (1367-1644), many plurality markers disappeared, and the *men* 们 usage began to become popular.

16. Regarding the origins of *men* 们, there are still many different opinions; they can be summarized as follows. Lü 吕叔湘 (1985) proposed that in ancient Chinese, when several objects of the same type appeared, words which indicated groups were added, such as *cáo* 曹, *shǔ* 屬, *děng* 等, and *bèi* 輩. Of these, *bèi* 輩 was often used after personal nouns, and this was the origin of *men* 们. Then, Jiang Lansheng 江藍生 (1995)

proposed that *wù* 物, which indicated a type of fur color sported by the *zase niu* 雜色牛 (Variegated cattle) in the Qin period, came to indicate many or all people by the 六朝 period, and after grammaticalization, was used as a plurality affix. Zhang Huiying 張惠英 (1995, 1997), Li Yanhui 李艳惠, Shi Liuzhi 石毓智 (2000) and others asserted that the *men* 門 in *jiamen* 家門 is the origin of *men* 们, based on a dialectal plurality affix.

17. Chinese third-person pronouns are affected by the intimacy and status relationships among the speaker, the listener, and third parties. That is, in Chinese, there are many cases where the use of normal nouns and pronouns is determined according to the content of the conversation or the intimacy relationship between the speaker and the listener.
18. Greenberg (1963) categorized the world's languages into 6 categories according to how they distinguish the gender of third-person pronouns, in the following way.
 - (1) There is gender distinction in third-, first-, and second-person pronouns. (18 languages)
 - (2) There is gender distinction only in third-person pronouns, both in the singular and non-singular. (42 languages)
 - (3) There is gender distinction only in singular third-person pronouns. (61 languages)
 - (4) There is gender distinction in first- and second-person but not third-person pronouns. (2 languages)
 - (5) There is gender distinction only in non-singular third-person pronouns. (1 language)
 - (6) There is no gender distinction. (254 languages)

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**Social Media and English Language Learning during Covid-19:
KILAW Students' Use, Attitude, and Prospective**

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Abstract

Institutions, universities, and schools suspended teaching due to the novel coronavirus called (COVID-19). Covid19 induced educational authorities in Kuwait to find such alternatives to keep the process of teaching and learning going on. They resorted to the use of E-learning by utilizing social media to finalize academic year. Nowadays, E-learning is heavily used in the education field due to the Covid19 pandemic. Kuwait International Law School (KILAW) implemented E-learning to sustain the process of teaching and learning. This research was an attempt to scrutinize the utilization of social media by KILAW students. The study was quantitative in nature. The researcher conducted an online questionnaire for 116 students enrolled in the English department atrial. The responses of the questionnaire were analyzed by using SPSS. The finding showed that KILAW students' use of SM for learning the English language is increased dramatically due to Covid19. The participants showed a positive attitude towards the use of SM. The future of using SM in the field of education, in general, and in English language learning in particular, is promising in Kuwait. This study recommended universities, schools and institutes to employ SM tools to augment the process of teaching and learning.

Keywords: Learning; Social Media; Covid19; Attitudes; Students; KILAW.

Introduction

In the era of the digital world, social media (henceforth SM) makes countries all over the world as close as one family. A person from Kuwait can communicate with many people from many different countries. They can share ideas, knowledge, experiences, etc. smoothly and easily by using SM tools. Utilizing SM in the field of education is very important and promising.

Technology has influenced everyone's life (Alrefaee & Al-Ghamdi, 2019). In the era of advancement and easiness of using technology almost every student wonders how it is useful to improve the way of learning languages from home. In 2020, almost everything is changed due to Covid19 pandemic. Universities were locked down following WHO orders for social distancing. The sole means for the continuation of the educational process is to use E-learning by using SM via online courses.

SM can be considered as a good tool for educating learners; it may be considered as the main source of knowledge, news, entertainment, exchanging ideas. Recently, many learners in the globe join webinars, watch YouTube videos, and participate in group discussions to educate themselves. Through SM, learners can listen to various lecturers, attend webinars, listen to songs, and follow educational channels on YouTube and join virtual classes on such tools like Zoom, GoogleMeet, lark etc. SM enables students to collect data from different sources. For English language learning purposes, fortunately, many lectures and lessons of the English prominent trainers, instructors such as (Oprah Winfrey, Rihanna, Adrian Underhill, Malcolm Mann and many others) are free and online which enable students to listen to these lectures or lessons whenever and wherever they want.

English language is taught in Kuwait as a foreign language. Kuwaiti students need to acquire the targeted level of English language set by the Ministry of Higher Education. To keep the process of teaching and learning going on, KILAW implemented SM tools to teach students. This study is an attempt to explore the benefits, attitudes, and future predictions of implementing SM tools in Kuwaiti Universities. Good communication performance can be a guarantee of enhancing students' chances for their success. Kuwaiti learners in KILAW show great interest in implementing SM tools. They attend most courses done by KILAW via SM tools.

Teaching English by employing traditional way seems to be outdated with the notion of lifelong learning since it requires the physical presence of instructors and students (Zhang & Zhou, 2003). It is increasingly important to identify and address the gaps in the literature of the

importance of SM in education. Exploring learners' view, perspectives and attitudes towards SM tools are an increasingly important area in the field of education, (Camilia, Ibrahim & Dalhatu , 2013; Hamid, Waycott, Kurnia, & Chang, 2015; & Smith, 2017).

This study examines the emerging role of SM in learning English language. The study sheds light on the use of SM in the time of the lockdown of the university. It also shed light on the relationship between the lockdown and of the students' increase in usage of SM for educational purposes. Besides, some learners want to learn by implementing new techniques and tools that are suitable to their age and lifestyle (Akhiar, Mydin, & Kasuma, 2017; Al-Jarrah, Jarrah, Hassan, & Talafhah, 2019). Implementing E-learning via SM platforms stimulate discourse and peer interaction (Gettman & Cortijo, 2015; Hanson, Drumheller, Mallard, McKee, & Schlegel, 2011). The finding of this study should make an important contribution in the field of utilization of SM tools in education.

This study scrutinizes the use of SM by Kuwaiti English language students at KILAW. It aims to:

- 1- Check out whether KILAW students' use of SM is increased due to university lockdown or not.
- 2- Explore the use of SM by KILAW students to improve their English.
- 3- Investigate the KILAW student's attitudes towards SM.
- 4- Forecast the use of SM in the future if similar diseases emerged.

Hypotheses of the study

It is hypothesized that;

- 1- KILAW students' use of SM for learning the English language significantly increased due to university lockdown.
- 2- There is no significant difference between undergraduate and postgraduate students concerning the parameters of using, attitudes and prospective of SM in learning English.
- 3- KILAW students' responses regarding statements on use and attitudes towards SM are above the average level.
- 4- KILAW students' prospective about SM to be used in teaching in the future is above the average level.

Covid19 appeared in December 2019 in China. The first case of Covid19 appeared on 24 February 2020 in Kuwait. All schools, universities and educational institutions were locked down. Consequently, many SM apps used heavily during this lockdown such as Zoom, Lark which are used for different sectors- marketing, education, entertainment.

The lockdown of universities and institutes due to Covid19 and the curfew imposed by the government forced students to quarantine themselves in their homes and hostels. KILAW looked for such good alternatives to continue delivering lectures and lessons. Students resorted to use SM also to develop their level in English language. KILAW students involved in many online discussions and sessions via Zoom apps, and other SM tools.

It is noticed that KILAW students studying English language frequently access YouTube videos, join some groups on Whatsapp, and participate in a group discussion on Zoom, Lark, and Google meet Apps for many different reasons such as entertainment, watching live events, or educating themselves. This has encouraged the researcher to investigate these new tools which can be utilized by KILAW students to improve their English language.

Literature review

In the age of technology, there are new forms of learning processes, socialization, and communication. In the past, teachers used to bring traditional media- newspapers, magazines, periodicals, etc. to teach their students, but in the current era, the use of digital media- social media replaced the traditional media. Technology plays a fundamental function in the educational process. This study investigates KILAW students' use of SM during the lockdown of the university. There are many types of technology used in the field of education. One of these forms is SM apps. KILAW students find it a good opportunity to learn through using SM in the time of university lockdown. They use different types of SM. Universities and institutions started to utilize SM tools to teach students online due lockdown of the Covid19. Only through SM platforms, KILAW students can be in touch with their teachers, they also can participate in lectures done by their teachers through SM platforms. SM platforms shifted KILAW students from being passive in lecture halls into active students. There are many groups on SM apps are created such as Whatsapp, Zoom, Facebook, etc.

KILAW students are aware of the importance of learning English language. Language primarily is a mean of communication between human beings, and it is either spoken or written.

Oral communication is one of the most common and used types of communication between people, and to develop the spoken language the two parts- the speaker and the listener need the skills to speak and listen, by these two skills one can express his needs, understand others, and positively communicate with them. Speaking skill is considered as an art that deals with the mind and emotion, and focuses more on emotion, because of the speaker's desire to persuade the other side and influence him.

General remarks on SM

In the late 2000s, the tools of SM started their appearance. Some of SM tools get rapid popularity (others grow up slowly). SM tools are used for interaction between people of different peoples, companies, universities and institutions. SM tools can be considered as an essential part of millions of people, they carry out their jobs through these tools. They connect individuals, who have the same field of interests with each other. University professors, school teachers, educationalists, etc., are heavily relying on the use of SM in formal and informal teaching. They deliver their lectures and share practices, information, educational material, opinions, views, and comments. They did all these activities via SM tools. SM is various tools created, circulated and employed by consumers which are determined for specific purposes such as educating people about products, brands, services, personalities, and many other issues (Mangold & Faulds 2009). SM is online computer-based technology tools which enable individuals to straightforwardly interconnect by means of the internet with each other. By utilizing SM, people from different countries can communicate and share information (Dollarhide, M, E .2019; Ikonić Hawes,2017; Meyliana, Hidayanto & Budiarjo 2016). Merriam-Webster defined SM as “forms of electronic communication (such as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (such as pictures, video and audio, course work, as well as disseminating courses and handouts (Chawinga, 2017; Mutarubukwa & Mazana,2020) . SM has grown quickly and has been used heavily for academic purposes especially during the emergence of Covid-19. Online teaching/ learning processes become at the heart of academic activities. The Users of SM showed great interest to exploit SM in the teaching and learning process. Basically, SM tools are used to keep contact between family members and friends, SM tools are also used for entertainment

(Hadebe, Owolabi & Mlambo, 2017; Mutalib, Halim, & Yahaya, 2015). SM enables Learners to freely interact with native speakers of the language they want to learn (Eltigani & Ahmed 2020).

Previous Studies

Many studies explored the opportunities, challenges, and benefits of using SM tools in the field of education (Al Alwan, Rana, Dwivedi & Algharabat, 2017; Huang & Behara, 2007; Kaplan, Piskin, & Bol, 2010; Lowe & Laffey 2011; Namaziandost & Nasri 2019; Neier & Zayer, 2015; Tocaimaza-Hatch, 2018), but they did not investigate the attitudes and the perspective of the students. Poor infrastructures such as network, internet inaccessibility problems and poor digital skills hinder online education. Onyema et al (2020) in their study recommend educational institutions, universities, educators, and learners to implement the technology and improve students' digital skills in line with the emerging global trends and realities in education. AlYoussef (2020) reported that SM was perceived as useful, easy to be utilized, the attitude of his study participants toward use, and SM was positive.

Namaziandost and Nasri (2019) investigated the effectiveness of using SM on EFL students' speaking skills. They used two questionnaires: one was for 100 EFL teachers and the other one was for 100 learners. They found that the frequent usage of SM has a significant impact on EFL students and EFL teacher. The utilization of SM has become a daily habit among students, they recommend the integration of online conversations in English class to provide an atmosphere of enjoyment as well as keep the student on the right path towards improving his/her skills. Al-Jarrah, Jarrah, Hassan and Talafhah (2019) investigated the perception of students towards SM in terms of ease of use, usefulness, and attitude toward the use of SM for carrying out the activities and examined the correlation between these factors. They found that SM plays a significant role in improving English language writing performance at the school level. There were a high percentage of students who use SM. Social media facilitates learning new words and phrases and improves students' writing skills. Mustafa (2018) investigated the impact of Skype, WhatsApp, and YouTube, on improving EFL learners' speaking skills. He found that social media has a great impact on students speaking skill. Ghouali and Benmoussat (2019) indicated that the intensive use of SM led to a significant decrease level of Algerian learners' writing. They established a new method of writing that includes linguistic habits that reflect the informalities often found in an SM environment. These students are unable to differentiate

between the formal and informal contexts to the point that certain linguistic aspects have become fossilized. In view of all that has been mentioned so far, one may suppose that SM tools are very important to be deeply explored to find the advantages and disadvantages of implanting SM in education.

The limitations of the Study

This study is limited to investigate the use of social media by KILAW students to learn English language in the time of lockdown. This study draws its sample from students who study at KILAW. This sample is small due to that many universities did not use SM tools or implement E-learning. Furthermore, it covers only students who study at English department only.

The methodology of the Study

The researcher used a quantitative approach; he conducted a questionnaire for 116 students enrolled in the English department at KILAW. The questionnaire items were gathered from such previous related studies such (Al-Jarrah, Jarrah, Hassan and Talafhah, 2019; Chen& Bryer,2012) and underwent modification to suit the study objectives. The questionnaire was sent to six judges to verify the clarity and the relevance of the questionnaire items to the objectives of the study. After the judges' comments, modifications to the questionnaire were made then it was tested to ensure the reliability. The test of reliability in table 1 shows that the questionnaire was reliable.

Table: 1 Reliability Statistics

Cronbach's Alpha Based on		
Cronbach's Alpha	Standardized Items	N of Items
.841	.867	23

One-hundred sixteen students studying at KILAW were recruited for this study. The questionnaire was distributed from 27 July till 1st August 2020. The number of responses was few because the questionnaire was restricted to the students who study in English Department at KILAW. The questionnaire was of two main sections. Section one; the participants are required

to complete demographic information including gender and educational level. Section two of the questionnaire consists of 23 statements which are distributed on five parameters. These five parameters are as follows:

- 1- The use of SM by KILAW students before Covid19,
- 2- The use of SM by KILAW students during Covid19,
- 3- The use of SM by KILAW students for learning English,
- 4- The attitude of KILAW students towards SM, and
- 5- The prospective of KILAW students towards SM.

Data analysis

The data analysis is divided into two sections. The first section discusses the background information of the participants while the second section deals with participants' responses to questionnaire items.

Participant's background information.

The first section in the questionnaire was devoted to basic participants' information.

Table 2 shows the details of the participants

Gender of participants	NO	%
Male	53	45.7%
Female	63	54.3%
Total	116	100%
Courses	NO	%
course100	19	16.4
course101	18	15.5
course102	28	24.1
course103	7	6.0
course401	12	10.4
course402	19	16.4
course403	13	11.2
Total	116	100%

*note: the courses (100,101, 102, and 103) represent undergraduate level, and courses (401, 402, and 403) represent postgraduate.

The results in table 2 show that 45.7% are male students while 54.3%female students. The students are collected from two levels. The undergraduate students are (72 students) 62%.In postgraduate courses, there are 38 %(44 students).

Table 3: Using SM before and during Covid-19

Paired Differences								
		Std.	Std.	95% Confidence Interval				
		Deviation	Error	of the Difference				
	Mean	n	Mean	Lower	Upper	t	df	P. value
before	—							
during	-.69655	1.04556	.09708	-.88885	-.50426	-7.175	115	.000

Tables 3 shows that there is a significant difference of using SM by KILAW students between before Covid19 and during Covid19 ($t=-7.175$, $p= <0.001^{**}$). As it is shown in table 3 the mean of using SM before Covid-19 was (4.35172) while the mean of using SM during Covid19 was (5.04828), the higher score of the mean was for during Covid-19 (5.0483). The utilization of SM is increased during Covid-19 as P. value is $<0.001^{**}$ which indicates that there is a significant difference between before and during Covid-19.

Table 4: the difference of SM usage between Male and female students

		Std.				
gender	N	Mean	Deviation	T	Sig	
Before Male	53	4.1887	.83979	-1.938	.055	
female	63	4.4889	.82053			
During Male	53	5.0868	.78692	.465	.643	
female	63	5.0159	.85557			

The result is table 4 shows that male increasingly used SM during Covid19 as the mean score is 5.0868 while it was 4.1887 before Covid-19, but in the case of female students, the increase of using SM is not to that extent. This may be ascribed to that female students always use SM and any new technologies more than male students, (Egbo, Okoyeuzu, Ifeanacho & Onwumere,2011). Female students are prominently interested in utilizing new technologies such as ICT, translation tools like (Google Translate), more than their male counterparts, (Alghamdi & Plunkett, 2018; Mohammed, Shaikh & Mahdi, 2020).

Table 5, T-test for significant differences between undergraduate and postgraduate concerning parameters of SM.

	Level					
Parameters	Undergraduate		Postgraduate		t-Value	p-Value
	Mean	SD	Mean	SD		
Use	4.1278	.87488	4.4364	.50720	-2.404	.013
Attitude	4.1361	.90372	4.5773	.56109	-3.244	.031
prospective	4.2037	.92700	4.6970	.37916	- 4.001	.003

Table 5 shows that both undergraduate and postgraduate students' responses were very high about the factors. There is a significant difference between undergraduate students and postgraduate students for the three parameters. Undergraduate students show lesser interest in using SM for learning than postgraduate students. The researcher uses a five-Likert scale where 1= strongly disagree and 5= strongly agree. The result shows that the responses of all participants are in high average- most of the responses are more than 4 which means agree. In general, the mean of their responses on using SM for learning English parameter is 4.2448; the mean of their responses on their attitude of SM in learning English parameter is 4.3034, and the mean of their responses their prospective of using SM parameter in education is 4.3908. 12.1% of the responses of the participants believe that SM is not useful for leaning listening, as well as 9.4 %, believe that SM is not useful for learning writing. While for other skills (speaking and reading) around 8% of the responses disagree with using SM for these skills, this shows that SM can be better used for such skills (speaking and reading) but those skills which need face to face integration SM tools may not achieve the needed level. Using SM by students is fundamentally

increased due to the suitability, ease of access and ease of utilization, and functionality (Alwan, Rana, Dwivedi & Algharabat, 2017; AlYoussef, 2020; Dwivedi et al., 2016, Otchie & Pedaste, 2020).

Table 6: t. test for the specified value(average=3)of the parameters Use, attitude, and prospective

	N	Mean	Std. Deviation	T	P-value
Use	116	4.2448	.76900	17.435	<0.001**
Attitude	116	4.3034	.81741	17.174	<0.001**
prospective	116	4.3908	.80130	18.694	<0.001**

In table 6: the P-value is <0.001** for all parameters, the analysis indicates KILAW students positively agree with the parameters. The means of these parameters as shown in the table are high more than (4). KILAW students indicate that SM will play a fundamental role in the future as it is obvious from their responses for that last parameter (Prospective). Overall, the results indicate that KILAW students have a positive as well as significant use of SM at an average of (3) as shown in table 6. KILAW students' responses of (Use) parameter are t= 17.435 and p <0.001**, (attitude) parameter are t= 17.174 and p <0.001**, and prospective parameter are t= 18.694 p <0.001**, which prove the hypothesis which states that KILAW students regarding these parameters are above average level .

Finding and discussion

To achieve the aims of the study, the researcher has set four hypotheses in this study, he wanted to check whether these hypotheses are proved or rejected. These hypotheses are explained as follows:

HYPOTHESIS 1: From table 2 and table 3, one can conclude that there is a significant difference in using SM between before Covid19 and during Covid19. Amazingly, KILAW students were using SM for learning English before Covid19, but during Covid19 the use of SM is increased. Since P-value is less than 0.01, the hypothesis is proved, concerning all the statements on the use of SM before and during Covid19. The results show that KILAW students heavily use SM to acquire the English language.

HYPOTHESIS 2: From table 4, it is clear that the P-value for the parameter of using SM is .013, so this hypothesis (the null hypothesis) is rejected. There is a significant difference in the use of SM in learning English. Postgraduate students at KILAW use SM in learning English more than those in undergraduate students. The means of postgraduate students is 4.4364 which is higher than that of undergraduate students (4.1278). Regarding their attitude, the P-value is .031; so again, this hypothesis (the null hypothesis) is rejected. There is a significant difference concerning the participant's attitude towards SM. The attitude of postgraduate students at KILAW towards SM in learning English is more positive than those in undergraduate students. The means of postgraduate students is 4.5773 while 4.1361 for undergraduate students

HYPOTHESIS 3: In table 5, the responses of the participants are very high, as the means of both postgraduate and undergraduate are 4.5773 and 4.1361 respectively. Since P-Values for Use, Attitude, and Prospective are .013, .031, and .003 respectively which show that their responses are above average level, which means that their use, attitude and prospective are positively supported and the hypothesis is approved and supported. This result is in line with that of (Alghamdi & Plunkett, 2018).

HYPOTHESIS 4: Similarly, in table 6, the responses of the participants are above average. The P-value is $<0.001^{**}$ for all parameters. KILAW students have a clear vision that SM will play a fundamental role in the future. The results indicate that KILAW students have a positive as well as significant use of SM at an average of (3) as shown in table 6. According to the result, the last hypothesis which states that KILAW students regarding these parameters are above average at level(3) is proved and supported.

Generally speaking, KILAW students heavily used SM in completing the academic year 2019-2020 and to acquire the English language in a proper way. Postgraduate students at KILAW use SM in learning English more than those in undergraduate students. The participant's attitude towards SM is positive. The attitude of postgraduate students at KILAW towards SM in learning English is more positive than those in undergraduate students. Female students show more interest than male students. The prospective of using SM in the future is very promising.

Conclusion

Many studies were conducted to explore the perception, attitudes, benefits of SM in the field of education. The findings of these studies are governed by many factors such as students'

readiness, trainers' ability to use SM tools, and stability of network connections, and so on. Consequently, the results varied from study to study. (Allo,2020; Moreno; Cavazotte&Alves 2017; Smith, 2017) who concluded that SM tools are very useful tools to be harnessed for educational purposes. KILAW students showed positive attitudes towards using SM. The present study investigated the use of SM by KILAW students to improve their English, it also investigated the KILAW student's attitudes towards SM, and it forecasted the use of SM in the future if similar diseases emerged. It surveyed 116 participants at KILAW in English department. The finding shows that there is an increase in using SM for learning the English language. It shows that the participants show a positive attitude towards the use, positive and prospective of SM tools on KILAW students. The participants ascertained that SM tools enable them to be active. They also reported that they can find suitable material for their level. Less than 9% of the participants show negative attitudes towards SM. The study concluded that Kuwaiti universities and institution have to implement SM in the process of teaching and learning. The students show great interest in using this new method. Teachers must train themselves on how to use these tools for educational purposes. The researcher strongly recommends implementing SM in the field of education especially in higher education.

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The production of English codas by Thai speakers

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Abstract

This study aims, first, to examine how Thai speakers produce English codas to address the variation performance in producing single and double consonant clusters. And second, this study investigates how the sonority degree relates to the coda consonant production. Three Thai university students were asked to read 64 sentences with a total of 279 single-coda consonant productions and 132 coda cluster productions. The results showed that the participants' errors in producing coda consonants were categorized into three types: substitution, deletion, and insertion. Obstruents were more marked than sonorants. The participants could produce single phonemes better than clusters in coda position. The single codas produced by Thai speakers violated the SSP. For the cluster production, the sonority distance did not sort the ranking of difficulty in producing the coda clusters. However, the L1 interference occurred in all single-coda phonemes. It is interesting that the fricative /s/ which is not allowed in Thai codas had higher accuracy percentages than the codas that exist in Thai, such as /k/, /n/ and /t/.

Keywords: consonants, coda position, markedness, Thai speakers of English

Introduction

It is believed that the native or first language (henceforth L1) of the speaker influences the pronunciation of the target or second language (henceforth L2) sounds (Yang, 2016; Fontiveros-Malana, 2018). Whenever the sounds of L2 are similar to the L1 sounds, those sounds should be

natural to attain. On the other hand, if L2 sounds are different from L1 sounds, it can be predicted that those L2 sounds are difficult for the L2 speakers to acquire.

Moreover, the speech sounds produced by the non-native speakers tend to differ from the native speakers' (Piske, MacKay & Flege, 2001). The research on the pronunciation of Thai learners of English has been conducted to find out strategies to improve their speaking skills, such as using Phonics (e.g., Iadkert, 2014) and to find out causes of difficulties in pronunciation (e.g., Narksompong, 2007). According to Narksompong (2007), Thai learners have difficulties with some consonants, stress, and intonation. She states that the learners pronounce English speech by substituting Thai phonological features. Unlike the empirical research on learners' pronunciation, Narksompong's study is not based on primary sources, but it collected data from secondary sources, including books, research, studies, articles, journals, and online information. In addition to the study of Narksompong, most previous research on Thai learners' pronunciation is about the perception rather than the production (e.g., Kanokpermpoon, 2007; Chamcharatsri, 2013; Rungruang, 2017). This present study, on the other hand, sought to examine the pronunciation from English as a foreign language (EFL) learners, the research subjects of primary sources. Concerning the English learning condition in Thailand, the subjects of this research are tertiary students who have learned English with Thai teachers in Thai institutions from primary to tertiary level, or at least for 17 years.

English phonemes are variant and occur in detailed phonetic transcriptions as known as allophones (Ladefoged, 2001, p. 37). For example, the voiceless stops /p/ has three allophones including unaspirated [p], aspirated [p^h], and unreleased [p̚]. The voiceless stops /p, t, k/ are aspirated only in onset position, in a stressed syllable, and only if they are not preceded by /s/. According to Ladefoged (2001, p. 56-60), there are more rules for English consonant allophones; nevertheless, they may not apply to all varieties of English. The corresponding voiceless stops and affricates /p, t, k, tʃ/ in coda position are longer than the voicing counterparts /b, d, g, dʒ/, for example, the differences between *back* and *bag*. In many English accents, the coda stops /p, t, k/ are accompanied by a glottal stop such as in words *tip*, *kit*, and *pick* are pronounced as /tɪʔp/, /kɪʔt/, and /pɪʔk/. Additionally, the glottalised pronunciation can occur before /tʃ/ such as *rich* /rɪʔtʃ/ and in the stressed syllable such as *nature* /neɪʔtʃə/. Roach (2010, p. 53) states that this glottalization rule is difficult for L2 learners to learn. Nevertheless, the glottal stop /ʔ/ exists in Thai, such as /tôʔ/ 'table', and also occurs in a variety of Southeast Asian

English, such as Singapore English and Malaysian English (Melchers & Shaw, 2013). According to Melchers and Shaw, the glottal stop is substituted for the stops in coda position. The lateral and nasals are syllabic in the coda, such as *listen* /lɪsn/ and *bottle* /bɒtl/. Regarding the coda clusters of stops in final and post-final positions, the final-position stop is unexploded, such as *looked* [lʊkʰt] and *stopped* [stɒpʰt]. The alveolar stops /t, d/ are omitted when between two consonants such as in a noun phrase *sand paper* /sæn peɪpə/. Regarding the final stops, several languages have unreleased stops in syllable coda, and it can infer that the absence of release bursts does not impair intelligibility (Tsukada, Birdsong, Mack, Sung, Bialystok, & Flege, 2004). These rules of allophones are employed to analyze the data of the present study whether the sounds are pronounced correctly or not.

The segments in coda position are more simple in the Thai language than those in the English language. The Thai language allows only single codas including /p, t, k, ʔ, m, n, ŋ, j, w/, and the affricates and aspirated or voiced stops do not occur (Hancin-Bhatt, 2000), whereas English has complex either onsets or codas (Ladefoged, 2001, p. 230). Although Thai speakers experience English words ended with three sounds /f, s, l/ from foreign loanwords in Thai (Noss, 1964; as cited in Hancin-Bhatt, 2000, p. 210), but these sounds are usually substituted with unaspirated and nasal sounds, e.g., /f/ to /pʰ/, /s/ to /tʰ/, and /l/ to /n/. The phonological interference from L1 greatly limits the number of final consonants and consonant clusters in L2 syllables and also reduces the L2 speakers' intelligibility, as it happens to Vietnamese speakers of English (Dang, 2015)

Results from previous studies on L2 pronunciation indicate that the most likely performance is to substitute the coda with one that is allowed in L1 (e.g., Hancin-Bhatt, 2000; Setter & Deterding, 2003; Yangklang, 2006; Rungruang, 2017). L2 learners' errors in uttering English segments have been analyzed as resulting from a variety of phonological processes. Hancin-Bhatt (2000, p. 211) revealed the data from the identification task showed that 'substitution is the preferred performance, over insertion and deletion, for marked codas.' Additionally, an inserted or epenthetic consonant in coda position can be found for grammatical reasons and lead to confusion over listeners or interlocutors. For instance, when a plural -s suffix occurs on a noun that is uncountable in Standard English such as *milks*, or when an unexpected -ed suffix occurs. However, there are some instances of extra final consonants that cannot be explained grammatically. The epenthetic final consonants are found in L2 speakers of English, for

example, Hong Kong English and Singapore English (Setter & Deterding, 2003). According to the study of Setter and Deterding, they found the occurrence of three epenthetic final sounds, including /s/, /t/, and /k/ in the English of speakers from Hong Kong and Singapore. They presented two explanations: articulatory and hypercorrection involving the occurrence of extra final sounds. First, the hypercorrection can be found in grammatical errors for spurious –s suffixes such as *furniture/s/* and *work/s/*, and spurious past tense such as *listen/t/*. And the articulatory explanation for sounds from the same articulators, for example an extra /t/ after final /s/ such as in *yes/t/* and *twice/t/* and after final /n/ in *done/t/* and *in/t/* as well as an extra /k/ after /ŋ/. These errors of sound insertion provide coda cluster production, which attributes markedness to L2 learners of English (Eckman, 2008). For the lateral /l/ in coda position, as stated in the study by Yangklang (2006), the /l/ can cause difficulty for Thai learners of English when it occurs in coda position. The /l/ is omitted, such as *mile* pronounced as *my*, *fill* pronounced as *few*, and is substituted with /n/ such as *bill* pronounced as *bin*. The phonemes which do not exist in the L1 sound system and phonotactic differences between L1 and L2 cause difficulties for L2 learners to a varying degree that have also been reported for Farsi English (Hall, 2007) and Chinese English (Huang & Radant, 2009).

Regarding the coda clusters that are not found in Thai, Rungruang (2017) investigates the development processes in English language acquisition of Thai learners after taking four-year English courses. He investigates how well Thai university students were able to perceive English onset and coda clusters consisting of two, three, and four consonants through the learners' opinion. The results reveal that the Thai learners performed slightly better in onset than in coda. Although the four-year study affects positive opinions on their English productive skills, the learners still have difficulty identifying some English consonant clusters, especially in coda clusters. The participants have difficulty dealing with coda clusters, particularly when the last members were fricatives, namely [ʃ, z, s], and an affricate [tʃ]. However, the participants can perform well in some tokens with a fricative ending. This performance may be as a result of the process of crossing over the target sounds, or interlanguage. By the way, they could identify some fricatives, but not all fricative tokens, as well as the coda clusters with [l] and [ɹ], such as in words *helps* and *sharp*. For coda cluster perception, it can be assumed that Thai learners tend to recognize the cluster simplification, or one consonant of a cluster is deleted that is consistent with Saudi learners of English, e.g., Almaki (2014) and Alenazi (2016).

The present study explores the extent errors of English codas produced by Thai learners while the research mentioned above investigates only through their perception, not production. Moreover, the current study examines the codas consisting of single or two consonants in syllables and discusses how the pronunciation is interpreted within the Markedness Differential Hypothesis (MDH) framework, one of the phonological acquisition theories. The MDH which was expressed by Eckman (1977; cited in Eckman, 2008) makes the prediction of the relative difficulty of a given aspect of the target language and the connection between native language transfer and language universals has been suggested as marked structures are difficult to learn, particularly if those in L2 are more marked than those in L1. The MDH proposes that not every difference between the target language or L2 and the native language or L1 causes the L2 learners difficulty. The sequences of difficulty in producing segments are well represented in the degree of sonority (Almalki, 2014; Alenazi, 2016). The sonority is loudness of a sound that relates to other sounds with the same length, stress, and pitch (Ladefoged, 2001, p.227). A sequence of segments in coda position can be either falling or rising sonority. For instance, the word 'lunch' with a nasal before an affricate, i.e. falling sonority; and 'legs' with a stop before a fricative, i.e. rising sonority.

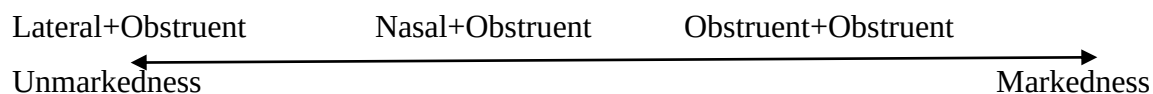
The idea of sonority is well represented in the Sonority Sequencing Principle (SSP). The SSP states that 'any syllable must contain a segment that constitutes its sonority peak (i.e., nucleus) preceded by a segment or a sequence of segments with increasing values of sonority and/or followed by segment or a sequence of segments with decreasing values of sonority' (Clements, 1990; as cited in Almalki, 2014, p. 3). The SSP is conformed in all languages that allow a single phoneme to precede and/or follow the vowel, for example, CV and CVC; however, the SSP violations are proved for syllables that begin or end with a consonant cluster. The sonority seems to play an important role in determining which sound sequence is permissible in the language, with the help of what is known as Sonority Indices (SI) of sounds, as presented by Parker (2011). A full scale can be seen in Table 1. The consonants are ranked by their manner of articulation and voicing. Vowels are ranked according to their heights. The closer the two consonants are, the more markedness the cluster has. For example, /nz/ is more marked than /nd/ because the sonority indices of /n/ and /z/ are 7 and 6 providing the sonority distance value 1 between /n/ (C1) and /z/ (C2), whereas the sonority distance of /nd/ is 3 as a result of the sonority indices of /n/ and /d/ are 7 and 4. The greater sonority distance makes more natural coda. So, /nz/ is more

difficult to be pronounced than /nd/. Nevertheless, some sequences violate the SSP as a result of a negative value of the sonority distance, or “negative sonority” (Almalki, 2014). For example, /ts/ is moving from sonority index 1 for /t/ to sonority index 3 for /s/ making sonority distance -2. The SSP violation makes the cluster the most marked.

Table 1 The hierarchy of relative sonority (Parker, 2011, p. 13)

Natural class	Sonority index
low vowels	17
mid peripheral vowels (not [ə])	16
high peripheral vowels (not [i])	15
mid interior vowels [ə])	14
high interior vowels ([i])	13
glides	12
rhotic approximants ([ɹ])	11
flaps	10
laterals	9
trills	8
nasals	7
voiced fricatives	6
voiced affricates	5
voiced stops	4
voiceless fricatives (including [h])	3
voiceless affricates	2
voiceless stops (including [ʔ])	1

Based on the sonority hierarchy, two consonants in clusters can be classified along with the sonority distance as a fall in sonority from the first consonant to the second one. The closer the two consonants are, the more markedness the cluster has. For example, /nz/ is more marked than /nd/. Consequently, it can be predicted that the most difficulty in producing coda clusters was as follows:



The influence of sonority in coda position has been expressed in many studies. For example, Eckman and Iverson (1994) state that obstruents including stops, fricatives and affricates are more marked in coda position than sonorants including nasals, lateral and flap. Eckman and Iverson found that for the L2 speakers such as Japanese, Cantonese and Korean speakers, predicting that the more marked obstruent coda would induce more vowel paragoge than the less marked sonorant one. Delatorre (2008) asserts that the sonority influences mispronunciation. Delatorre investigates the influence of classes of obstruents on vowel epenthesis and vowel paragoge on obstruents preceding *-ed* and on single codas produced by Brazilian EFL learners. The results reveal that the class of obstruents is influenced by sonority since epenthesis decreases when sonority increases. It suggests that the greater sonority degree is unmarked or less difficult.

In conclusion, the present study differs from previous research. The previous research limit to perception and opinion studies and lack of observing the extent of the problems that Thai speakers experienced in pronunciation. This present study aims to identify the phonological errors by focusing on phonemes including single consonants ($_VC$, V is a vowel, C is a consonant) and two-consonant clusters ($_VCC$) in coda positions produced by Thai speakers. To account for a prediction of difficulty, a notion of markedness for coda consonant production is employed. The language teachers and learners benefit from ranking the degree of L2 pronunciation difficulty and giving priority over repairing the problematic sound. It is hoped that the findings of this study expand to EFL teachers, specifically Thai EFL teachers, a set of general ideas about the possible problems that Thai learners of English may come across in learning pronunciation. Moreover, the spread of the L2 variety of English encourages L2 speakers, especially with different L1, to understand each other.

Methodology

The main objective of this study is to investigate how Thai speakers of English produce coda consonants including single and double consonants that are not allowed in their L1. Based on the stimuli of the present study, /b/, /ʒ/ and /r/ (rhotic) are excluded from the analysis. As mentioned in the previous section, sonority is useful in organizing segments in syllables based on their

relative degrees of markedness. Consequently, the hypotheses of the present study are conducted as follows:

- 1) for single-coda consonant production, the smaller value of sonority index has more marked than the greater value; and
- 2) for coda cluster production, smaller sonority distances between C1 and C2 are more marked than greater ones.

Participants

Three Thai speakers were female students from a public university in the south of Thailand. They majored in English with an intermediate level of competence. The participants were initially collected for the first author's doctoral study. All three speakers had been recommended by an English lecturer for an English speaking course at the university that they had the best performance on English speaking. Their achievements in English speaking and pronunciation, Grade A, were used to justify their English proficiency. The speakers were all undergraduate females, aged 21 years old, to hold gender and age constant. All of the three speakers were from southern provinces with the Southern Thai dialect as their first language. Because of the various phonological features of the Thai dialects (Chomphan, 2010) including Royal or Standard Thai, *Isaan* (Northeastern Thai), *Lanna* (Northern Thai), and *Pak Tai* (Southern Thai), Thai native students with the Southern Thai dialect were selected for analysis to make certain if there are dialect variables in the production of English vowels. All speakers are going to be interviewed and then answer a questionnaire. The short interviews will gather language background data and be used to determine if the speakers have any listening or speaking impediments, as well as to familiarize the speakers to be audio-recorded.

Materials and procedures

A sentence reading task is assigned to control the test tokens within the utterance sentence lists can be functional tests for measuring segmental errors that are used to detect pronunciation errors produced by L2 learners such as the study of Jehma and Phoocharoensil (2014). This present study uses the Bamford-Kowal-Bench Standard Sentence Test (BKB-ST). The original BKB-ST was designed to assess the speech intelligibility curves of British English speakers (Wilson & Bamford, 1979 as cited in Harmand, 2010, p. 139). The test consists of 21 lists with

16 sentences of 3-4 keywords each. There are 50 keywords per list. For example, "The children dropped the bag," "The dog came back," and "The floor looked clean."

The stimuli in the current study consist of four consecutive sentence lists, the BKB-ST list No. 7, 8, 9, and 10, which were employed to investigate the intelligibility of foreign-accented speech in many studies (e.g., Bent, Bradlow, & Smith, 2008; Hardman, 2010). The lists No. 7-10 were selected because they had the most similar mean intelligibility scores out of all 21 lists, and they did not deviate from the grand mean by more than 9% (Hardman, 2010, p. 140). The speakers were recorded reading the four sentence-lists consisting of 64 sentences with a total of 193 keywords. Since the current study explored only phonemes in the syllable-final position, including single phonemes, i.e., _VC, and two-consonant clusters, including final and post-final phonemes, i.e., _VCC, the total investigated tokens were extracted from 137 target words consisting of 93 single-coda phonemes and 44 coda cluster phonemes. Each speaker was recorded on a high-quality Zoom H4n Handy Recorder. Wherever possible, on-site transcriptions were carried out by the researcher that was utilizing both visual and auditory cues. The data of three speakers allow us to consider phonological features of codas that can be found in this variety of English. The utterances were analyzed using PRAAT software (Boersma & Weenink, 2014).

Data analysis

A total of 279 single-coda consonant productions (93 items X 3 subjects), as shown in Table 2, and 132 coda cluster productions (44 items X 3 subjects), as shown in Table 3, were recorded and calculated to percentages. The target items are preceded by either monophthongs or diphthongs that extend the discussion to different vowels affecting codas later on. The single-coda phonemes cover five manners of articulations, including stop, fricative, affricate, nasal, and lateral. The transcription was made of the subjects' recorded response and crosschecked through the PRAAT software. The transcriptions were then coded into five categories: accuracy, substitution, deletion, and insertion. Speaker pronunciation accuracy was tabulated based on the reference model of British English. The allophone rules, as mentioned in the Introduction section, were also used as the criteria of the accuracy. Percentages were used to analyze the data and to figure out the degree of pronunciation difficulties.

Table 2 The sonority index (SonIn) of target phonemes and the number of target words

SonIn	Single coda	Phoneme	n	Target words
9	Lateral	l	8	ball, children, fell, girl, helping, holding, people, table
7	Nasals	m	5	broom, came (x2), home, <u>some</u> one's
		n	8	boun <u>c</u> ing, clean, dan <u>c</u> ing, win <u>d</u> ow (x2), hen, men, kitchen
		ŋ	14	riding, clearing, crossing, working, wrong, young (x2), along (x2), hang, climbing, moving, shopping, listening
6	Voiced fricatives	z	9	boy's, cheese, lies, noise, nose, shoes, water's, lies, he's
		v	1	five
4	Voiced stops	d	10	bread, followed, good, hard, heard, laid, road (x2), stood, cupboard
		g	7	bag (x2), dog (x2), jug, leg, mug
3	Voiceless fricatives	s	7	bus (x2), buys, house, police, purse, saucepan
		θ	1	path
2	Voiceless Affricate	tʃ	1	match
1	Voiceless stops	p	1	map
		t	12	boot, bought, cat, footballer, quite, sweet, forgot (x2), fruit, hit, hot, mat
		k	9	back, book (x3), broke (x3), clock, picture
Total			93	

By comparing the sonority indices, single phonemes in coda positions can be expected as the hierarchy of markedness as follows,

$l < m, n, \eta < z, v < d, g < s, \theta < tʃ < p, t, k$

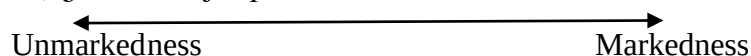


Table 3 The sonority distances (SonD) between C1 and C2 of target coda clusters and the number of target words

SonD	Coda cluster	Phonemes	n	Target words
8	Lateral+Vl stop	lk	2	milk (x2)
6	Nasal+Vl stop	nt	3	front, went (x2),
		ŋk	2	drank, sink
	Lateral+Vl fricative	lf	1	shelf
5	Nasal+Vl affricate	ntʃ	1	lunch
		ndʒ	1	orange
	Lateral+Vd stop	ld	3	child, cold, hold
3	Nasal+Vd stop	md	1	climbed
		nd	5	found, friend, ground (x2), pond
	Lateral+Vd fricative	lz	4	ball's, bottles, girls, tells
2	Vl fricative+Vl stop	ft	1	left
		st	4	fast, lost, postman, used
		ʃt	1	washed
1	Nasal+Vd fricative	nz	2	listens, train's
		ŋz	1	brings
0	Vl stop+Vl stop	kt	3	looked (x2), packed
		pt	2	dropped, stopped
-2	Vl stop+Vl fricative	ts	4	buckets, shirts, writes, plate's
	Vd stop+Vd fricative	dz	1	road's
		gz	2	legs, eggs
Total			44	

Based on the data in Table 4, it can be predicted that the most difficulty in producing coda clusters is as follows,

SonD 8 < SonD 6 < SonD 5 < SonD 3 < SonD 2 < SonD 1 < SonD 0 < SonD -2

Unmarkedness ← → Markedness

Results

The results of the subjects' production of syllable coda consonants were comparing between single phonemes and clusters shown in Figure 1. The chart shows single phonemes were

produced more accurately than clusters in coda position with 74.5% vs. 45.0% accuracy. Regarding the inaccurate coda production, the highest rates of single phonemes were to the substitution, followed by deletion and insertion, whereas the highest rates of clusters were to the deletion, followed by substitution and insertion. The preferred repairs for single-coda phonemes and coda clusters were substitution and deletion, respectively. The substitution might cause some confusion for other words, for example, *bag-back*, *dog-dock*, and *leg-lake*. The voiced fricative /z/ was substituted with The deletion occurred in words with –ed suffix, for example, *followed*, and the syllable-final sounds preceded by a diphthong were also deleted such as deleted /n/ in *bouncing* [baʊsɪŋ], and deleted /s/ in *boys* [bɔɪ] and *lies* [laɪ]. The insertion of the fricative /s/ occurred after the stop /k/ such as in words *clock* and *book*, after /g/ in *jug*, and after nasals /n/ and /ŋ/ such as in words *hen* and *hang*.

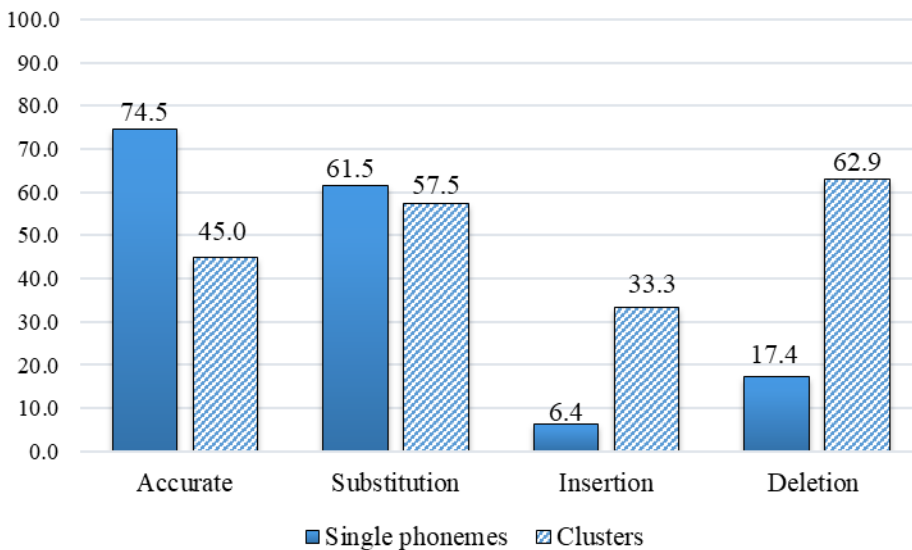


Figure 1 Percentages of coda consonant production comparing between single phonemes and two-consonant clusters

Coda single phonemes

Concerning the coda single phoneme production, the pronunciation performance was consistent across the speakers. Table 4 shows nasals were highest correctly produced with 93.6% accuracy, followed by stops (63.8%), lateral (50%), and fricatives (23.8%), while the affricate was produced inaccurately (0%). The substitution was the preferred repair for all manners of articulation except nasals. For the inaccuracy production, a preference repair of each coda

phoneme can be seen in Table 5. From fourteen single coda phonemes, the bilabial stop /p/ and nasal /m/ were extremely produced with 100% accuracy. The voiced stops /d/ and /g/ were substituted with unreleased alveolar /t̚/ and unreleased velar /k̚/ respectively. No accuracy scores were to two voiced fricatives (/z/ and /v/), a voiceless dental fricative (/θ/), and a postalveolar affricate (/tʃ/). The voiced alveolar fricative /z/ was substituted with the voiceless counterpart /s/; moreover, it was deleted. For the voiced labio-dental fricative /v/ was substituted with the voiceless fricatives /f/ and /s/, and the unreleased stop /p̚/. It is fascinating that the participants could produce the fricative /s/ with a high percentage of 95.2% accuracy, even though this sound never occurs in the Thai coda position. The postalveolar affricate /tʃ/ was substituted with the fricative counterpart /ʃ/. Although the nasals had high accuracy scores without substitution, the deletion and the sound /s/ insertion occurred in this category. The nasal /n/ was deleted when it was preceded by a diphthong, such as in *bouncing* pronounced as [baʊsɪŋ]. A substitution of /w/ and a vowel change to /ɪu/ were the preferred variation for the lateral /l/. The deletion and the /s/ sound insertion also occurred to the lateral /l/. In conclusion, the prominence of devoiced counterparts in coda position can observe from the sound substitution.

Table 4 Percentage of coda single phoneme production for five manners of articulation

Manner of articulation	Accuracy	Substitution	Deletion	Insertion
Stops	63.8	24.6	16.7	5.7
Fricatives	23.8	46.7	11.1	0.0
Affricate	0.0	100	0	0
Nasals	93.6	0	12.5	3.3
Lateral	50.0	12.5	16.7	8.3

Table 5 Percentage of coda single phoneme production by Thai speakers

		Substitution													
				Voiceless stop		Unreleased stop		Voiceless fricative		Others		Deletion (%)		Insertion	
Phoneme	n	Accuracy (%)			%		%		%		%		%		%
Stops	d	30	46.7	t ^h	3.3	t ^ɹ	16.7	s	16.6			16.7			
	t	36	75					s	25.0						
	g	21	4.8	k ^h	23.8	k ^ɹ	61.9						s	4.8	
													t ^h	4.8	
	k	27	92.6										s	7.4	
	p	3	100												
Fricatives	s	21	95.2					ʃ	4.8						
	z	27	0					s	88.9		11.1				
	v	3	0			p ^ɹ	33.3	f	33.3						
								s	33.3						
	θ	3	0	t ^h	66.7	t ^ɹ	33.3								
Affricate	tʃ	3	0					ʃ	100.0						
Nasals	m	15	100												
	n	24	83.3								12.5	s	4.2		
	ŋ	42	97.6									s	2.4		
Lateral	l	24	50							w	12.5	16.7	s	8.3	
										ru	12.5				

Based on the percentages of the accurate coda phonemes, the hierarchy of the markedness from the present study is as follows,

Results: $m, p < \eta < s < k < n < t < l < d < g < f, z, v, \theta$

Unmarkedness Markedness

Coda clusters

Based on a total of 132 tokens, the percentage of variations of each cluster environment is very high, i.e., lateral followed by obstruent, obstruent followed by obstruent, and nasal followed by obstruent had 100%, 86.47%, and 81.25% accuracy, respectively (Table 6). The results showed that the participants tended to make English coda clusters simpler regardless of the sonority distance between the two consonants. These findings revealed that the most difficulty in

producing coda clusters for the participants was lateral/obstruent clusters, followed by obstruent/obstruent clusters and nasal/obstruent clusters.

Table 6 Percentage of total variations in coda clusters

Target clusters	Accuracy	Variations
Obstruent+Obstruent	13.53	86.47
Nasal+Obstruent	18.75	81.25
Lateral+Obstruent	0	100

Table 7 exhibits variations of error types in producing coda clusters for Thai speakers. The variation does not occur to the nasal-affricate coda cluster /ntʃ/, so this category is not represented in the table. Concerning the deletion performance, the second segment of the two-consonant clusters was greater deleted than the first one, for instance, *went* [wen], *left* [lef], and *fast* [fa:s]. Regarding the substitutions, places of articulation were still maintained, but the voiced phonemes were changed to the voiceless counterparts, for example, /gz/ to [kʰs] and [ks], /md/ to [mtʰ], /ndʒ/ to [ntʃ], and /lz/ to [ls]. There was also the replacement of manner of articulation for post-final phonemes, but final phonemes remained, for example, /nd/ and /nt/ to /ns/, and /kt/ to /ks/. Additionally, one segment of the two consonant clusters was substituted with a phoneme which does not belong to the same articulation, for example, /ft/ to [pʰs], /lk/ to [skʰ], and /lf/ to [euf] in words *left*, *milk*, and *shelf*, respectively. It was also revealed that two consonant clusters were substituted with only one phoneme /s/, for instance, /dz/ in *roads* pronounced as [ro:s]. For the word *milk* in one case was pronounced as [mɪu] which there was not only the deletion of the coda cluster, but also the change of a monophthong /ɪ/ to a diphthong /ɪu/ and was produced with a high tone [míu], and another case was produced as [mɪus]. For the insertion performance, one more syllable as /ed/ was inserted, such as in words *stopped* pronounced as [stɒpʰtʰed] or [stɒpʰed] and *climbed* pronounced as [kʰlaɪmɒded]. About the deletions, one of the two phonemes in coda positions was deleted. It was discovered that the final phonemes remained, but the post-final phonemes were deleted. However, in some categories, the final position or the first consonant cluster was omitted, for instance, /ts/ to /s/ and /lf/ to /f/. Finally, the coda clusters were not released which preceded by diphthongs /aʊ/ in *ground* [kraʊ], *found* [faʊ], *child* [tʃaɪ], and *cold* [kʰo:], and *hold* [ho:].

Table 7 Variations in producing coda clusters by Thai speakers and sample words of unreleased cluster error

Coda cluster		Variation summary			Unreleased coda
		Substitution	Insertion	Deletion	
Stop+Stop	kt	ks		k ^h , k ^ʔ	
	pt		p ^ʔ t ^h ed, p ^h ed	p ^ʔ	
Stop+Fricative	dz	s			
	ts			s	
	gz	k ^ʔ s, ks		g ^ʔ	
Fricative+Stop	ft	p ^ʔ s		f	
	st			s	
	ʃt			ʃ	
Nasal+Stop	md	mt ^h	mded	m	
	nd	ns		n	ground, found
	nt	ns		n	
	ŋk			ŋ	
Nasal+Fricative	nz	ns		n	
	ŋz	ŋs			
Nasal+Affricate	ndʒ	ntʃ			
Lateral+Stop	ld			l	child, cold
	lk	s, sk ^h		l	milk
Lateral+Fricative	lf	euf		f	
	lz	aus, ls, s		l	

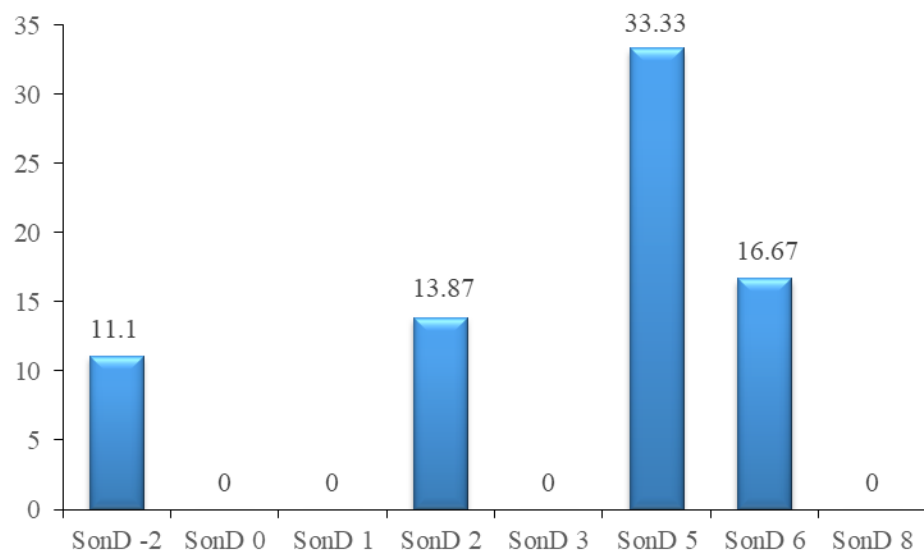


Figure 2 The percentage of accurate coda cluster production classified by the sonority distance (SonD)

Figure 2 illustrates the percentage of coda cluster production accuracy classified by the sonority distance (SonD). The sonority distance 5 (Nasal+VI affricate including /ntʃ/ and /ndʒ/, and Lateral+Vd stop including /ld/) has the highest percentage, that is, 33.33% accuracy, followed by the sonority distance 6, 2, and -2, respectively (16.67%, 13.87%, and 11.1%), whereas the sonority distances 8, 3, 1, and 0 have no accuracy. Therefore, the hierarchy of marked coda clusters produced by Thai speakers is as follows,

Results: SonD 5 < SonD 6 < SonD 2 < SonD -2 < SonD 8, SonD 3, SonD 1, SonD 0
 Unmarkedness ←————→ Markedness

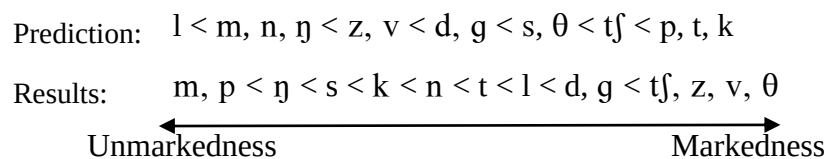
The results of coda clusters produced by Thai speakers violates the SSP. Descending values of the sonority distance do not sort the ranking of difficulty in producing the coda clusters.

Discussion

This study was intended to determine the difficulty of coda consonant production for Thai speakers. An overview result revealed that the speakers could produce single phonemes better than clusters in coda position. It shows that coda clusters are more marked than single phonemes. The phonological facts that English has more than two consonant clusters in either onset or coda

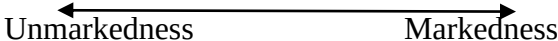
position, while Thai has two-consonant clusters only in onset position. It is not surprising that the Thai speakers have more difficulty in the production of clusters than single phonemes in coda position. Regarding the production errors of single coda phonemes, the substitution was the highest performance, followed by deletion and insertion. The substitution occurred in all final consonants except nasals. This erroneous sound production is consistent with the conclusion of Hancin-Bhatt (2000). The voiced final consonants /d/, /g/ and /z/ were substituted by the voiceless counterparts /t/, /k/ and /s/, respectively. The voiced labio-dental fricative /v/ was substituted with /p/, /f/ and /s/. Regarding the deletion, grammatical errors can explain about removing final consonants. Two phonemes, the voiced alveolar fricative /z/ and the voiced alveolar stop /d/, were deleted in words with –s suffix and –ed suffix, respectively. The /n/ was deleted when it was preceded with a diphthong /au/ such as *bouncing*. This finding is a result of the interference of the Thai language that the final /n/ never follows the diphthong. The lateral /l/ deletion occurred in syllabic words such as *table* and *people*, and the first syllable of disyllabic word such as *holding*. The result of the deletion of /l/ in syllabic words was not consistent with the finding of Yangklang (2006). She found that the participants could well produce syllabic words. The insertion of the voiceless fricative /s/ and the aspirated stop /t/ in ended with either stops or nasals also occurs in Hong Kong English and Singapore English (Setter & Deterding, 2003).

Based on the percentages of coda single phonemes accuracy, the comparison of the predicted markedness by the sonority index and the markedness from the present study can be seen as the following hierarchy.



The results of the single-coda phonemes are inconsistent with the hypothesis. The values of the sonority index are not related to the markedness of coda single phoneme production. The single codas produced by Thai speakers violates the SSP. In addition to the sonority, the results do not support the study of Eckman (2008), which claims that marked features are more difficult to acquire than unmarked features. However, the L1 influence occurs in almost all single codas produced by Thai speakers of English except /s/ which is not allowed in Thai codas. Since Thai

only allows /p, t, k, ʔ, m, n, ŋ, j, w/ in coda positions, these coda phonemes are unmarked for Thai learners of English, and the marked coda phonemes are /b/, /d/, /g/, /f/, /v/, /θ/, /ð/, /s/, /z/, /ʃ/, /dʒ/, /tʃ/ and /l/. It is interesting that /s/ has higher percentages than the codas that exist in Thai including /k/, /n/ and /t/. The /l/ and /n/ sounds are generally predicted as unmarkedness, but the participants produced the two sounds with higher variations than /p/, /ŋ/, /s/ and /k/. The voiceless fricative /s/ is a marked consonant for Thai speakers as a result of no occurrence of this sound in Thai codas, even though the participants could produce the /s/ sound more accurately than other sounds, including /k/, /n/, /t/ which exist in Thai codas. If the /s/ sound was excluded, the most difficulty in producing single coda phonemes based on the place of articulation was as follows:

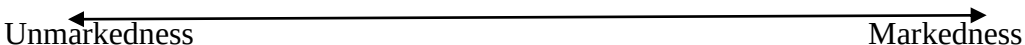
Bilabial < Velar < Alveolar


For coda cluster prediction based on the sonority distance, small sonority distances are more difficult to produce than greater sonority distances. The comparison between the prediction and the production of the coda clusters from the study is as follows:

Prediction: SonD 8 < SonD 6 < SonD 5 < SonD 3 < SonD 2 < SonD 1 < SonD 0 < SonD -2

Results: SonD 5 < SonD 6 < SonD 2 < SonD -2 < SonD 8, SonD 3, SonD 1, SonD 0

Regarding the cluster production, the findings were quite unexpected because some marked clusters had few variations compared to unmarked ones. Clusters that have a close sonority distance are considered to be more marked than clusters with consonants having a wide sonority distance. The percentage of lateral+obstruent cluster variation, which has a large sonority distance (two sonority distance), is higher than some obstruent/obstruent clusters (those having zero sonority distance) and nasal+obstruent clusters in which the sonority distance is one. Many EFL learners also produced unmarked clusters with difficulty; for example, Arabic speakers (Alenazi, 2016). In conclusion, the hierarchy scale of the coda cluster production difficulty for Thai speakers of English can be exhibited as follows:

Nasal+obstruent < Obstruent+Obstruent < Lateral+Obstruent


Additionally, the cluster variations were accord with the single phoneme production in coda position. The lateral /l/ had quite more considerable variations compared to nasals and obstruents in coda position; therefore, the participants also had the most difficulties in producing lateral/obstruent clusters. The substitution of /l/ was not only substituted but also deleted that is consistent with the findings of Rungruang (2017). The participants could produce the first segment of the two consonant clusters in nasal/obstruent clusters better than in obstruent/obstruent ones, and the second segment was usually deleted. However, the first segment of the two consonant clusters was always devoiced. The middle vowel /e/ was inserted in words ending with *-ed* suffix. Moreover, the two consonant clusters were usually omitted when preceded with a diphthong.

Conclusion

In this study, the segmental variations in coda position can be categorized into three types, including substitution, deletion, and insertion. The voiced segments were substituted with the voiceless counterparts that were available in the native phonemic inventory. In some cases, differences between L1 and L2 did not interfere with the speakers' performance. Based on the sonority degree, the results of this study were not consistent with the sonority degree that there were fewer errors in some marked sounds than in unmarked ones. Words ending with the voiceless fricative /s/ could be produced high accurately, even though the /s/ sound never occurred in Thai codas. Concerning the sonority distance, clusters with two sonority distances would be predicted as unmarkedness, but lateral/obstruent clusters were marked and most difficult to the participants to produce. The markedness based on the sonority degrees could not be used to predict the difficulty of Thai speakers' pronunciation. Although the task for collecting speech sounds was a sentence reading, there were grammatical errors in producing words with *-s* suffix for plural nouns and subject-verb agreement, and with *-ed* suffix for past tense. These errors might be trouble to listeners or interlocutors, as well as to the speakers themselves.

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**On the *song* Double Object Construction in Mandarin Chinese
and Its Passivization Variations**

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Abstract

This paper examines the typical double object construction verb *song* ('give'), which can optionally form a verb cluster with *gei* ('GEI'). In the literature, passivization of the IO in the *song* DOC has been judged ungrammatical with or without *gei* ('GEI'). However, closer examination reveals that some native speakers can in fact accept the IO passivization in the *song* DOC without *gei* ('GEI'). Based on these findings, I draw on Paul and Whitman's (2010) IO-raising approach for double object constructions to propose a base-generation mechanism to accommodate this speaker variation. Moreover, I propose a constraint to explain the impossibility of IO movement when *gei* ('GEI') is added. Finally, the discussion of the *song* DOC further confirms that there is no structural conversion connection between the double object construction and the dative construction.

Keywords: Applicative projection, Base-generation, Dative Construction, IO-raising, Passivization

Introduction

According to the categorization of Li and Thompson (1981), there are three different types of double object construction [DOC] with the order of V-IO-DO in Mandarin Chinese. A characteristic that distinguishes these three types of DOC is whether the lexical item *gei* ('GEI')

must necessarily follow the main verb, whether it can do so optionally, or whether it is prohibited from doing so. For the first type of DOC, the main verbs are generally transitive, including *xie* ('write'), *ji* ('send'), *lou* ('leave'), etc. In this type of DOC, GEI following the verb is obligatory. As shown in 1(1), the omission of GEI results in the ungrammaticality of the sentence.

- (1) Dongni xie-*(gei)-le Kaite yi-feng xin. (V-IO-DO)
Tony write-give-ASP Kate one-CL letter
'Tony wrote Kate this/a letter.'

The main verb of the second type of DOC is basically ditransitive itself – for example, *song* ('give'), *huan* ('return'), *fu* ('pay'), etc.. In contrast to the first type of DOC, GEI following the verb is optional, as shown in (2).

- | | | | | | |
|---|---------------|-------|----------|---------|-----------|
| (2) Dongni | song(-gei)-le | Kaite | san-zhi | qianbi. | (V-IO-DO) |
| Tony | give-give-ASP | Kate | three-CL | pencil | |
| 'Tony gave Kate (these) three pencils.' | | | | | |

The third type of DOC, like the first type, generally has a transitive main verb, such as *wen* ('ask'), *yin* ('win'), *tou* ('steal'), etc. However, in the third type, GEI is prohibited, as shown in (3). Huang (2007) has proposed that this last type of DOC is in fact a kind of pseudo-double object construction, which behaves differently from the other two types.

- (3) Kaite wen-(*gei)-le Dongni (zhe-)-san-ge wenti. (V-IO-DO)
 Kate ask-give-ASP Tony (this-)-three-CL question
 ‘Kate asked Tony (these) three questions.’

If one compares the first type of DOC to the second type, superficially these two constructions only differ in the obligatory or optional appearance of GEI. Intuitively, it would seem reasonable to assume there might be some structural similarities between these two constructions. For example, one might assume that the combination of the main verb plus GEI in the double object construction is formed via head movement of the main verb. If *qei* ('GEI') is

proposed to be an overt head in a certain projection in the first type of DOC, its appearance in the second type of DOC might simply be an optional head realization of this particular projection, as schematized in (4).

- | | | |
|-----------------------|-------------|--------------------------------------|
| (4) a. [XP <i>gei</i> | [VP verb]] | (DOC with an obligatory <i>gei</i>) |
| b. [XP (<i>gei</i>) | [VP verb]] | (DOC with an optional <i>gei</i>) |

In this paper, I will focus on the ditransitive verb *song* (‘give’) to test the above possibility. The ditransitive verb *song*, shown in (2), exemplifies the second type of DOC under Li and Thompson’s categorization. I would like to argue that, although the partial structure of the DOC with an optional *gei* (‘GEI’) in (4b) appears consistent with the data in the literature, it needs some refinement to account for new data with the ditransitive verb *song* in the double object construction (henceforth abbreviated as the *song* DOC).

This paper is organized as follows: In Section 2, I first discuss the structure proposed by Paul and Whitman (2010) for the double object construction with GEI and its A/A’-movement patterns exhibited via passivization in Mandarin Chinese. In Section 3, I present some new language data regarding the *song* DOC without GEI. In Section 4, based on Paul and Whitman (2010), I propose that the possible passivization of the indirect object involves the base-generation of the IO in the structure. In addition, I examine a special requirement imposed by GEI in the *song* DOC. In Section 5, I propose that there is no structural link for the conversion between the double object construction and the dative construction. I conclude this paper in the last section.

The DOC with *gei* (‘GEI’)

In this section, I will first present the relevant analysis for double object constructions cross-linguistically under the applicative framework. After that, I will introduce the applicative-related analysis by Paul and Whitman (2010) for double object constructions with *gei* (‘GEI’) in Mandarin Chinese.

The A-movement patterns of the IO and DO of double object constructions have received great attention in the literature (i.e. Lee, 2005; Marantz, 1993; McGinnis, 2001; McGinnis and Gerdts, 2004; Pylkkänen, 2008; among others). Of particular interest is that languages may differ

in the A-movement pattern of the IO and DO. For example, in English, only the IO of the ditransitive verb *give* can undergo A-movement, as shown in (5). The A-movement of the DO is not permitted. On the other hand, in Norwegian, the IO and the DO show movement symmetry, as shown in (6). Both arguments can undergo passivization.

- (5) a. John gave Mary the book.
 b. Mary was given the book. (IO)
 c. *The book was given Mary. (DO)

- (6) a. Jon_i ble gitt t_i boken. (IO)
 John was given book.DEF
 ‘John was given the book.’
 b. Boken_i ble gitt Jon t_i. (DO)
 book.DEF was given John
 ‘The book was given to John.’

(Holmberg and Platzack 1995: 215)

To account for the passive symmetry/asymmetry of double object constructions in different languages, various analyses have been proposed in the literature. For example, starting from Pylkkänen (2002, 2008), the applicative framework has been widely applied to double object constructions cross-linguistically. In Pylkkänen (2008), there are two relevant projections which may be selected by different double object constructions: the High Applicative, which is right above VP, and the Low Applicative, which is in the complement position of the verb, as illustrated in (7) and (8), respectively. The high Applicative denotes a relation between an event and an individual, while a low applicative relates two individuals in a possessor-possessee relationship.

(7) High Applicative

[_{ApplHP} IO_{Goal} ApplH [_{VP} V DO_{Theme}]]

(8) Low Applicative

[_{VP} v [_{VP} V [_{ApplLP} IO_{Goal} [_{ApplL'} ApplL [_{DOTheme}]]]]

McGinnis (2001) proposes that the passivization symmetry/asymmetry in DOCs can be explained by these two different applicatives involved in the structure. The symmetric passive languages, such as Norwegian, are argued to involve a high applicative projection in the double object construction. On the other hand, asymmetric passive languages, such as English, are argued to involve a low applicative in the structure instead. Adopting Chomsky's (2000, 2001a, 2001b) phase definition, only the high applicative is considered a phase because it is the sister of the VP and its head assigns a theta-role to the applied argument. If a DOC involves a high applicative projection, as in (7), the IO can undergo passivization since it is at the edge of a phase. As for DO passivization, the DO can be attracted by the phase-EPP feature and move to the higher specifier of the high applicative phrase. In this position, the DO is closer to T than the IO, and is able to undergo further movement for passivization. However, for a low applicative projection, as in (8), things will be quite different. Since the low applicative is not a phase, its edge cannot be used as an escape hatch. The DO, which is structurally lower than the IO, is unable to move higher than the IO in this structure. Hence this causes the passivization asymmetry.^{xix}

To have a cross-language comparison, Paul and Whitman (2010) (see also Georgala, Paul and Whitman 2008) examine the double object construction in Mandarin Chinese, in particular the DOC with GEI, as shown in (9).^{xx}

- (9) Zhangsan song-gei-le Lisi yi-ben shu.
 Zhangsan give-give-ASP Lisi one-CL book
 'Zhangsan gave Lisi a book.'

Following the literature, Paul and Whitman test the movement patterns of the DOC with GEI. In Mandarin Chinese, passivization is achieved via the *Bei* construction. Typical active examples and their passive counterparts are illustrated in (10). Interestingly, in the literature, the *Bei* construction has been argued to be able to demonstrate A- or A'-movement. According to Ting (1998) and Huang (1999), the *Bei* construction, which involves A-movement, lacks an

Agent (the short passive), as in (10b), while the *Bei* construction, which involves A'-movement, includes an Agent (the long passive), as in (10c).^{xxi}

- (10) a. Zhangsan mai-zou-le yi-ben shu.
 Zhangsan buy-away-ASP one-CL book
 ‘Zhangsan bought a book.’
- b. Zhe-ben shu bei mai-zou-le.
 This-CL book bei buy-away-ASP
 ‘This book was bought.’
- c. Zhe-ben shu bei Zhangsan mai-zou-le.
 This-CL book bei Zhangsan buy-away-ASP
 ‘This book was bought by Zhangsan.’

The A-movement pattern of the DOC in example (9) is shown in (11). In contrast to English, only the DO, but not the IO, can undergo A-movement.^{xxii}

- (11) a. *Lisi bei song-gei-le yi-ben shu. (IO)
 Lisi bei give-give-ASP one-CL book
 ‘Lisi was given a book.’
- b. Zhe-ben shu bei song-gei-le Lisi. (DO)
 this-CL book bei give-give-ASP Lisi
 ‘This book was given to Lisi.’

In addition to the A-movement pattern, Paul and Whitman also examine the A'-movement of DOCs in Chinese. The A'-movement in example (10) shows exactly the same pattern as its A-movement pattern, as illustrated in (12) (see also Liu 2006). The IO is still unable to move.

- (12) a. *Lisi bei Zhangsan song-gei-le yi-ben shu. (IO)
 Lisi bei Zhangsan give-give-ASP one-CL book
 ‘Lisi was given a book by Zhangsan.’
- b. Zhe-ben shu bei Zhangsan song-gei-le Lisi. (DO)

this-CL book bei Zhangsan give-give-ASP Lisi
 ‘This book was given to Lisi by Zhangsan.’

To explain the movement asymmetry between IOs and DOs in Mandarin DOCs, Paul and Whitman (2010) propose the following structure for double object constructions with GEI by employing the applicative framework. Based on the phenomenon observed in Chinese DOCs, they propose the Raising Applicative Hypothesis. This hypothesis assumes that there is only one single applicative projection, which combines the high applicative projection and the low applicative projection of Pylkkänen (2008) in the structure. The high applied NP is proposed to be base-generated at Spec, ApplP. On the other hand, the low applied NP moves from Spec, VP to Spec, ApplP. These two applicatives are termed the Thematic Applicative and the Raising Applicative and are illustrated in (13), respectively.

(13) a. Thematic Applicative

[APPLP DP_{Benefactive} [APPL' Appl [VP V DP]]]

b. Raising Applicative

[APPLP DP_{Goal} [APPL' Appl [VP t_{Goal} [V' V DP_{Theme}]]]]

Following their Raising Applicative Hypothesis, Paul and Whitman's proposal for example (9) is shown in (14). In (14), the single applicative projection is right above VP. GEI is proposed to be the overt realization of this applicative head. When the verb undergoes head movement from VP, it incorporates with GEI on its way to the *v* head position (i.e. Chomsky 2005, Huang, Li and Li 2009). Note that there is also IO-raising of the IO in the structure (cf. Citko, 2011; Larson, 2014; Larson and Zhang, 2016).

(14) [TP Zhangsan [AspP song-gei-le [ApplP Lisi_i [Appl' t_{song-gei}
 Zhangsan give-give-ASP Lisi
 [VP t_i [V' t_{song} yi-ben shu]]]]]].
 one-CL book

The IO-raising in (14) is a salient characteristic in the proposed structure and can be supported by the following example (15). In example (15), there is a distributive quantifier *ge* ('each'), following the IO.^{xxiii} Lin (1998) and Soh (2005) have proposed that *ge* ('each') following the IO is in the VP-adjoined position. Since the distributive quantifier *ge* ('each') is in the VP-adjoined position, the IO then has to be higher than VP, which can be explained by the structure in (14).

- (15) Zhangsan song-gei-le xusheng-men *ge* san-ben shu.
 Zhangsan give-give-ASP student-PLU each three-CL book
 'Zhangsan gave the students each three books.'

Moreover, with IO-raising, the A-movement and A'-movement patterns in (11) and (12) can also be explained. Paul and Whitman (2010) assume that similar to the *v* head, the *Appl* head has a case feature to check. The *Appl* head values the case of the IO, which is the closest candidate, via Agree, and the EPP feature of the IO is also being checked when it moves to the Spec, ApplP position. Following Chomsky's (2001) Phase Impenetrability Condition (PIC), once the IO enters an Agree relationship with the *Appl* head, it cannot be attracted to the edge of vP (a strong phase) in order to undergo further operations. Hence, the IO in the double object construction becomes immobile. On the other hand, the DO, without prior movement, can move to the edge of vP. Further operations of the DO are then allowed.

Overall, we can see that in the literature there have been different applicative proposals offered to accommodate different DOC structures and related phenomena cross-linguistically. As more and more languages have been compared, refinements regarding applicatives have been proposed to explain the relevant syntactic behaviors of DOCs as well. Paul and Whitman (2010)'s single applicative structure for the Mandarin DOC is one example. Their new proposal can nicely explain the A/A'-movement asymmetry in Mandarin DOCs with GEI. Essentially, the raised IO is prohibited from undergoing further movement under their proposal because of its prior movement from Spec, VP to Spec, ApplP.

The *song* DOC

In this section, I would like to examine the ditransitive verb *song* ('give') in the DOC

structure. Recall that in example (9), the first part of the verb cluster is a ditransitive verb *song* ('give'), and the second part is an optional *gei* ('GEI'). In Li and Thompson (1981), this belongs to their second type of DOC, as repeated in (16).

- (16) Zhangsan song-(gei)-le Lisi yi-ben shu.
Zhangsan give-give-ASP Lisi one-CL book
'Zhangsan gave Lisi a book.'

Since GEI is optional in (16), I believe that it is reasonable to paraphrase example (16) as (17a) and (17b), respectively. Note that example (17a) is similar to the cases discussed in the previous section where there is an additional GEI in the structure.

- (17) a. Zhangsan song-gei-le Lisi yi-ben shu.
Zhangsan give-GEI-ASP Lisi one-CL book
'Zhangsan gave Lisi a book.'
- b. Zhangsan song-le Lisi yi-ben shu.
Zhangsan give-ASP Lisi one-CL book
'Zhangsan gave Lisi a book.'

For (17a), since GEI is in the structure, it is expected that its A-/A'-movement pattern would be similar to the DOC with GEI discussed in the previous section. Therefore, the focus here will be on the A-/A'-movement patterns of the DOC without GEI in (17b) and its corresponding structure under the applicative framework.

I have noticed that there are complexities regarding the A-/A'-movement of the DOC without GEI in (17b). In the literature, Liu (2006) shows the results of long passivization of double object constructions with and without GEI, reproduced here as (18) and (19). Example (18) is similar to (12), the example noted previously from Paul and Whitman (2010).

- (18) a. *Lisi bei ta song-gei yi-ben shu. (IO)
 Lisi bei he give-give one-CL book
 ‘Lisi was given a book by him.’

b. Nei-ben shu bei ta song-gei Lisi le. (DO)
 that-CL book bei he give-give Lisi ASP
 ‘That book was given to Lisi by him.’

(19) a. *Lisi bei ta song-le yi-ben shu. (IO)
 Lisi bei he give-ASP one-CL book
 ‘Lisi was given a book by him.’

b. Nei-ben shu bei ta song-le Lisi. (DO)
 that-CL book bei he give-give Lisi
 ‘That book was given to Lisi by him.’

(Liu, 2006, p. 896)

Both (18) and (19) are long passives with Agents and illustrate the patterns of A'-movement of the IOs and DOs. As is apparent, in Liu (2006), no matter whether there is GEI or not in the structure, the A'-movement pattern is the same. The IO simply cannot be passivized. I summarize the movement patterns observed by Paul and Whitman (2010) and Liu (2006) in Table 1.

Table 1 Paul and Whitman (2010) + Liu (2006)

	The <i>song</i> DOC with GEI		The <i>song</i> DOC without GEI	
	A-movement	A'-movement	A-movement	A'-movement
IO	*	*	N/A	*
DO	√	√	N/A	√

The movement pattern of the *song* DOC with GEI, shown in Paul and Whitman (2010), is verified by Liu (2006). As for the movement pattern of the *song* DOC without GEI, we only see the A'-movement results in Liu (2006). The corresponding A-movement pattern is unavailable in these two papers.

Though agreeing with the IO/DO movement patterns in the *song* DOC with GEI in Table 1, some of my consultants seem to show different judgments when it comes to movement patterns

in the *song* DOC without GEI. They have reported to me that an example like (19a) is acceptable to them. In other words, for some speakers, the IO can move in the *song* DOC without GEI. Recall that an example like (19a) illustrates A'-movement since it is a long passive. The corresponding A-movement pattern of the IO in the DOC without GEI can also be found through a google search, as illustrated in (20) and (21).^{xxiv}

- (20) Yulejuan heimu chongchong
entertainment-circle dark-side a-lot
Hangeng bei song du dangao
Hangeng bei give poisoned cake
‘It was so dark in the entertainment circle Hangeng was given a poisoned cake
.....’
(by google)

- (21) Riben nansheng qishi bu xiang-yao bei song qiaokeli?
Japan boy in-fact not want-want bei give chocolate
‘Japanese boys in fact do not want to be given chocolate?’
(by google)

In both examples (20) and (21), there are no Agents; hence, these two examples are categorized as short passives and illustrate A-movement. Thus for some speakers, the IOs in the *song* DOC without GEI behave the same as do the DOs. They are all free to undergo movement in passivization, as summarized in Table 2.

Table 2 Speaker Variation

	The <i>song</i> DOC with GEI		The <i>song</i> DOC without GEI	
	A-movement	A'-movement	A-movement	A'-movement
IO	*	*	√	√
DO	√	√	√	√

By comparing Tables 1 and 2, we can see that the movement judgments are the same for the *song* DOC with GEI. However, this is not the case for the *song* DOC without GEI. In the previous literature, the IO is simply assumed not to move, but this is contrary to the judgments of some of my consultants and the google search results.

The Proposal

In this section, first I would like to provide a possible explanation to account for the above observation for the *song* DOC without GEI. I propose that a base-generation mechanism can be applied to explain the mobility of the IO in the *song* DOC without GEI. A possible semantic interference factor for the above-mentioned speaker variation will also be discussed. Later, I will provide a possible solution to explain the symmetrical movement patterns of the IO and DO in the *song* DOC with GEI.

The Movements

Although it has been proposed in the literature that A'-movement of the IO is unavailable in the *song* DOC without GEI, I will show that there are in fact speakers who can have IO passivization for both A- and A'-movements. To explain this kind of speaker's judgment, let us review the movement in the Raising applicative first, as shown in (22).

(22) Raising Applicative

[_{VP} V [_{APPLP} DP_{Goal} [_{APPL'} Appl [_{VP} t_{Goal} [_{V'} V DP_{Theme}]]]]]

Under this structure, the Appl head values the case of the closest NP – the IO, and the EPP feature on the Appl head attracts the closest NP, also the IO. Once the IO moves to Spec, ApplP, further movement is not allowed. The DO is the only candidate that can undergo A- or A'-movement.

It is therefore expected that a structure or mechanism other than the one in (22) should be employed to explain the possibility of movement for some speakers of both the IO and the DO in the *song* DOC without GEI. Recall that in Section 2, we have seen that it is possible for both the IO and the DO to undergo passivization (A-movement) in some languages. Examples from

Norwegian and Albanian, which both exhibit this kind of symmetric movement, are shown in (23) and (24). The same phenomenon can be observed in Kichaga (Bresnan and Moshi 1990) and Swedish (Falk 1990) as well.

(23) Norwegian

- a. Jon gav Marit ei Klokke.
 John gave Mary a watch
 ‘John gave Mary a watch.’
- b. Jon vart gitt ei klokke.
 John was given a watch
 ‘John was given a watch.’
- c. Ei klokke vart gitt Jon.
 A watch was given John
 ‘?*A watch was given John.’

(Åfarli, 1987, p. 44)

(24) Albanian

- a. [Secili libër]_i iu kthye autorit të tij t_i
 each book.NOM CL returned.NACT author.DAT his
 ‘Each book was returned to its author.’
- b. [Secilit djalë]_i iu dha t_i paga i tij.
 Each boy.DAT CL gave.NACT pay.NOM his
 ‘Each boy was given his pay.’

(McGinnis, 2001, p. 7)

In addition, recall that McGinnis (2001) has proposed that double object constructions which show symmetric movement involve a High Applicative in the structure, as in (25).

(25) High Applicative

[_{VP} v [_{ApplHP} IO_{Goal} ApplH [_{VP} V DO_{Theme}]]]

Anagnostopoulou (2003) also proposes that the double object construction found in Bantu languages that show symmetric movement should adopt an applicative structure like the one in (26). Note that this structure in (25) or (26) is quite similar to the Thematic applicative of Paul and Whitman (2010) in (27).

- (26) [_{VP} Agent v [_{APPLP} Ben/Goal Appl [_{VP} V Theme]]]
- (27) Thematic Applicaitve
- [_{VP} v [_{APPLP} DP_{Benefactive} [_{APPL'} Appl [_{VP} V DP]]]]

Hence, for speakers who allow movement of both the IO and the DO, the very intuitive proposal would be that they employ the Thematic Applicative for the *song* DOC without GEI. The proposed structure is shown in (28).

- (28) [TP Zhangsan [AspP song-le [AppIP Lisi [Appl' t_{song}
Zhangsan give-ASP Lisi
[VP [V' t_{song} yi-ben shu]]]]].
one-CL book

In this structure, the applicative head is covert, and there is no IO-raising. Instead, the IO is proposed to be base-generated at Spec, ApplP. This structure would allow movement of the IO in the double object construction without GEI for some speakers. The base-generated IO in (28), after its case is valued by the *v* head, can undergo further A'-movement. As for its A-movement, since there is no prior case checking of the IO, the IO is free to undergo A-movement if the *v* head is passivized (see also Citko 2010). Note that, according to McGinnis (2001), the ApplP in (28) is a phase. Therefore, for the DO, if its case is valued by the Appl head, it can move to the edge of ApplP to undergo further A'-movement. Moreover, if the Appl head is passivized, the DO can also move to the edge of ApplP to undergo A-movement to TP.^{xxv}

Under the current analysis, the speakers who show asymmetric movement and those who show symmetric movement of the *song* DOC without GEI in fact share the same structure. The only difference lies in the mechanisms employed. The former employ a raising approach, while

the latter employ a base-generation approach. This similarity and difference may also contribute to the speaker variation for passivization. Within the same structure, some speakers choose the base-generation mechanism, which is also available universally. Finally, if the speaker variation is due to the same structure but a different mechanism of the applicative projection, this current proposal also supports Paul and Whitman's (2010) single applicative proposal. Under Pylkkänen's (2002, 2008) applicative proposal, the Raising and Thematic applicative are located in different syntactic domains. The correlation between speaker variation and structure/syntactic mechanism under Pylkkänen's multiple applicatives will not be so strong when compared to the single applicative proposal.

Adversity Requirement?

Thus far, I have proposed different syntactic derivations to explain the speaker variation in judgments of the *song* DOC without GEI. However, one might wonder if the particular syntactic derivation is the sole factor influencing speaker judgments. Indeed, there might be another variable at play – specifically, the adversity requirement of passives in Mandarin.

Recall that in the data cited from Liu (2006), the A-/A'-movement tests of the IO are mainly done via passivization. This is basically following the tests used in other languages. However, a special property of Chinese passives might be an important factor that could cause judgment differences. For Chinese speakers, there is a tendency to require the subject of passives to be adversely affected (i.e. Li and Thompson 1981, Liu et al. 2001). For example, in example (29a), since *Zhangsan* was hit and died, the *bei* counterpart in (29b) is acceptable. On the other hand, (30b), the *bei* counterpart of (30a), involves the liking of the teacher and is unacceptable.

- (29) a. Lisi da-si-le Zhangsan.
 Lisi hit-die-ASP Zhangsan
 'Lisi hit Zhangsan and caused him to be dead.'
- b. Zhangsan bei Lisi da-si-le.
 Zhangsan bei Lisi hit-die-ASP
 'Zhangsan was hit by Lisi and became dead.'

- (30) a. Lisi xihuan zhe-wei laoshi.

- Lisi like this-CL teacher
 ‘Lisi likes this teacher.’
- b. *Zhe-wei laoshi bei Lisi xihuan.
 this-CL teacher bei Lisi like
 ‘This teacher was liked by Lisi.’

According to previous research in the literature, this adversity requirement for the subject ranges from 50% to 70% in all passives (i.e. McEnery *et al.*, 2003; McEnery and Xiao, 2005; Xiao *et al.*, 2006; Xiao and Dai, 2010; Yang, 2006; among many others), and this requirement may be lessened because of grammaticalization or language contact. For example, in Chao (1968), he noticed that there were more and more non-adversative passives emerging in Chinese texts, and he proposed that this was due to the influence of English. When western articles were translated into Chinese, the translators simply translated the western passives by employing the *bei* construction, ignoring the adversative meaning expected in the *bei* construction in Chinese. The verb *fan* (‘translate’) is one such case. Its English counterpart “translate” can have a passive form, as in (31a). However, since *fan* (‘translate’) has no adversative meaning, to translate (31a) as (31b) with the *bei* construction would be unacceptable. A better way is to use the *ba* construction, as shown in (31c).

- (31) a. This article was translated into Chinese by Zhangsan.
- b. (*)Zhe-pian wenzhang bei Zhangsan fan-cheng zhongwen.
 this-CL article bei Zhangsan translate-become Chinese
- c. Zhangsan ba zhe-pian wenzhang fan-cheng zhongwen.
 Zhangsan ba this-CL article translate-become Chinese

As noted in Li and Thompson (1981), as time has gone by, examples like (31b) have spread from written texts to oral languages. These days, example (31b) is considered acceptable by many Mandarin speakers.

If one goes back to the so-called ungrammatical example (30b), compared to the grammatical example (29b), there is no structural derivation difference. Both are derived by long passivization. Therefore, the adversity requirement is arguably the major factor causing the

ungrammaticality judgment here. This same phenomenon might occur with the *song* DOC without GEI as well. In the *song* DOC, the ditransitive verb *song* ('give') usually implies that something good is given to the receiver.^{xxvi} Hence the receiver should be interpreted as a beneficiary. If an adversity reading has to be imposed on the receiver when it becomes the subject of the passive construction, this then could cause the unacceptability of the sentence.

To exclude this adversity requirement interference, a simple solution is to propose that other A or A'-movement tests should be used to show the IO/DO movement results. Indeed, Liu (2006) also uses topicalization to show the A'-movement of the IO and the DO of double object constructions.^{xxvii} However, the ditransitive verb tested is not *song* ('give'), but *huan* ('return') instead, which is grouped in the same subclass as *song* ('give') under Liu's categorization. This is shown in (32).

- (32) a. *Na-ge ren, wo huan-gei yi-ben shu.
 that-CL person I return-GEI one-CL book
 'That person, I returned a book.'
- b. *Na-ge ren, wo huan-le yi-ben shu.
 that-CL person I return-ASP one-CL book
 'That person, I returned a book.'

(Liu, 2006, p. 897)

Interestingly, when the main verb in (32) is replaced with the verb *song* ('give'), the judgments once again vary for DOC sentences without GEI. As shown in (33), all my consultants indicate that with the addition of GEI following *song* ('give'), the sentence is ungrammatical, as shown in (33a). In contrast, if there is no GEI, as in (33b), some consultants said that (33b) was grammatical, while others said it was ungrammatical.

- (33) a. *Na-ge ren, wo song-gei yi-ben shu.
 that-CL person I give-GEI one-CL book
 'That person, I gave a book.'
- b. (*)Na-ge ren, wo song-le yi-ben shu.
 that-CL person I give-ASP one-CL book

‘That person, I gave a book.’

Moreover, my consultants showed consistency in their judgments of passivization and topicalization. Those who did not like (33b) also did not allow IO passivization. On the other hand, speakers who accepted (33b) also accepted IO movement in passives.

This consistency provides a clue about how we might exclude the possible influence of an adversity reading in the passives. As shown in Table 3, if we try to match the syntactic mechanism employed and the possible influence of an adversity reading, there are four possibilities.^{xxviii} Speakers who do not allow IO movements at all might belong to the first and second possibility, in which there is IO-raising in their derivation of the *song* DOC without GEI. However, for these speakers, it is unclear whether the adversity requirement for passives plays a role in IO passivization, since the syntactic IO-raising mechanism has pre-determined the ungrammaticality of the sentence.

Table 3 Possible Combinations

	The <i>song</i> DOC without GEI			
	Syntactic mechanism	Adversity reading	IO Passivization	IO Topicalization
Possibility 1	IO-raising	Y	N	N
Possibility 2	IO-raising	N	N	N
Possibility 3	Base-generation	Y	N	Y
Possibility 4	Base-generation	N	Y	Y

The interesting combinations lie in the third and the fourth possibilities. In these two possibilities, the base-generation strategy allows free IO movement. If an adversity requirement for the passive does affect speakers’ judgments, we should be able to find speakers who show the third possibility. That is, these speakers would allow IO topicalization but would not like IO passivization in the *song* DOC without GEI, since the latter would be judged ungrammatical because of the adversity reading requirement. However, so far, none of my consultants shows

this pattern. My consultants who accept IO topicalization all agree that IO passivization is grammatical as well. Therefore, for these speakers, it seems that the adversity requirement of passives is totally ignored in their judgment of IO passivization.

To summarize, although it would seem reasonable to suspect that the adversity requirement might be a factor influencing speakers' grammaticality judgments, we do not find solid evidence of this from my consultants' responses. For speakers who employ the IO-raising mechanism, the adversity requirement is not testable. As for the speakers who employ the base-generation mechanism, so far there is no speaker who accepts IO topicalization but not IO passivization. Thus, we may conclude that the most important factor influencing speaker judgments in the *song* DOC without GEI still lies in the syntactic mechanism employed.

The Overt NP restriction

In this section, we focus on the *song* DOC with GEI. Recall that judgments for the *song* DOC with GEI are quite consistent. The literature and my consultants are in accord that IO passivization in the DOC with GEI is ungrammatical. However, if the base-generation mechanism is available in the *song* DOC without GEI, an immediate question that follows is why speakers who employ this mechanism still find the *song* DOC with GEI ungrammatical. If this mechanism is available, IO movement should be possible. My answer to this question lies in a special property of GEI in the structure. I suggest that GEI, which is proposed to be an overt applicative head, still maintains some residual properties of a preposition and therefore requires an overt NP afterwards.

First, let us examine the properties of typical prepositions in Mandarin Chinese. A salient property of these prepositions is that they cannot be followed by covert NPs. As shown in (34), the answer to the question (34a) can be quite short, as in (34b). If the NP following the preposition is omitted, however, as in (34c), the answer becomes ungrammatical. Yet, the answer can become grammatical if the preposition and the following NP are both omitted, as in (34d).

- (34) a. Zhangsan cong yinghang_i jie-le duoshao qian?
 Zhangsan from bank borrow-ASP how-much money
 'How much money did Zhangsan borrow from the bank?'
 b. san-baiwan yuan.

three-million dollar

‘Three million dollars.’

- c. *Ta cong EC_i jie-le san-baiwan yuan.
he from borrow-ASP three-million dollar

‘He borrowed three million dollars from the bank.’

- d. Ta (cong yinghang) jie-le san-baiwan yuan.
he from bank borrow-ASP three-million dollar

‘He borrowed three million dollars from the bank.’

It is also not possible to move the NP following a preposition to a sentence-initial position, as in (35a). Either an overt pronoun has to fill in the empty slot, as in (35b), or the whole PP has to move, as in (35c).

- (35) a. *Yinghang_i, Zhangsan cong t_i jie-le san-baiwan yuan.
bank Zhangsan from borrow-ASP three-million dollar
‘Zhangsan borrowed three million dollars from the bank.’
b. Yinghang_i, Zhangsan cong na_i jie-le san-baiwan yuan.
bank Zhangsan from there borrow-ASP three-million dollar
‘Zhangsan borrowed three million dollars from the bank.’
c. Cong yinghang, Zhangsan jie-le san-baiwan yuan.
from bank Zhangsan borrow-ASP three-million dollar
‘Zhangsan borrowed three million dollars from the bank.’

Unlike typical object NPs following the verb, it is not possible to drop the NP following the preposition, even if this NP has been mentioned in the previous context. Hence, there seems to be an overt NP restriction for the preposition.

Interestingly, this overt NP restriction for typical prepositions can be observed in the *Ba* construction as well. For example, in the exchange in (36), if *ba* (‘BA’) is included in the answer, an overt pronoun must be used. It is ungrammatical to have *ba* followed by an empty slot, as in (38b), unless both *ba* (‘BA’) and the empty category are deleted together, as in (38c).

- (36) a. Zhangsan ba Lisi_i zeme-le?
 Zhangsan BA Lisi what-ASP
 ‘What did Zhangsan do to Lisi?’
 b. Ta ba Lisi_i/*EC_i da-shang-le.
 He BA Lisi hit-hurt-ASP
 ‘He hit and hurt Lisi/him.’
 c. (Ba ta_i) da-shang-le.
 BA he hit-hurt-ASP
 ‘He hit and hurt him.’

It is possible that the *Ba* NP has moved to the topic position and binds the EC in example (36a) (see Huang 1984). In the IO-raising spirit of Paul and Whitman (2010), if the *Ba* NP has moved from a postverbal position to the *Ba* NP position, further movement is not permitted. However, in the *Ba* construction (37) where the *Ba* NP is arguably base-generated at the *Ba* NP position, once the base-generated *Ba* NP is topicalized to the sentence-initial position, the sentence becomes ungrammatical too. In (38), similar to the question-answer pair in (36), the grammatical sentence requires an overt pronoun or the deletion of *ba* and the *ba* NP together.

- (37) Zhangsan ba zhi-men ti-le yi-ge dong.
 Zhangsan BA paper-door kick-ASP one-CL hole
 ‘Zhangsan kicked the paper-door and made a hole on it.’

 (38) a. *Zhi-men_i, Zhangsan ba t_i ti-le yi-ge dong.
 paper-door Zhangsan BA kick-ASP one-CL hole
 ‘Zhangsan kicked the paper-door and made a hole on it.’
 b. Zhi-men_i, Zhangsan (ba ta_i) ti-le yi-ge dong.
 paper-door Zhangsan BA it kick-ASP one-CL hole
 ‘Zhangsan kicked the paper-door and made a hole on it.’

Therefore, it is likely that *ba* (‘BA’) shares the same restriction as the typical preposition presented above. If one traces the derivation of *ba* (‘BA’), *ba* (‘BA’) in the *ba* construction has

been proposed to undergo grammaticalization by Sun (1997). In ancient Chinese, *ba* was used as a pure lexical verb, and only became a preposition around the Tang Dynasty. In modern Chinese, *ba* ('BA') is now a purely functional head. However, since *ba* is derived from a preposition, it is quite possible that it must obey the same restrictions as a preposition. The overt NP restriction seems to be one example.

Interestingly, the syntactic status of *gei* ('GEI') in the *song* DOC is quite similar to *ba* ('BA') in the *Ba* construction. Under Paul and Whitman's (2010) proposal, *gei* ('GEI') is an applicative head, which is also a functional head, like *ba*. Moreover, *gei* also has a verbal and prepositional usage in archaic Chinese, as shown in (39) and (40), respectively. In example (39), *gei* is used as a verb that means "supply" and takes a Theme argument NP. In example (40), the verb *zhu* ('cook') appears in the same sentence, and *gei* is used as a preposition which takes a Goal argument NP.

- (39) 鎮 國家， 撫 百姓， 給 餽饗，
zhen guojia fu bzixing gei weixiang
suppress country pacify people supply army-provisions
不 絕 糧道， 吾 不如 蕭何。
bu jue liangdao wu buzhu Xiaohe
not short food-road I cannot-be-compared-to Xiaohe
'To suppress the country, pacify the people, and supply the army provisions, and
keep the food-supplying way going, I am not as good as Xiaohe.'
- (*Shi Ji*: Ben Ji, 91 B.C.)

- (40) 是月， 都城 大 疫，
 shi yue ducheng da yi
 that month capital-city severe disease
 分遣 醫官 煮 藥 給 病者。
 fenqiang yiguan zhu yao gei bingzhe
 dispatch medical-official cook medicine to patient
 ‘That month, the capital had a severe disease. (The government) dispatched the
 medical officials to cook medicines for the patients.’
 (*Song Shi*: Ben Ji, 1343 B.C.)

In contrast, *ba* only works as a functional head nowadays, but the verbal and prepositional uses of *gei* are still quite prevalent in modern Chinese, as shown in (41) and (42).

- (41) Zhangsan gei-le Lisi yi-ben shu.
 Zhangsan give-ASP Lisi one-CL book
 ‘Zhangsan gave Lisi a book.’
- (42) Zhangsan da danghua gei Lisi.
 Zhangsan call phone to Lisi
 ‘Zhangsan called Lisi.’

Overall, since GEI in the *song* DOC shares several similarities with *ba* (‘BA’), it is unsurprising to see that GEI may impose the same overt NP restriction as *ba* does in the BA construction.

Finally, recall that there is no speaker variation when it comes to the *song* DOC with GEI. All speakers judge the *song* DOC with GEI as ungrammatical. This therefore implies that no matter whether the speaker employs the IO-raising mechanism or the base-generation mechanism, this overt NP restriction for GEI will be activated once the NP following GEI undergoes movement during the derivation. An empty slot results in the ungrammaticality of the sentence, which explains why we see different judgments for the *song* DOC without GEI, but the

same judgment for the *song* DOC with GEI.

Dative Construction

In this section, I will address a final issue related to the *song* DOC. Recall that I have proposed that the *song* DOC with an optional *gei* ('GEI') has two paraphrases. The relevant examples are repeated here as (43) and (44).

- (43) Zhangsan song-(gei)-le Lisi yi-ben shu.
 Zhangsan give-(give)-ASP Lisi one-CL book
 'Zhangsan gave Lisi a book.'

- (44) a. Zhangsan song-gei-le Lisi yi-ben shu.
 Zhangsan give-give-ASP Lisi one-CL book
 'Zhangsan gave Lisi a book.'
- b. Zhangsan song-le Lisi yi-ben shu.
 Zhangsan give-ASP Lisi one-CL book
 'Zhangsan gave Lisi a book.'

In the previous discussion, I proposed two different derivations for the *song* DOC without GEI. Since (44a) and (44b) are paraphrases of (43), I assume they share the same basic structure. The only difference between (44a) and (44b) lies in whether the applicative head GEI is overtly realized or not. In other words, if the speaker employs the IO-raising mechanism in (44a), he/she should employ IO-raising in (44b) as well. The same assumption applies to the speaker who employs the base-generation mechanism. These two different mechanisms determine whether IO movement is possible in the *song* DOC without GEI in (44b). However, because of the overt NP restriction, the IO movement will not be permitted no matter which mechanism is adopted in (44a).

If this proposal is on the right track, there is an interesting follow-up question regarding the co-relation between the double object construction and the dative construction from a broader perspective. When discussing the double object construction, the dative construction is usually the point of comparison. As shown in (45) and (46), no matter whether there is an additional *gei* ('GEI') in the DOC structure, the dative counterparts of (45a) and (46a) are exactly the same as

shown in (45b) and (46b). Interestingly, the preposition *gei* ('to') in the prepositional phrase and *gei* ('GEI') in the double object construction are homonyms.

- (45) a. Zhangsan song-le Lisi yi-ben shu.
 Zhangsan give-ASP Lisi one-CL book
 'Zhangsan gave Lisi a book.'
- b. Zhangsan song-le yi-ben shu gei Lisi.
 Zhangsan give-ASP one-CL book to Lisi
 'Zhangsan gave a book to Lisi.'
- (46) a. Zhangsan song-gei-le Lisi yi-ben shu.
 Zhangsan write-give-ASP Lisi one-CL book
 'Zhangsan gave Lisi a book.'
- b. Zhangsan song-le yi-ben shu gei Lisi.
 Zhangsan give-ASP one-CL book to Lisi
 'Zhangsan gave a book to Lisi.'

Recall that the patterns shown in (45a) and (46a) belong to Li and Thompson's (1981) second type of DOC, since GEI is optional. The first type of DOC, which has an obligatory GEI, shows the same pattern as (46). The dative construction counterpart of (47b) is illustrated in (47c).

- (47) a. *Zhangsan ji Lisi yi-fen xin.
 Zhangsan send Lisi one-CL letter
 'Zhangsan sent Lisi a letter.'
- b. Zhangsan ji-gei Lisi yi-fen xin.
 Zhangsan send-GEI Lisi one-CL letter
- c. Zhangsan ji yi-fen xin gei Lisi.
 Zhangsan send one-CL letter to Lisi
 'Zhangsan sent a letter to Lisi.'

With this preliminary observation of the first and second types of DOC, the co-relation between the double object construction and the dative construction seems possible, since both types of DOC can have dative construction counterparts. However, if there is indeed such a co-relation, it cannot be a structural one. First of all, Soh (2005) has argued that the double object construction has an additional VP not found in the dative construction. If the dative construction is structurally derived from the double object construction, the additional VP should be eliminated somehow. But this kind of mechanism is not available syntactically. A one-to-one structural co-relation between the DOC and the dative construction therefore seems impossible.

Secondly, although, as noted above, it seems on the surface like there could be some co-relation between the two types of DOC and their dative counterparts, the unlikeliness of this is further reinforced when we consider the third type of DOC for comparison. An example of the third type of DOC is shown in (48a), and, as previously noted, it has been referred to as a pseudo-double object construction. Note that the appearance of GEI results in ungrammaticality, as in (48b).

- (48) a. Zhangsan he-le Lisi yi-ping jiu.
 Zhangsan drink-ASP Lisi one-CL wine
 ‘Zhangsan drank a bottle of wine on Lisi.’
 b. *Zhangsan he-gei-le Lisi yi-ping jiu.
 Zhangsan drink-GEI-ASPLisi one-CL wine

In the literature, Huang (2007) has proposed that the IO is in the specifier of VP and receives an Affectee interpretation, as shown in (49).

- (49) [_{VP} Zhangsan drank_i [_{VP} Lisi t_i one bottle of wine]]

Tsai (2007, 2008, 2009) proposes an updated version of (49) placing the affected NP *Lisi* in the specifier of a high applicative projection, as in (50). Recall that the high applicative projection of Pylkkänen (2002, 2008) is equivalent to the Thematic Applicative of Paul and Whitman (2010).

(50) [_{VP} Zhangsan drank_i [_{ApplHP} Lisi t_i [_{VP} t_i one bottle of wine]]]

Importantly, unlike the DOC with an obligatory GEI and the DOC with an optional GEI, the DOC with a prohibited GEI (the third type) cannot have a dative construction counterpart, as shown in (51).

(51) *Zhangsan he-le yi-ping jiu gei Lisi.
 Zhangsan drink-ASP one-CL wine to Lisi
 ‘Zhangsan drank a bottle of wine on Lisi.’

If one compares the structural proposal of the DOC with prohibited GEI with that of the *song* DOC without GEI where speakers allow IO movement, they in fact share a similar structure (i.e. (28) vs. (50)). That is, they both involve a Thematic Applicative, followed by a VP. However, the former cannot have a dative construction counterpart, while the latter allows it. If the *song* DOC without GEI where speakers allow IO movement can have a dative construction counterpart, there is no reason why the DOC with a prohibited GEI could not have a dative construction counterpart, since they employ the same Thematic Applicative. Hence, this comparison further confirms that there is no structural conversion co-relation between the double object construction and the dative construction.

Finally, since there is no structural co-relation, the co-relation between the double object construction and the dative construction probably has to be lexicon-determined, as proposed by Liu (2006). Liu (2006) compares the following three constructions: the double object construction with GEI, the double object construction without GEI, and the dative construction. She observes that the possible/impossible alternation among different constructions is determined by the denotation of the main verb. For example, if a verb carries a core meaning of transfer and its IO argument role is a Recipient, this verb can then participate in all three constructions. If a verb has an extended meaning of transfer, it can alternate in two ways: If its IO is a recipient, the verb can alternate between the DOC with GEI and the dative construction. If its IO is a patient, the verb can alternate between the DOC with GEI and the DOC without GEI. Finally, if a verb has an even further extended meaning of transfer, there will be no alternation at all.

To sum up, we can see that the double object construction and the dative construction cannot be structurally related. Rather, the co-relation is determined by lexical denotation and the theta-role of the IO, as proposed by Liu (2006).

Conclusion

In this paper, I have discussed the *song* DOC in Mandarin Chinese. The differences between speaker judgments in the literature and those presented here raise questions about possible derivations of the *song* DOC. Although it is not entirely clear why there is speaker variation happening for this particular DOC, the existence of different grammatical judgments does call for an explanation.^{xxix} In addition to discussing the applicability of Paul and Whitman's (2010) IO-raising approach, I have also proposed a base-generation approach to the *song* DOC as well. Moreover, the observed pattern of speaker judgments is further explained by proposing an overt NP restriction on the *song* DOC with GEI. Finally, the current applicative proposal for the *song* DOC may enable us to exclude a possible structural co-relation between the DOC and dative constructions in a broader perspective.

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^{xix} See also Lee (2004, 2005) who argues that the nonphasehood of ApplP can be derived from anti-locality (i.e. Bošković 1994 and Abels 2003).

^{xx} In Paul and Whitman (2010), they do not distinguish the DOC with an optional GEI from the DOC with an obligatory GEI. Hence the verbs exemplified in their paper include *song* ('give'), *huan* ('return'), *mai* ('sell'), and *fen* ('allot'). As long as there is GEI in the DOC structure, no matter if it is an optional one or an obligatory one, their analysis should be able to apply to it.

^{xxi} Throughout the paper, an indefinite object will become a definite one when it undergoes movement to the subject or topic position. This is because in Mandarin Chinese, a topic/subject has to be definite or generic, as shown in Li and Thompson (1981), Hsin (2002) and Tsai (2001). Hence the indefinite object has to be changed to avoid this unnecessary interference.

^{xxii} In Paul and Whitman (2010), the A-movement test is achieved via the *Ba* construction, as shown in (i). For ease of discussion, I have changed the test into the passivization (short passive), which shows the same movement result under the test of the *Ba* construction.

- (i) *Pengyou ba Akiu mai-gei chezi le.
 friend BA Akiu sell-GEI car ASP

(Paul and Whitman 2010: p. 278)

^{xxiii} In Paul and Whitman (2010), they employ the distributive quantifier *mei-ren/yi-ren* ('each') instead to argue for the IO-raising.

^{xxiv} The Google search occurred on Feb 18, 2017.

^{xxv} Overall, whenever IO or DO passivization for the *song* DOC is possible, structurally the overt GEI is located at the ApplP head position, following Paul and Whitman (2010). This is also the position for the covert GEI if one assumes a covert GEI in the possible IO or DO passivization for the *song* DOC without GEI. Semantically, the overt GEI seems to make the transfer meaning more complete for the verb phrase, when compared to the grammatical IO or DO passivization counterparts without GEI.

^{xxvi} In Liu (2006), the gloss of *song* is 'give-as-present'.

^{xxvii} One might wonder why the *Ba* construction is not used here as the A-movement test for the IO. Recall that it is also used in Paul and Whitman (2010). However, it is well-known that the *Ba* construction also imposes a strict semantic requirement on its *Ba* NP. Because of this requirement, the *Ba* construction is not considered to be a proper test for A-movement here.

^{xxviii} Impossible combinations have been pre-excluded here. For example, it is not possible to have IO-raising as the syntactic mechanism but allow IO passivization later in the derivation. Such a combination is therefore not listed as part of Table 3.

^{xxix} Maybe one possible explanation is that the usage of *song* ('give') has a higher frequency than other verbs in the same subclass. Hence the verb *song* has a higher chance to undergo mutation.