THE 2022

ASIAN CONFERENCE ON LANGUAGE

MARCH 25–MARCH 26

WWW.ACL.IAFOR.ORG

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The Asian Conference on Language 2022

Official Conference Proceedings

ISSN: 2435-7030

Table of Contents

A Register Analysis of Written Messages From the Papacy
and the Universal House of Justice

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The Asian Conference on Language 2022
Official Conference Proceedings

Abstract

This study investigates selected features of the Catholic and Bahá'í registers through an analysis of written messages from the Papacy and the Universal House of Justice (UHJ) using a corpus-based approach. The research questions of this study pertain to the situational characteristics and language patterns associated with these registers, and the functional relationships that connect the situational context to the linguistic features. Since previous studies on the interface between language and religion have predominantly focussed on liturgical language in Christian texts, this research addresses a gap in the literature, primarily the description of religious registers of other faiths. Based on Biber and Conrad's (2019) framework of register analysis, a three-step process was applied to two corpora, each approximately 50,000 words in size. The results show that nearly all of the top 20 noun keywords in the Papal register belong to the animate and abstract/process categories, whereas the top 20 noun keywords in the UHJ register are almost evenly distributed across the animate, group/institution, and abstract/process categories. These findings illustrate how the Papacy and UHJ adopt distinctive registers to fulfil their social roles. As an ecclesiastical leader, the Pope guides the Catholic community with messages containing traditional Christian teachings, adapted to suit modern contexts. The UHJ, however, is the supreme administrative body of the Bahá'í community, and its messages outline systematic plans of action for the betterment of society. This study provides impetus for renewed interest in theolinguistics, presenting new opportunities for research on linguistic variation within the domain of religion.

Keywords: Register Analysis, Theolinguistics, Religious Language, Papacy, Universal House of Justice, Catholicism, Bahá'í Faith

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Introduction

Theolinguistics, a term coined by van Noppen (1981) and subsequently adopted in works by Crystal, is "the study of the relationship between language and religious thought and practice" (Crystal, 2008, p. 484). Over the years, theolinguistics has diminished in prominence, having enjoyed a momentary peak in academic interest between 1960 and 1980. Theolinguistic studies in that period predominantly concerned Christian liturgical texts—the language of prayers and hymns, for example. Crystal (2018) claims that theolinguistic enquiry is still relevant today, arguing that critical questions of language diversity and change merit further investigation into language and religion. By diversity is meant the variation that not merely exists within Christianity and its various denominations, but also between other religious communities, such as Judaism, Islam, and the Bahá'í Faith. The other reason, language change, also calls for a renewed interest in theolinguistics. Given the complex and widespread changes in language over the past four decades, driven by globalisation, the development of the Internet, and religious practice, it is doubtful that descriptions of the language of religious texts and usage from the 1980s reflect contemporary usage.

Adopting Biber and Conrad's (2019) analytical framework of register analysis, this study is an exploration of linguistic features in the Catholic and Bahá'í registers. The focus of the analysis in this study is the specialised register of written correspondence from the heads of faith to the members of these religious communities. Hence, this study compares the registers of messages from the Papacy and the Universal House of Justice (UHJ), the institutions acting as the supreme governing bodies of the Catholic and Bahá'í communities, respectively.

This study aims to explicate some features of the Papal and UHJ registers by analysing the situational characteristics, identifying significant language patterns (with a focus on nouns), and interpreting their functional relationships. It seeks to answer the following research questions:

- What are the situational characteristics of written messages from the Papacy and the UHJ?

- What language patterns are observed in the top 20 noun keywords (and related collocations) associated with written messages from the Papacy and the UHJ?

- What are the functional relationships between the situational context and the linguistic features found in written messages from the Papacy and the UHJ?

Literature Review

One of the earliest theolinguistic studies is a description of liturgical language, defined as "a set of distinctive verbal forms used in official public worship on behalf of a religion" (Crystal, 1964, p. 149). Liturgical language is markedly formal in style, but the register is seen as a more pronounced feature. Accordingly, Crystal (1964) identified three "kinds of distinctiveness": archaisms, formulaic diction, and specialised vocabulary (p. 151). Archaisms are fossilised forms found in a language, such as grammatical words (e.g. pronouns *thou, thee* and *thy*), lexical words (e.g. *vouchsafe, whence*), and syntactic structures (e.g. vocatives with *O*, as in *O God*). Formulaic units are set expressions, which include idioms, proverbs and metaphors (e.g. *by the sweat of thy brow*). The specialised vocabulary encountered was roughly divided into seven categories:

1. Historically contextual vocabulary, with emotional overtones (e.g. *crucifix*, *disciple*)
2. Historically contextual vocabulary, with no emotional overtones (e.g. *centurion*, *synagogue*)
3. Vocabulary of personal qualities and activities (e.g. *charity*, *love*)
4. Religious concepts which can be given a Catholic definition (e.g. *heaven*, *salvation*)
5. Technical terms (e.g. *sermon*, *cardinal*)
6. Theological terms with precise definitions (e.g. *only-begotten*, *transubstantiation*)
7. General vocabulary in liturgical language that may appear in other registers (e.g. *deliverance*, *partake*)

(adapted from Crystal, 1964, pp. 154–5)

In a later development, a functional approach to the analysis of liturgical language established a connection between sociolinguistics and religious language (see Crystal, 1990).

Among the studies related to religious registers are those on the language of hymns and prayers. In a study on Wesleyan hymns, van Noppen (2001) found that the most prominent word in the first 40 keywords of all three different works by John Wesley (prose, sermons, and hymns) was *God*, followed by *Christ*, *Jesus*, *Lord*, and *Spirit*. After crossing the threshold of what he considers genre-conditioned vocabulary, he discovered content-related words common to the three genres: *all*, *faith*, *heart*, *grace*, *love*, *sin*, and *soul*. A study of collocations in the hymn corpus yielded more interesting findings. For instance, the keyword *blood* was found alongside words like *dip*, *flow*, and *gush*; all suggestive of the physical nature of blood as a liquid, rather than gory imagery. Hymns are considered a genre in van Noppen's terms, but their features consistently exhibit the hallmarks of a religious register. This is because the language patterns observed are characteristic of hymns, and their functions are associated with a specific situational context, namely the worship of God sung as though speaking to Him through Christ.

One part of a theolinguistic study on prayers involved the investigation of features of the language of intercessory prayers, which was of two kinds: collects and votive prayers. Lašťovičková (2013) described the structure of collects as formulaic, focussing on God's attributes and man's weaknesses, followed by the intentions for which the prayers are said. To achieve this, abstract words (e.g. *love*, *sin*, and *freedom*), and fixed expressions (e.g. *He is the salvation of mankind*) are typically used. Votive prayers, on the other hand, were found to be less formal, and due to the influence of spoken language, some were written using colloquialisms, contractions and abbreviated forms. These features were clearly incompatible with liturgical language, but interestingly, Lašťovičková (2013) noted that some contained archaisms, such as the pronouns *thou* and *thee,* as a form of politeness when addressing God. The findings suggest that even in votive prayers, where the expression of intentions is done extemporaneously, some semblance of a religious register is adhered to. It is likely that the church members relied on previous experiences with liturgical prayers to develop the most 'appropriate' ways to converse with God, leading to observable similarities in sentence structure and vocabulary.

Methodology

Corpus Design

Two corpora (henceforth referred to as the Papacy corpus and the UHJ corpus, respectively) were compiled. Each corpus is a collection of excerpts from written messages, totalling up to

approximately 50,000 words. As the full texts chosen were of varying lengths—some as short as 400 words, while others around 50,000 words—the corpora comprised differing numbers of texts. The length of each excerpt ranged between 1,000 and 1,100 words since there is generally a "high level of stability for… linguistic feature counts" across 1,000-word samples (Biber, 1990, p. 261). Smaller chunks of 250 to 600 words (depending on the length of the full text) were extracted from messages of fewer than 1,000 words.

To achieve representativeness, stratified sampling was applied, and the proportion of the number of documents for each message type was calculated. In the case of the Papacy corpus, messages (with official English translations) released between 1996 and 2020 - spanning the pontificates of Popes John Paul II, Benedict XVI, and Francis - were first identified, and accordingly, four message types were chosen. As for the UHJ corpus, messages from the same time period were identified, and five message types were selected. For both corpora, the selection of message types was based on the number of documents in the category - in the case of the Papacy corpus, whether English versions were available - and the average length of the messages. Therefore, the list of message types presented in Tables 1 and 2.

Message types	Number of texts	Total number of words
Apostolic Exhortations	8	8,314
Apostolic Letters	21	21,556
Encyclicals	6	6,255
Messages for Lent	14	14,524
TOTAL	49	50,649

Table 1: Composition of Papacy corpus

Message types	Number of texts	Total number of words
Messages to the Conference of the Continental Boards of Counsellors	5	4,696
Messages to all National Spiritual Assemblies	7	4,515
Messages to the Bahá'ís of the World	19	14,627
Messages to the Believers in the Cradle of the Faith [Iran]	17	12,025
Ridván Messages	14	14,793
TOTAL	62	50,656

Table 2: Composition of UHJ corpus

Register Analysis

Biber and Conrad's (2019) analytical framework of register analysis is a three-step process, beginning with an analysis of the situational characteristics of each register, followed by a quantitative analysis of selected linguistic features found in each corpus, and, finally, a functional interpretation of the associations between the situational characteristics and the linguistic patterns.

Table 3 shows the seven major situational characteristics in Biber and Conrad's (2019) framework for the situational analysis:

Situational Characteristic	Aspects to consider
Participants	• *Addressor* (producer of the text) • *Addressee* (intended receiver of the text) • *On-lookers* (observers, not direct addressees)
Relations among participants	• *Interactiveness* (the extent to which participants interact directly with each other) • *Social roles* (how participants function in the interaction) • *Personal relationships* (how participants relate to one another) • *Shared background knowledge* (familiarity with topic or specialist background knowledge)
Channel	• *Mode* (speech or writing) • *Specific medium of communication* (e.g. radio, print)
Production circumstances	• *Production* (how the addressor produces the text) • *Comprehension* (how the addressee processes the text)
Setting	• *Time and place* (shared by participants or not) • *Place of communication* (private or public setting) • *Time of communication* (contemporary or historical time period)
Communicative purposes	• *General purposes* (e.g. inform, persuade, entertain) • *Specific purposes* • *Factuality* (e.g. factual, opinionated, speculative) • *Expression of stance* (personal attitudes and epistemic stance)
Topic	• *General topical domains* (e.g. science, religion, politics) • *Specific topics*

Table 3: Situational characteristics of registers (adapted from Biber & Conrad, 2019)

Information on the situational context of the Papal register was derived from entries in the Catholic Encyclopedia and the Modern Catholic Dictionary. As for the UHJ register, the situational characteristics were described based on the Bahá'í Holy Writings and credible, researched works.

The quantitative aspect of the research lies in the linguistic features analysis. This stage involves frequency and probability calculations to determine the language patterns that are more salient in one register compared with the other.

The linguistic feature of focus in this study is nouns—both common and proper—which denote specific meanings that differ from conventional dictionary definitions. This is because nouns normally make up a significant proportion of specialised vocabulary in a register. In the analysis, 20 nouns with the highest likelihood values for each corpus were grouped according to semantic categories (see Table 4), and content-word collocates for each noun were analysed to compile specialised vocabulary lists for both registers.

Semantic category	Examples
animate	*teacher, child, person*
cognitive	*fact, knowledge, understanding*
concrete	*rain, sediment, modem*
technical/concrete	*cell, wave, electron*
quantity	*date, energy, minute*
place	*habitat, room, ocean*
group/institution	*committee, bank, congress*
abstract/process	*application, meeting, balance*

Table 4: Semantic categories of nouns (adapted from Biber, 2006, p. 244)

To calculate the frequencies of the linguistic features in the corpus and compute the relevant statistical information, AntConc was used in this study. AntConc contains functions, such as a concordancer, a collocation search tool, and word and keyword list generators. The Keyword tool was crucial in generating keyword lists for the Papacy corpus in comparison with the UHJ one and vice versa to analyse the distribution of noun keywords according to the semantic categories in each register.

The Collocate tool of AntConc was utilised for the study of collocations. Taking into consideration the size of the corpora for this research and the amount of data they would yield, content-word collocates from a window span of two words on either side of each keyword were observed.

The functional analysis represents the qualitative aspect of the research, as connections between the situational characteristics and observed language patterns are made to describe the features of the registers examined. This step requires the researcher to provide explanations showing how the linguistic features are linked to the situational characteristics, thereby making this an interpretive process (Biber & Conrad, 2019).

Results and Discussion

Situational Analysis

Participants. The producer of papal messages is the Pope. The Papacy corpus used in this study contains messages from Popes John Paul II, Benedict XVI, and Francis. The Pope is a title conferred on the Bishop of Rome. In the Catholic community, he is seen as the "successor of St. Peter, the chief pastor of the whole Church, the Vicar of Christ upon earth" (Joyce, 1911), based on Christ's constitution of St. Peter as head of His Church in Matthew 16:18—"And I say also unto thee, That thou art Peter, and upon this rock I will build my church; and the gates of hell shall not prevail against it". In addition, the Pope has papal infallibility, which is freedom from error in "his teaching of faith and morals" (Hardon, 2000c). The intended recipients vary according to the message type, but, in general, the messages are addressed to members of the worldwide Catholic community: the bishops, clergy, consecrated persons and the lay faithful.

As for the messages from the UHJ, the addressor is the institution of the Universal House of Justice, which is composed of nine elected members. In the UHJ corpus, there were changes in the membership, as elections took place five times in 25 years. The UHJ is the supreme governing body of the international Bahá'í community, ordained in the Most Holy Book (Kitáb-i-Aqdas) by Bahá'u'lláh, the Prophet Founder of the Bahá'í Faith. In a Tablet,

Bahá'u'lláh (2005) writes that the members of the UHJ "have been charged with the affairs of the people", for they are "the Trustees of God among His servants and the daysprings of authority in His countries" (p. 128). As an institution, the UHJ has conferred infallibility, confirmed by 'Abdu'l-Bahá, the son of Bahá'u'lláh, in His Will and Testament (Vafai, 2005). The addressees of the messages are either institutions, such as the Continental Boards of Counsellors and National Spiritual Assemblies, or Bahá'í communities around the world.

Relations among participants. In both registers, there is no direct interaction between the addressor and the addressee. The participants in both registers are not socially equal, in that the Papacy and the UHJ are institutions of authority that have jurisdiction over their respective religious communities. Interestingly, the participants in both communicative situations regard themselves as being in a close relationship, despite the profound differences in the power dynamic. This impression may be accounted for as the result of the participants' shared faith experience. Moreover, both the addressor and addressees share a great deal of background knowledge, especially with respect to the tenets and teachings of their faith.

Channel. Both are written registers, although in the case of the Papacy, the Pope delivered some messages as homilies for occasions like World Youth Day. All these messages are publicly available online for mass dissemination.

Production circumstances. Because the messages are written, the Papacy and the UHJ would have planned and reviewed them before officially releasing them. The Papacy has its own press office, which manages the Pope's communications, whereas in the case of the UHJ, messages are sent to the Quality Control department at the Bahá'í World Centre (in Israel) for proofreading.

Concerning the comprehension circumstances, careful reading is often required, with spaces for reflection and collective study, whether formal or informal, made available to members of the community. This is because the messages are treated as having divine authority, and adherence to the exhortations enshrined in them is comparable to obedience to the laws of God.

Setting. The time and place are not shared by participants during the interaction made in the messages by the Papacy and the UHJ, but the expectation is that the messages are read immediately once they are disseminated. The place of production for papal messages is the Vatican, while for UHJ messages, it is the Bahá'í World Centre in Haifa, Israel. As these two locations are the corresponding centres of administration for the Catholic and Bahá'í communities, they lend a greater sense of authority to the messages. The messages analysed in this study are set in a contemporary time period, from 1996 to 2020.

Communicative purposes. The general purposes of the messages from the Papacy and the UHJ are to guide and educate the members of the Catholic and Bahá'í communities, respectively. The specific purposes vary depending on the message type. Encyclicals, for example, are written to "express the mind of the Pope to the people" on "doctrinal, moral, or disciplinary matters of universal significance" (Hardon, 2000b). Messages from the UHJ to the Conference of the Continental Boards of Counsellors normally present the goals of forthcoming Plans for the worldwide Bahá'í community; those addressed to the believers in Iran serve to encourage the community to remain resilient in the face of widespread persecution.

Regarding the aspect of factuality, both registers often contain references to passages from Holy Scripture in relation to current events. Although the messages can be considered factual, there is no conclusive way to assume that interpretations of Holy Scripture are speculative or otherwise, since religious experiences are subjective and different for each individual. An additional feature of messages from the UHJ is that they frequently incorporate information from reports sent to the Bahá'í World Centre by Bahá'í communities around the world.

On the aspect of stance, because the Papacy and the UHJ are institutions of authority in religious matters, they express an overt stance that is in alignment with the principles of the religion. They also express an epistemic stance in their messages, as their certitude stems from faith in God and interpretations of Holy Scripture.

Topic. The general topic area of both registers is clearly religion, but the specific topics vary. Some specific topics found in the Papacy corpus include interreligious dialogue, environmental issues, and commemorations of anniversaries. In the UHJ corpus, messages revolved around community building, involvement in the life of the society, and news of Bahá'í-related developments.

To conclude, both registers are similar in many aspects largely due to the similarities shared by the Papacy and the UHJ. However, it should not be assumed that the UHJ is the Bahá'í counterpart of the Papacy. The social characteristics discussed here do not present the entire scope of jurisdiction for each institution. It would suffice at this point to make one final distinction between the two institutions. The Pope is an ecclesiastical leader charged with the duty to guide the Catholic community on religious matters, often through dogmatic statements on the Christian doctrine. As the Bahá'í Faith does not have clergy, the UHJ serves as an administrative body that primarily serves "to exert a positive influence on the welfare of humankind, to promote education, peace and global prosperity, and to safeguard human honour and the position of religion" (Bahá'í International Community, 2022). While it also provides guidance on matters of faith, the UHJ strongly encourages the believers to deepen their own understanding of the teachings, in accordance with the Bahá'í principle of independent investigation of truth.

Linguistic Features Analysis

The Papacy Corpus

The 20 nouns with the highest likelihood values in the Papacy corpus were obtained from the first 35 words on the list (see Appendix A). The nouns were then sorted according to semantic category, as shown in Table 5.

The data show that a large proportion of nouns unique to the Papacy corpus belong to the animate and abstract/process categories. In the animate category, it is not surprising that there are references to *Jesus/Christ*. The Triune God in Christian doctrine—the Father, the Son, and the Holy Spirit—also appear as keywords in this category, although the classification of words associated with God is contentious, since semantically, words like *God* and *Spirit* do not refer to tangible or sentient beings akin to anything within the purview of human experience.

In the cognitive category, *Gospel* refers specifically to the teachings of Christ, as shown in the example below:

(1)   All of this has great relevance for the preaching of the *Gospel*, if we are really concerned to make its beauty more clearly recognized and accepted by all.

(PAP-APE-FRA-2013)

Semantic category	Keyword
animate	Jesus / Christ God* Christian(s) Lord Spirit* man Father Saint Son
cognitive	Gospel
concrete	-
technical/concrete	-
quantity	-
place	-
group/institution	Church(es)
abstract/process	love mercy faith Eucharist mystery death Lent gift charity

Table 5: Top 20 noun keywords in Papacy corpus, according to semantic category

* *God* and *Spirit* are considered animate nouns as opposed to abstract nouns, based on interpretations in Christian doctrine.

Only one group/institution noun appears among the top 35 keywords in the Papacy corpus: *Church*. This is to be expected, since the Church is an institution exclusive to Christianity, regardless of denomination. With the exception of *Eucharist* and *Lent*, the keywords in the abstract/process category are common nouns. The keywords *love*, *mercy*, *faith*, and *charity* are semantically related; in Crystal's (1964) categorisation of specialised vocabulary in Catholic liturgical language, they represent personal qualities and activities, which are "interpreted in the light of Christ's own usage and example" (p. 154). Moreover, they are consistent with van Noppen's (2001) observation of content-conditioned words found across all genres in Christianity. Another group of words is also related to Crystal's (1964) classification: *mystery*, *death*, and *gift* refer to religious concepts with Catholic definitions. These words relate to the theme of salvation through Christ's sacrifice, a mystery consisting of the passion, death, resurrection, and ascension of Jesus. Words from both groups are used in various combinations in the papal messages, as shown below:

(2)   *Mercy* and *love* for one's neighbour must therefore be the fruit of a living relationship with God and have God as their constant point of reference, since it is in closeness to Christ that we find our joy.

(PAP-LEN-JP2-2003)

(3)   By placing his *gift* in this context, Jesus shows the salvific meaning of his *death* and resurrection, a *mystery* which renews history and the whole cosmos.

(PAP-APE-BEN-2007)

(4)   In a similar way, *faith* precedes *charity*, but faith is genuine only if crowned by charity.

(PAP-LEN-BEN-2012)

A study of collocations thus aided in contextualising some of the specialised vocabulary found in the Papal register. The list of content-word collocates for the aforementioned 20 nouns is presented in Table 6.

Face, a collocate of *Christ*, refers to His physical appearance, but denotes a metaphorical meaning:

(5)   Lent is a favourable season for opening the doors to all those in need and recognizing in them the *face of Christ*. Each of us meets people like this every day.

(PAP-LEN-FRA-2016)

In (5), the *face of Christ* can be interpreted as the essence of Christ, considering the fact that 'goodliness' is an abstract concept.

Another collocate, *encounter*, has a specific meaning in Catholicism, as demonstrated here:

(6)   The *encounter with Christ*, constantly intensified and deepened in the *Eucharist*, issues in the Church and in every Christian an urgent summons to testimony and evangelization.

(PAP-APL-JP2-2004)

This phrase refers to "the relation with Christ" implied through the reception of a sacrament, mainly the *Eucharist*, which is another keyword (Hardon, 2000a).

These collocations are consistent with Crystal's (1964) findings, as phrases such as *works of mercy* and *paschal mystery* are exclusive to Catholic contexts. They make up the specialised vocabulary of the Papal register, and, thus, a recognisable Catholic style.

Keyword	Left collocates	Right collocates
Jesus / Christ	*Jesus* Christ* *face* of Christ *love* of Christ *encounter* with Christ *Lord* Jesus (Christ)	Jesus *Christ**
God	*Son* of God *Word* of God *love* of God *children* of God *People* of God	God's *love* God's *mercy* God's *word*
Christian(s)	-	-
Lord	the *Risen* Lord	Lord's *Day*
Spirit	*Holy* Spirit	-
man	-	man and *woman*
Father	*Heavenly* Father	Father's *will*
Saint	-	Saint *John* Saint *Augustine* Saint *Paul*
Son	-	Son of *God*
Gospel	-	-
gift	-	-
Church(es)	the *Catholic* Church(es) the *Eastern* Church(es)	-
love	*God's* love	love of *God* love of *Christ*
mercy	*works* of mercy *God's* mercy	-
faith	*Christian* faith	-
Eucharist	-	-
mystery	*paschal* mystery	-
death	-	death and *resurrection*
Lent	*season* of Lent	-
charity	-	-

Table 6: Collocates for keywords in Papacy corpus

* *Jesus* and *Christ* are mutual collocates, but also occur independently in texts in the Papacy corpus.

The UHJ Corpus

A similar process was applied to the UHJ corpus: from the first 35 words in the Keyword List (see Appendix B), the 20 nouns with the highest likelihood values were extracted. Table 7 presents the 20 noun keywords, sorted according to semantic category.

Semantic category	Keyword
animate	Bahá'í(s)
	Bahá'u'lláh
	friends
	individual
	'Abdu'l-Bahá
	youth
cognitive	-
concrete	-
technical/concrete	-
quantity	-
place	cluster(s)
	Iran
group/institution	community/ies
	Assembly/ies
	institution(s)
	institute(s)
abstract/process	Plan(s)
	Faith
	Cause
	activity/ies
	progress
	effort(s)
	capacity
	expansion

Table 7: Top 20 noun keywords in UHJ corpus, according to semantic category

As with the Papacy corpus, the noun keywords in the UHJ corpus mainly belong to the animate, abstract/process and group/institution categories. Of note is the absence of *God* in the list. We might expect frequent occurrences of the token *God* as a defining feature of a religious register. However, in the 50,656-word UHJ corpus, there are only 87 instances of *God*, in comparison with 357 instances in the 50,649-word Papacy corpus.

In the animate category, there are notable similarities shared with the set of keywords in the Papacy corpus. *Bahá'í(s)* corresponds to *Christian(s),* and distinguished personages in the Bahá'í Faith—*Bahá'u'lláh* and *'Abdu'l-Bahá*—parallel occurrences of central figures in Christian discourse, such as *Jesus Christ* and *Holy Spirit*. The use of the common noun *friends*, is noteworthy, as it refers to those who identify themselves as members of the Bahá'í community, as exemplified below:

(7)　　Indeed, the *friends* should be on their guard, lest the development of capacity in the community not keep pace with the rise in receptivity of a disillusioned humanity.

(UHJ-RID-UHJ-2008)

(8)　　Dear *friends*! You represent an army of able and highly motivated servants of the Cause throughout the world.

(UHJ-CCC-UHJ-1998)

In (7), *friends* appears as though it is separate from the addressee, but this reference is made clearer in (8), where the salutation, *Dear friends*, is followed by the pronoun *you*.

In the group/institution category, of note is *Assembly/ies*, which signifies established institutions in the Bahá'í Administrative Order:

(9)   The evolution of local and national Bahá'í *Assemblies* at this time calls for a new state of mind on the part of their members as well as on the part of those who elect them, for the Bahá'í community is engaged in an immense historical process that is entering a critical stage.

(UHJ-RID-UHJ-1996)

Finally, in the abstract/process category, words such as *Faith* and *Cause* have specific meanings, distinct from those in the Papal register. *Faith*, for instance, differs from *faith* in the Papacy corpus, as the former refers to the Bahá'í Faith. A similar concept is associated with *Cause*, as is seen below:

(10)   Suffice it to say that, four years into the current Plan, the tireless supporters of the *Cause* have brought the *Faith* of Bahá'u'lláh to the strongest position in which it has ever been in its history.

(UHJ-WRL-UHJ-2020-1)

The collocations for the 20 noun keywords provided more scope to the specialised vocabulary of the UHJ register. Table 8 presents the content-word collocates found in the UHJ corpus.

Junior youth is a technical term coined by the UHJ in 2000 to refer to young adolescents aged between 12 and 15. Along with another notable collocation, *training institute*, this demographic group receives significant attention in the Bahá'í community's educational process:

(11)   In these places, the *training institute* is learning to ensure that sufficient human resources are being raised up to provide for the spiritual and moral edification of children and *junior youth* in ever-increasing numbers.

(UHJ-RID-UHJ-2018)

Interestingly, the collocation, *Plan's three protagonists* relates to three keywords—*individual*, *community*, and *institution*—suggesting that they play a pivotal role in the Plans:

(12)   In more and more clusters, the programme of growth is increasing in scope and complexity, commensurate with the rising capacity of the *Plan's three protagonists*—the *individual*, the *community*, and the *institutions* of the Faith—to create a mutually supportive environment.

(UHJ-RID-UHJ-2014)

It can be observed that most of the collocations are common nouns with specialised meanings that pertain to processes (e.g. *community building*, *institute process*, and *expansion and consolidation*) rather than overtly theological terms.

Keyword	Left collocates	Right collocates
Bahá'í(s)	-	Bahá'ís of *Iran*
Bahá'u'lláh	*followers* of Bahá'u'lláh *teachings* of Bahá'u'lláh *Birth* of Bahá'u'lláh *Cause* of Bahá'u'lláh *Faith* of Bahá'u'lláh	Bahá'u'lláh's *Revelation* Bahá'u'lláh's *teachings*
friends	*beloved* friends	-
individual	-	-
'Abdu'l-Bahá	-	-
youth	*junior* youth *children* and youth *Bahá'í* youth	-
cluster(s)	-	-
Iran	*Bahá'ís* of Iran *people* of Iran *women* of Iran	-
community/ies	*Bahá'í* community *worldwide* community *national* communities *local* communities	community *building*
Assembly/ies	*National (Spiritual)* Assembly/ies *Local (Spiritual)* Assembly/ies *Spiritual* Assembly/ies	-
institution(s)	*Bahá'í* institution(s)	-
institute(s)	*training* institute(s)	institute *process* institute *courses* institute *program(s)*
Plan(s)	*One/Four/Five/Ten Year* Plan *Divine* Plan *Minor* Plan *Major* Plan *series* of Plans *global* Plan(s)	Plan's *three protagonists*
Faith	-	Faith of *Bahá'u'lláh* Faith of *God*
Cause	-	Cause of *God* Cause of *Bahá'u'lláh*
activity/ies	*core* activity/ies *Bahá'í* activity/ies *community-building* activity/ies	-
progress	*social* progress	-
effort(s)	*individual* effort(s) *collective* effort(s)	-
capacity	*institutional* capacity *administrative* capacity	capacity for *service*
expansion	*large-scale* expansion	expansion and *consolidation*

Table 8: Collocates for keywords in UHJ corpus

Functional Analysis

In the Papal register, the noun keywords and their collocations belong mainly to the animate and abstract/process categories. This distribution can be attributed to the social characteristic of the Papacy. As head of the Catholic Church, the Pope fulfils his duty to advise on matters regarding the Christian faith in pronouncements that make numerous references to Christ, the Trinity, Mary, and other significant figures. Across the pontificates of the Popes studied, there is a consistent pattern in the usage of traditional Catholic terms that encourage the congregation to deepen their personal relationship with Christ. This can be achieved, for example, by practising *charity* and the *works of mercy*, and recognising the *face of Christ* in others.

On the other hand, the UHJ register contains keywords and collocations in the animate, group/institution, and abstract/process categories that reveal an organised process operating on a global scale. The UHJ, as the supreme governing body, directs the course of action for the worldwide Bahá'í community through a series of Plans. Thus, in the Plans spanning the 25-year period, the messages progressively describe how the establishment of the *training institute* enables the *Plan's three protagonists* to promote *community building*. The use of *friends* helps, in this context, to establish solidarity with the Bahá'ís; it denotes a horizontal power dynamic. In addition, this noun suggests that the UHJ and the Bahá'í community are engaged in a common purpose and are working shoulder to shoulder, rather than implying that the addressees are carrying out the directives of the addressor.

Conclusion

The distinction between the religious registers of messages from the Papacy and the UHJ is sufficiently significant to demonstrate that linguistic variation exists within the domain of religion. The linguistic features in this study—noun keywords and collocations with specialised meanings—not only prove that they are unique to a religious community, but also shed light on how these institutions, as religious leaders, operate in society.

As the findings indicate, the Papacy, though covering various topics in different message types, ultimately focusses on the sanctity of life and mankind's relationship with God. Emphasis on the Person of Christ and His teachings motivates the Catholic community to act in accordance with His example, that is, to do charitable deeds out of love for God and humanity. In these texts, the Papacy encourages certain lines of action, but does not make plans for the Catholic community at large.

The UHJ, on the other hand, has systematic plans of action in place, enabling it to chart the course for the Bahá'í community. Although the messages appear to be administrative in nature, constant references to the central figures of the Bahá'í Faith, such as Bahá'u'lláh and 'Abdu'l-Bahá, serve as a reminder that the Plans are part of a spiritual enterprise. The worldwide endeavour to build vibrant communities can be seen as the UHJ's fulfilment of its duty to promote the welfare of the generality of humanity. The efforts initiated to this end are not exclusive to the Bahá'ís alone, whether in their involvement or their outcomes.

Limitations of the Study

The scope and scale of this study were necessarily limited. Since only one type of linguistic feature was investigated, any attempt to make direct generalisations for both the Papal and

UHJ registers would be premature at this stage. Ideally, excerpts from all message types and spanning a longer period of time would have contributed to better representativeness in the corpora, thereby improving the validity of the findings. One barrier to achieving this was the limited number of papal messages with official English translations available, as some of these messages were only in Latin.

As for the data, while larger corpora may not have had a significant impact on the findings, part-of-speech (POS) tagging would have been useful in the corpus analysis. Furthermore, with POS-tagged corpora, analyses of different aspects of the various word classes could have been conducted to define the features of both registers more conclusively.

Recommendations for Future Research

A comparative analysis of language patterns across diverse religious registers can enable researchers to make generalisations about the unique characteristics of each. In Biber and Conrad's (2019) framework, this type of analysis is known as a multidimensional (MD) analysis, "a quantitative approach [comparing] many different registers, with respect to several different linguistic parameters", referred to as *dimensions* (p. 268). Thus, specialised corpora for registers in other religious communities would have to be developed. This opens exciting new prospects for theolinguists, with the potential to further uncover the relationship between language and religion. Although Christianity remains "the dominant religion of the English-speaking world" (Crystal & Davy, 2013, p. 148), other faiths are emerging in prominence, thanks to globalisation. Hence, theolinguistic analyses of registers found in other faiths would serve to foster better interreligious understanding, and even clarify some misconceptions about religion in this age.

Appendix A

Keyword List for the Papacy corpus

Rank	Frequency	Likelihood	Keyword
1	301	292.251	us
2	197	273.730	Christ
3	186	258.425	Church
4	143	198.621	Jesus
5	353	173.436	God
6	199	145.603	love[*]
7	358	139.307	his
8	122	134.193	I
9	93	129.127	Christian[†]
10	286	125.356	our
11	236	121.824	he
12	118	107.510	Lord
13	72	99.955	mercy
14	123	96.676	faith
15	65	90.232	Christians[†]
16	61	84.677	Eucharist
17	90	84.357	himself
18	66	82.611	Spirit
19	77	80.570	man
20	113	74.415	him
21	53	73.568	Gospel
22	52	72.179	mystery
23	50	69.402	death
24	251	68.680	who
25	63	62.687	Father
26	44	61.071	Lent
-	44	61.071	Saint
28	49	59.594	gift
29	48	58.246	my
30	407	57.212	which
31	38	52.741	charity
32	58	52.502	poor
33	42	51.522	Son
34	36	49.965	Paul
35	68	48.495	truth

Table A: Top 35 keywords in Papacy corpus

[*] Instances of *love* in the Papacy corpus comprised those belonging to the syntactic categories of noun (179 instances) and verb (20 instances).

[†] *Christian* and *Christians* are considered two forms of the same lexeme, *Christian*. As the Papacy corpus is not part-of-speech (POS)-tagged, instances of *Christian* found in the corpus comprised those belonging to the syntactic categories of noun (9 instances) and adjective (84 instances).

Appendix B

Keyword List for the UHJ corpus

Rank	Frequency	Likelihood	Keyword
1	204	282.957	Bahá'í[*]
2	125	173.283	Plan
3	224	170.687	community
4	122	169.121	Bahá'u'lláh
5	129	133.361	Faith
6	114	128.625	friends
7	65	90.069	Cause
8	61	84.524	Bahá'ís[*]
9	191	73.366	your
10	95	73.186	individual[†]
11	49	67.890	Assemblies
12	73	67.013	institutions
13	48	66.504	'Abdu'l-Bahá
14	47	65.118	clusters[‡]
15	46	63.733	Spiritual
16	45	62.347	National
17	72	62.181	progress[§]
18	51	62.161	activities
19	44	60.961	institute
20	43	59.575	cluster[‡]
21	52	57.713	youth
22	72	55.739	efforts
23	364	55.665	their
24	38	52.646	Iran
25	264	49.918	will
26	63	48.393	capacity
27	38	44.731	expansion
28	67	44.627	growth
29	32	44.331	Centre
30	3329	43.847	of
31	77	43.491	years
32	31	42.946	Councils
-	31	42.946	Order
34	50	42.700	members
35	401	42.099	are

Table B: Top 35 keywords in UHJ corpus

[*] *Bahá'í* and *Bahá'ís* are considered two forms of the same lexeme, *Bahá'í*. As the UHJ corpus is not part-of-speech (POS)-tagged, instances of *Bahá'í* found in the corpus comprised those belonging to the syntactic categories of noun (6 instances) and adjective (198 instances).

[†] Instances of *individual* in the UHJ corpus comprised those belonging to the syntactic categories of noun (41 instances) and adjective (54 instances).

[‡] *Clusters* and *cluster* are considered two forms of the same lexeme, *cluster*.

[§] Instances of *progress* in the UHJ corpus comprised those belonging to the syntactic category of noun (71 instances) and verb (1 instance).

Note: The likelihood values represent the probability of words appearing in a text of a particular register due to their unusually high frequencies found in the corpus in comparison with another. Hence, keywords with high likelihood values are more likely to belong to a register under examination. If these keywords were to be encountered in a random text not in the corpus, it can be assumed that the text employs the register to which the keywords are associated.

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Lessons Learned From Teaching Japanese for Medical Purposes
to International Students

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The Asian Conference on Language 2022
Official Conference Proceedings

Abstract
This work shows the lessons learned from the online course on Basic Medical Japanese for international students conducted between May and July 2020 at Tokushima University. The participants were five graduate students from China, Bangladesh, Thailand, including one male and four females. This course was designed for the learners to master basic medical terms and phrases in Japanese, as well as to be able to make basic conversation in health care context. The course materials were prepared bilingually, consisted of 13 lessons covering practical topics such as "parts of human body", "basic symptoms", "medicines and drug store", "respiratory system". For each lesson, the learners were introduced to new vocabulary and basic expressions by doing role play, translating sentences, solving quiz, and watching clips. The results of class assessments and end-course assessment had shown improvements of vocabulary capacity and context-based conversation skills for most of the topics. However, the learners showed difficulties in learning topics with more complicated terminology such as "psychiatry". The learners reported that besides improving their medical Japanese language skills, they had gained more confidence in using Japanese for medical purposes, as well gained motivation for mastering medical Japanese. They found visual aids and English instruction were helpful to absorb the content. These results imply that teaching Japanese for medical purpose may contribute to improving practical Japanese skill and confidence in daily life for international students in Japan.

Keywords: Japanese Language for Medical Purpose, Online Teaching, Adult Learning

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Introduction

In recent years, Japanese language education is gaining increasing popularity worldwide, as almost four million of learners enjoy studying Japanese (Japan Foundation, 2018). Until before the outbreak of COVID-19 pandemic, there was a steep influx of international students into Japan. For some international students, especially graduate students, and research students, who come to Japan with little Japanese skills, they must face many challenges during their campus life due to shortage of Japanese communication skills. On the other hand, the receiving universities in most of the cases offer general Japanese languages courses to the international students who enroll in any kind of programs. Many of courses and Japanese education materials are focused on zero level or beginner level, often supplemented with visual aid and pictures (Takahashi, 2020). This approach seems very practical to address the need for survival Japanese in Japan. However, these beginner level courses often not address the need for Japanese communication in specific settings such as at healthcare facilities. In reality, foreigners who can speak a little Japanese always face a hard time to make communication in Japanese at health facilities in Japan (Inoue et al., 2006).

Some universities provide international students or researchers specialized in medical-related fields with medical Japanese courses (Masuda et al., 1998; Matsumoto, 2000). A Japanese language course on medical field often covers the medical vocabulary, conversational skills at medical settings and knowledge about medical system in Japan. However, looking back at the history of Japanese language education, little attention has been given to medical-related courses. Until recently, there have been enormous renewals of interest in teaching Japanese language course on medical science.

At Tokushima University, Japanese language courses are being offered for international students at any level of proficiency (Hashimoto, 2017). Among a variety of courses, Medical Japanese course has been introduced since 2018, conducted based on the teaching material developed previously by International Center (Fukuoka et al., 2019). The textbook, which titled "Medical Vocabulary and Expressions for International Students and Japanese Students" created in 2017 as a joint learning material for medical-related international students and Japanese students. The Medical Japanese course is primarily intended to target all international students, including undergraduate, graduate, research students, exchange students who want to learn making conversation in Japanese for practical purposes such as going to clinics, visiting hospital, shopping at drugstore, talking at laboratory etc. The course was designed to suit to any student regardless of Japanese proficiency. It was also intended to recruit Japanese students who might be interested in practicing their medical interpretation skills by direct interacting with international students in a bilingual conversation simulating medical settings.

This textbook "Medical Vocabulary and Expressions for International Students and Japanese Students" organizes each topic with illustrations, vocabulary and sentences written in Japanese with kana, romaji notation and English translation, for the intention that it could be used by both beginners and advanced learners of Japanese. The lessons are designed to cover practical topics such as parts of human body, basic symptoms, medicines and drug store in Japan, respiratory system, digestive system etc. In addition, each lesson or topic is designed to be as much as possible stand-alone, so that an absence would not hinder further attending to the course. The textbook includes a set of basic vocabulary and general expressions about the human body and common illness that could be used in healthcare settings. Instead of the conventional grammar-based approach, this textbook uses context-based approach to

implement a curriculum in which Japanese language learners from beginner to intermediate level and above could participate in the same class. The student-participants have given high evaluation scores for the Medical Japanese course conducted in 2017. Nevertheless, because of its un-systematic nature, it is still an issue to evaluate if the students' Japanese proficiency have been improved after taking this course.

Given what has been done so far, the remaining questions are how the Japanese language course related to medical topic should be provided to international students, and to what extent medical-related Japanese language teaching should be paid attention to meet the need. Moreover, what are the international students' specific needs regarding Medical Japanese and what are the associations between the students' linguistic backgrounds and their satisfaction regarding this class? How about their online learning experience during the pandemic? This paper aims to show: (1) the concept, process and results of the Medical Japanese course conducted in spring 2020; (2) the satisfaction level, challenges and needs of international students in a medical Japanese class, and implications for providing language training support to international in the future.

Method

During the spring semester 2020, due to Covid-19 breakout, all courses including this Medical Japanese course were mandatory to be conducted online. In this Medical Japanese course, participants were recruited voluntarily by university-wide announcement at the beginning of the semester, in line with the other courses within the Japanese Education program for international students. This course was conducted mainly using the textbook "Medical Vocabulary and Expressions for International Students and Japanese Students" developed by the International Center, Tokushima University. Besides, for increasing interactivity in online mode, some additional materials had been introduced in parts such as online videos (Easy Languages, 2014; Japanization, 2014), out-patient questionnaire (KIFJP, n.d.), textbooks (Ono, 2018; Osuka, 2018).

The course syllabus contents of 13 lessons with 90 minutes for each lesson (Table 1). The learning objective for the whole course was for the participants to master basic medical terms and phrases in Japanese, then to be able to make basic conversation in health care context. Each lesson consisted of new vocabulary and basic expressions as well as illustrations to the topic. Each lesson consisted of a minilecture and practice activities such as role play, translating sentences, quiz, and watching video clips. In principle, no homework is given to avoid overloading students with their studies. The classes were conducted bilingually, with English as the language of instruction, with support of audio-visual aid and additional contents such as health system in Japan, health insurance, classification of drugs in Japan. All lessons were conducted via Google meet platform, as all the tests and final evaluation forms were used Google forms. We made analysis quantitatively and qualitatively of the data obtained from the classroom tests, final evaluation, discussion and Q&A, teaching notes and students' feedback.

Table 1. Course Syllabus

No	Lesson
1	Parts of Human Body (1)
2	Parts of Human Body (2)
3	Phrases for Illness (1)
4	Phrases for Illness (2)
5	Medicines
6	Inside Hospital (1)
7	Inside Hospital (2)
8	Respiratory organs/Otolaryngology
9	Digestive organs/Internal Medicine
10	Psychiatry
11	Obstetrics/Gynecology
12	Dentistry
13	Phrases for Medical Practice

Results

Characteristics of participants

Among a pool of about 200 international students with various level of Japanese proficiency, five students registered for the Medical Japanese who were from China, Bangladesh, Thailand, including 1 male and 4 females. The participants were 1st year or 2nd year graduate students who enrolled in a Ph.D. course related to biomedical or pharmaceutical fields, holding education background in medical, pharmaceutical, or biomedical fields. All of the participants had intermediate English proficiency and had Japanese conversational level of fluency. These participants had either completed or concurrently had been joining another basic Japanese course.
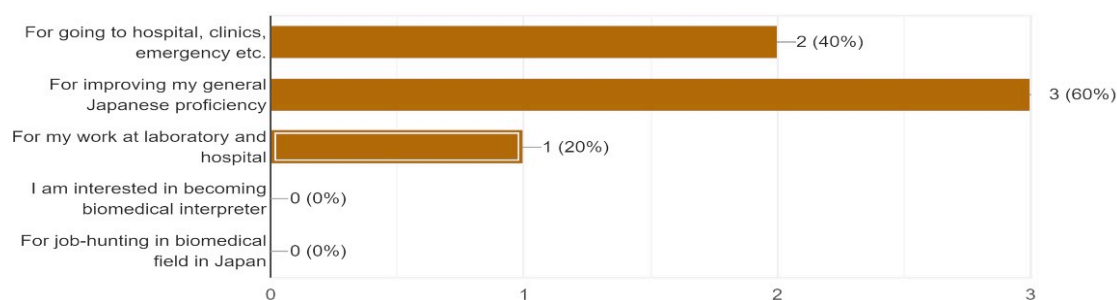
Figure 1. Reasons for studying Medical Japanese

Regarding the purposes for joining this course, participants reported their motivation such as for improving general Japanese proficiency, for going to hospital or dealing with emergency, and for working at laboratory. Interestingly, no one related the purpose of participation with job-hunting in Japan (Figure 1).
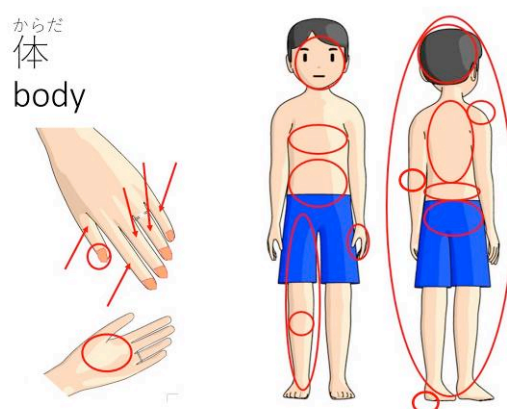
Figure 2. A slide used for practice vocabulary

Leaning of medical-related vocabulary

Figure 2 shows an example of slides used online for practicing vocabulary about the names of body parts in Japanese. Familiarizing with the body parts and medical terms was an essential part of the course. Using the provided textbook, the participants practiced pronunciation of the terms. For each lesson, a list of vocabulary was provided including essential terms written in English, Japanese, romaji, and furigana. The terms included in the list were carefully selected to include the most essential but not too overwhelming. Using pair-work in repetitions and warm-up, the participants goals were to memorize the terms naturally and be able to use these terms in conversation.

Figure 3. A sample of vocabulary test in hiragana only and Kanji with hiragana

No placement test at the beginning nor end-course examination had been conducted. Assessment for vocabulary mastering was conducted at spot, during or at the end of lessons. Several multiple-choice tests were applied using Google forms to spot check the level of vocabulary gained by participants. Figure 3 shows a sample of vocabulary test in hiragana only and Kanji with hiragana. The test results showed that participants could retain about

80% of the vocabulary from immediate previous lesson (data now shown). The participants showed difficulties in memorizing terms for abstract topics such as psychiatry, where visual aids could be designed to support memorization.

Conversation Practice

Figure 4 shows a slide used for practicing basic conversation. Given a simulation setting of an outpatient clinic, participants were assigned a task to do a role-playing in pair following a standard sentence pattern. This exercise had been continued in repetitions until the participants gained some feel of mastery.

Figure 4. A slide used for practice making conversation

Assessment of conversation skills had been made by multiple choice tests or fill-in the blank test, as well as some sentence translation tests. Assessment on spot by the instructor was used to check improvement of context-based conversation skills. Pair-work for conversation practice had been assigned as students were requested to practice in patient-doctor pair and shifted their roles until achieving some mastery. The sentence patterns were limited to minimum per lesson and keep practicing the same pattern in the next class.

Self-evaluation, satisfaction, and challenges

The learners reported gaining more confidence in using Japanese for medical purposes, as well gained motivation for mastering medical Japanese. This was partly achieved together with improvement of understanding about healthcare system in Japan. This content was provided supplementarily in the form of mini lectures in English but introduced new Japanese vocabulary. The visual aids and illustrations in the textbook, as well as using English as a language of instruction were helpful to absorb the content. 100% participants reported preference of English instruction and bilingual class design. In response to the question "What aspects of this course were most useful?", the responses were "the practice of communication with nurse and doctor at hospital", "Conversation practice", "Vocabulary for hospital", "Parts of body, symptoms and name of different types of medicine was useful."
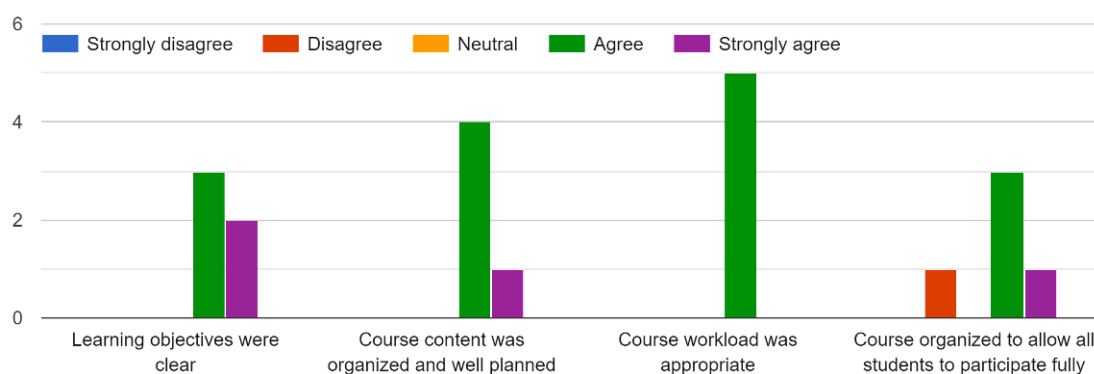
Figure 5. Opinions regarding the course's contents

Regarding the course's content, the participants were agreed that the learning objectives were clear, the contents were well planned, the workload was appropriate. The full engagement of leaners into the leaning process remained a challenge, partly due to the influence of not being familiar enough to the online mode or leaning.

Regarding challenges that participants faced within this course, a participant reported that "in this course, we enjoy learning and practicing Japanese and English which is fun but there are difficulties as well since both languages are not our native language so it may take more time to absorb the contents." For Chinese natives, it was less difficult learning kanji-based vocabulary. For Bangladeshi and Thai students, memorizing terms in Kanji seemed more difficult than for Chinese, however for practicing grammar structure and conversation, it was the same level of challenge.
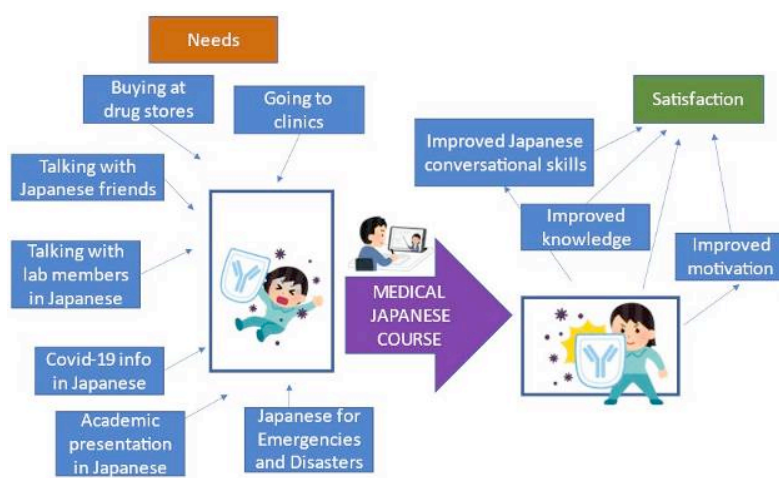
Figure 6. Conceptual framework proposed by the authors

The increasing trend of inbound international students and job hunting in Japan is related to the higher needs for supporting their integration into Japanese society. Japanese language education also is transforming to meet higher demands for diversified options, including Medical Japanese. Through conducting this course, we have learned about the multiple needs of international students such as going to clinics, buying OTC drugs at drugstore, calling emergency, coping with disaster, watching TV news about COVID-19, talking with laboratory colleagues, presenting at academic meetings in Japanese, etc. By taking this course, even online, the participants could achieve some KAS (knowledge, attitude, and skills), which may contribute to their general satisfaction as international students in Japan (Figure 6). Meeting the needs of international students could contribute indirectly to increasing inbound international mobility into Japan.

Conclusion

In conclusion, this paper shows some of the results and lessons learned from the online course on Basic Medical Japanese for international students conducted at Tokushima University. This data was taken after the breakout of pandemic and universities just introduced online mode of education. This course was designed for the learners to master basic medical terms and phrases in Japanese, as well as to be able to make basic conversation in health care context. The learners reported improvement of Medical Japanese language conversation skills, along with gaining more confidence and motivation for mastering Japanese. They found visual aids and bilingual mode with English instruction used in this course were helpful to absorb the content. These results imply that there is a need for Medical Japanese and the universities should find a way to continue and improve teaching Japanese for medical purpose, which contributes to improving practical Japanese skill and confidence in daily life for international students in Japan.

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Early Constructions of the English Dative Alternation: A Corpus-Based Study

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The Asian Conference on Language 2022
Official Conference Proceedings

Abstract

This study aims to investigate the early constructions of the dative alternation produced by four L1 English-speaking children and focuses on how it emerges. The dative verbs such as *give* can take two alternating constructions: double object constructions (*John gave Mary his book*) and prepositional dative constructions (*John gave his book to Mary*). In this study, utterances with a prototypical verb for the dative alternation *give*, were extracted from the CHILDES database, by means of the kwal command in the Browsable Database. The data were then divided into four types: double object constructions, prepositional dative constructions, constructions missing the direct object (verb-indirect object), and those missing the indirect object (verb-direct object). The data show that the children produce verb-indirect and verb-direct object constructions before they acquire the dative alternation. For example, while Aran's first production of double object constructions was at 2 years and 6 months (*he give me a nana*), that of verb-indirect object constructions was at 2 years and 3 months (*give that lady*). While Adam's first production of prepositional dative constructions was at 3 years and 11 days (*give that to me*), that of verb-direct object constructions was at 2 years, 3 months, and 4 days (*I may give some*). Therefore, this study argues that before children acquire the double object construction or the prepositional dative construction, they first produce its simple version.

Keywords: Dative Alternation, Double Object Constructions, Prepositional Dative Constructions, CHILDES

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Introduction

The purpose of this paper is to investigate the dative alternation produced by the L1 English-speaking children to explore whether the early production of the dative alternation is affected by another construction. The dative alternation is where dative verbs such as *give* can take on two alternating constructions, as in (1).

(1) a. Double object construction: John gave Mary his book.
   b. Prepositional dative construction: John gave his book <u>to</u> Mary.

(1a) is called the double object construction, in which two objects of the verb appear. On the other hand, (1b) is the prepositional dative construction and the indirect object of the verb in (1a), Mary, is placed immediately after the preposition *to*. While dative verbs such as *give*, *send*, and *show* require the preposition *to*, others such as *buy*, *cook*, and *make* require the preposition *for* in prepositional dative constructions. Examples of the dative verb *cook* are given below:

(2) a. Double object construction: John cooked me dinner.
b. Prepositional dative construction: John cooked dinner <u>for</u> me.

Although dative verbs can take two patterns, children do not acquire them at the same time. According to Campbell and Tomasello (2001), 5 out of the 7 children examined, produced double object constructions earlier than prepositional dative constructions, as Table 1 shows. It is important to note that in this paper, I use the notation, x; yy. zz, which indicates years; months. days. For instance, 1;11.29 stands for 1 year, 11 months, and 29 days, respectively.

	Double-object constructions	To-datives (Prepositional dative constructions)	For-datives (Prepositional dative constructions)
Eve	1;06	1;10	1;11
Nina	1;11.29	2;00.17	2;01.15
Peter	2;01.21	2;00.07	2;01.21
Naomi	2;01.07	2;05.03	2;03.19
Adam	2;03.04	2;11.13	2;10.30
Abe	2;06.14	2;06.18	2;05.20
Sarah	2;09.29	3;02.23	3;00.18

Table 1: Ages of the Initial Production of Each Construction
(Campbell & Tomasello, 2001, p. 256)

For example, Eve's first production of double object construction was at 1 year and 6 months, while her fist production of *to*-datives was at 1 year and 10 months. There were two children who produced prepositional dative constructions earlier than double object constructions: Peter and Abe. Peter's initial production of double object construction was at 2 years 1 month and 21 days, while his initial production of *to*-datives was at 2 years and 7 days. On the other hand, Abe developed *for*-datives earliest among the three constructions.

This analysis also focuses on the production of the dative alternation by L1 English-speaking children. Therefore, it can be compared and contrasted with the Campbell and Tomasello's (2001) analysis. One of the similarities is the subjects being examined. Both studies

scrutinized the utterances produced by L1 English-speaking children. Moreover, both studies collected the data from the Child Language Data Exchange System (CHILDES) database (MacWhinney, 2000). An important difference between the two studies is what they focus on. Campbell and Tomasello's (2001) interest is exploring the initial construction i.e. they investigated whether children first produced double object constructions or prepositional dative constructions. In addition, they examined the initial verb appearing in the production of the dative alternation. In contrast, this paper focuses on the constructions that the early dative alternation is based on i.e. the way which the production of the dative alternation develops in the early stages of language development. Therefore, this paper addresses the following research questions:

(3) a. Do children produce different constructions before they acquire the dative alternation?
b. If the answer to the question (3a) is *yes*, how long do children produce such constructions?

1.   Data from the CHILDES database

To address these research questions (3), data were collected from four L1 English-speaking children using the CHILDES database. The four children included in the study were Adam (Brown, 1973), Aran (the Manchester corpus), Naomi (Sachs, 1983), and Nina (Suppes, 1974). Three preliminary steps were undertaken before analyzing the data, as shown in (4).

(4) Procedures
Step 1: Collect all utterances with the verb *give*.
Step 2: Classify the data into Brown's stages based on MLU.
Step 3: Divide the data into four types.

In this study, all the utterances produced by the children that contain the verb *give* were first collected. The verb *give* is considered a prototypical verb for the dative alternation; therefore, we can expect that children produce utterances with *give* even in the early stages of language development. Further, the data were divided into several stages based on Brown's (1973) MLUs to make a longitudinal analysis. Brown (1973) proposed that individual language development should be based on the Mean Length of Utterance (MLU), not on the age. MLU is based on morphological development. For example, (5) produced by Adam (3;04.18) contains 6 morphemes because the word *lips* can be broken down into *lip* and *-s*.

(5) Who gave me some lips? (Adam 3;04.18)
    1   1   1   1   2
MLU values are calculated by dividing the total number of morphemes by the total number of utterances. Therefore, if there are 100 morphemes in the 50 utterances that a child produced, the child's MLU is calculated by dividing 100 (the total number of morphemes) by 50 (the total number of utterances). The result is 2.0. Based on Brown (1973) and Bowen (1998), the ranges of the MLU values for each stage are as shown in Table 2.

Stage	MLU range
Stage I	1 – 1.99
Stage II	2.00 – 2.49
Stage III	2.50 – 2.99
Stage IV	3.00 – 3.74
Stage V	3.75 – 4.49
Stage V+	4.50 –

Table 2: Brown's Stages

MLU values can be calculated by hand, but the Browsable Database in the CHIDLES project provides us with the mlu command, as in Figure 1.

From file <childes/Eng-NA/Brown/Adam/020304.cha>
MLU for Speaker: *CHI:
 MLU (xxx, yyy and www are EXCLUDED from the utterance and morpheme counts):
  Number of: utterances = 1239, morphemes = 2728
  Ratio of morphemes over utterances = 2.202
  Standard deviation = 1.299

Figure 1: An Example of MLU Calculations

This information tells us that the number of utterances observed was 1,239 when Adam was 2 years, 3 months, and 4 days old and the utterances consist of 2,728 morphemes. Therefore, the MLU value at that time was 2.202, which suggests that Adam was in Stage II. Step 3 is to divide the data into the following four types.

Type	Pattern
A	SVO_1O_2
	John gave Mary his book.
B	SVO_2 to O_1
	John gave his book to Mary.
C	SVO_1
	John gave Mary.
D	SVO_2
	John gave his book.

Table 3: Four Types and Their Patterns

The fist classification is Type A, which is the double object construction. Type B is the prepositional dative construction. In addition to these, two more types are relevant here: Type C and Type D. Type C and Type D are the constructions that lack the direct object and the indirect object, respectively. In this analysis, utterances that involve phrasal verbs like (6) were left out. Utterances in which *give* appears in a relative clause or in a *wh*-question were also excluded due to a difficulty in judging whether the children really intended either of the two constructions: the double object construction or the prepositional dative construction. Representative examples are given in (7).

(6) I give up. (Adam 4;10.23)

(7) a. Everything you give him. (Adam 5;02.12)
b. What did I give them? (Nina 3;01.04)

2.   Results

Table 4 and Figure 2 display the results of the four types of constructions produced by the children. Representative examples of each type are given in Table 5 - Table 8. Note that Stage I is left out here because the children produced none of the four types during Stage I.

	Type A	Type B	Type C	Type D	Total
Stage II	7	1	9	19	36
Stage III	36	7	6	10	59
Stage IV	61	6	0	6	73
Stage V	102	31	3	8	144
Stage V+	96	17	3	4	120
Total	302	62	21	47	432

Table 4: Numbers of the Four Types by MLU Stages
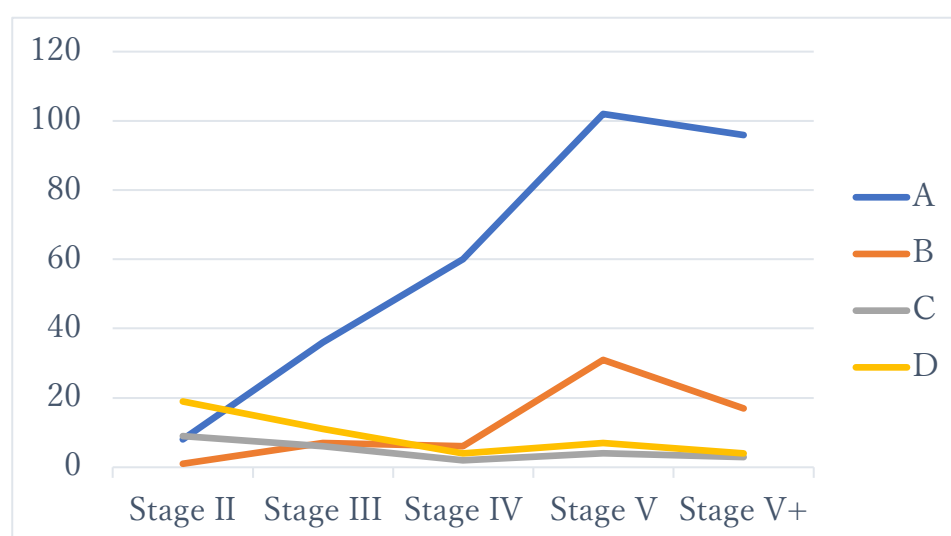
Figure 2: Changes of the Four Types by MLU Stages

Stage	Examples
II	Give me screwdriver. (Adam 2;03.04)
	Give me baloney. (Naomi 2;01.07)
	Daddy gave it my ball? (Nina 2;00.24)
III	Give me one. (Adam 2;10.16)
	Nobody will give him a carrot. (Aran 2;07.07)
	Give me a diaper. (Naomi 2;05.08)
	Give me lollipop. (Nina 2;01.29)
IV	I going give you one. (Adam 2;11.28)
	My Mum will give you another ice cream. (Aran 2;10.07)
	I gave her a kiss. (Naomi 3;05.07)
	Let's give him coffee. (Nina 2;03.18)
V	I going give you these. (Adam 3;05.01)
	I wanna give her some food. (Naomi 4;07.29)
	Give me the scissors. (Nina 2;11.12)
V+	Give me that bracelet. (Adam 5;02.12)
	She gave me strawberry. (Nina 3;03.08)

Table 5: Examples of Type A by MLU Stages

Stage	Examples
II	I give that to you. (Nina 2;01.15)
III	Who gave it to me? (Aran 2;05.17)
IV	Give that to me. (Adam 3;00.11)
	Let me give that to Poy now. (Nina 2;09.26)
V	Give it to me. (Adam 3;03.04)
	Your Mommy gave it to the hospital. (Naomi 4;09.03)
	Give it to you. (Nina 2;11.06)
V+	and then she give it to me? (Adam 5;02.12)
	Nonna gave them to you for Christmas. (Nina 3;02.12)

Table 6: Examples of Type B by MLU Stages

Stage	Examples
II	Give doggie. (Adam 2;03.04)
	Give me. (Naomi 1;11.21)
	Ellie gave him. (Nina 2;00.24)
III	Gave Ursula? (Adam 2;06.17)
	Give that lady. (Aran 2;03.02)
	Give me. (Naomi 2;05.08)
V	I give you. (Adam 3;04.18)
	She's gonna give you. (Nina 3;00.03)
V+	Give me. (Adam 4;06.24)

Table 7: Examples of Type C by MLU Stages

Stage	Examples
II	Give paper pencil. (Adam 2;03.04)
	Ellie gave my balloon. (Nina 2;00.03)
III	Who gave it? (Adam 2;09.04)
	Because grandpa's give naughty kisses. (Aran 2;08.19)
	Give that. (Nina 2;02.06)
IV	I will give cheese in the plate. (Nina 2;03.14)
	Give bread too? (Nina 2;09.13)
V	Gave some more. (Adam 3;01.26)
	You give nice lollipops. (Naomi 4;09.03)
V+	Give our carrots. (Nina 3;02.12)
	Because he gives milk. (Nina 3;03.21)

Table 8: Examples of Type D by MLU Stages

There were 432 cases and out of the 432 cases, 302 (69.9%) belonged to Type A. The results also show a clear distinction between Type A and Type B on the one hand and Type C and Type D on the other. Type A and Type B increased as time proceeded: the number of Type A jumped from Stage II to IV, while that of Type B rose from Stage IV. On the other hand, Type C and Type D were observed in the early stages and were rarely attested thereafter. Let us look at the following tables to see that the early production of Type C and Type D is observed in every child.

	Type A	Type B	Type C	Type D	Total
Stage II	3	0	6	3	12
Stage III	23	0	3	3	29
Stage IV	7	2	0	0	9
Stage V	54	10	1	4	69
Stage V+	70	11	3	0	84
Total	157	23	13	10	203

Table 9: Adam's Production of the Four Types

	Type A	Type B	Type C	Type D	Total
Stage II	0	0	0	0	0
Stage III	7	7	2	3	19
Stage IV	10	0	0	0	10
Stage V	0	0	0	0	0
Stage V+	0	0	0	0	0
Total	17	7	2	3	29

Table 10: Aran's Production of the Four Types

	Type A	Type B	Type C	Type D	Total
Stage II	2	0	1	0	3
Stage III	3	0	1	2	6
Stage IV	8	0	0	2	10
Stage V	5	3	0	1	9
Stage V+	0	0	0	0	0
Total	18	3	2	5	28

Table 11: Naomi's Production of the Four Types

	Type A	Type B	Type C	Type D	Total
Stage II	2	1	2	16	21
Stage III	3	0	0	2	5
Stage IV	36	4	0	4	44
Stage V	43	18	2	3	66
Stage V+	26	6	0	4	36
Total	110	29	4	29	172

Table 12: Nina's Production of the Four Types

These tables provide evidence for the fact that the children produced more Type C and Type D cases in the early stages. However, there is a need to scrutinize the data closely. This is because the initial production of Type C was at the same stage as that of Type A: Adam, Naomi, and Nina started to produce Type A and Type C at Stage II, while Aran started to produce the two types at Stage III. Table 13 presents the initial production of the four types for each child.

	Type A	Type C	Type B	Type D
Adam	2;03.04	2;03.04	3;00.11	2;03.04
Aran	2;06.17	2;03.02	2;05.17	2;03.02
Naomi	2;01.07	1;11.21	4;09.03	2;02.25
Nina	2;00.24	2;00.24	3;03.01	1;11.29

Table 13: Initial Production for Each Child by Ages

Comparison between Type A and Type C revealed that Aran and Naomi produced Type C earlier than Type A. For example, Aran's first production of Type C was at 2 years, 3 months, and 2 days, while his first production of Type A was at the age of 2 years, 6 months, and 17 days. Adam and Nina produced both types at the same point of language development. What is important here is that there was no child who produced Type A earlier than Type C. A comparison between Type B and Type D shows that the development of Type B came much later than the initial production of Type D. For example, Adam's first production of Type D was at the age of 2 years, 3 months, and 4 days, while his first production of Type B was at the age of 3 years and 11 days.

One question raised by the results is why the ungrammatical forms were observed in a limited period of time. It can be argued that this is related to the development of cognitive abilities. Let us look at Type C, focusing on the use of the indirect objects. Out of the fifteen cases attested during Stage II and Stage III, eight cases involved pronominal indirect objects as shown in (8), and four cases involved proper nouns as can be seen in (9). This shows that the conversation took place in a familiar context, and therefore, the listener (in this case, the mother) could guess the children's intention and what the object was even if it was not mentioned in the utterance.

(8) a. Give <u>me</u>. (Naomi 2;05.08)
b. Ellie gave <u>him</u>. (2;00.24)

(9) a. Give <u>Cromer</u>. (Adam 2;03.18)
b. Gave <u>Ursula</u>? (Adam 2;06.17)

The same thing can be said regarding Type D. Out of the 29 cases of Type D in Stage II and Stage III, 16 involved pronominal direct objects as in (10) and 3 involved determiners as in (11). The use of pronouns and determiners implies that the object was shared between the child and the mother; therefore, the mother could understand who the object was given to.

(10) a. Linda gave <u>it</u>. (Nina 2;00.24)
b. Give <u>that</u>. (Nina 2;02.06)

(11) a. giving <u>the</u> flower. (Nina 1;11.29)
b. Ellie gave <u>my</u> balloon. (Nina 2;00.03)

3.   Conclusion

This study examines the English dative alternation produced by the L1 English-speaking children. Moreover, it focuses not only on double object constructions and prepositional dative constructions, but also on the ungrammatical constructions that lack either direct or indirect objects. Let us examine the research questions (3a) and (3b), repeated here as (12a) and (12b).

(12) a. Do children produce different constructions before they acquire the dative alternation?
b. If the answer to the question (12a) is *yes*, how long do children produce such constructions?

The answer to the research question (12a) must be *yes*, since the data provide evidence that the children produced simple constructions (Type C and Type D) before they acquired the

dative alternation. Let us move on to the research question (12b). As the numbers of Type C and Type D decreased, those of Type A and Type B increased. This suggests that Type C and Type D were produced during Stage II and Stage III. To put it precisely, these types lasted for 3-12 months depending on the child, as displayed in Table 14.

Name	Age range
Adam	2;03.04-2;11.13
Aran	2;00.09-2;08.19
Naomi	1;11.02-2;11.10
Nina	1;11.16-2;02.12

Table 14: Age Ranges for Stage II and Stage III

However, further research is required to see whether children produce Type C and Type D for other dative verbs such as *take* and *show* before they acquire the dative alternation.

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Language as the Foundation of "Dasein"

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The Asian Conference on Language 2022
Official Conference Proceedings

Abstract

Metacognition, together with anthropolinguistics, evolutionary psychology, and philosophy, have for years postulated a scientific consideration of the interrelationships between language and the self-awareness of a being in relation to its existence. Recognizing one's own existence "in" and "in relation to" the world can be described as Heideggerian *Dasein*. Theories of consciousness formulated within the framework of discourse are forced to adopt anthropocentric optics—a classic and popular emanation of this paradigm of thought in the field of artificial intelligence research is Turing's Imitation Game. The current state of knowledge concerning the evolutionary development of human self-awareness and language as a phenomenon, as well as the consideration of various types of hypothetical para-consciousness in selected animal species, leads us to the conviction that there is a close relationship between the potential or the ability to use language as an advanced system of signs and the evolutionary development of *Dasein*. The ability to understand and use advanced language systems is, in this perspective, a prerequisite for going beyond the sphere of para-consciousness (i.e., primary consciousness), which demonstration should find its application, inter alia, in the development of artificial general intelligence (AGI), including advanced social robots.

Keywords: Language, Consciousness, Awareness, Understanding, *Dasein*, Heidegger, Linguistics, Cognitive Science, Anthropology, Philosophy, Artificial Intelligence, AI, Imitation Game

> The origin of human language must, more than anything else, have had an ennobling and transforming influence upon the mental life of Man, and consequently upon his brain. The higher differentiation and perfecting of the brain and mental life as its highest function developed in direct correlation with its expression by means of speech. Hence, the highest authorities in comparative philology justly see in the development of human speech the most important process which distinguishes Man from his animal ancestors.
> — Haeckel, E. (1880). *The History of Creation* (Vol. II) (E. R. Lankester, Transl.). New York: D. Appleton and Company, 302.

Introduction

The phenomenon of consciousness in the context of contemporary scientific and philosophical discourse can generally be considered in two ways: either materialistically-physicalistically, as a currently unattainable resultant of a series of neuronal processes[1] occurring within the limits of a dispersionally complex and advanced brain architecture (Dennett, 1991; Eccles, 1992, pp. 7320–7324; Edelman, 1992; Crick, 1994; Damasio, 1999), or idealistically, as an ontological singularity being transcendent to the brain's physical structure (McDowell, 1994, pp. 190–205; Chalmers, 1996; Pearce, 2014; Scruton, 2017). Regardless of the accepted interpretation, the definitional problem within the framework of scientific consensus remains unresolvable at present.[2] Nevertheless, there is practically no doubt that consciousness is gradational (and therefore roughly measurable), i.e., that its individual realizations can be considered as components that together form a kind of spectrum (Edelman & Tononi, 2000; Tononi, 2008; Seth et al., 2008, pp. 314–321; Arrabales et al., 2010, pp. 213–225; Overgaard, 2015). The common definitional point for the description of higher-order consciousness (Gennaro, 2004; Rosenthal & Weisberg, 2008; Lau & Rosenthal, 2011, pp. 365–373)—according to theories postulating the differentiation of consciousness into individual degrees, which, in reference to the categorization of Gerald Edelman (1992; 2003), could generally be described as emanations of (1.) primary or (2.) secondary consciousness (pp. 5520–5524)—can already be found in the thought of John Locke (1975) expressed in *An Essay Concerning Human Understanding*:

> Consciousness is the perception of what passes in a man's own mind (II, i, 19).[3]
> Therefore, higher-order consciousness is not only "awareness of the environment" but also "awareness of awareness" (Thomas, 1967, p. 366), although such a specification, based on the definitional recursion and bringing to mind the homunculus fallacy, must raise objections.

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[1] Sometimes also quantum (e.g., Beck & Eccles, 1992, pp. 11357–11361; Hameroff & Penrose, 1996, pp. 36–53; Atmanspacher, 2020), especially in the framework of the so-called holonomic theory (Pribram & Carlton, 1986, pp. 175–210; Peruš & Chu Kiong, 2010).

[2] As Stuart Sutherland (1995) writes, consciousness as a concept is "impossible to define except in terms that are unintelligible without a grasp of what consciousness means. (…) It is impossible to specify what it is, what it does, or why it evolved. Nothing worth reading has been written on it" (p. 95). More restrictive attempts to define consciousness are made within the framework of neuroscience. According to the notion of Bryan G. Young presented in the second edition of the *Encyclopedia of Neurological Sciences* (Aminoff & Daroff, 2014), "consciousness has been variably defined but includes both wakefulness and awareness. Wakefulness is evidenced by the awake state with eyes open and the capacity for arousal from sleep or drowsiness. Awareness consists of the person being aware of, cognizant of, and attending to aspects of one's own self and the environment. It is axiomatic that awareness depends on alertness being present" (p. 858).

[3] More about Locke's concept of consciousness and personal identity: Lycan, 1996, pp. 14–17; Lähteenmäki, 2011, pp. 160–178; Lisman, 2017; Gordon-Roth, 2019.

Dasein

Introduced by Martin Heidegger (1967; 2001), the philosopheme *Dasein* (lit. "being-there" or "there-being"—Childers & Hentzi, 1995, p. 70) is most extensively discussed in his dissertation *Sein und Zeit* (*Being and Time*) published in 1927. *Dasein* appears as a being [*Sein*], „a pure expression of its being [*als reiner Seinsausdruck*]" (S. 12; p. 33),[4] having an understanding of being [*Verstehens von Sein*] (S. 12; p. 32) as well as, "among other things, (…) the ability to ask questions [*die Seinsmöglichkeit des Fragens*]" (S. 7; p. 27)—thus remaining in some kind of conscious *relation to* [*Beziehung*] (or *relationship with* [*Verhältnis*]) others' and its own being(s). „In its (*Dasein*'s—F. Ś.) very being, that being is an *issue* for it [*diesem Seienden in seinem Sein »um« dieses Sein selbst geht*]" (S. 12; p. 32). Its way of being, i.e., its *essence* [*Wesen*], is its *existence* [*Existenz*]—and "all existing is already a philosophizing [*alles Existieren ist schon ein Philosophieren*]" (1978, S. 274; 1992, p. 212). *Dasein* „is such a being, which each of us is himself [*dieses Seiende, das wir selbst je sind*]" (1967, S. 7; 2001, p. 27), though it is not a man (S. 45; pp. 70–71)—it rather exists "in" a man, appearing as his essence. It constitutes the actual *potentiality of (conscious) being* [*Sein-können*] "in" the world (or potentiality of *being-in-the-world* [*Sein-können-in-der-Welt*] (SS. 53–62; pp. 78–90)) and "in relation to" the world, internal potentiality of actual existence—hence "*Dasein*, as existing, is always, in essence, necessarily 'further' than any given factical being [*als existierendes wesensnotwendig immer »weiter« als jegliches faktische Seiende*]" (1978, S. 279; 1992, p. 215). *Dasein* itself does not have the characteristics of a haecceity, but it may manifest in and pass through the entity which has such the characteristics, appearing in parallel with the questions of the entity about being [*Sein*] and about its self [*Selbst*] (1967, SS. 114–115; 2001, pp. 150–151). Their results are supposed to be the self-understanding and the self-recognition—again—"in" and "in relation to" the world, entity's *being-in-the-world* [*In-der-Welt-sein*] (S. 146; p. 186), and therefore—conscious *individualization* [*Vereinzelung*] (SS. 184–191; pp. 228–235) as well as individual consciousness.

Difficulties in defining the term *Dasein* result primarily from the inconsistency of Heidegger's own approach (Jaran, 2010; Sobota, 2011, pp. 255–271; Zuckerman, 2015, pp. 493–516). Nevertheless, to concretize, it can be assumed that *Dasein* is either (1.) a being with such a class of potentials that allows it a reasonable, analytical, and individualized (i.e., possessing qualia (Lycan, 1996, pp. 69–142; Dennett, 2017, pp. 5–12; Tye, 2021) or, if they do not exist (Dennett, 1988, pp. 42–77; 1991), having the impression of the possession of them) reception of the surrounding world and itself as individual (separate) consciousness (i.e., as a phenomenon), which is achieved, inter alia, by asking questions (the space in which they are formed is the language) directed both onward and inward, or (2.) such a class of potentials itself. Thus formulated, the category of *Dasein* definitionally remains in agreement with the category of higher-order consciousness, both of which, for obvious reasons, must accept anthropocentric optics axiomatically (Nagel, 1974, pp. 435–450; Hacker, 2002, pp. 157–174).

Detection of *Dasein*—higher-order consciousness and the anthropocentric problem

The acceptance of anthropocentric optics in discourse is inevitable in the sense that when we speak of higher-order consciousness, we are forced to think of consciousness similar to ours. Considering the question, "Is some kind of a being the realization of *Dasein*, can it be

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[4] Here and hereafter, I usually propose my own translation of the *Sein und Zeit* excerpts; in the beginning, I include a reference to the original (Heidegger, 1967), then *pro forma* to the English edition (Heidegger, 2001).

perceivable as having higher-order consciousness?,'' we are, in fact, asking whether it is conscious like a man and whether it thinks like a man, although both of these categories seem unclear. With this in mind, Alan Turing, studying the problem of intelligence of non-human beings (i.e., machines), has proposed in *Computing Machinery and Intelligence* (1950) the Imitation Game, according to which a program considered to be intelligent should be perfectly mimetic and indistinguishable from a human (p. 433–460). The irrevocable implication of this approach is the problem of a hypothetical philosophical zombie (Kirk, 2005, 2019), potentially unsolvable—if the distinguishing mark for the recognition of being as the realization of *Dasein* is to be the fullness of imitative linguistic abilities, then, according to Douglas Hofstadter and Daniel Dennett (1981, pp. 92–95), such a being should be recognized as having higher-order consciousness; if the distinguishing mark is to be qualia, by nature inexpressible in words, we fall down the rabbit hole of the problem of other minds and solipsism, since neither a being realizing the category of *Dasein*, nor a being imitating its realization, will be able to reliably communicate them, although they can assure about them.

Proposed by Victor Argonov (2011, p. 59; 2014, pp. 51–70), the test based on the detection of phenomenal judgments could be considered as hypothetically promising and complementary to the Imitation Game. According to his approach, a being (machine) can be regarded as conscious (and consciousness can be regarded as deterministic) when it is able to "produce phenomenal judgments on all problematic properties of consciousness"[5] even though it does not have any "innate (preloaded) philosophical knowledge," has not had any "philosophical discussions while learning," and "does not contain informational models of other creatures" (p. 60). However, this type of test raises a number of questions, i.e., (1.) what kind of discussions qualifies as the philosophical discussions[6] and (2.) is it possible for other beings considered to be conscious (i.e., humans) to completely avoid them during the learning process, and if so, then (3.) can they—despite absence of such discussions—be (or: be considered as) actually conscious?[7]

In general, proceeding from the axiom of anthropocentric optics, one should recognize that a perfectly imitative being (program) simulating or pretending to be human intelligence, exhibiting (or undetectably mimicking) perfectly "human" qualities (i.e., assurances about the possession of consciousness and about recognizing it in other beings, possible assurances about the occurrence of (hypothetical) qualia, certain spontaneity of thought, the ability to produce phenomenal judgments, etc.) should be considered conscious—not as philosophical zombies. Otherwise, as already mentioned, we fall down the rabbit hole of the problem of other minds and solipsism, and (in their framework) a dilemma that I would call the problem of bilateral imputing (or bilateral attribution): *If I attribute consciousness to myself and others, and others attribute consciousness to me and themselves, do we have consciousness?*—or more precisely—if in a finite set of (perfectly imitative) beings, each of the beings attributes consciousness to itself and to the other beings, can it be considered that all the beings have consciousness? Ultimately, regardless of whether we consider the study of

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[5] Though he later adds: "Problematic terms such as 'consciousness' should be avoided. Maybe it would be better to start the test with the discussion about qualia and religious questions" (p. 60).

[6] Finally, to echo Heidegger's thought once more, "all existing is already a philosophizing" (1992, p. 212).

[7] One of the brightest examples here may be feral children. William Foulkes (1990, pp. 39–55; 1999), referring to the categorization of William Lycan (1996, pp. 1–44), mentions that children raised in normative conditions (i.e., not isolated from human society) acquire "introspective consciousness" (which, according to the proposed reception of Heidegger's *Dasein*, should be considered as its integral component) between the fifth and seventh years of life (the fifth and sixth according to Katherine Nelson and Robyn Fivush (2020, 71–96)). Feral children are deprived of it at least until they take appropriate socialization, including language learning (Williams, 1983; McNeil et al., 1984, pp. 70–79; Dombrowski et al., 2011, pp. 81–93).

beings realizing either authentic or simulated (phantom) *Dasein*, the fundamental, main space and channel of such research is always (spoken or not) language. In other words: it is impossible to deliberate about a being having higher-order consciousness (in an anthropocentric sense) without the use of language.

The question as a central category

The appropriateness of the Heideggerian term *Dasein* in describing higher-order consciousness lies, i.a., in the fact that it emphasizes the ability to ask questions as its integral component and prerequisite. Asking questions is a central category, available only to humans among biological beings known to us, which is confirmed by primatological research (e.g., Terrace et al., 1979, pp. 891–902; Patterson, 1981, pp. 86–87; Gardner et al., 1989; Savage-Rumbaugh & Lewin, 1994; Fouts & Fouts, 1996; Hillix & Rumbaugh, 2004; Terrace, 2019)—none of the primates, which until now have been taught to communicate with humans using tools characteristic of language, was able to formulate questions (not to mention formulating them spontaneously), although they could "understand" them and/or try to respond adequately to them (Premack, 1976; Premack & Premack, 1983; Jordania, 2006). It seems that the inability of primates to master this skill and, in general, to develop linguistic abilities is not due to the limitations in their vocal tract anatomy (Fitch et al., 2016) but to the genetic limitations associated with, i.a., their coding of FOXP2 and SRPX2 proteins (Enard et al., 2002, pp. 869–872; Zhang et al., 2002, pp. 1825–1835; Scharff & Petri, 2011, pp. 2124–2140), as well as to the neurological limitations, resulting from differences in the cerebral cortex development (Mora-Bermúdez et al., 2016) and in the architecture of the homologs of Broca's (Schenker et al., 2010, pp. 730–742) and Wernicke's areas (Spocter et al., 2010, pp. 2165–2174). Even though it is presumed that some primates, such as *Pan paniscus* or *Pan troglodytes*, are able to pass the mirror self-recognition (MSR) test (Gallup, 1970, pp. 86–87; Calhoun & Thompson, 1988, pp. 361–365; Bekoff, 2002, p. 255; Bekoff et al., 2002), due to the lack of evolutionary predestination they are not and will not be able to go beyond the realm of para-consciousness—no matter how far-reaching attempts would be made to teach them to understand the language. Programmable machines seem to be much more promising in both of these areas (Hodson, 2012, p. 23; Hoffmann et al., 2021, pp. 37–51).

Considering language and the ability to ask questions as two inalienable pillars of *Dasein*, one can presume that the evolutionary development of linguistic abilities and secondary consciousness ran in parallel, bringing with it the emergence of symbolic (and successively proto-religious) behaviors. Archeological reconstruction and research on endocasts (Beaudet, 2017), combined with molecular analysis and research on artifacts, as well as on, in general, culture-forming traces (Tobias, 1998, pp. 72–78), suggest that perhaps *Homo erectus* may have used some form of proto-language (Newmeyer, 2003, pp. 58–76; Hillert, 2015), while *Homo neanderthalensis* was using it almost certainly (La May, 1975, pp. 9–14; Kuckenburg, 1997; Kochiyama et al., 2018; Balzeau & Pagano, 2021, 1–8)—hence, it can be assumed that the first manifestations of higher-order consciousness among hominids occurred between 2–0.4 Ma BP.

Conclusion

Consciousness as a phenomenon can be understood in at least two ways; regardless of the adopted definitional framework, it remains gradational. Attempts at a descriptive approach and researching it (in particular higher-order consciousness) are, due to human cognitive limitations, irrevocably forced to adopt anthropocentric optics. Similarly, attempts to detect it

(especially among artificial beings) are (and will remain) problematic. However, there is undoubtedly a close relationship between the evolutionary development of linguistic abilities and the development of secondary consciousness—therefore, it can be assumed that its first manifestations among hominids appeared at least 400,000 years ago. Such language skills must include, as Heidegger aptly suggested, the ability to ask questions, since a question is a lever of higher-order consciousness. The consideration of language as an irrevocable component of consciousness should find its application, inter alia, in research on the development of artificial general intelligence (AGI). The role of spontaneous (spontaneously generated) internal monologues (as well as "streams of thoughts" (Christoff et al., 2016, pp. 718–731; Zanesco, 2020, pp. 2417–2437) understood as streams of nonrandom words) in the formation of higher-order consciousness seems to be a complementary problem worth considering—what, however, goes beyond the actual subject matter of this paper.

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Dementia Care Users' Resistance to Long-Term Home Care Service: Taiwanese Care Workers Advised Communication Strategies

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The Asian Conference on Language 2022
Official Conference Proceedings

Abstract

Population of older people living with dementia is expected to rise in Taiwan due to the dramatically ageing trend. Long-term home care service becomes increasingly needed to help family with older people diagnosed with dementia cope. However, due to the health condition, older people with dementia can be difficult to reason given the changes in cognitive competence and personalities. It is also possible to encounter their resistance to long-term home care service which is mainly practiced by strangers, that is, care workers. Dementia care communication comes into the picture to help professional care workers to deal with such scenarios. 35 Taiwanese long-term home care workers with at least one year of dementia care experiences were interviewed. A number of communication strategies were identified for dealing with dementia care users' resistance to care service. They can be divided into two main groups, leading to two different communication outcomes: first, to postpone instruction without forcing dementia care users (with strategies used to show empathy and to avoid enhanced resistance) and second, immediate compliance to instruction (strategies used to help care users to accept service/instruction with light-hearted mood and to relate to what is concerned by them). The implication and potentially problematic nature of the advised communication strategies are also discussed in the conclusion.

Keywords: Long-Term Home Care, Older People With Dementia, Resistant Behavior, Dementia Care Communication

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Introduction

Dementia is regarded as one of the most serious and worldwide health issue. In 2010, 35 million people were diagnosed with dementia in the world. It is expected to reach 65 million by 2030 and 113 million by 2050, of whom approximately two-thirds will live in developing countries (Brodaty el at, 2011).

Dementia is not a single disease. It is characterized by many behavioral syndromes, such as memory loss, language disorders, cognitive impairment, visual/spatial disorientation, decline in problem solving abilities, personality changes, and so on (van Der Flier & Scheltens, 2005). The most common types of dementia include Alzheimer's disease (60-70% of the dementia cases), Vascular dementia, dementia with Lewy bodies, and a group of diseases that contribute to frontotemporal dementia (World Health Organization, 2017). Therefore, the syndromes for the elderly people with dementia of different types could vary.

According to Taiwan Alzheimer's Disease Association (2020), approximately 18% of Taiwanse people aged 65 and about 8% of the 85+ population in Taiwan suffer from dementia. Population with dementia in Taiwan grow dramatically. In addition, some epidemiological studies showed that the prevalence of dementia increases with age and was higher among women than among men (Fuh & Wang, 2008). It is also predicted that in the following 47 years, there will be a new individual diagnosed with dementia in every 40 minutes. Therefore, a huge demand of long-term care service for elderly people with dementia can be expected in Taiwan.

In the process of care services, long-term home caregivers may encounter resistances or uncooperative behaviors by elderly people with dementia who have mental disorder, cognitive deficits and physical restraint (Cadore et al, 2014; Smith & Buckwalter, 2005). Communication between long-term home caregivers and elderly people with dementia as care users can be frustrating and helpless. Furthermore, most studies (Small et al, 2003; James & Plerjert, 2014; James & Gibbons, 2019) about the communication strategies focused on how to establish the relationships between the two participants of dementia care communication. But it was less to discuss the solutions to the scenario when demented care users show denial of instructions. Therefore, this study is aimed to explore this issue. This aspect of discussion, arguably, could directly help long-term home caregivers tackle what can be the most difficult part of service delivery involving dementia elders.

Literature Review

The statistics provided by Gender Equality Committee of Executive Yuan (2019) showed that people working as home caregivers have increased gradually to approximately 21 thousand in Taiwan. Long-term home care services include housework services and physical care services (Kane et al, 1998). Housework services involve cleaning services, meal preparation, and accompanying older care users to go to hospitals, whereas physical care services cover taking shower, wearing/taking off clothes, and helping with exercises. It seems to be easy to complete the above tasks, but when communication breakdown happens, the service operation can be terminated. This is why long-term home caregivers need to use certain strategies to interact with dementia individuals when they become difficult to reason and hence refuse service that should be delivered within certain period of time. What follows is the discussion.

Communication with older people with dementia

A survey by Small et al (2003) identified and recommended ten strategies as used by caregivers for communicating with people with dementia. Through these techniques, home caregivers can have deeper understanding of the behavior and demand of those with dementia. The strategies include: (1) eliminating distractions, (2) approaching the person slowly and from the front; establishing and maintaining eye contact, (3) using short, simple sentences, (4) speaking slowly, (5) asking one question or give one instruction at a time, (6) using "yes/no" questions, (7) repeating messages using the same wording, (8) paraphrasing repeated messages, (9) avoiding interrupting the person; allowing plenty of time to respond, and (10) encouraging the person to "talk around" or describe the word he is searching for.

Challenges in dementia care communication

Colling (1999) indicated that when people with dementia encounter communication disorder, their difficulty in expressing their feelings might be realized in terms of the forms of resisting or attacking others. In addition, Ripich (2000) suggested that having appropriate communication trainings for home caregivers can facilitate more successful communication with people with dementia and give them better care services and living quality. Challenges such as being rejected and aggressively attacked by people with dementia can be handled well if one knows how to communicate with them. What follows provides some insights.

Jansson and Plejert's (2014) research investigated the conversational interactions for shower tasks between home caregivers and people with dementia in two nursing homes. The people with dementia initially rejected bathing service. But, when caregivers expressed concerns and showed negotiable manners to complete the tasks step by step, bathing tasks became less challenging. This implies that it is important to treat people with dementia as if they are normal individuals and hence also have rights to choose from options, needs of receiving care and respect. Only when those person-centered considerations are evident in the communication processes, rejection of service can be reduced and no longer becomes a problem.

James and Gibbons (2019) also examined communication involving people with dementia who have cognitive impairment. No matter how rude they were, the study showed that caregivers still remained kind and polite. However, it is noticed that people with dementia needed someone whom they could feel related to and hence have a sense of security or trust in the communication. Hence, to develop a relationship with those with dementia, home caregivers could try to position in the role to be trustworthy or reliable by changing the language tone, accent, body language, and appearance.

The review of the above studies indicated that it is likely to experience resistance of service by people with dementia in the process of delivering professional care services because they are puzzled or out of character or do not fit into the situation at hand (Smith & Buckwalter, 2005). This implies distress to people with dementia, their family and caregivers. Therefore, this study argues that it is necessary to explore how caregivers communicate with people with dementia with a focus on their resistance to care services in Taiwanese long-term home care contexts.

Methodology

Interviews with a total of 35 long-term home care staff were conducted to elicit in-depth views on the research topic under study in this paper. All the participants were from Pingtung County in Taiwan, and their age ranges were from 41-60. The average years of the participants' experiences working as long-term home care workers are 7 years. They all had at least one-year experience of providing home care services to older people living with dementia. They were asked the following interview questions:

1. How many older dementia care receivers (who are over 65 years old) have you cared for? (Please inform their severity level of dementia)
2. How long have you been a long-term home care worker?
3. Do you have any experiences of taking care of older people with dementia who showed denial of intrusions? How do you perceive them when they do so?
4. What communication strategies did you demonstrate when older care users with dementia resisted your home care service?

Results

Dementia care communication for resistant behaviors

The suggestions on how to communicate with older care users who show denial of instructions or show resistant manners are divided into four main categories, illustrating four different kinds of communicative effects or functions, that is, "avoiding enhanced resistance", "showing empathy", "persuasion based on resisting care receivers' main concerns", and "persuasion with light-hearted tones".

As to "avoiding enhanced resistance" and "showing empathy", the communicative effects are to postpone dementia care users' acceptance to follow the given care-related instructions without making them feel forced. Successful delivery of the service hence is not the main priority.

On the contrary, the persuasion based on resisting care receiver's main concerns or with light-hearted moods aims to arrive at immediate compliance to the given instructions in care. Figure 1 shows the clear organization of the strategies in relation to the communication purpose/goals.

1. Avoiding enhanced resistance

When older care users with dementia show denial of instructions, their mood also becomes emotional and furious. To prevent older care users with dementia from getting out of control, the interviewed care workers provided four strategies to avoid enhancing resistant behaviors further, that is, "diverting the attention to calm down and step-by-step negotiation", "avoiding keywords", "ignoring until forgetting, and "using body languages to enhance comprehension". The details of each strategy are introduced below.

Strategy 1: Diverting the attention to calm down and step-by-step negotiation

The attention of resistant demented care users could be diverted away from the current arguments surrounding their rejection of care services. One way is to change the topics to those preferred by older care receivers (see Extract 1) until the denial of the instruction is forgotten.

After that, home care workers can try to negotiate with them. Therefore, observing what topics are considered interesting by demented care users is important while having daily conversation with them so that when the denial of service appears, care workers know what topics can be raised to divert attention away. It is hence advised to know the personal history of demented care users and what preferred topics could be raised appropriately. This is a rather individualized approach of topic selection in dementia care communication.

> Extract 1: I chose a topic related to picking up beautiful clothes instead of taking a shower to divert a demented elderly lady's attention. She was very happy because she loves pretty clothes. As a result, she forgot that she refused to go to the bathroom for shower. (C3, 2020.09.13/ 57-year-old/ Female)

Strategy 2: Avoiding keywords

Some home care workers avoid keywords regarding the rejected service or instructions when older dementia clients show resistance. By not to say any words which the dementia people dislike, care workers could avoid making them angry or provoking their bad temper. Also, it is advised to refer to the topics in daily conversation in case the denial of service appears. In order to do so at the needed moment, care workers need to know the personal history of the clients so that the preferred topics can be raised appropriately. This is a rather individualized way of topic selection in care communication.

> Extract 2: At first, I would say "Let's go to take a shower", but the older care user would reject. So now, I say "Let's go" directly instead of "Let's go to take a shower", and he is willing to go with me and take a shower. (C15, 2020.10.19/ 50-year-old/ Female)

Strategy 3: Ignoring until forgetting

It is mentioned that ignoring older care receivers can be one communication strategy when they resist home care services and do so until they forget. Some interviewed home care workers would stop the home care services that annoy older care users who are resistant and demented. Moreover, being out of their sight is one way to calm their resisting attitude down.

> Extract 3: Sometimes, the older care user is not willing to let me cook and ask me to go out. Hence, I follow her requirement and stop cooking because you cannot have a quarrel with older people with dementia if they get angry, because they will become angrier due to the quarrel. (C9, 2020.10.05/ 53-year-old/ Female)

Strategy 4: Using body languages to control

Body languages are also useful way to prevent the older care users from out of control. Many Taiwanese home care workers interact with their older care receivers with dementia through body languages, such as touch their bodies or smile. The interviewed home care workers mentioned that this strategy is able to make care clients follow their instructions and make them feel comfortable.

> Extract 4: Sometimes, the older male care user with dementia can be quite moody and can act quite aggressively when showing resistance to my service. I sometimes need to hold his hands to prevent him from being out of control and try to make eye-contact with him to calm him down. (C11, 2020.10.17 / 30-year-old / Male)

2. Showing empathy

According to the interviewed home care workers, there must be a reason to explain why older care receivers with dementia reject the home care services. If home care workers could not find the reason, the older care users with dementia would refuse the care service every time. Therefore, "standing in resisting care receivers' shoes" (Strategy 5) was advised by the interviewed home care workers. They suggested that home care workers should see or understand things from the older dementia care user's feeling or perspective so as to provide appropriate care services to older care receivers with dementia even when they show refusing manners.

Strategy 5: Standing in resisting care receivers' shoes

> Extract 5: I have provided home care services with an older female who usually rejected to be fed by me. After I observed her in attempt to understand her, I find that she considers me as a visitor, so she has to have meals with me for curtesy. In other words, if I do not have meals with her, she would wait. (C6, 2020.09.20/ 45-year-old/ Female)

3. Persuasion based on resisting care receiver's main concerns

Persuading resisting care receivers by giving them a reason to accept service or by referring to the person they like or care. Such as strategy is to enhance persuasion based on resisting care receiver's main concerns, and the main approaches or communicative tactics could include pretending to threat (Strategy 6), highlighting service free of charge (Strategy 7), changing roles (Strategy 8).

Strategy 6: Pretending to threat

Humans tend to be afraid of someone or something in their life, and the elderly people with dementia are no exception. Home care workers would observe and understand what the elderly people with dementia are afraid of or care the most. Hence, when they refuse to accept care services, long-term home care workers would negotiate with them by pretending to threat.

> Extract 6: An older woman who is 72 years older and suffers from dementia. She usually refused to take the medicine. Trough observation, I found that she cannot stand to skipping meals. Therefore, I would pretend to threat that if she does not have the medicine, I would not provide her meals. She is afraid, so she would follow my instruction and take the medicine. (C16, 2020.10.24/64-year-old/ Male)

Strategy 7: Highlighting service free of charge

When care users with dementia are highly concerned about money, highlighting service free of charge could persuade them to accept.

> Extract 7: An older woman with dementia refused me to accompany her to go to the hospital because she thought she would be charged for the service. Therefore, I told her that I had free time and what I did was only to offer help. Hence, she accepted the service as a result. (C4, 2020.09.15/ 33-year-old/ Female)

Strategy 8: Changing roles

People tend to be easily persuaded by the authorities who are experts or people working on behalf of the government and this is employed by long-term home care workers to deal with resistance of service from their demented care receivers. For instance, when they are refused to enter the homes of demented care users who perceive them as strangers, it might be useful to declare their identities as staff working in the government to assist the older dementia clients and usually successful entry can be obtained (see Extract 8). Other options of useful identities claimed for this situation include pretending to be friends or relatives so as to gain trust from those demented care users who do not perceive the reality well due to cognitive decline (see Extract 9).

> Extract 8: R: How do you get permission to enter home care users' houses when they regard you as a stranger? C7: I would say, "I am sent by the government to assist you with bathing. (C7, 2020.09.20/ 55-year-old/ Female)

> Extract 9: I have provided home care services for an older man with dementia. Every time I arrived his home, he would not let me in because he forgot who I am again. In this case, I would pretend to be his friend to remove his alert and said "I am your friend, and we often chat away." (C16, 2020.01.24/ 64-year-old/ Female)

4. Persuasion with light-hearted moods

To complete the assignments immediately, the interviewed home care workers would make older care users with dementia feel light-hearted and in a pleasant mood. It is believed that if older care receivers with dementia are joyful or happy, home care workers could persuade older dementia clients easily. There are four strategies employed for this communicative purpose, including giving compliments (Strategy 9), humorous persuasion (Strategy 10), and begging (Strategy 11).

Strategy 9: Giving compliments

Compliment is like candy which makes people happy. The interviewed home care workers would express approval, admiration, or respect to make older care users with dementia delighted when they refuse home care services, such as having a meal or taking the medicine. To encourage care receivers to follow instructions, giving compliments would be a good choice.

> Extract 10: I have encountered an older care user with dementia who did not want to have meals. So, after she started to a bite of the provided food, I immediately said, "WOW! You are so great!" Upon the compliment, she decided to eat up by herself. (C3, 2020.09.12/ 57-year-old/ Female)

Strategy 10: Humorous persuasion

Being humorous is another useful strategy to persuade older care receivers to accept given service or instructions. Making them laugh is one way to reduce their resisting manner and to create a relaxed atmosphere for the communication (see Extract 11).

Extract 11: An older client with dementia who I take care of usually refuses to take medicine as instructed. So I would persuade him by saying, "Let's take the elixir" instead of "Let's take the medicine". The older client with dementia would laugh and feel amused so later he would be willing to taking the elixir (medicine). (C3, 2020.09.12/ 57-year-old/ Female)

Strategy 11: Begging

Sometimes, begging older clients with dementia to follow the instructions is also a useful way to persuade them because they would feel respected and needed or they feel empowered to give consent. As a consequence, they are more willing to accept instruction or service (see Extract 12).

Extract 12: One of my older care user with dementia does not want to take a shower, so I would try to persuade him by saying, "Could you go with me to the bathroom? Please. I need you." It always worked and he would agree to go to the bathroom with me. (C15, 2020.10.19/ 50-year-old/ Female)

Discussion and Conclusion

This study revealed a number of widely advised and useful communication strategies by experienced long-term home care workers for communicating with demented care users who show resistance to their service. This situation can be problematic since no delivery of service means no payment. These strategies can help long-term home care workers accomplish the home care services by strategically communicating, negotiating and persuading their demented clients to accept the care service they need.

However, it should be noted that this study has only examined the viewpoints of the long-term care works. The previous studies indicated that long-term home care services should show person-centered consideration and treat elderly people with dementia as if they are normal individuals who can choose from their needs of receiving care services. Based on this consideration, we assume that some caregivers in this study might overlook the dementia clients' real needs and demands since some of the interviewed home caregivers used the strategy of a pretending threat (strategy 11) to communicate when their service was resisted. Although eventually, the service can be delivered, this strategy, feasible based on demented clients' fear, could compromise their well-being and future opportunities to engage in social interactions with the caregivers.

However, it is comforting to know that the strategy of showing respect to the individuals' rights to make decision (including resisting service) in the care communication processes is acknowledged and this, even though, from service provider's point of view, may not be an effective strategy, can actually be the most person-centered approach to take.

The results of this study have to be seen in the light of some limitations. First, it only depended on the perceptions of home caregivers as the accounts to the topic under study. Therefore, the effect of these communication strategies on dementia clients' attitudes or evaluation to the service may be examined in the future. Second, there are many other scenarios which could also be noteworthy and require specific communication accommodations. They should be explored in the future as well.

Figure 1. Dementia care communication strategies for resistant behaviors
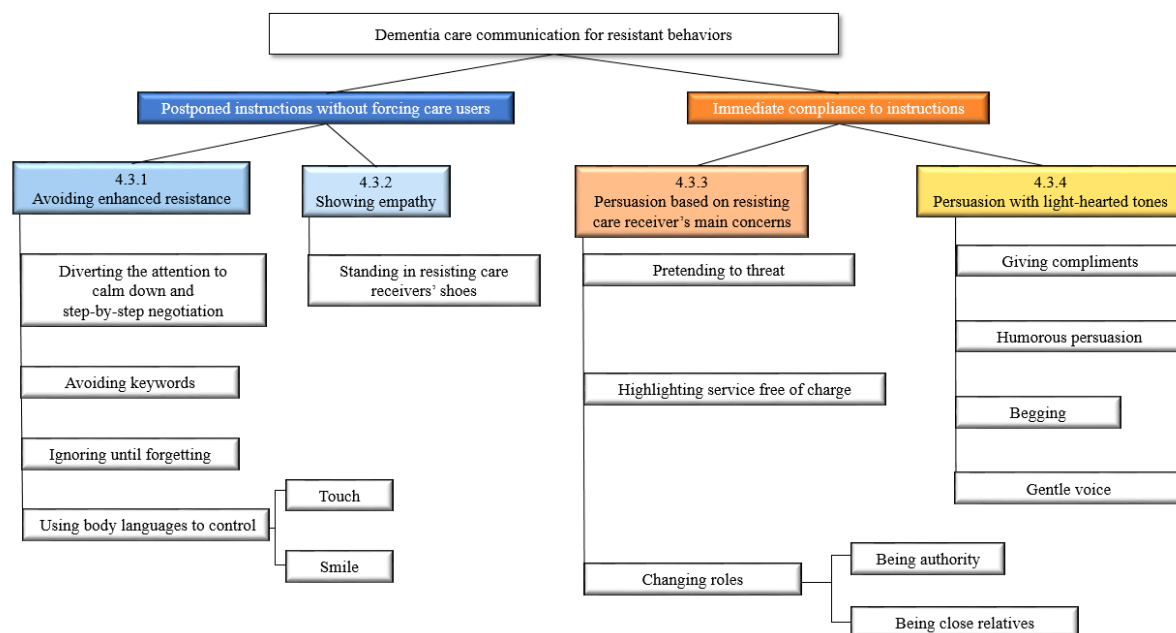
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Morphological Assimilation of Arabic Loanwords in Maguindanaon

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The Asian Conference on Language 2022
Official Conference Proceedings

Abstract

The study is synchronic, i.e. examined the integration of Arabic loanwords in Maguindanaon at present. It used qualitative, descriptive, and structural methods in identifying loanwords through morphological structure within the domain of contrastive analysis. Morphological integration seems to be more difficult when the languages in contact possess two distant morphological paradigms. Factors influencing the degree of integration into Maguindanaon of Arabic loanwords is the linguistic nature of the loanword itself. Whether it conforms to the morphological patterns of the recipient language could have a bearing on which inflections to take and on the generative capacity of the word. Another is whether such integration would lead to homonymy with other existing words, thus leading to ambiguity. The effect of morphology was apparent in many cases of Arabic loanwords in Maguindanaon such as the adaptation of words where all Arabic loanwords that were realized in Maguindanaon followed Maguindanaon morphological templates. Likewise, the surface form of some nouns was affected by morphological factors such as clipping, affixation, and the word-formation processes. It also employed its inflectional rules for gender, number, and possessive assignment. The gender of the Maguindanaon equivalent is the most influential determinant of the gender of the loanword. Likewise, loanwords inflect to show plurality in Maguindanaon by the addition of markers (suffixes). Other morphological processes such as the nominal suffixation of loanwords and clipping of compounds generally apply to established loanwords, except in preservative circumstances, i.e., the bilingual use of affixes in playful contexts, and the clipping of technical (institutional) terms.

Keywords: Morphological Assimilation, Arabic, Maguindanaon

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Introduction

Morphological integration seems to be more difficult when the languages in contact possess two distant morphological paradigms. Winford (2003) states that, in comparison with syntactic integration, morphological integration can be proven more difficult, particularly if the borrowing language or the donor language has 'complex' inflectional and derivational paradigms, such as case, number, gender, etc.

In Maguindanaon, the researcher had noticed that it appears that all the established loanwords are treated as a stem regardless of its word-class. Canonically, words that end in a vowel tend to get fully adapted due to syntax and gender distinction. In much the same way as loanwords may be integrated to the phonological patterns of Maguindanaon along a continuum from fully integrated on one extreme, to non-integrated on the other. Loanwords maybe assimilated morphologically as well into Maguindanaon. According to Smeaton (1973), a loanword undergoes modification of morphological structure to achieve harmony with the established predominant pattern and root system, thus usually leading to internal pluralization, i.e. broken plural and similar derivations. With respect to morphological assimilation, two areas were examined: integration related to word-formation processes (e.g., affixation and clipping), and inflectional integration. A comparison between the morphology of the Arabic item and its reproduction in Maguindanaon was conducted to examine word formation-based integrational patterns. Changes targeting the inflectional paradigm focused mainly on gender, number, and possessive assignments of Arabic words entering Maguindanaon. Since Maguindanaon is a language that does not assign number, gender, and possessive distinctions, reliance was on the reproduction of the Arabic terms in Maguindanaon in order to examine how these words were changed to fit in its inflectional paradigm.

A. Inflectional Integration

Gender

In Arabic, the masculine form is the "unmarked" form -- that means there is no special ending. Therefore, it is the feminine form that is "marked" which contains an inflection on the ending. By far, the most common ending is ة. This letter is called *taa marbuuta*, and it only appears at the end of a word. It is always preceded by *fatha*, so feminine nouns generally end in /–a/.

This is called a "productive suffix," meaning that one can add it to words and generate a new word that people will accept as correct. That is how Arabic gets the feminine forms of different occupations. For instance:

Table 1. Gender Inflection in Arabic

Root word	Masculine	Feminine
رَئيس (president) raʔis	رَئيس (male president) raʔis	رَئيسَة (female president) raʔisa
أستاذ (professsor) ʔustadh	أسـتاذ (male professor) ʔustadh	اسـتاذة (female professor) ʔustadha
عالِم (scientist) ʕalim	عالِم (male scientist) ʕalim	عالِمَة (female scientist) ʕalima

However, in Maguindanaon, the biological sex of the animate referent does not have a crucial role in determining the gender of the loan noun. In fact, very few loan nouns in the corpus are assigned a gender (masculine or feminine) based on their biological sex. The examples given above are all referred with their root term when referring to both male and female. Hence, the word *ʔustadh*, for instance, is being referred to both male and female professor even without adding the suffix /-a/ for feminine inflection.

Number

In Arabic, plurals can be sound or broken. Sound plurals /jamʿ sālim/ are created simply by adding a suffix to the singular form (وْنَ /un/ or يْنَ /in/ for the masculine and اتّ /at/ for the feminine), whereas broken plurals /jamʿ taksīr/ change the internal structure of the singular (ergo the term 'broken').

Rendering a noun plural using a sound plural is quite simple. Both the masculine and feminine versions have only one basic form each. And this form involves simply adding a suffix to the noun as indicated above. The only thing to note is that the form for the masculine plural is changed slightly depending on the grammatical case of the noun. To illustrate, the following table shows the pluralization for both kinds.

Table 2. Number Inflection

Gender	Singular Form	Plural
Masculine	muslim	muslimin
Feminine	muslima	muslimat
Broken Plural	masjid	masajid

However, in Maguindanaon, these loan nouns only appear on their singular form and are formed into plural by adding a Maguindanaon quantifier "mga" which means "many", thus, forming a quantity phrase such as "mga muslim" for "many Muslims" and "mga masgit" for "many mosques".

It can be seen from the above that broken plural and sound plural are not in complementary distribution as some nouns take only sound plural, some only broken plural, some both, and some neither. The choice could be dictated by the degree of conformity of the loanword to Maguindanaon patterns. Such degrees of integration could also reflect language attitudes. For instance, the use of broken plurals (where there is a sound-plural form available) could mean that the user is less educated while use of the sound-plural form could be regarded positively to the speaker as educated or negatively as affected and foreign.

It is also noticeable that broken plural loan nouns are inflected to plural number after they are phonologically integrated into Maguindanaon. Hence, they are formed based on their integrated forms not on their original forms in the Arabic. The loanword *masjid* which is pluralized in Arabic as *masajid* is phonologically integrated as *masgit*, and then its plural form by adding Maguindanaon quantifier "mga masgit" is generated. Indeed, all loan nouns that are pluralized in the form of quantifying phrase are old established loan nouns that have been accepted in the Maguindanaon language a long time ago. In all cases, assigning a quantifying phrase for loan nouns entails mapping these loan nouns (roots) onto Maguindanaon existing inflectional templates.

The question here is not one of whether such words can be easily reduced to Maguindanaon root and pattern structure but rather of speakers' linguistic preferences. While some prefer broken plurals as they treat the loanwords as indigenous words integrated into Maguindanaon lexicon, others may prefer sound-plural suffix addition to keep the word intact and unanalyzed due to their awareness of its foreignness, both positions depending to a large extent on speakers' linguistic background, education and attitude to bilingualism. It could also be the case that newly introduced loanwords start with a sound-plural form and later, when felt to be part of the Maguindanaon, switch to a broken-plural form, especially as the words go through required phonological integration.

Possessive assignments

Loan nouns in the corpus also inflect to show possessives. In Arabic, nouns are inflected to show the possessive case by adding a possessive pronoun to the noun that is owned. The possessive pronouns are used as suffixes attached to the noun. In comparison, possessive assignment in Maguindanaon differs. The stem or root word borrowed are added with Maguindanaon inflections on cases of pronouns. As an illustration, below are the possessive forms of the word *kitāb* 'book' in Modern Standard Arabic and spoken Maguindanaon:

Table 3. Possessive assignment in Arabic and spoken Maguindanaon

Person	Modern Standard Arabic	Maguindanaon Adaptation	English meaning
1st	*kitābi*	*kitab ko*	my book
2nd .M	*kitābuka*	*kitab nengka*	your book
2nd .F	*kitābuki*	*kitab nengka*	your book
3rd .M	*kitābuhu*	*kitab nin*	his book
3rd .F	*kitābauha*	*kitab nin*	her book
2nd .DUAL	*kitābukumaa*	*kitab nu*	your book
3rd .DUAL	*kitābuhumaa*	*kitab nilan*	their book
1PL	*kitābuna*	*kitab nami*	our book
2PL.M	*kitābukum*	*kitab nu*	your book
2PL.F	*kitābukunna*	*kitab nu*	your book
3PL.M	*kitābuhum*	*kitab nilan*	their book
3PL.F	*kitābuhun*	*kitab nilan*	their book

In the table, one may notice that in English, the category for a noun denoting the meaning of two or more is called Plural. However, in Arabic, the noun that denotes the meaning of two is dual or *Muthanna* and plural is a noun that denotes three or more in number. As shown in the table, Arabic adds the suffix *–i* which is equivalent for the English "my" and is formed in Maguindanaon by adding the Maguindanaon singular possessive pronoun for 1st person *ko* on the root word borrowed from Arabic. For the second person singular possessive case, the suffix *–ka* is added for masculine gender and the suffix *-ki* for feminine gender in Arabic; however, in Maguindanaon, one adds the 2nd person singular possessive pronoun *nengka* for both masculine and feminine gender. The third person singular possessive pronoun in Arabic take the suffix *–hu* for masculine and *–ha* for feminine; and are both formed in Maguindanaon by adding third person singular possessive pronoun *nin* for both male and female gender. For the dual number, Arabic forms the possessive form for second person by adding the suffix *–kuma* for both male and female and is formed in Maguindanaon by adding the Maguindanaon 2nd person plural possessive pronoun for both male and female *nu,* and the 3rd person dual possessive form in Arabic is formed through adding the suffix *–huma* which is formed in Maguindanaon by adding the third person plural possessive pronoun *nilan.* For the first person plural possessive form in Arabic, the suffix *–na* is added which is equivalent to adding the Maguindanaon first person plural possessive pronoun *nami* on the Arabic root word in Maguindanaon. Arabic adds the suffixes *–kum* and *–kunna* for second person plural possessive form while adding the 2nd person plural possessive pronoun *nu* in Maguindanaon. Lastly, the suffixes *–hum and –hunna* are added for the 3rd person plural possessive form in Arabic while adding the third person plural possessive pronoun in Maguindanaon *nilan* which is also applicable in the dual form as Maguindanaon is same with English which categorizes the number of two as plural disparate from Arabic.

Established loan nouns inflect to show the possessive case following the Maguindanaon possessive patterns. Another interesting finding concerns the possessive assignment of some spontaneous loanwords. In the spoken language, they are sometimes expressed by the native possessive adjective *kani* (belong to) which is placed before the noun owned. This is also true for established loanwords that consist of two parts.

B. Word Formation Processes

Affixation

In Maguindanaon, Arabic loanwords that contain foreign suffixes are treated differently. In some cases, suffixed loanwords such as *akh* (brother) which is made into possessive forms in Arabic by adding the suffix "*i*" for "*my*" as in *akhi* (my brother), as well as *ukht* (sister) into *uhkti* (my sister), *umm* (mother) into *ummi* (my mother) and *"ab"* (father) into *abi* (my father), are borrowed together with their Arabic possessive pronoun suffixes. However, the corresponding forms derived from existing Arabic stems and affixation is still added with Maguindanaon possessive pronouns for ownership "ko" which is already composed in the Arabic with the presence of the possessive suffix for ownership "i". For this reason, these Arabic loanwords are borrowed in Maguindanaon as *aki ko* for "my brother", *ukti ko* for "my sister", *umi ko* for "my mother" and *abi ko* for "my father". This may possibly because Maguindanaon did not borrow root words of these loanwords and thought that these terms are the stem so they make it into possessive forms by adding the Maguindanaon affixation on possessive pronouns. This may also explain why another form of possessive pronouns in Maguindanaon such as *nin* for "his/hers", *nilan* for "theirs", *taw* for "our", and *nami* for

"ours", may still be added in this terms as in *umi nin* (her/his mother), *umi nilan* (their mother), *umi taw/tanu* (our mother) and *umi nami* (our mother).

There are examples of loanwords that are borrowed along with their accompanying suffixes, such as the loanwords containing the foreign suffixes */ah/*, which are borrowed as a whole. Loanwords containing these suffixes are integrated by adding the Maguindanaon suffix /t/ directly to them, as in *Jum-ah* (Friday) into *gyamat* and *baraka* (blessing) into *barakat*. Maintenance of the loanwords may be due to the difficulty of integrating loanwords without them as opposed to the integration of those containing other suffixes.

Finally, it is reasonable to view integration of loanwords as a process on a continuum with two polar end points: non-integrated spontaneous loanwords, and fully integrated established loanwords. As shown in the data, applying the light word strategy to integrate loanwords might be the first strategy towards establishing such loanwords. As well, functioning as a root or stem for further derivations and inflections is considered a clear sign of being accepted in Maguindanaon and thereby becoming established loanwords. An example is the integrated spontaneous loanwords endpoint towards the integrated established loanwords endpoint which contain points like indirect insertions by reserving a template for loanwords such as the addition of Maguindanaon prefix "*ed*" which means "to do" to different Arabic loanwords such *edsakat* which means "to do zakat", with the stem *zakah* (obligatory alms-giving) and the loanword *edsadaka* which means "to do sadaqah" with the stem *sadaqa* (optional alms-giving/charity) and the Maguindanaon suffix *–an* which means "set" or "imposed" added in the Arabic borrowed word such as *ibaratan* which means "set examples" from the original word *ibarat* which means "example" and the word *kitaban* which means "set instructions" from the Arabic word *kitab* which means "book".

Clipping

Clipping is creating new words by truncation of already existing words. McCarthy (1981) states that clipping is a word-formation process with a phonological dimension because the clipped word may become monosyllabic or disyllabic. Haspelmath (2009) suggests that, although clipping is considered one of the less productive word-formation processes, it is becoming more important in our daily lives. This is mainly due to people's familiarity with a particular subject, which made clippings come into common usage because of the preference for a more easily and quickly pronounceable version of the word (Hoffmann 1991).

There are two types of clipping: fore-clipping and back-clipping. The former refers to the deletion of the initial part of the word and the latter to the deletion of the final part of the word. Most clipped loanwords found in the corpus are back-clipped. Few fore-clipped loanwords are also identified. In both types, the dominant type of clipping refers to clipped compounds. Matras (1998) states that compound clipping takes place when a compound is reduced to one of its parts. Notably, most of these compounds belong to the domain of everyday supplication and expression. The back-clipped Maguindanaon compounds *lakola* from the Arabic supplication *La hawla wa la quwwata ila billah* (There is no power and might except that by Allah.), *la ila* from the Arabic *La ilaha ilallah* (There is no deity except Allah.), *Astaga* from the Arabic supplication Astagfirullah (Forgive me Allah.) and *salam* from the salutation *Assalamu 'alaikum* (Peace be upon you.) are examples of clipped loanwords belonging to this domain. In comparison, the clipped compound *latala* from the Arabic word *Allahu Ta'ala* (Name of God) is an example of fore-clipped compounds

belonging to the religious terms. However, in the current society of Maguindanaon which are becoming more literate with Arabic, the first two examples mentioned such as *lakola* and *la ila* are now avoided because the meanings implied if you remove the rest of the words in the sentence would rescind the meaning of the supplication. *lakola* would only mean "There is no power," and *la ila* would only mean "There is no God". In the current times, this can only be heard from an illiterate Maguindanaon especially among elders who became their habit to use these as exclamation expressions and who may still be not aware of the alteration on the meaning if they cut the supplication short. In agreement with Harley (2006), the truncation of compounds in the given examples seems to be motivated by the need to obtain an easily pronounceable version of the compound. The clipping pattern is nearly consistent, i.e., deletion of the last part of the compound (back-clipping).

Conclusions

The findings show that, in most cases, the more a word is entrenched in Maguindanaon, the more dramatic changes it shows at the level of morphology. Established loanwords are more likely to show intense integrations, which have, sometimes, led to a word that is distant from its original form. The phonological adaptation patterns seek to preserve the Maguindanaon phonological inventory in relation to affixation and word-formation processes.

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Semantic Variations of Arabic Loanwords in Maguindanaon

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The Asian Conference on Language 2022
Official Conference Proceedings

Abstract

The study is synchronic, i.e. examined the integration of Arabic loanwords in Maguindanaon at present. Data collection started with the list of loanwords which were repeatedly updated and sifted. It used qualitative, descriptive, and structural methods in identifying loanwords through semantic integration within the domain of contrastive analysis. This study shows that the meaning of most of the Arabic loanwords in the Maguindanaon language is not different from their meaning in Arabic sources, although, there have been some semantic adaptations. Furthermore, the relationship between the bilingual spontaneous insertions and the monolingual use of established loanwords, in terms of motivations and distribution across semantic domains can contribute to the mechanisms and directions of language change in Maguindanaon. Loanwords act as a face-saving strategy when it comes to speech acts like apology and request. Avoiding directness when expressing empathy, feelings, euphemism, disagreement, apology, etc., is manifested through resorting to Arabic words. The data also show formulaic usages of greetings, farewells, and wishes, which have become the norm, whether in the Arabic script or in the Romanized Arabic script, replacing the Maguindanaon words gradually. Insertions denoting institutional procedures have also turned out to be the norm to an enormous extent. On the other hand, semantic integration of loanwords in Maguindanaon is a clue of diachronic change, in which semantic narrowing and widening are the most prominent changes.

Keywords: Semantic, Arabic, Maguindanaon, Spontaneous Loanwords, Established Loanwords

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Introduction

Inventory of Arabic loan words in Maguindanaon in terms of their semantic fields and the semantic changes

A.   Semantic categorization of Arabic loan words in Maguindanaon

Borrowing, as frequently reported by language contact scholars, is motivated by either the need to fill a gap in the linguistic system of the recipient language (RL), as meaning can only be expressed in one language, or by the prestigious social associations of a borrowed term (Matras 2009; Loveday 1996; Myers-Scotton 2002; Haspelmath 2009). Borrowing seems to be driven by social, pragmatic, or stylistic motivations, depending on the communicative goal of the user or the borrower.

Haspelmath (2009) discusses some social and linguistic motivations, such as the desire to avoid taboo words and to resolve the conflict of homonymy. Additionally, borrowing can be driven by stylistic motivations as it provides speakers with stylistic choices that permit the alternation of foreign and native words with the same meaning (Winford 2003). Matras (2009) talks about cognitive motivation that applies when there is a pressure on the bilingual society to simplify the selection procedure.

In this study, lexical borrowing is investigated in relation to the semantic fields that content loanwords belong to. The most affected semantic fields seem to depend on several factors like the type of contact, the dominant language from which words are transferred, the function and the usage of the borrowed words, and the socio-cultural setting of the subordinate language. The researcher found out that the mainstream of Arabic loanwords into the Maguindanaon language is due to the great influence of Islam, and the terms borrowed range from religious terminologies, law terms, religious rites, academic or educational terms, titles and kinship address, everyday expressions and supplications, five daily obligatory prayers, clothing, grooming, personal belongings, names of the days, months in Hijrah Calendar, names of persons and characters in Islamic myths, sense and perceptions.

Arabic is considered the spiritual language of Islam. Since the Qur'an is written in Arabic, people in all Muslim countries must have at least a basic to advanced knowledge of Arabic. Arabic is related directly to the Qur'an, the holy book of the Muslim and *Arabic* is a distinguishing feature of *Islam*. But this is only because it is the language that the Qur'*an* was revealed in. Muslims in the entire world form one community of believers who believe that the Qur'an was sent over 1400 years ago in the Arabic language. Therefore, Arabic serves as a common language within the World Islamic Community.

Muslims strive to study Arabic to be able to understand and comprehend the Qur'an as the Qur'an was revealed in Classical Arabic. Muslims have strong motivation to keep Classical Arabic alive and well because Arabs consider Classical Arabic as an important component of their culture. Arabic is an efficient language, especially when it comes to the precise statement of laws. Since the Qur'an is a Statute Book, it was crucial that such laws must be clearly stated. Also, Muslims believes that God chose Arabic for His Final Testament because of the obvious reason that it is the most suitable language for that purpose.

In this study, religion and belief received the highest borrowing rate. The possible explanation is that these words were borrowed with the outspread of Islam religion as also mentioned by Suleiman (1985).

Shari'a is a religious law forming part of the Islamic tradition. Judicial procedures and legal education were likewise brought along with Maguindanaon practice being an Islamic tribe. Separating these concepts in Islam or concepts specific to Arab culture or the language itself from Maguindanaon culture can be difficult. Many of these law terms and concepts have an Arabic secular meaning as well as an Islamic meaning. Why the loanwords under this category rarely have Maguindanaon native equivalent may be attributed to this reason.

Islam teaches the importance of both belief and practice; one is insufficient without the other. Muslims, specifically Maguindanaons, are asked to put their beliefs into practice by performing certain acts of worship which are usually termed as how they are referred to in Arabic. As in all faith, since adherence to religious obligations and practices is a matter of individual choice, some Maguindanaon are very strict in performing these duties, while others are not. Since these rites only began to be observed since the coming of Islam, they lack Maguindanaon native equivalents.

In addition, there are also terminologies that refer to the five daily obligatory prayers among Muslims. These terminologies arrived in the Maguindanaon language after the coming of Islam that is why these terms initially did not exist in the Maguindanaon vocabulary. This reflects how the Arabic language as the language of the Qur'an and by extension the language of the Muslims spread widely with the spread of Islam. Muslims are supposed to learn the Arabic language for religious purposes especially that they are obliged to pray using Arabic. Everyday religious expressions are common not only in Maguindanaon, but also among other Muslim tribes in the Southern Philippines such as *Maranao, Iranun, Yakan, Tausug, Jama Mapun*, etc. Words denoting good wishes were also listed in the corpus as formulaic. These words were also very frequent in the data of this study, including words denoting wishes at the end of a conversation, congratulations, and compliments. The following table shows the list of these commonly used religious expressions and supplications.

Maguindanaon communities also have a continuous Islamic education even in informal situation such as *Wasi'ah* and *Khutbah* (sermons) delivered by an *'Alim* (learned men in Islam) during Friday obligatory prayers.

Furthermore, although Arabic loanwords label institutional activities related to education, the same linguistic practice was found at work when relating to academic activities and procedures, especially for interactions in which university students were involved. Maguindanaon bilingual *Madrasah* students tend to insert Arabic words designating academic procedures, practices, or activities, due to the dominance and appropriateness of the Arabic academic terms among Maguindanaon *madrasah* students.

Maguindanaons are also fond of naming their children after famous characters in Islamic myths or after Islamic terminologies which have beautiful meanings. The following table shows the list of the famous Maguindanaon names that are of Arabic origin.

Clothing and grooming also showed up a number of times in the corpus collected. An explanation proposed was that in Islam, men and women have a prescribed set of garments to

use, for example, especially among women who are forbidden to dress in the modern fashion style which shows the "supposed-to-be-hidden" parts of the body.

In Maguindanaon community, intimacy in kinship address can also be expressed through insertions of affection. In naturally occurring conversations, Maguindanaon participants tend to switch to the Arabic script in order to express affection.

Sense and perception had the lowest borrowing rate due to the existence of indigenous words for such concepts. Most of these terms still have Maguindanaon native equivalents and are commonly known among elders and younger Maguindanaons.

Maguindanaons also refer to the names of the days as how Arab people name it. According to one of the respondents, Maguindanaon elders do not perceive the names of the day as how they are counted nowadays prior to the coming of Islam. The elders only differentiate the usual day routine into *mapita* (morning), *modtu* (noon), and *magabi* (evening). In the coming of Islam, they learned to name it according to its Arabic terms such as:
Names of the days are originally from numerical counting system in Arabic:
-     One   =   Wahid (become Ahad)   أحد
-     Two   =   ʔIthnin   إثنين
-     Three   =   thalatha   ثلاثاء
-     Four   =   Arbaʕa   أربعاء
-     Five   =   Khamsa   خميس

The Maguindanaon language also borrowed all Arabic names of the months in the Islamic calendar or Hijrah calendar. The Islamic (Hijrah) calendar has twelve lunar months. Years are counted since the Hijrah – the time when the Prophet Muhammad (SAW) migrated from Mecca to Madinah (approximately July 622 A.D.). The Islamic calendar was first introduced by the second caliph 'Umar ibn Al-Khattab in approximately 638 A.D. The Islamic calendar is the official calendar in some Muslim countries, such as Saudi Arabia. The table below lists the names of these twelve months in Hijrah calendar.

B.   Semantic changes

Onysko (2007) mentions that some foreign words are unique because they have cultural associations, showing that foreign words in the native written discourse may act as 'culturally specific tones' and 'cultural indices' that evoke in the reader an image of the source culture, which will eventually contribute to the authenticity of the picture given. The association that the loanword makes is such a choice loaded with meanings, contrary to what might be achieved in case a native equivalent is used. That is, a translation of the term whether by calquing or providing the exact equivalent, or semi-equivalent may reflect the semantic denotation of the term, but not its cultural connotation.

Semantic changes in the Arabic loanwords in Maguindanaon may fall on three specific categories – broadening, narrowing, and shifting.

Semantic broadening

Semantic broadening of the Arabic loanwords in the Maguindanaon language is the shift in the meaning where the words express wider meaning or more general in its use than the original meaning. Another case of semantic broadening is when Arabic derivatives from the

same root, approximately having similar meanings and pronunciations might have been used in the Maguindanaon language but later one word is left and extended to represent the meanings of the others. An example is the term *ni'mat*, which means blessing from Allah, and was extended to mean, satisfied, happy, good or delicious that are termed *mutanaim* and *manum in* Arabic. The broadening of this term could have been extended because of the absence of the Arabic terms *mutanaim* and *manum* in the corpus of Arabic loanwords in Maguindanaon, but the meaning is left in *ni'mat* since these words have the same root. Another is the word *madrasah*. Although the term *madrasah* means only a school in the Arabic Language, it was extended in the Maguindanaon language to mean a lecture and to have a lecture.

In Maguindanaon, the loanword *Arab* which only pertains to an Arab person in its original meaning does not only refer to a person, but also anything that has something to do with the Middle East as a whole. Almost all concepts coming from all countries from the Middle East are termed *kana Arab* 'from Arab'. Likewise, the loanword *iklas* 'sincere' is also used to refer to a religious and devoted Muslim. Also, the loanword *alamat* 'sign' is used to denote the act of fortune telling. The word is found in the data to have undergone semantic widening to also mean the act of pondering the meaning 'sign' which is the literal meaning of the word *alamat*.

Another example is the use of the supplication *la hawla wa la quwwata ila billah (There is no power or might except of Allah)*. The spontaneous exclamatory expressions in Maguindanaon *lakola* was a shortened version of the earlier mentioned supplication with initial words such as *la hawla* to *lakola*. In Maguindanaon, this supplication is read when someone is amazed or afraid of something but is also used to mean an exclamation or a questioning discourse device.

Further, an interesting case of semantic broadening is the instance of insertions that expresses solidarity in the use of the word *akh* (brother) and *ukhti* (sister). Unlike the previous loanwords that reflect social identity, the use of *akh* (brother) and *ukhti* (sister) represents a relatively broader sense of identity. That is, it signifies religious (Islamic) identity expressing solidarity among Maguindanaon participants belonging to a broader social group, which is the Islamic brotherhood that unites members of the society. The use of the word does not reflect the same degree of informality as opposed to other loanwords because it seeks solidarity among a larger social group that goes beyond the interpersonal group of intimate friends. An example is given when someone is thanking his friend for a favor. The word *akh* is usually inserted in the script. As shown in the use of *akh* (brother) and *ukhti* (sister), affirming solidarity through the declaration of intimate feelings could achieve the speech act of apology successfully. In fact, establishing or confirming solidarity through insertions of intimate feelings could act as a strategic device that creates a linguistic leeway to accomplish a number of verbal actions. In other words, it is shown to be a key mechanism of sorting out problematic personal issues due to the effect these words have on establishing a social and religious identity.

Semantic narrowing

Semantic narrowing is the opposite of extension. Semantic restriction of meanings in which a term acquires a narrower meaning of the word and becomes less general than before is evident in Arabic loanwords in Maguindanaon. The majority of the Arabic loanwords in the Maguindanaon language retained similar meanings of the Arabic original words especially

the terms concerning Islamic issues. Although deeply religious material tends to be transmitted in the original form, most of the semantic adaptations, especially narrowing, happen to be religious terms.

In case of the Arabic loanwords which have more than one meaning -- one of which is religious, the religious meaning is retained in the Maguindanaon language. This narrowing is simply because since the coming of Islam the Maguindanaon Muslims have been in contact with Islamic terms concerning their faith in their everyday life. A large proportion of these loanwords are concerned more or less directly with the moral values introduced through Islam. As there were new concepts of Islam, Arabic words especially religious terms were used to fill gaps in the lexicon of Maguindanaon to designate the newly introduced notions.
An example would be the sex-related words which are highly stigmatized in the Maguindanaon culture; someone would tend to express his idea by inserting some Arabic borrowings to sound polite and soften the effect of the taboo word. In the data, Arabic words denoting sexual activities such as *hayd* (menstruating) and *junub* (impurity caused by having sex) were also shown to be preferred over their Maguindanaon taboo counterparts *gapamalyan* for the term menstruating and *ebpun sa kinambargyuma* for the impurity from having sex.

Also, usage of Maguindanaon words denoting body-related biological parts, actions, or processes was also avoided in the Maguindanaon chats. Slightly similar to words referring to sexual activities, these words in Maguindanaon are considered low, tabooed, and uncivilized. For this, Arabic words were chosen to lessen the effect of such usages. The use of words such as *bubun* (legs) *awitan* (ass), and *buk* (hair) by a Maguindanaon is euphemistically driven and therefore referred with Arabic word *awrat* (forbidden to be seen parts of the body) in general. Further, referring to sex-related terms was avoided by Maguindanaon speakers, even if they represent basic notions that do not have to do with women's body features or sexual behavior.

The last example is the word *setan* from the Arabic word *shaiṭan* which literally means evil spirit in Arabic. In Maguindanaon, it has commonly been referred to a person who is a venial sinner who is so aberrant in terms of moral values.

Semantic shift

Semantic shift of the Arabic loanwords in the Maguindanaon language is a complete shift of meaning and sometimes a shift to the opposite meaning. In this adaptation, a word loses some aspect of its former meaning or takes on a partially new but related one. This change occurs over an extended period of time, resulting in a meaning that is totally irrelevant to the previous meaning of a word. An example is the word *ustads* 'professor' which is adapted in Maguindanaon to mean anyone faithful and steadfast on the Islamic religion. Since the Madrasah professors are referred to by their students as *ustads*, if somebody, not necessarily an *ustads*, advises someone of an Islamic teaching, they would exaggeratedly refer to him as *ustads* which is far from its literal meaning. Another example is the word *kapil* from the Arabic work *kafir* which literally refers to anyone deviant of a set rule. In Maguindanaon, it mutually refers to the people belonging to the other religions. From the Islamic viewpoint, a Maguindanaon who is accepting the Islam religion may still be referred to as *kapil* if he or she is not following or executing the teachings of Islam.

Another case of semantic shift is when derivatives from the same root are approximately having similar meanings and root. The word *adnan* is derived from the Arabic word *adan*. Both *adan* and *adnan* exist in the Maguindanaon to refer to the paradise. However, in the Arabic language only *adan* means paradise which is repeated in the Holy Qur'an so many times. The word *adnan* is only a proper name. It denotes a far ancestor of the prophet Muhammad (peace be upon him) as well as Arabs. Indeed, the term *adan* is closely related to Muslims spiritual life and is thus used abundantly during prayers, preaches, sermons and personal spiritual life. Both *adan* and *adnan* are approximately similar in pronunciation. The term *adnan* was used mistakenly for *adan* due to having the same root and the great prominence of the meaning of *adan* over *adnan*. Another example is the term *kitab* which is used in the Maguindanaon language to mean something which is relating to religious studies. *Kitab* in the Arabic language is literally translated to "book" specifically relating to Holy books such as Qur'an, Torah, and the Bible. The meaning is shifted with the Maguindanaon word *kitaban* which is taken from the Arabic word *kitab* that means a law or rule to follow. The semantic shift might be due to the fact that the term *kitab* is a religious term of great prominence, and the Maguindanaon interpreted this term upon its borrowing to mean anything that has to do with the knowledge and rules of Islam. This is an example of important type of semantic shift – that is the additional metaphorical meaning that some loanwords gain. On the whole, metaphor is a semantic change in which a broadening of the meaning of a word that takes place due to semantic similarity or connection between the new meaning and the original one, i.e., 'one thing is conceptualized in terms of another' (Campbell 2004). The metaphorical meaning goes beyond the literal meaning of a loanword.

Conclusions

The findings reveal that one more reason of semantic changes such as broadening, narrowing, and shifting is that the receptor society does not get exposed only to words but also to beliefs and culture of the donor society so there was borrowing of new words along with new concepts and notions. That is mainly because words are borrowed to signify a cultural concept rather than their literal meaning in the source language, to name things by the way they are utilized or because of overgeneralizing forms that occurred in Arabic loanwords to include other words in the Maguindanaon language.

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ESL Functions, Purposes, & Didactic Implications:
A Grounded Theory on Codeswitching Linguistic Phenomenon

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The Asian Conference on Language 2022
Official Conference Proceedings

Abstract

This article fittingly considered the descriptive-correlational method of research to delineate written and oral code-switching prevalence in discourse of 80% purposively selected participants considering ESL context. The main instrument employed by the researchers was the transcribed/recorded oral recitation of the respondents and the written essays. The data gathering commenced October 8 to 12, 2018 two weeks prior to second quarter examinations. The quantitative and textual analyses redound to the formation philosophical data on constructive aspects associated to codeswitching occurrence in ESL classroom despite its adverse impression in the context of pedagogy. This paper predominantly explores code-switching from L1 to L2 in a multifaceted milieu as it has hidden purposes and functions along the channels of communication. For instance, codeswitching for description and clarification (*For me, ang mga hayop ay "mahalaga" sa environment uhhhm,… because they give food to eat* [*see Extract 1*]). After careful scrutiny, the study emphasizes that the accentuated linguistic prevalence should uncover its positive aspects for communicative competence sake. The paramount goal must always be the understanding of text and glitches along the channels of communication must have been deemed secondary. This practice has functions and purposes in the context of interlocutors of the language itself. They do such for clarity, emphasis, emotion expression, and equivalence for the most part. The role of the L2 teachers counts a lot to bring the students to a high level of communicative competence by exploiting L1 as a bridge to tread the ladder of L2 fluency progressively.

Keywords: Codeswitching, Communicative Competence, ESL Functions, Grounded Theory, 3Cs Theory

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Introduction

There have been global urgings by scholars on how practically L1 influences L2 acquisition such as the studies of Bingjun (2013); De La Fuente (2020); and, Alghazo (2018). The former accentuates that role of L1 in L2 acquisition consists of 6 different areas: (1) with the behavioral theory to explain the SLA, focusing on the role of conditions; (2) to explain the interaction of SLA, highlighting communication and social needs; (3) to clarify the SLA with the cognitive theory, accentuating the logic and thinking processes; (4) with the nativist theory or biological theory to expound SLA, underscoring the inherent genetic capacity; (5) to underscore the learner and learning strategies. (6) L1 transfer in L2 acquisition of phonetics, lexicology, syntax, semantics and pragmatics. As for Alghazo (2018), the value of using the L1 as a teaching resource may be explicitly relayed to L2 teachers in training courses and workshops in order to equip teachers with the required skills to successfully undertake a teaching assignment. Her findings may help increase the awareness of L2 teachers and enable them to benefit from strategic L1 usage as another valuable teaching method when providing L2 instruction, and, at the same time, to be cognizant of how to avoid any negative consequences stemming from L1 overuse. To supplement, Storch et. al., (2003) underscore that the use of learners' L1 in L2 education has been a controversial issue. Language learners are usually discouraged to use their L2 during interactions and classroom activities with the belief of less likelihood of successful L2 acquisition. Be that as it may, Iswati et. al., (2018) conjecture that the role of L1 both by teachers and learners in English classrooms at tertiary level is essential. This is vouched by the findings that 70% of the teachers stated that L1 should be used in their class whilst 87% of students postulated that L1 should be used during explanation of difficult concepts of L2. First language likewise lessens learners' affective filter as it will make them more secure, comfortable, and eventually confident to use the target language.

However, pursuant to Section 16 of Republic Act No. 10533, titled "An Act Enhancing the Philippine Basic Education System by Strengthening Its Curriculum and Increasing the Number of Years for Basic Education, Appropriating Funds therefor and for Other Purposes," otherwise known as the "Enhanced Basic Education Act of 2013,". The K-12 curriculum shall encourage proficiency in both Filipino and English, so long as the first and dominant language of the learners shall serve as the essential language of education. For Kindergarten and first three years of elementary education, instruction, teaching materials and assessment shall be in regional or native language of learners. DepEd, likewise, shall establish a mother language transition program the mother/first language to the succeeding languages of the curriculum that is appropriate to the language capacity and needs of learners from Grade 4 to Grade 6 (Estremera, 2017). Consequently, Filipino and English shall be progressively introduced as languages and can become the primary languages of instruction at the secondary level. Moreover, the curriculum shall follow the principles and framework of Mother Tongue – Based Multilingual Education (MTB-MLE) which starts from where the learners are and from what they already know proceeding from the known to the unknown; instructional materials and capable teachers to implement the MTB-MLE curriculum shall be available (Gempeso & Mendez 2021; Adriano et. al., 2021; Obod et. al., 2019). For this purpose, MTB-MLE refers to formal or non-formal education in which in the classroom the learner's mother tongue and additional languages are used in the classroom. These conflicting issuances by the Department of Education pose ballooning problems and confusions to teachers and even the students. Teachers seem to have been groping in the dark unsure of what really is the right medium to use in the classroom setting to make sure learning of concepts are easier and more practical. Although the latest issue is alongside educational

transformation from a 10-year basic education and now already a 12-year system, it somehow opens the door for the use of both the vernacular and the target language (L2). This is where codeswitching of students from vernacular/Filipino to the target language or *vice versa* is prevalent functions and purposes in the context of ESL (Orit 2015; Gort 2012; Keller 2016).

Research Questions (RQs) & Hypotheses

The negative impression associated to codeswitching occurrence in the classroom setting rather than its concealed semantic features are usually the ones that are instilled onto the minds of the hearers of information. This gap of communication process is what the present study hopes to fill by highlighting its positive aspects. In effect, sociolinguists who had studied codeswitching indicated that factors such as extra-linguistic features like topic, setting, relationships between participants, community norms and values, as well as societal, political and ideological developments, influenced speakers' choice of language in conversation (Suurmeijer et. al, 2020). Thus, researchers were spurred to conduct a study on the prevalence of codeswitching among the Grade VI pupils. Conversely, the long term purpose of this academic pursuit is to help the pupil respondents improve their academic performance by exploring the frequency of use and knowing the purposes of codeswitching occurrence among the respondents. In detail, this research aimed to answer the following research questions:

- How prevalent is codeswitching on subjects with English as medium of instruction?
- Is there a significant relationship between written and oral code-switching prevalence?
- What new language theory may be formulated to delineate the purpose of codeswitching in SLA?

For the preceding research questions (RQ's), the following hypotheses were proposed:

- The prevalence of codeswitching both written and oral discourse do not vary.
- There is no significant relationship between written and oral code-switching prevalence.
- A new language theory may be formulated to delineate the purpose of codeswitching among the students.

Methodology

Context and Procedure

The context of the present paper conforms to the view of Bailey (1987) as cited by De Belen (2015) who underscores methodology as a philosophy of research process because it includes the assumption and values that serve as the rationale for research and the standards or criteria the researcher uses for interpreting data and reaching conclusions; whereas a method would include the rationale and principles of research, and the philosophical underpinnings that underlie a particular pursuit. Thus, this study fittingly considered the descriptive-correlation method of research. It is considered as a descriptive study insofar as, in the process, it elucidated the frequency of use and determined the purposes behind codeswitching occurrence. This is, conversely, correlation since the researcher thoroughly correlated the occurrence of transcribed responses both in oral and written discourse. Moreover, the population may be defined as a group of classrooms, schools, or even facilities. Hence, the

chief sources of data of this undertaking are the 18 pupils chosen purposively. Campollo (2012) delineates purposive sampling as determining the target population, those to be involved in the study. The respondents are chosen on the bases of their knowledge and of the information desired. The researcher, for the most part, considered purposive sampling to ensure high validity gauge of the pursuit.
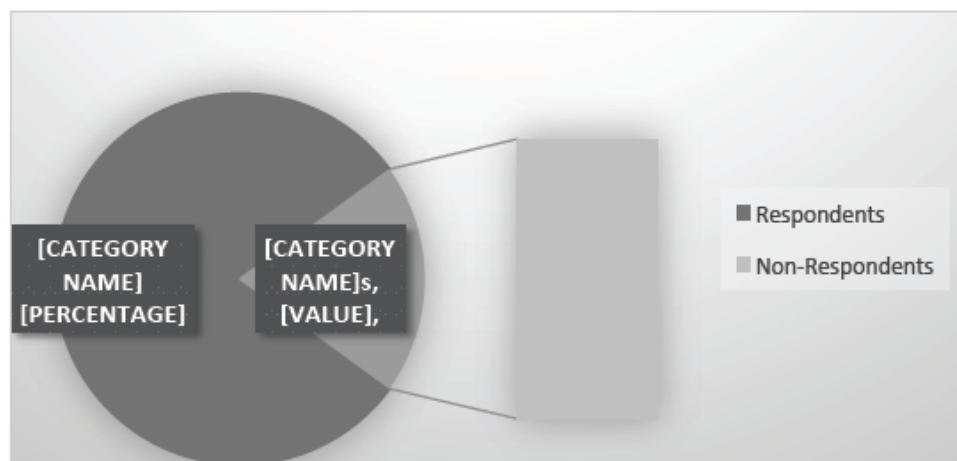

Figure 1:   Purposive Selection of Participants

Besides, the highlighted participants represent the 80% performing pupils of the class who are active during class recitations and can somehow write paragraphs. The rest of the students might not be able to contribute to this pursuit since they have difficulty in both oral and written communication. The respondents represent the 80% of the class which surpassed the ideal 20% sampling to ensure high validity. There are 22 pupils in the class, 6 females and 16 males. The data gathering commenced October 8 to 12, 2018 two weeks prior to second quarter examinations. The subjects that were observed are MAPEH (8:00-8:40), TLE (8:40-9:30), Mathematics (9:30-10:20), English (10:20-11:30), and Science (1:50-2:40). These subjects are taught using English as a medium where students would resort to switching codes whenever they do not know the English term to utter.

Instrumentation and Analysis

The main instrument employed by the researchers was the transcribed/recorded oral recitation of the respondents and the written essays of the students. The subjects of the study were informed that they will be under research; however, they were not informed that they are allowed to switch codes whenever expressing their views. Codeswitching, in effect, is a normal leeway given to students for the sake of airing their views since they are not exposed to English language and still in the coping level. The quantitative method of analyzing data was utilized in this research. This involves, mean, frequency, ranking, and percentage to satisfy the research questions no.1 & 2. However, in order to establish the correlation between two variables (oral and written), correlation coefficient and covariance were adopted. For the question no.3, researchers came-up with a thematic analysis of responses where theoretical formulation was based. Besides, textual analysis of written outputs as well coded oral responses paved the way to determine the functions, purposes, and meaning of codeswitching prevalence in ESL classroom (McKee, 2003).

Ethical Issues

Ethics in research must have been observed in order circumvent future plights. Hence, parents of the minor respondents were notified thru a permit letter that their children will be the subject of study. The school head, in effect, was informed thru a communication of the purposes of the conduct of research. In the process of research, the data and information that were taken from the respondents had been held with utmost confidentiality and anonymity. Ensuing research ethics and rules had also been aptly observed by the researcher to circumvent future problems relative to plagiarism, intellectual dishonesty and the like. Cited researchers and authors can be verified as highlighted in the succeeding pages. This research had likewise been undertaken in response to the DepEd's call for research intensification and also systematically finding answers to the challenges encountered by teachers relative to the implementation of K to 12 curriculum and is not categorically divulging the incompetence of the respondents or the low academic performance of pupils featured in this masterpiece.

Findings

The data gathered from documentations, observations, and transcriptions had been categorized into themes in order to observe parallelism of ideas. Therefrom, codes were assigned to the recorded responses of participants. The principal aim of this paper is to illuminate the gray areas on the impression of codeswitching in the context of applied linguistics. To provide philosophical answers to the prevailing research questions, both the written and oral communication occurrences were looked into carefully represented by the graphs and figures. Hence, portrayed in table 1 is the frequency of codeswitching along the subjects with English as medium of instruction.

Table 1: Codeswitching Prevalence per Area with English as a Medium

DAYS	MAPEH (8:00-8:40)				TLE (8:40-9:30)				MATHEMATICS (9:30-10:20)				ENGLISH (10:20-11:30)				SCIENCE (1:50-2:40)			
	X	%	Y	%	X	%	Y	%	X	%	Y	%	X	%	Y	%	X	%	Y	%
FIRST DAY (10/8/18)	3	10	4	36	2	12	1	14	3	38	1	33	4	13	4	21	3	11	2	33
SECOND DAY (10/9/18)	7	25	3	27	8	47	2	29	2	25	1	33	8	25	6	31	7	26	1	17
THIRD DAY (10/10/18)	8	29	1	9	0	0	1	14	1	12	0	0	9	28	4	21	8	30	0	0
FOURTH DAY (10/11/18)	5	18	2	18	3	18	0	0	0	0	0	0	5	15	3	16	4	15	2	33
FIFTH DAY (10/12/18)	5	18	1	9	4	23	3	43	2	25	1	33	6	19	2	11	5	18	1	17
Σ	28	100	11	100	17	100	14	100	8	100	3	100	32	100	19	100	27	100	6	100
Σ/n	5.6	20	2.2	20	3.4	20	7	20	1.6	20	1	20	6.2	20	3.8	20	5.4	20	1.2	20

Legend: X = Oral; Y = Written

Empirically, during the first day pupils have actually been switching codes both in oral and in written discourse. This is proven by a frequency of 3 in oral and 4 based on their written output. As highlighted, the frequency of 7 tantamount to 10% for the second day in oral, and 3 or 27% in written denotes a practice of codeswitching by the respondents also. This continues until fifth day of data gathering by the researcher. In fact, the frequencies and percentages for the last three days show similar patterns -- that respondents do the codeswitching either from vernacular/Filipino to English or *vice versa* to participate in the class discussions. The $\sum/n$ values of 5.6 for oral and 2.2 for written implies that respondents are switching codes more frequently in oral discourse than in written. For Technology and Home Economics (TLE), it turned-out that respondents obtained highest frequency of 8 for oral code-switching while it earned a frequency of 2 or 29% for written. Interestingly, there was no occurrence of switching codes in written discourse for the third day of study. Mathematics by nature largely involves numbers to solve such as rational numbers, integers etc. insofar as the Curriculum Guide is concerned, pupils are expected to create their own word problems based on the lesson discussed. Teachers likewise use the higher order thinking skills (HOTS) question to bridge the students to the right answer and concept. There has still been an interaction, apparently, between and among students and teachers which may serve as a venue for codeswitching for the sake of communication. As noted based on the tallied responses, Mathematics obtained the least occurrences based on $\sum/n$ value of 1.6 in oral and .6 in written discourse due possibly to its being highly numerical. English as opposed to Mathematics usually offers a lot of opportunities for communicative competence of the learners. Teachers, on the other hand, may initiate debate, role-play, etc. which will pave the way for communicative development among the students. As highlighted in the above table, both oral and written discourse obtained the highest occurrences of code-switching as vouched by $\sum/n$ values of 6.8 and 3.4. This data presupposes that the very essences of communication were achieved since respondents are able to express their feelings, thoughts, and emotions relative to the lesson considering sentence structure as merely trivial and secondary. This is supported by the $\sum/n$ values of 5.4 and 1.2 for both means of communication. This is indicative of minimal communicative activities during the conduct of study. Pupils are performing experiments which do not require much of communication and, question and answer portion. The noted switching of codes is palpable during the output presentation where pupils ought to defend the findings of their experiments. This recorded conversation goes for the oral codeswitching for the most part.

Clearly rolled-out in the hereunder plotted graph is the correlation between the oral and written speech variables based on $\sum/n$ values. Coming-up with a correlation between the two variables has been a *sine qua non* as this could serve as basis for providing more meaningful communicative activities toward linguistic competence without having to set aside the L1 of the learners. This will also serve as an eye opener for both teachers and administrators relative to the boon side of switching codes in the essence of communication. As noted, oral codeswitching has obtained $\sum/n$ values of 5.6, 3.4, 1.6, 6.2, and 5.4 respectively. Conversely, inasmuch as written responses are concerned, it gathered $\sum/n$ values of 2.2, 1.4, .6, 3.8, and 1.2. The correlation coefficient value of .767897246 implies positive correlation between oral and written speech variables. This means that the prevalence of codeswitching among the respondents both in oral and in written move in a somewhat the same direction and magnitude. As the oral code-switching occurs, there is also the counterpart of written codeswitching occurrence along the 5 subjects with English as medium of instruction (MOI).
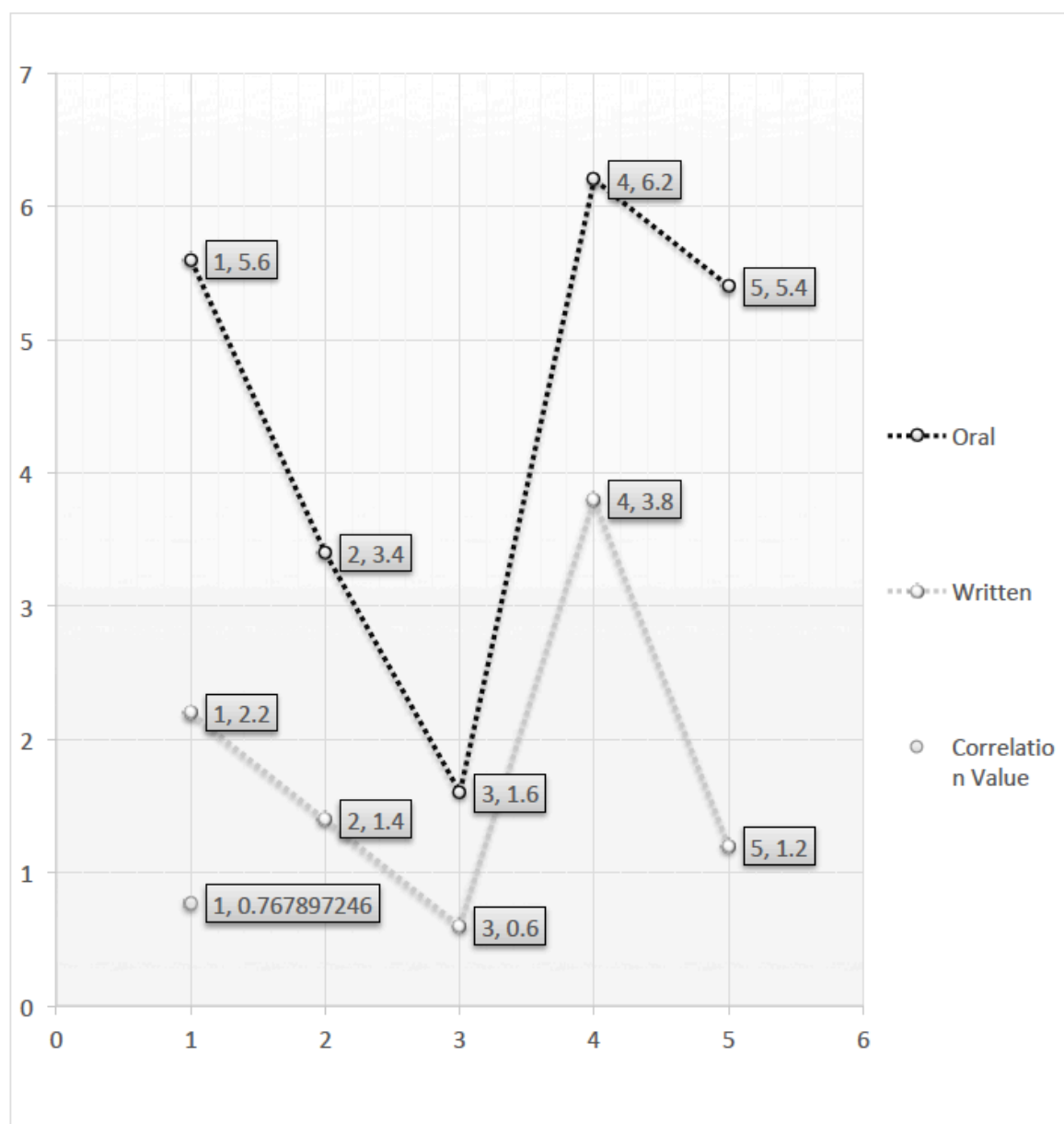
Figure 2: Correlation between Oral (*x axis*) and Written (*y axis*) Code-switching
as occurred in the Five Identified Subjects

Testing the difference between oral and written codeswitching will somehow provide data on its relevance in the classroom setting. The gaps between the two variables can be a source of feedback where interventions and school-initiated activities may be drawn upon. Teachers of English as a L2 will be guided on what strategy to use, appropriate materials to utilize and language activities to execute which form part of the language development of the clienteles. Thus, the covariance values of 1.4464 (T.L.E.), 1.6775 (MAPEH), 2.12 (Mathematics), 0.52 (English), and 0 (Science) are indicative of speech intervals between oral and written discourse.
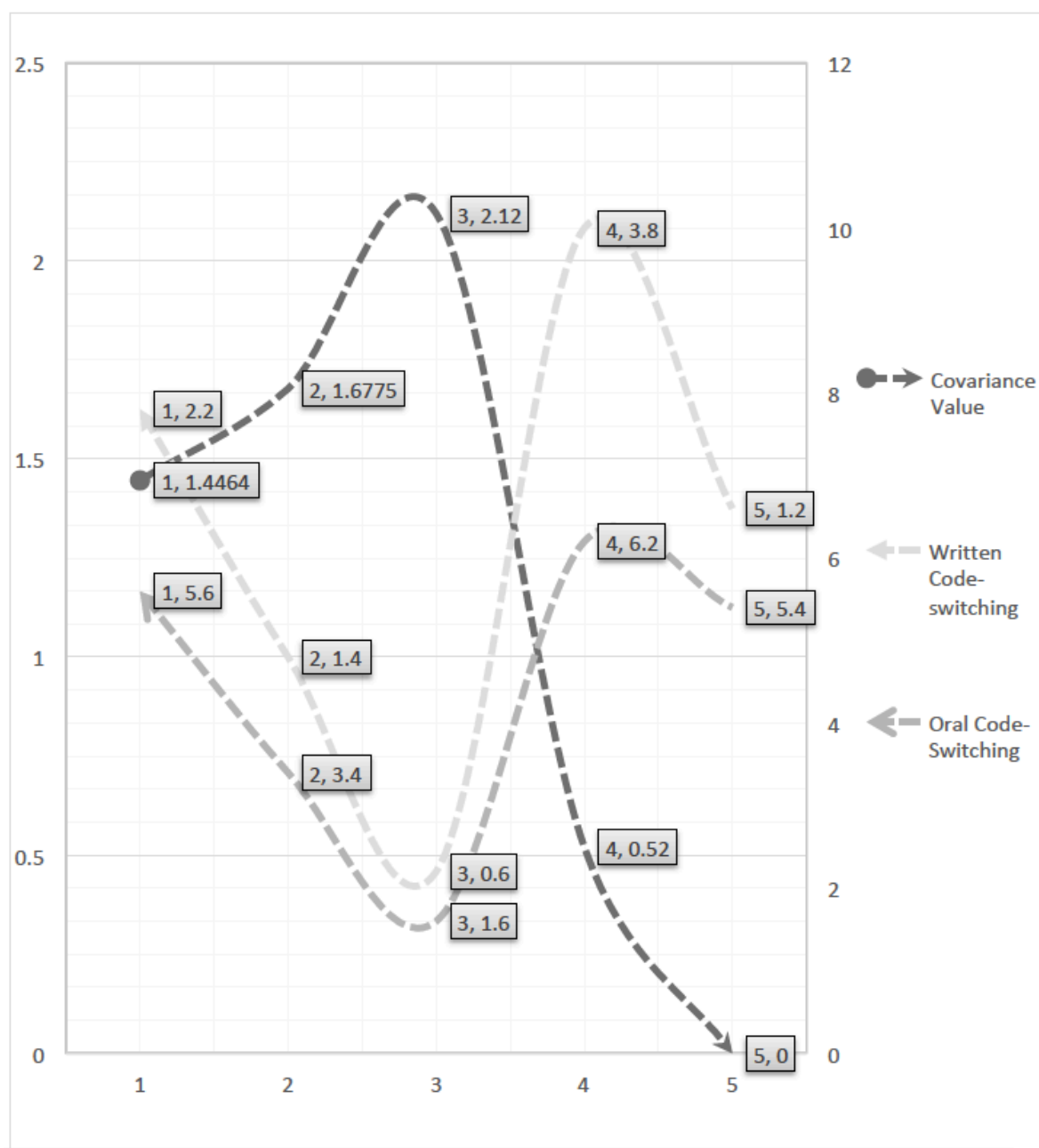
Figure 3: Test of Difference Between Oral and Written Codeswitching
Prevalence Based on Mean Score ($\sum$/n)

These are already the perceived speech gaps as they occurred during communicative events using the target language (L2). The *0* and nearly *0* (*e.g. 0.6*) covariance values would mean that one variable transpired more recurrently as likened to the other variable of the study. Contrariwise, covariance values of more than *1* in this pursuit presuppose a parallel occurrence between oral and written codeswitching. The pupils switch codes at almost the same pace and magnitude along TLE, MAPEH and Mathematics; while oral codeswitching may have occurred more prevalently in English and Science in the main.

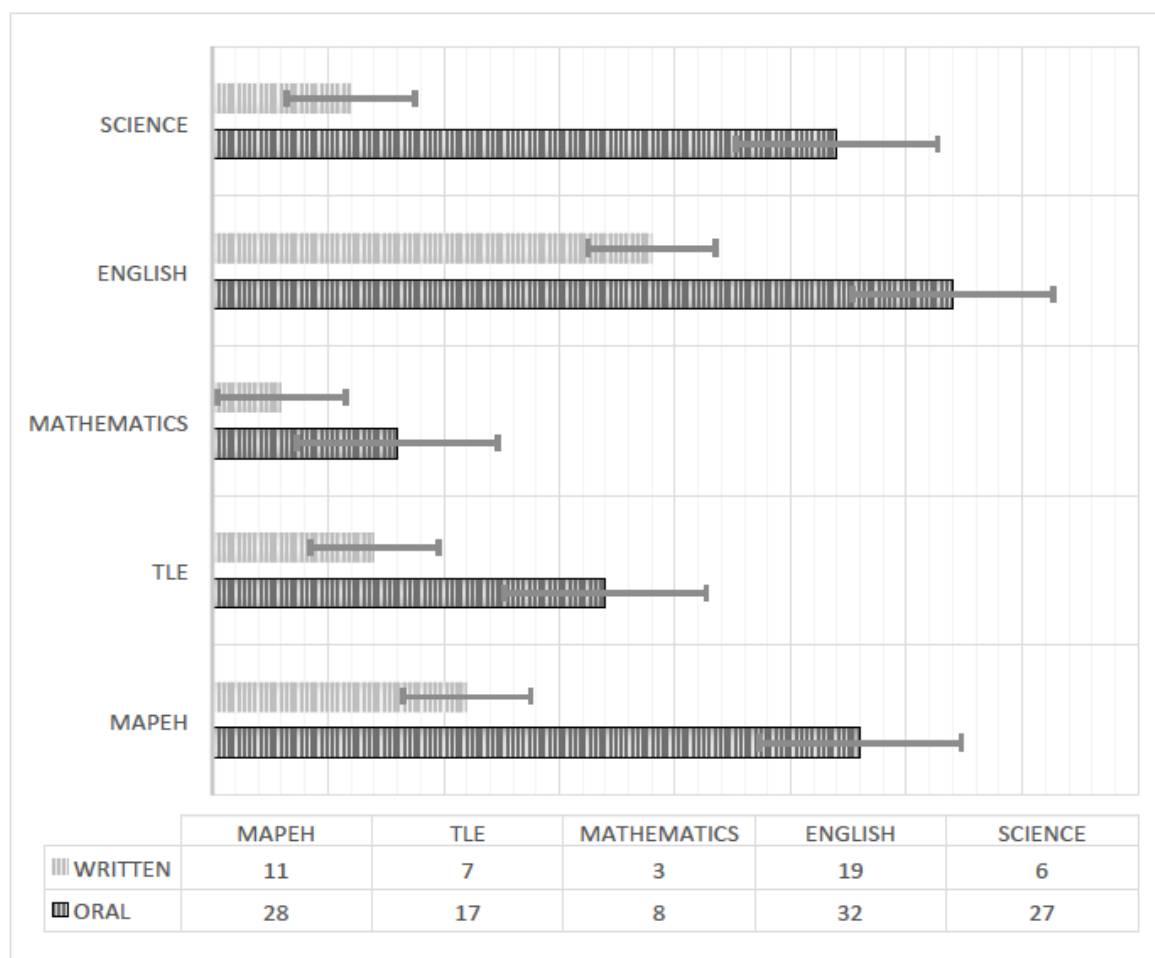|	MAPEH	TLE	MATHEMATICS	ENGLISH	SCIENCE
WRITTEN	11	7	3	19	6
ORAL	28	17	8	32	27

Figure 4: Prevalence of Codeswitching Based on Total Score per Subject Area

Worthy of scrutiny in figure 4 is the prevalence of codeswitching based on total score transcribed responses. The data above shows that English subject topped among the subjects in terms of oral and written codeswitching. This is followed by MAPEH with 28 and 11 total scores. Ranked third also is Science with 27 and 6 total scores tallied. The fourth, therefore, is TLE earning a total score of 17 and 7 in oral and written prevalence. Mathematics, as noted in the graph, obtained the least occurrence of codeswitching in both speech variables of the study.

Theme 1: Codeswitching for Description and Clarification

The transcribed oral and written codeswitching occurrences had been coded by the researchers based on their purposes and functions of communication by the respondents. These transpired during oral recitation, class discussion and question and answer portion between respondents and teacher. For the written variable, the researchers looked into the essays and in evaluation part of the lesson which demand the respondents to explain and/or write a paragraph based on stimulus. However, for English and Science subjects where most occurrence of codeswitching had been noted, the researchers considered enrichment activities such as role-playing and presentation of outputs significant. Empirically, these parts have had many switching of codes happened. Some of the codeswitching occurrences are featured hereunder:

Extract 1

Teacher:	What can you say to the villain on the story?
Student:	*Mam the villain in the story is "masama" because …uhhhmm …she done bad thing to the main character.* [TCMLE#1]
Teacher:	What do you think is the importance of animals in the environment?
Student:	*For me, ang mga hayop ay "mahalaga" sa environment uhhhm… because they give food to eat.* [TCMLE#2]
Teacher:	Do you think it is okay to do revenge to someone who hurt us?
Student:	*"Para sa akin po sir"…it's ok to be get revenge to others because they also do bad to me.* [TCMLE#3]
Teacher:	So now, you are going to make a collage showing animal adaption.
Student:	*"Sir ano po gagawin naming output sa" Science? Can we make a photo collage showing the animals adaptation po sir? Yes! Mapabakal ako pictures kay mother tomorrow.* [TCMLE#4]

These coded conversations show how respondents switch codes from Filipino to English and at times from vernacular to English language with distinct purposes and functions. In effect, codes [TCMLE#1] & [TCMLE#2] show clear purpose of description. The respondent perchance is not aware of English equivalent of the descriptive words in the recorded conversation. Be that as it may, majority of the pupils are able to express their ideas to emphasize and clarify things relative to the lesson despite the noted error in sentence structure. In like manner, coded conversations [TCMLE#3] & [TCMLE#4] confirm the researchers' assumption on codeswitching for clarification and emphasis. The respondents want to clarify the process of making their outputs for the subject. If scrutinized closely, in code [TCMLE#4], the speaker's pattern of speech is from Filipino (L1) + English (L2) + Filipino (L1) + English (L2) + vernacular + English (L2) + Filipino (L1), then back to English (L2) [L1 + L2 + L1 + L2 + L1 + L2 + L1 + L2]. This pattern usually is prevalent to subjects with English as medium of instruction. Students seem to have no other recourse but to switch codes just to convey their message effectively.

Theme 2: Codeswitching for Equivalence

According to Eldridge (1996), one of the functions of student codeswitching is equivalence. In this case, the student makes use of the native equivalent of a certain lexical item in target language and therefore code switches to his/her native tongue. This process may be correlated with the deficiency in linguistic competence of target language, which makes the student use the native lexical item when he/she has not the competence for using the target language explanation for a particular lexical item. So "equivalence" functions as a defensive mechanism for students as it gives the student the opportunity to continue communication by bridging the gaps resulting from foreign language incompetence. The preceding notion concerning the function and purpose of switching codes in the context of students has also been one of the points of this study. This is evident in the coded conversations accentuated below:

Extract 2

Teacher: Student:	What can you say to the villain on the story? *Mam the villain in the story is "masama" because…uhhhhmmm… she done bad thing to the main character.* **[TCMLE#1]**
Teacher: Student:	Why do you think exercise is necessary class? *Exercise is "mahalaga" in our body to make abs [referring to muscles] and sexy bodies.* **[TCMLE#5]**
Teacher: Student:	Why do animals adapt to their environment? *Animals adapt to the environment to make them "ligtas" for many enemies.* **[TCMLE#6]**

Obvious in the coded responses that respondents probably forgot and/or perhaps practically do not know the equivalent translations of "*masama", "mahalaga",* and *"ligtas"*; hence, they resort to switching codes from English to Filipino then back again to lexical terms in English to complete their sentences and convey their thoughts to their teacher and peers.

Discussion

From the results adopting descriptive-quantitative statistics as well as empirical approach, have paved the way for some confirmatory data relative to the formulated research hypotheses.

Prevalence of Codeswitching

The first hypothesis highlights the prevalence of codeswitching on selected subjects with English as MOI (*Table 1 & Figure 4*). From the dataset, it is noticeable that the above linguistic occurrence transpired on a varying degree both oral and written forms with documented purposes and functions in the context of pedagogy as well as with semantic feature. This result is linked to the views of Iswati et. al., (2018) who similarly conjecture that the role of L1 both by teachers and learners in English classrooms at tertiary level is essential. This is vouched by the findings that 70% of the teachers stated that L1 should be used in their class whilst 87% of students postulated that L1 should be used during explanation of difficult concepts of L2. First language likewise lessens learners' affective filter as it will make them more secure, comfortable, and eventually confident to use the target language.

Correlates of X and Y Variables

The second hypothesis indicates the positive correlation between oral (*x*) and written (*y*) discourse (*Figure 2*), and communication gaps (*Figure 3*) which implies that both discourse forms could have occurred in the same magnitude and degree posing pedagogical challenges to ESL teachers. This could, similarly, presuppose that ESL teachers may consider this occurrence as a prelude towards L2 fluency. Perceived errors along the channels of communication could have been deemed trivial and paying much attention to the semantic aspect is what matters to foster communicative competence. These are in acquiescence to the claims of Bingjun (2013); and Iswati et. al., (2018) that the role of L1 both by teachers and learners in English classrooms at tertiary level is essential to lessen learners' affective filter as it will make them more secure, comfortable, and eventually confident to use the target language (L2). The former accentuates that role of L1 in L2 acquisition consists of 6 different areas: (1) with the behavioral theory to explain the SLA, focusing on the role of conditions;

(2) to explain the interaction of SLA, emphasizing communication and social needs; (3) to explain the SLA with the cognitive theory, emphasizing the logic and thinking processes; (4) with the nativist theory or biological theory to explain SLA, stressing the inherent genetic capacity; (5) to emphasize the learner and learning strategies. (6) L1 transfer in L2 acquisition of phonetics, lexicology, syntax, semantics and pragmatics (Oflaz, 2019).

Language Theory

The third hypothesis reveals the main contribution of this academic piece to the body of knowledge specifically along language theories (*Figure 5*). It highlights some pedagogical implications on the positive aspects of codeswitching occurrence during TLP. This is further underpinned by the studies of Nordin et. al., 2013; Zainil & Arsyad (2021) who emphasized that ESL learners were also reported to believe that codeswitching facilitates them in understanding the target language. The findings suggest that the use of codeswitching is necessary when the situation requires the use of first language in the classroom to enable the learners to become more confident in mastering English. In the same vein, Wu et. al., (2020) likewise concluded that teachers and students have the same attitudes towards using codeswitching, and experienced teachers used this more frequently than novice teachers.

Conclusion

The issue of bilingualism or even multilingualism could be one of the culprits behind this linguistic phenomenon. Respondents do have their own language identity which mirrors their own culture. ESL has its own morphosyntax characteristics which the respondents might not be that proficient enough of the distinguishing features of ESL (Biliková & Seresová, 2021). However, the distorted sentences denote something and form meaning necessary to perform the linguistic activities (Alshammari, 2020). In fact, there is complete communication process between the speaker and the listeners as manifested during the data gathering. Another factor could have been equated to vocabulary stockpile. Pupils do not have yet the cache of terminologies to be used during oral recitation and written test. They are also in the groping level with doubts and fears to commit mistakes and be ridiculed by their classmates. As witnessed by the researchers, respondents were still enthusiastic to communicate and participate in the class discussions despite the fact that codeswitching had been their last recourse to air their views. In view of the preceding claims, researchers now conclude that there are factors which triggered the codeswitching prevalence among the respondents which confirm the researcher's hypothesis in effect. This practice, likewise, has functions and purposes in the context of the interlocutors of the language itself (Estremera, 2021).
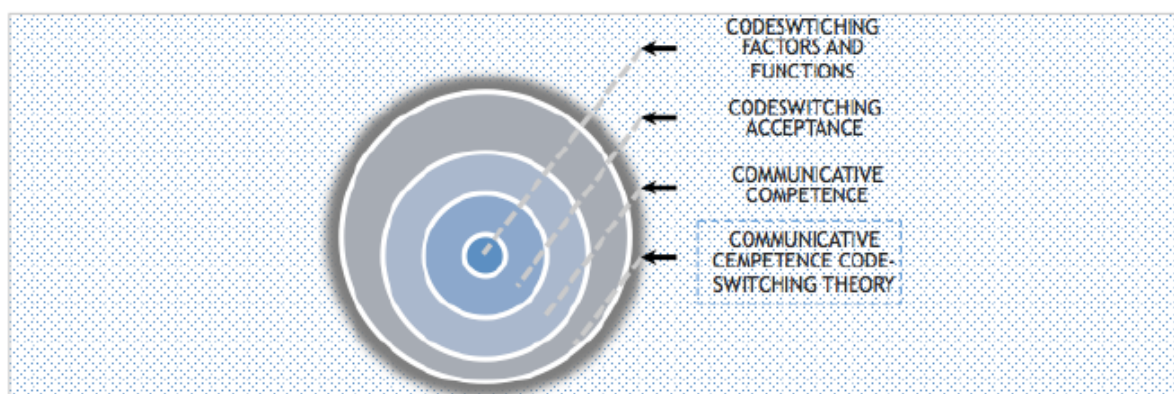

Figure 5: Communicative Competence Codeswitching Theory or the 3Cs Theory

They do such for clarity, emphasis, emotion expression, and equivalence for the most part. The role now of the L2 teacher counts a lot to bring the students to high level of communicative competence specifically along vocabulary development to develop both writing and oral competence (Huang, 2021). It is concluded too that there is a positive correlation between oral and written speech variables. This means that the prevalence of codeswitching among the respondents both in oral and in written move in a somewhat the same direction and magnitude. This presupposes that they transpire nearly in the same frequency concurrently. In the long run, based on the confirmed hypothesis, the researcher recommends that English teachers both NS and NNS shall not pay much attention to grammatical competence initially if they want their students to be participative in the class discussions, language activities, and output presentations (Hurajova, 2019). This concern will merely transpire then and there and naturally after series of attempts and exposure to the target language by stimulating their linguistic in a student-centered environment (Giannikas, 2018). Hence, taking into account the results and conclusions, has paved the way to the formulation of a new language theory called *Communicative Competence Codeswitching Theory or the 3Cs Theory*. This theory delineates the automatic tendency of the of ESL learners to do codeswitching in dealing with the classroom activities and when conversing to peers as attempts to mastering L2. This is prevalent commonly in Asian countries such as Philippines, Thailand, Japan, Malaysia and all countries having English as a second language. Learners attempt to speak and write the combinations of native language and the target language. These attempts of the learners to shift from one code to another code help them complete the cycle of communication in a multilingual classroom setting (Arend & Sunnen, 2018). This linguistic phenomenon plays an essential role to be able to send the text successfully using various channels of communication. In the case of the respondents of the study, codeswitching helped a lot to assimilate the phonology, syntax, and lexical aspect of English language gradually as observed by the researcher. The examples of these attempts [*sentences spoken and written by the learners*] to learn the second language L2) are well-discussed in the results section of the paper.

Limitations, Suggestions & Research Direction

There have been foreseen limitations in the present study which can be addressed by future researchers along the same field. Foremost, this study involved many subjects with English as a medium delivery, it is far preferable if one or two subjects shall only be subjected to investigation to capture more details of codeswitching and arrive at a more detailed purposes of ESL. There is also greater likelihood of capturing many purposes of codeswitching to make the pursuit more comprehensive. Next, the data gathering of the present paper was done on a week-long period only. It is suggested that, collection of data be conducted on a month-long scheme, if possible. Last, more thematic presentations and categorization of collected data to practically capture the ESL functions, purposes and didactic implications. Hence, for the sake of parallel studies, other functions of codeswitching which might have happened in the conduct of this study but are not discussed are recommended to be investigated. These functions and purposes may include: *Switching for principle of economy, switching for checking, Switching for message qualification* and the like. In the long run, the proposed theory offers a room for relevant studies to better comprehend human language and its perceived symbiotic relationships to the speech community.

Acknowledgments

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