

A STUDY OF THE PRODUCTION OF ENGLISH RELATIVE
CLAUSES BY L1 MALAY SPEAKERS IN MALAYSIA

NOHRA DINKHA RABIN

FACULTY OF LANGUAGES AND LINGUISTICS
UNIVERSITY OF MALAYA
KUALA LUMPUR

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**A STUDY OF THE PRODUCTION OF ENGLISH
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MALAYSIA**

NOHRA DINKHA RABIN

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Name of Candidate: **Nohra Dinkha Rabin**

Matric No: **TOA170018**

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A STUDY OF THE PRODUCTION OF ENGLISH RELATIVE CLAUSES BY L1 MALAY SPEAKERS IN MALAYSIA

ABSTRACT

This study focusses on Syntax. It aims to measure the syntactic knowledge of thirty (30) Malaysian first language (L1) adult Malay speakers in producing English Relative Clauses (henceforth, ERCs) through sentence combination task. The framework used to detect this was based on the Noun Phrase Accessibility Hierarchy (henceforth, NPAH) proposed by Keenan and Comrie (1977). Based on the categorization of the NPAH, there are six types of ERCs, these are: subject (SU), direct (DO), indirect object (IO), object of preposition (OPREP), genitive (GEN), and object of comparison (OCOMP). From the difficulty order (SU> DO> IO> OPREP> GEN> OCOMP) which was hypothesized by the NPAH, it is predicted that the SU type is the easiest and the OCOMP is the hardest. Based on the aim of the current study, two research questions were formulated. Firstly, which type of English relative clause, based on the NPAH, is the easiest and hardest for the Malaysian L1 Malay participants to produce, and secondly, what types of deviations, if they exist, are made by the Malaysian L1 Malay participants when producing English relative clauses. This study is quantitative-qualitative in nature. The quantitative aspect is the statistical analysis derived from the data results while the qualitative aspect refers to the data generated from 540 combined sentences through the sentence combination task which was the approach used to extract the data. Findings indicated that the easiest ERC type based on NPAH for the participants was the SU (percentage of correct sentences on SU=63%) and the hardest one was the OPREP (percentage of correct sentences on OPREP=27%). The reason for this could be attributed to the participants' L1 interference. This study also noted that of the four deviations types detected in the ERC sentences comprising incorrect relative pronouns selection (IRPS), non-adjacency (NA), omission of preposition (OP), and

passivization (Pssv.), the most common was IRPS. The reason behind this could also be attributed to the participants' L1 interference. The participants seemed to experience great difficulty in producing correct sentences on ERCs. The result showed that they are not fully aware of the formation of ERCs in which they made 241 correct sentences out of 540 total sentences on all the six ERC types. It is, thus, revealed that the participants are only (44.6%) syntactically knowledgeable of producing the structure of ERCs through the sentence combination task. On the other hand, they produced 299 incorrect sentences out of 540 total sentences for all the ERC types (percentage of incorrect sentences on all ERC types=55.4%). The main reason behind this may be, once more, attributed to the effect of their native language (Malay) which greatly interfered in their answers. This study is confined to looking at the productions of ERCs by Malaysian L1 Malay speakers only, thus, findings cannot be generalized to other Malaysian L1 speakers of Chinese or Tamil.

Keywords: English Relative Clauses, Malaysian L1 Malay speakers, Noun Phrase Accessibility Hierarchy (NPAH), Sentence Combination Task.

**KAJIAN PENGHASILAN KLAUSA RELATIF BAHASA INGGERIS OLEH
PENUTUR L1 BAHASA MELAYU DI MALAYSIA**

ABSTRAK

Kajian ini berfokus pada Sintaksis. Ia bertujuan untuk mengukur pengetahuan sintaksis tiga puluh (30) rakyat Malaysia dewasa penutur Bahasa Melayu sebagai bahasa pertama (L1) dalam menghasilkan Klausa Relatif Bahasa Inggeris (selanjutnya, ERCs) melalui tugas penggabungan ayat. Rangka kerja yang digunakan untuk mengesan penghasilan klausa ini adalah berdasarkan Hierarki Kebolehcapaian Frasa Nama (mulai sekarang, NPAH) yang dicadangkan oleh Keenan dan Comrie (1977). Berdasarkan pengkategorian NPAH, terdapat enam jenis ERC, yaitu: klausa relatif subjek (SU), objek klausa relatif objek (DO), klausa relatif objek tidak langsung (IO), objek klausa relatif preposisi (OPREP) klausa relatif genitive (GEN), dan objek perbandingan klausa relatif (OCOMP). Dari susunan kesukaran (SU > DO > IO > OPREP > GEN > OCOMP) yang dihipotesiskan oleh NPAH, diramalkan bahawa jenis SU adalah yang paling mudah dan OCOMP adalah yang paling sukar. Berdasarkan matlamat kajian semasa, dua soalan penyelidikan telah dirumuskan. Pertama, klausa relatif bahasa jenis, berdasarkan NPAH, adalah yang paling mudah dan paling sukar untuk peserta Melayu L1 Malaysia untuk menghasilkan, dan kedua, jenis sisihan, jika wujud, dibuat oleh peserta Melayu L1 Malaysia ketika menghasilkan Klausa relatif bahasa Inggeris. Kajian ini bersifat kuantitatif-kualitatif. Aspek kuantitatif adalah analisis statistik yang diperolehi dari hasil data manakala aspek kualitatif merujuk kepada data yang dihasilkan dari 540 ayat gabungan melalui tugas kombinasi ayat yang merupakan pendekatan yang digunakan untuk mengekstrak data. Dapatan menunjukkan bahawa jenis ERC yang paling mudah berdasarkan NPAH bagi peserta adalah yang SU (peratusan ayat yang betul bagi SU = 63%) dan yang paling sukar adalah yang OPREP (peratusan ayat yang betul bagi OPREP = 27%). Sebab bagi hal ini boleh dikaitkan

dengan interferens L1 peserta. Kajian ini juga menyatakan bahawa empat jenis sisihan yang dikesan dalam ayat ERC terdiri daripada pemilihan kata ganti relatif yang salah, tidak berkaitan, penghilangan kata depan, dan pembuatan ayat pasif; yang paling biasa adalah pemilihan kata ganti relatif yang salah. Sebab bagi hal ini juga boleh dikaitkan dengan interferens L1 peserta. Para peserta seolah-olah mengalami kesukaran besar dalam menghasilkan ayat-ayat yang betul mengenai ERCs. Hasilnya menunjukkan bahawa mereka tidak menyedari sepenuhnya pembentukan ERC di mana mereka membuat 241 ayat yang betul daripada 540 ayat dalam semua enam jenis ERC. Oleh itu, ia mendedahkan bahawa peserta hanya (44.6%) mempunyai pengetahuan sintaksis untuk menghasilkan struktur klausa relatif bahasa Inggeris melalui tugas kombinasi ayat. Sebaliknya, mereka menghasilkan 299 ayat yang tidak betul daripada 540 ayat untuk semua jenis ERC (peratusan ayat yang salah pada semua jenis ERC = 55.4%). Sebab utama di sebalik ini, sekali lagi, dikaitkan dengan kesan bahasa ibunda mereka (Melayu) yang sangat mengganggu jawapan mereka. Kajian ini adalah terhad untuk melihat penghasilan ERC oleh penutur Bahasa Melayu L1 rakyat Malaysia sahaja, oleh itu, dapatan tidak dapat digeneralisasikan kepada penutur bahasa pertama Cina atau Tamil L1 Malaysia yang lain.

Kata kunci: Klausa Bahasa Inggeris, penutur bahasa Melayu L1 rakyat Malaysia, Hierarki Kebolehcapaian Frasa Nama (NPAH), Tugasan Penggabungan Ayat.

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DEDICATION

To

My

Beloved Parents

Dear Siblings and Relatives

My Friends and Everyone Who Supported Me

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LIST OF SYMBOLS AND ABBREVIATIONS

ANOVA	:	Analysis of variance
DO	:	Direct Object
EFL	:	English as a Foreign Language
ESL	:	English as a Second Language
ERC	:	English relative clause
ERCs	:	English relative clauses
ERP	:	English relative pronoun
FL	:	Foreign Language
FLA	:	First Language Acquisition
GEN	:	Genitive
I	:	Co-index
IO	:	Indirect Object
IRPS	:	Incorrect Relative Pronouns Selection
L1	:	First Language
L2	:	Second Language
MC	:	Matrix Clause
MRC	:	Malay relative clause
NA	:	Non-adjacency
NP	:	Noun phrase
NPAH	:	Noun Phrase Accessibility Hierarchy
NPs	:	Noun phrases
OCOMP	:	Object of Comparison
OO	:	RC that modifies the object of the matrix clause and has an object gap
OP	:	Omission of Preposition

OPREP	:	Object of Preposition
OS	:	RC that modifies the object of the matrix clause and has a subject gap
PDH	:	Perceptual Difficulty Hypothesis
PFH	:	Parallel Function Hypothesis
PhD	:	Doctor of Philosophy
PROG	:	Progressive
Pssv.	:	Passivization
RC	:	Relative clause
RCs	:	Relative clauses
REL	:	Relativizer
RP	:	Relative pronoun
RPs	:	Relative pronouns
RQ1	:	First research question
RQ2	:	Second research question
S	:	Sentential note
SLA	:	Second Language Acquisition
SO	:	RC that modifies the subject of the matrix clause and has an object gap
SOHH	:	Subject- Object Hierarchy Hypothesis
SS	:	RC that modifies the subject of the matrix clause and has a subject gap
SU	:	Subject
T	:	Wh-trace (relativized constituent)
Trans	:	Translation
VP	:	Verb phrase
>	:	Easier than
∅	:	Zero relative pronoun
=	:	As difficult as

[] : Phrasal boundary

— : The constituent that is relativized or gapped in the ERC

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CHAPTER 1: INTRODUCTION

1.1 Background to the Study

This study investigates the production of English Relative Clauses (ERCs) among Malaysian first language (henceforth, L1) Malay speakers. According to Al-Zaghir (2014), the ERC is a kind of subordinate (dependent) clause that is embedded within the matrix clause (MC). The ERC is used to define the *head noun* of a MC which precedes it (ERC) and it usually begins with an English relative pronoun (ERP), such as *who* and *that* (Al-Zaghir, 2014). An example is "[MCThe claim [RC which was suggested] was not true as it had conflicting evidences given by the witnesses]" where the symbol (), which is given as an illustration, stands for the constituent that is gapped (missed or relativized) inside the ERC. This constituent represents one of the six types of the ERC, such as subject ERC and object of comparison ERC, based on the categorization of the Noun Phrase Accessibility Hierarchy (NPAH) as explained in detail in section (2.3.1). This gapped constituent must be identical in form and must be referenced to the head noun (Abdolmanafi & Rahmani, 2012), which in this case, is the underlined constituent (claim) in the MC.

The symbol () is also referred to as a *type of gap* or *position of the gap* inside the Relative clause (RC) in a study by Biber, Conrad, and Leech (2002). Furthermore, a RC is called an adjectival clause by some grammarians and writers because it functions as an adjective in principle (Yas, 2016). That is, it provides more details about a head noun and must be attached to a MC in order to give a complete thought both semantically and syntactically.

It is important for learners to know how to form a RC, especially for learners of English as a Second Language (ESL) and English as a Foreign Language (EFL) frames because these learners need to know how to construct such sentences for a myriad of writing tasks. It becomes even more necessary as the learners' level of education moves

from one level to a higher level. Writing skills sometimes become the main focus for academia to determine how good these learners are in their language proficiency, such as through their written examinations or assignments.

Different levels of written tasks require students to be competent in different levels of their writing competence, such as the ability to use complex sentences with embedded clauses. In this regard, the Relative clause of the English language is of concern. Studies have found the construction to be difficult (Hawkins & Chan, 1997; Eng & Heng, 2005; Yi, 2017). Despite what ESL or EFL learners think, the ERC plays an important role in conversations, fictions, news, academic prose, and academic journal paper writing (Cho & Lee, 2016; Biber et al., 2002).

1.1.1 Relativization in English

Abdolmanafi and Rahmani (2012) described English relativization as a sentence formation that goes through the process of embedment where one sentence is embedded into another when the two sentences have a co-referential noun phrase or head noun. Through the process of embedding, it is possible to create an enormous number of well-formed sentences from a finite set of words; therefore, it becomes possible to write things which have never been written before (Kennedy, 2003).

In order to make an English relative clause (ERC) which is attached to a head noun within a matrix clause (MC), a gapped constituent in the ERC is usually represented by a relative pronoun (RP) (Borjars & Burridge, 2010). For this process to happen, the head noun must be the same in the two sentences, as was mentioned earlier.

Example:

A1. I wrote the assignment. (Simple sentence)

A2. The assignment discusses the theories in Syntax. (Simple sentence)

In A3, the structure of the ERC is made by removing the noun phrase (determiner phrase) comprising the determiner (the) and the head noun underlined (assignment) in

A2, and by choosing a suitable ERP (such as, *which*) based on the syntactic and semantic mixture. Then, the ERC structure is embedded within A1, as shown in the square brackets in A3:

A3. I wrote the assignment [which _ discusses the theories in Syntax].

The underlined constituent (assignment) is the head noun which is being modified by the ERC in the MC (A3). The ERP (which) is corresponding to the head noun positioned in the MC, i.e. replacing *assignment*. The relativized constituent, symbolized as (_), that is following the ERP (which) is taking place in the position of the subject (SU), i.e. the type of gap inside the ERC is subject. The underlying meaning of the ERC is that "The assignment discusses the theories in Syntax".

1.1.2 Classification of English Relative Clauses (ERCs)

According to Lock (1996), relative clauses (RCs) in English are functionally classified as restrictive or non-restrictive clauses. Biber et al. (2002) claimed that "restrictive relative clauses are much more common than non-restrictive clauses" (p.280). The restrictive ERC identifies the reference of the head noun intended and provides the essential information about it (Biber et al., 2002). For example, "The car [that he stole _] made everybody very sad". The function of the restrictive relative clause in this example is crucial to understanding the head noun (car). It highlights the specific "car" which was being pointed out to, i.e. the stolen car and not just any other car. Therefore, the meaning of the remaining sentence becomes ambiguous to the listener or reader if the restrictive ERC is omitted from the sentence (Allen, 2009).

On the other hand, a non-restrictive ERC provides additional information, yet possibly interesting, about the head noun that has already been specified (Kennedy, 2003). Unlike restrictive relative clause, non-restrictive RC in English is preceded and followed by a pause in spoken language and by a comma in written language (Tse &

Hyland, 2010). Yas (2016) stated that “without a comma in writing (one in front of the clause, one at the back of it) a great difference occurs. This difference is not in form only, but it is also in the meaning” (p.24). For example, "Mr. George, [who _ lives next door,] said that the war will end very soon". The function of the non-restrictive relative clause in this sentence is modifying the head noun (Mr. George) with unnecessary information which is possibly interesting. The primary meaning of the remaining sentence, thus, stays understandable if the non-restrictive ERC is omitted from the sentence (Allen, 2009), because it is providing extra information about the head noun (Mr. George) whose reference is thought to be already identified to the listener or reader.

1.1.3 Malay Relative Clause (MRC)

There is some difference in syntactic structures between the English language and the Malay language (see Table 1.1). Keenan and Comrie (1977) and Percillier (2016) explained that a relative clause (RC) in Malay is classified only into the restrictive RC. It shows up directly after the head noun (post-nominal) as far as the position of the RC with respect to the head noun is concerned. Unlike the English relative clause (ERC), the MRC is only exclusive to the relative pronoun (RP) *yang* which is equivalent to the RPs - *which*, *who*, and *that* in English (Eng, 2008; Percillier, 2016; Sneddon, 1996).

An example of the MRC, borrowed from Keenan and Comrie (1977, p. 71), is shown below:

1. *Ali bonuh ayam [yang Aminah sedang memakan _].*

Gloss: Ali kill chicken REL Aminah PROG eat.

Trans: 'Ali killed the chicken [that Aminah is eating _].'

Table 1.1: Comparisons between English and Malay Relative Clauses

S	English Relative Clause (ERC)	Malay Relative Clause (MRC)
1	Post-nominal	Post-nominal
2	Restrictive/ Non-Restrictive	Restrictive
3	Five RPs: Who, Which, Whom, Whose, & That	One RP: Yang
4	Six types of gaps based on the NPAH: SU, DO, IO, OPREP, GEN, & OCOMP (see section 2.3.1)	Two types of gaps based on the NPAH: SU & DO (see section 4.2)

1.2 Problem Statement

Language learning is a commitment, and not every learner who learns a language becomes competent, even after a number of years of learning. This is even more discernible in many countries, regardless of geographical locations, where every learner studying in a higher institution of learning, needs to acquire some level of competence in the English language so as to be competitive globally. These students are required to be competent in their one of the skills, writing, so that they can participate in the global demands for employability. At some level of their education, these learners have to show proof of their acquired skills, whether through some written examinations, reports or assignments.

Malaysia was once colonized by Great Britain, and it once used to have Malaysian speakers who were very competent in the English language. However, the scenario today is completely different. Many Malaysian students, including those studying in higher institutions of learning like public universities, have problems with the English language, particularly in sentence construction (Azman, 2016). This has affected the employability of the graduates from public universities. It was further noted that such an issue has been more prevalent among the Malay students due to language attitudes and the lack of interest (Thiagarajan, 2018).

However, the English language is not an easy language to learn; it has many peculiarities that are very confusing and illogical to other L1 learners. For example, its syntax, its pronunciations, its tenses, its idioms and its directness, is making this culturally disorienting. It becomes even more challenging for the learners when it comes to writing because there are so many ways of constructing a sentence in the English language. Language learners have to experience a lot of difficulties just to process the language structures of English in order to compose a prose that can be understood by others. Many learners' L1 do not have such structures (Izumi, 2003).

In looking at the English syntax, the relative clause (RC) is a syntactically complex structure. RC formations and constructions have been investigated (Wagers, Borja, & Chung, 2018) due to its distinctive syntactic features and its significant functions in written and spoken communications.

The RC is considered as one of the ultimate complex domains to English as a Second Language (ESL) and English as a Foreign Language (EFL) learners because of the syntactic differences between their native language and English language (Hawkins & Chan, 1997). Such differences as, the place of the RC in regard to the head noun within the matrix clause (MC), the usage of presumptive pronouns, the animate and in-animate head nouns, the restrictive or non-restrictive RC, and so on (Marefat & Rahmany, 2009).

The RC is considered a universal phenomenon since its structure has the ability to appear in all languages, although not in the same form (Abdolmanafi & Rahmani, 2012). One of the aspects that can be problematic for ESL and EFL learners is the position of the RC with respect to the head noun. According to Gass and Selinker (2008), in most European languages such as, English, French, and German, as well as other languages like, Persian and Arabic, the RC appears after the head noun (post-nominal). However, in some other languages such as, Chinese, Korean, and Japanese,

the RC appears before the head noun (pre-nominal) in the MC (Ozeki & Shirai, 2007). Therefore, the native speakers of those languages are required to realize the difference of this essential grammatical pattern. They may also need extra exercise in order for them to comfortably use the RC in English.

Alotaibi (2016), Cho and Lee (2016), Doughty (1991), Gao (2014), and Izumi (2003) noted that the RC has an important function in the English language, particularly in its role for effective writing. They investigated the use of English relative clauses (ERCs) among learners of Arab, Persian, Polish, French, Portuguese, Turkish, Thai, Korean, Chinese, and Japanese. To date, studies linking the use of ERC with Malaysian adult L1 Malay speakers have not been actively conducted. This study, thus, aims to bridge that gap by stressing on ERC and adult L1 Malay participants.

1.3 Research Objectives

Based on the aim of this study, the objectives are thus outlined as follows:

- To highlight which type of English relative clause, based on the NPAH, is the easiest and hardest for the Malaysian L1 Malay participants to produce.
- To identify the types of deviations, if they exist, made by the Malaysian L1 Malay participants when producing English relative clauses.

1.4 Research Questions

From the objectives outlined, two research questions were formulated:

RQ1: Which type of English relative clause, based on the NPAH, is the easiest and hardest for the Malaysian L1 Malay participants to produce?

RQ2: What types of deviations, if they exist, are made by the Malaysian L1 Malay participants when producing English relative clauses?

1.5 Scope of Study

This study is confined to only Malaysian L1 Malay speakers who were studying in the University of Malaya. The sample was restricted to 30 participants; hence findings may not be generalized to all L1 speakers although it is possible to assume that the findings may be representative of the L1 Malay speakers in this country. Therefore, the present study was neither concerned with speakers of Malay of other nationalities such as Singaporeans and Indonesians, nor Malaysians of other ethnicities such as Malaysian Chinese and Malaysian Indians.

1.6 Definition of Terms

This section defines the basic terms mentioned in this study:

1.6.1 Syntax

Chomsky (2002) defined syntax, which is a branch of linguistics, as the scientific study of the grammatical structure of sentences in a given language. It deals with syntactic rules and principles that explain the way in which words are combined to form larger units, like phrases, clauses, and sentences (Fromkin, Rodman, & Hyams, 2014).

1.6.2 Sentence

A sentence can be syntactically defined as the largest syntactic unit which grammatical rules can apply on (Nordquist, 2019). Radford (2009) stated that “A sentence is built up of a series of constituents (syntactic or grammatical units), each of which belongs to a specific grammatical category (such as, noun or verb) and serves a specific grammatical function (such as, subject or predicate)” (p.1). Subject-verb-object (SVO) is the most commonly used order of words in English sentences (Nordquist, 2019).

1.6.3 Matrix Clause (MC)

Diessel (2004) stated that a matrix clause (MC) is a clause which a dependent (subordinate) clause, such as relative clause (RC), is embedded to as a constituent to modify it and contribute to discourse cohesion. When a MC can syntactically stand-alone, by having a subject and a verb, and when it is not part of any larger clause, it can be referred to as a sentence (Borjars & Burridge, 2010).

1.6.4 Subordinate Clause

According to Carnie (2013), a subordinate clause, also known as an embedded or dependent clause, is a group of words which includes a subject and a verb; however, it cannot stand alone as a sentence. A subordinate clause must be embedded within a matrix clause in order to express a complete idea (Haegeman, 2006). Kennedy (2003) claimed that a subordinate clause is of three types; relative (adjectival) clause, adverbial clause, and noun (nominal) clause. All of the three types start with a word (such as, who, where, or whatever) which indicates what follows is a subordinate clause.

Examples:

2. My mother saw a child who was crying in the market. (Relative Clause)
3. I visited the place where my parents used to live in. (Adverbial Clause)
4. She buys whatever she needs from the mall. (Noun Clause)

1.6.5 Constituent

Carnie (2013) defined a constituent as “a group of words that function together as a unit” (p.73). He also stated that “constituents don’t float out in space. Instead, they are embedded one inside another to form larger and larger constituents” (Carnie, 2013, p.73). In English grammar, it is possible for constituents to be words, phrases, or clauses in which they can be combined together to form a sentence (Halliday & Mathiessen,

2014). In the following sentence which consists of three constituents, each constituent is enclosed in square brackets:

Example:

5. [John]₁ [plays [football]₂]₃.

1.6.6 Noun Phrase (Determiner Phrase)

According to Fromkin et al. (2014), a noun phrase (NP) is a phrase which has a noun or a pronoun as its head. The head of a noun phrase can occur along with a determiner (like *the*, *this*, or *a*) (Chomsky, 2002). For example, "the professor", is a noun phrase comprising the determiner *the* along with the head noun *professor*.

1.6.7 Determiner

Radford (2009) defined a determiner as a "word like *the/that* which is used to modify a noun, but has no descriptive content of its own. Most determiners can be used either prenominally (i.e. in front of a noun they modify) or pronominally (i.e. on their own)" (p.382).

Example:

6. *The* man who is standing at the corner looks very sad.

1.7 Summary of the Chapter

To sum up, this chapter gives a background to the concept being investigated in the current study which is sectioned into relativization in English, classification of English relative clauses (ERCs), and Malay relative clause (MRC). This chapter also presents the problem statement of the study, research objectives, research questions, scope of study, and it is concluded by defining some basic terms mentioned in the study such as

syntax, sentence, matrix clause (MC), subordinate clause, constituent, noun phrase (determiner phrase), and determiner.

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CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter presents the way relative clause (RC) in English is dealt with as post-modification. It also gives a detailed explanation of the words which introduce the English relative clauses (ERCs), i.e. relative pronouns, as well as the way these pronouns are used with respect to these clauses. In addition, this chapter presents the relevant literature that concerns the current topic of study. It outlines the various hypotheses, the methodological and empirical contributions, regarding the production and acquisition of ERCs, made by previous studies on learners of English as the first language (L1), second language (L2), and foreign language (FL).

2.2 Formation of English Relative Clauses (ERCs)

Siemund (2013) stated that the relative clause (RC) in English is based on three essential elements that form the clause: the *head noun*, the *relative pronoun* (RP), and the *relativized* or *gaped constituent* (*type of gap*) inside the English relative clause (ERC). The head noun is the noun which is positioned inside the matrix clause (MC) and it is the noun being identified by the ERC (Fromkin et al., 2014). In English, the head noun always precedes the RC (Gass & Selinker, 2008). According to Kennedy (2003), the relativizer (like *who* or *that*) is the RP inserted at the beginning of the ERC and it refers to the same person (animate) or thing (inanimate) as the head noun. It marks that the following is a RC and it replaces the co-referential head noun within the embedded clause (Kennedy, 2003). Finally, the relativized constituent is the position of the gaped or missing constituent inside the ERC (Yas, 2016). This missing constituent refers to one of the six types of ERC (such as, subject and direct object ERCs, see section 2.3.1) based on the Noun Phrase Accessibility Hierarchy (NPAH) and it is semantically identical to the head noun.

Example:

7. John [whom I gave the papers to _ yesterday afternoon] is from London.

The head noun which is followed by an ERC in example (7) is the word "John". "Whom" is the RP which corresponds to the head noun positioned in the MC, i.e. replacing "John". The relativized constituent (the type of gap symbolized as "_") that is following the preposition "to" is taking place in the position of the indirect object (IO). The underlying meaning of the ERC is that "I gave the papers to [John_(IO)]". So, the ERC in example (7) is modifying the head noun "John".

2.2.1 The Uses of Relative Pronouns in Restrictive and Non-restrictive English Relative Clauses

The English relative pronoun (ERP) is the word which the English relative clause (ERC) begins with and it refers to the same person (animate) or thing (inanimate) as the head noun in the matrix clause (MC) (Yas, 2016). According to Kennedy (2003), there are basically five relative pronouns (RPs) in English (see Table 2.1): *who*, *whom*, *which*, *whose*, and *that*. Among these, the three pronouns (*who*, *which*, and *that*) are used most frequently in English (Abdolmanafi & Rahmani, 2012). Added to that, the ERP can usually be deleted, as claimed by Greenbaum and Nelson (2009), resulting to a *zero relative pronoun* (\emptyset) which is used in specific circumstances in English.

The correct selection of the RPs in English is influenced by number of factors, such as the types of gaps or gap positions (subjective, objective, and genitive cases, as explained in detail in section 2.3.1.1), restrictive versus non-restrictive clauses, and animate versus inanimate head nouns (Biber et al., 2002), as illustrated in Table 2.1:

Table 2.1: The Relative Pronouns in English

Function	Restrictive		Non-Restrictive	
	Animate Head Noun	Inanimate Head Noun	Animate Head Noun	Inanimate Head Noun
Subjective Gap Case	Who, That	Which, That	Who	Which
Objective Gap Cases	Who(m), That	Which, That, \emptyset	Who(m)	Which
Genitive Gap (Possessive) Case	Whose	Whose	Whose	Whose

2.2.1.1 *Who* and *Which* Relative Pronouns

Of the five standard relative pronouns (RPs) (*who*, *whom*, *which*, *whose*, and *that*) as well as the zero RP, "*who* and *which*" are most clearly differentiable in English relative clauses (ERCs) (Celce-Murcia, Larsen-Freeman, & Williams, 1999). The RP "*who*" is solely used after animate (human) head noun in the restrictive and non-restrictive ERCs, as illustrated in examples (8) and (9) successively. On the contrary, the RP "*which*" that is syntactical with a broad range of gap positions comes exclusively after inanimate (non-human) head noun in the restrictive and non-restrictive ERCs, as illustrated in examples (10) and (11) successively.

Examples:

8. Catherine's sister-in-law [who _ had an accident last month] talked secretly to the police about her case.
9. Everyone shockingly looked at my brother, [who _ was still standing in the queue].
10. The large bedroom mirror [which I bought _ last week] is already broken.
11. My father's company, [which _ makes mountain bikes], will move soon from Berlin to Munich due to its new policy.

2.2.1.2 *That* and *Zero* Relative Pronouns

The English relative clause (ERC) comprising "*that*" is so adoptable in that it can be used with both animate and inanimate head nouns. The relative pronoun (RP) "*that*", in fact, is considered as common as "*who*" in that it can be flexibly used with animate head noun (Biber et al., 2002). However, "*that*" RP occurs exclusively with English restrictive RC.

Examples:

12. The handsome and middle aged man [that she jogged with _ in the park yesterday morning] is a very organized person.
13. The plane [that _ took off with my father inside] was obliged to land in Istanbul airport at 12 midnight due to problems with the engine.

On the other hand, a RP can often be omitted (zero relative pronoun) by writers and speakers of English, as previously mentioned. However, the omission process of the RP can only occur with inanimate head nouns in restrictive RCs as shown in example (14). According to Greenbaum and Nelson (2009), the zero RP can be an alternative to totally avoid the selection of the basic five RPs as it is a preferable choice in both written and spoken languages.

Example:

14. The historical big castle [∅ my family used to live in _] was turned to a beautiful hotel in 1952.

2.2.1.3 *Whom*, *Who*, and *That* Relative Pronouns

Being only used with animate head nouns in restrictive and non-restrictive English relative clauses (ERCs) (see examples, 15-18), the selection between "*whom*" and "*who*"

is sharply distinguished (Biber et al., 2002). The relative pronoun (RP) "*who*" is usually used with subjective gap cases and also can be usually used with objective gap cases while "*whom*" is only used with objective gap cases (as explained in detail in section 2.3.1.1).

Examples:

- **Animate head noun with restrictive ERC**

15. The student [whom William studied harder than _] failed in the exam twice this year.

16. I hardly interviewed the woman [who _ got the job at the dean's office].

- **Animate head noun with non-restrictive ERC**

17. The four witnesses, [whom the police interviewed _], gave contradictory evidences about the awful crime.

18. The grass machine scared our neighbor, [who _ was standing by the door talking to his wife].

Regarding "*that*", it is generally an all-purpose RP in English restrictive RCs (Kennedy, 2003). It takes place with animate and inanimate head nouns as well as with subjective and objective gap cases. "*That*" can be a substitute RP for "*whom*" with animate head nouns and objective gap cases. However, "*who*" and "*whom*" are very strongly preferred in non-restrictive RCs rather than "*that*" (Kennedy, 2003).

Examples:

- ***That* with animate head noun in English restrictive RC**

19. The students [that _ study very hard] will not fail in my Mathematic class.

- ***That with inanimate head noun in English restrictive RC***

20. My daughter loves the paintings [that _ are hung in the RWG lobby in Genting Highlands because she thinks they are so beautiful].

2.2.1.4 Whose Relative Pronoun

The English relative pronoun (ERP) "*whose*" is simply used within relative clauses (RCs) as it solely marks the genitive (possessive) gap case (Yas, 2016). It is used with animate and inanimate head nouns in restrictive and non-restrictive English relative clauses (ERCs):

Examples:

- ***Whose with animate and inanimate head nouns in restrictive RCs***

21. The woman [whose _ son won the tournament three days ago] was a baseball coach at the United States women's national baseball team.

22. The husky [whose _ owner let it run loose] caused an accident which made everybody frightened yesterday on the street.

- ***Whose with animate and inanimate head nouns in non-restrictive RCs***

23. I met a man named William, [whose _ wife works in Sydney].

24. I exercise at the gym, [whose _ fitness coach was a gymnastics teacher at the Gim Sports club in 2016].

2.3 Categorizations and Hypotheses about Relative Clauses

There has been a wide-range of studies conducted in language learning which have focused on first language acquisition (FLA), second language acquisition (SLA), and syntax. In particular, these studies (Andrews, 2007; Doughty, 1991; Gass, 1979; Izumi, 2003; Keenan & Hawkins, 1987; O'Grady, 1997; Schumann, 1980) have investigated the acquisition and production of English relative clauses (ERCs). In addition, they have

used various hypotheses or frameworks of ERC and categorizations of its types such as these by Hamilton (1994) and Kuno (1974). Among these, the categorizations of the ERC types indicated by Sheldon's (1974) Parallel Function Hypothesis (henceforth, PFH) as well as Keenan and Comrie's (1977) Noun Phrase Accessibility Hierarchy (NPAH) have been most widely used.

2.3.1 Categorization of Relative Clauses Based on Keenan and Comrie's (1977) Noun Phrase Accessibility Hierarchy (NPAH)

After conducting a detailed comparative investigation of the relative clause (RC) structures on approximately fifty languages, Keenan and Comrie (1977) posited the difficulty order of the types of RCs. They mentioned that subject (SU) RC type, i.e. SU as the type of gap inside the RC, is the easiest to produce whereas the object of comparison (OCOMP), i.e. OCOMP as the type of gap inside the RC, is the hardest. The order is shown as: SU > DO > IO > OPREP > GEN > OCOMP, where ">" means "easier than".

These six types of RC hypothesized by the Noun Phrase Accessibility Hierarchy (NPAH) were categorized on the basis of the syntactic function of the gap only, i.e. the constituent which is gapped or relativized in the RC (the position of the missing constituent in the RC) (Diessel & Tomasello, 2005). The gap, thus, syntactically functions as one of the six RC types noted on the NPAH. In the NPAH, SU stands for "subject", DO for "direct object", IO for "indirect object", OPREP for "object of preposition", GEN for "genitive", and OCOMP for "object of comparison" as shown in Table 2.2.

Table 2.2 Categorization of ERC Types Based on Keenan & Comrie's (1977) Noun Phrase Accessibility Hierarchy (NPAH)

S	ERC Types	Examples
1	SU (Subject)	The <u>person</u> [who__ is driving the new version of Kia] is my brother-in-law.
2	DO (Direct Object)	That is the <u>girl</u> [who(m) I saw__ yesterday in the shopping mall].
3	IO (Indirect Object)	This is the <u>agent</u> [who(m) I gave the papers to__ early morning at the office].
4	OPREP (Object of Preposition)	I found the grey <u>key</u> [which I opened the door with__].
5	GEN (Genitive)	The <u>man</u> [whose__ brother died] is a professor at the university of Oxford.
6	OCOMP (Object of Comparison)	The foreign <u>student</u> [who(m) I am smarter than__] is John.

In particular, Keenan and Comrie (1977) hypothesized that SU exists in all languages and that if a language has an "X" RC type on the hierarchy then that language will also have all the other types of RC higher or to the left of "X" but not the types lower to "X". In other words, if OPREP is allowed in a language (SU> DO> IO> OPREP> GEN> OCOMP) then IO, DO, and SU types are also allowed but not GEN and OCOMP.

2.3.1.1 The Uses of English Relative Pronouns Based on the Types of Gaps

It is of crucial task to know the correct selection of a relative pronoun (RP) when forming an English relative clause (ERC). To some degree, the selection of the RP is based on structure features, such as the type of gap (the location of the relativized constituent) inside the ERC (Biber et al., 2002). A noun phrase or a constituent comprising a head noun can be substituted by a RP in the ERC and the RP can, thus, be functioned as one of the six types of ERC on the NPAH (Yas, 2016).

Example:

25. The dean [whom I am supposed to have a meeting with ___] is very ill because of a virus which is spread in the city nowadays.

In example (25) above, the RP "*whom*" is standing for the object of preposition (OPREP) of the preposition "*with*". The basic meaning of the ERC, which is modifying the head noun "*dean*", is that "I have a meeting with the [dean]".

The RPs "*who*", "*that*", and "*which*" are considered easier and more adaptable in their gap positions (Biber et al., 2002). They are, thus, the most usable forms among the other RPs. These three pronouns most frequently occur with the subjective case (SU) (Celce-Murcia et al., 1999).

Examples:

26. She likes the bearded man [who ___ lives next door with his father]. (SU)
27. The Semi-detached house [that ___ is located in London] belongs to my grandfather. (SU)
28. Sally sold the dog [which ___ ruined my mother's house garden]. (SU)

"*That*", "*who*", and "*which*" RPs can also appear in the objective cases (Kennedy, 2003), such as direct object (DO), indirect object (IO), object of preposition (OPREP), and object of comparison (OCOMP). As illustration, the following examples are given for each of these ERC types:

Examples:

- **Direct object (DO)**

29. He bought the red car [that his wife drove ___ in the company].

30. The English syntax professor, [who I met ___ in the conference], lives in London.

31. She excitedly started to read the novel, [which she likes ___].

- **Indirect object (IO)**

32. The clever Chinese girl [that my son sent the song to ___] is my second year student.

33. The professional musician [who I gave the honorary award to ___] is Australian.

34. The company [which my sister wrote a letter to ___] is very famous.

- **Object of preposition (OPREP)**

35. Her pen, [that she is currently writing with ___] was a gift from her father.

36. The professor [who I am talking about ___] was my PhD supervisor at Harvard University.

37. She passed the biology exam [which she prepared for ___ very hard in the past three days].

- **Object of comparison (OCOMP)**

38. The Jamaican athlete [that I couldn't run faster than ___] won the race and set a new world record.

39. My brother [who I am more patient than ___] had a fight with the club owner last night.

40. I know the very expensive hotel [which Pullman is cheaper than ___].

On the contrary, the other RPs (*whom* and *whose*) which are less frequently used in the ERCs (Biber et al., 2002) are limited to specific types of gaps. In contrast to *who*, *that*, and *which*, the RP "*whom*" is restricted to the objective gap cases (DO, IO, OPREP, OCOMP) only while "*whose*" is restricted to the genitive (GEN) case only.

Examples:

- **Objective cases**

41. The high school student [whom you have taught ___ online] got an A. (DO)
42. I talked to the troublemaker boy [whom my son gave the ball to ___]. (IO)
43. Jennifer, [whom my daughter plays Tennis with ___], was injured badly and was taken to the nearest hospital. (OPREP)
44. Cathy [whom Jack is more experienced than ___] didn't get the job at the car company. (OCOMP)

- **Genitive/possessive case**

45. He had complained to the woman [whose ___ dog bit him in the leg and made it bleed].

Regarding the zero relative pronoun, it is used only with the objective cases in ERCs (Yas, 2016). That is, it cannot be applied on the subjective and genitive cases. The zero relative pronoun is represented as "∅" in the following examples:

- **Objective cases**

46. The instrument [∅ she played ___ in the theatre this evening] was a gift from her beloved mother. (DO)
47. The song [∅ he is listening to ___ these days] is in Russian language. (IO)
48. This is the chance [∅ you were waiting for ___ eagerly since your graduation from university]. (OPREP)
49. The animal [∅ my dog is lazier than ___] won the trophy. (OCOMP)

- **Subjective case**

50. *The lazy employee [∅ ___ was fired yesterday] is jack's brother.

- **Genitive/possessive case**

51. *The old man [Ø house was sold] was my high school teacher.

2.3.2 Categorization of Relative Clauses Based on Sheldon's (1974) Parallel Function Hypothesis (PFH)

On the other hand, Sheldon (1974) had sentences with relative clauses (RCs) into four types (see Table 2.3): SS, SO, OS, and OO. She hypothesized that, “In a complex sentence, if co-referential noun phrases (NPs) have the same grammatical function in their respective clauses, then that sentence will be easier to process than one in which the co-referential NPs have different grammatical functions” (Sheldon, 1974, p.3). Thus, Sheldon (1974) claimed that parallel functions RC sentences (SS and OO) are easier than non-parallel functions RC sentences (SO and OS).

Unlike the classification of the Noun Phrase Accessibility Hierarchy (NPAH), these four types noted on Sheldon's (1974) Parallel Function Hypothesis (PFH), were categorized on the basis of two form features: a), the syntactic function (subject or object) of the head noun in the matrix clause (MC), and b) the syntactic function (subject or object) of the gap inside the RC (Diessel & Tomasello, 2005; Yas, 2016).

According to Sheldon (1974), SS refers to a RC type which modifies the subject of the MC and contains a subject gap. The SO is a RC which modifies the subject of the MC and has an object gap. The OS is a RC that modifies the object of the MC and has a subject gap while the OO is a RC which modifies the object of the MC and consists of an object gap. Even if the head noun and gap may provide any syntactic function, the literature on the acquisition of RCs has largely focused on these four specific types of RCs classified by the PFH (Diessael & Tomasello, 2005). As illustration, Table 2.3 is provided:

Table 2.3: Categorization of ERC Types Based on Sheldon's (1974) Parallel Function Hypothesis (PFH)

S	MC's Head Noun (underlined constituent)	Relativized Constituent or Type of Gap (_)	Sentence Label
1	Subject	Subject	SS (Parallel Function)
	E.g.: The <u>person</u> [who_ broke my car's window] is my neighbor's brother.		
2	Subject	Object	SO (Non-Parallel Function)
	E.g.: The <u>guy</u> [who(m) she likes_] drives very fast on the highways.		
3	Object	Subject	OS (Non-Parallel Function)
	E.g.: I saw the very young <u>girl</u> [who_ works till midnight in my office].		
4	Object	Object	OO (Parallel Function)
	E.g.: I love the hard-working <u>employee</u> [who(m) you mentioned_ at the restaurant].		

2.3.3 Other Hypotheses about Relative Clauses

Two other hypotheses which received less attention than Noun Phrase Accessibility Hierarchy (NPAH) in the literature of relative clauses (RCs) acquisition were based on different theoretical grounds (Abdolmanafi & Rahmani, 2012; Izumi, 2003). Kuno's (1974) Perceptual Difficulty Hypothesis (henceforth, PDH) and Hamilton's (1994) Subject- Object Hierarchy Hypothesis (henceforth, SOHH) made various predictions on the difficulty order of different RC sentence types.

The PDH is based on the cognitive factors of the human memory system (Kuno, 1974). As a result of short term memory limitations, Kuno's (1974) PDH claimed that a sentence with center-embedding construction is more cognitively difficult to process than a sentence with right-embedding construction. The reason behind this is that the center-embedding construction intervenes the processing of the matrix clause (MC) with the RC while the right-embedding does not (Kuno, 1974).

Examples for center-embedding (as in, 52) and right-embedding (as in, 53), borrowed from Kuno (1974, p. 119), are shown below:

52. The cheese [that the rat [that the cat chased] ate] was rotten.

53. The cat chased the rat [that ate the cheese [that was rotten]].

In sentence (52), "the cat chased" is center-embedded in the clause "the rat... ate", which, in succession, is center-embedded in the MC (Kuno, 1974). In sentence (53), the RC "that was rotten" is right-embedded in "that ate the cheese", which, in succession, is right-embedded in the MC (Kuno, 1974). Therefore, sentence (53) is hypothesized to be more comprehensible than sentence (52) which indicates that center-embedding construction decreases the comprehensibility of the sentence while the right-embedding construction increases it (Kuno, 1974).

Despite the fact that Kuno's (1974) PDH had not precisely focused on the difficulty order of the RC types, the PDH predicted that, ignoring the syntactic function of the gap inside the RC, RC sentence types embedded to the object matrix position are easier than RC sentence types embedded to the subject matrix position (Abdolmanafi & Rahmani, 2012). That is, RCs embedded to the head noun functioning as an object in the MC are easier to process than RCs embedded to the head noun functioning as a subject in the MC. According to Gao (2014), the hierarchical order of RC types predicted by the PDH is shown as: OS = OO > SS = SO, where (=) means (as difficult as).

Hamilton's (1994) SOHH, which has been motivated by the PDH and NPAH, puts into consideration both the role of the head noun (subject or object) inside the MC and the role of the relativized constituent (type of gap) inside the RC. This hypothesis, which has less been addressed to in second language acquisition (SLA) literature, is based on the concept of processing discontinuity (Gao, 2014). This process occurs on

the basis of two situations. Firstly, the discontinuity occurs when the MC is interrupted by the RC, and secondly, the discontinuity occurs when the phrasal boundaries inside the RC disconnect the relative pronoun and the relativized constituent (Yas, 2016), see Table 2.4.

Concerning the difficulty order of RC types, the hierarchical order predicted by the SOHH is shown as: OS > OO = SS > SO (Gao, 2014). Since it contains only one discontinuity inside the RC, OS RC type is assumed by the SOHH to be the easiest among the four RC types. OO and SS RC types are in the same level of difficulty and more difficult than the OS because they both include two discontinuities, one made by the center-embedding in the MC and the other discontinuity inside the RC. SO RC is, thus, the hardest type in the hierarchical order as predicted by the SOHH. This type has three discontinuities, one discontinuity created by the center-embedding inside the MC and the other two in the RC.

Examples for the RC sentences types shown by the SOHH, borrowed from Izumi (2003, p. 290), are provided in Table 2.4. According to Hamilton (1994), "[]" means "phrasal boundary", "t" means "wh-trace (relativized constituent)", "i" means "co-index", "S" means "sentential note", and "VP" means "verb phrase" as shown in Table 2.4:

Table 2.4: English Relative Clause Sentences Types Based on Hamilton's (1994) Subject- Object Hierarchy Hypothesis (SOHH)

S	Sentences types	Examples
1	OS	They saw the little boy who _i [_S t _i entered the room with his dog].
2	OO	I bought the ancient clock _i that [_S the woman [_{VP} wanted t _i]].
3	SS	The man [who _i [_S t _i needed a job]] helped the girl in the office.
4	SO	The wild dog [that _i [_S the woman [_{VP} owns t _i]]] bit the cat.

2.4 Previous Studies

Following Keenan's and Comrie's (1977) categorization of the English relative clauses (ERCs), Gass (1979) tested the acquiring ability of ERC types of seventeen high intermediate and advanced second language (L2) learners with different mother tongues (Italian, Portuguese, Thai, Japanese, Korean, Arabic, Persian, French, and Chinese). Free composition, grammaticality judgment, and sentence joining tasks were administered to gather data from the grown up participants. Consequently, the results of the sentence joining task have shown substantiation for the Noun Phrase Accessibility Hierarchy (NPAH) (SU>GEN>DO>IO/OPREP>OCOMP), except for the genitive (GEN) type. Concerning both indirect object (IO) and object of preposition (OPREP) ERC types, Gass (1979) stated that they were joined because of their comparable structural behavior in English.

The sentence combination task was also used by Alotaibi (2016) to test 120 Arab Kuwaiti EFL advanced and intermediate adult learners. The results (total percentage of correct sentences= 60.4%) indicated that the participants were not fully aware of the ERC formation. The outcome also showed that the participants' answers adhered largely to the difficulty order of the NPAH: (SU> IO> DO> GEN> OPREP> OCOMP).

Following Sheldon's (1974) categorization of the ERCs, Ioup and Kruse (as cited in Cho & Lee, 2016) administered a grammatical judgment task on 87 participants with various mother tongues, such as Persian, Arabic, Chinese, Spanish, and Japanese. Their results showed that the participants' ERCs formation followed the order of (OS > OO > SO> SS). The result implied that sentences which involved the head noun functioning as the object (OS and OO) in the MC were easier than those which involved the head noun functioning as the subject (SO and SS) in the matrix clause (MC). Also, their study results (OS > OO > SO> SS) were on agreement with Kuno's (1974) hypothesis.

Therefore, OS and OO ERC sentences which did not have center-embedding were easier to access than SS and SO sentences which contained center-embedding, as the participants tended to avoid embedding.

Likewise, Schuman (1980) analyzed the capability of (7) multinational participants in the United States of America to explore how relative clauses (RCs) are frequently occurred. His study findings showed that OO and OS were more understandable to the participants than SS and SO. His findings, thus, asserted and were hand in hand with Kuno's (1974) hypothesis by predicting that the center-embedding is the most important prospect in the process of acquiring relative clauses.

Another study by Abdolmanafi and Rahmani (2012) on the production of English relative clauses, they investigated the learnability of ERCs by 78 Iranian learners of ESL. They also applied the sentence combination task which contained 20 sets of two sentences to assess the mastery level of the ERCs order, based on Sheldon's (1974) four classifications. Their results showed that the production frequency of the four types of sentences was 75.4% of OS form, 74.6% of SS, 72.3% of OO, and 69.9% of SO, following the order (OS>SS>OO>SO). The result implied that sentences which involved the gap functioning as the subject (OS and SS) inside the ERC were easier than those which involved the gap functioning as the object (OO and SO) in the ERC. Their results showed that the learners' answers adhered largely to Diessel and Tomasello's (2005) hypothesis (as explained in detail in section 4.2). Hence, it is deduced that the Iranian learners experienced less difficulty in producing the sentences whose gap functioned as the subject because it included only one constituent between the head noun and the gap. On the other hand, they had more difficulty in producing the sentences whose gap functioned as the object because it included more than one

constituent between the head noun and the gap. As illustration, examples below are provided:

Examples:

54. I saw the girl [who₍₁₎ came with us to the festival yesterday]. (One constituent)

55. The baby [whom₍₁₎ Gabriella₍₂₎ played₍₃₎ with₍₄₎] was adopted. (Four constituents between the head noun and the gap)

A very important and recent study which investigated the acquisition of ERCs was conducted by Izumi (2003). In his study, Izumi (2003) tested the predictions of the three main hypotheses: Keenan and Comrie's (1977) NPAH, Kuno's (1974) Perceptual Difficulty Hypothesis (PDH), and Hamilton's (1994) Subject- Object Hierarchy Hypothesis (SOHH). He examined total 61 participants' knowledge of the structure of ERCs, which were based on the three hypotheses, by using three different testing instruments. The three instruments used in Izumi's (2003) study were sentence combination test which was used to test the participants' productive knowledge, picture-cued sentence interpretation test which was used to test their comprehension knowledge, and grammaticality judgment test which was used to test their cognitive ability. His 61 participants were of various native languages: Turkish (1), Thai (4), Spanish (6), Portuguese (1), Polish (1), Persian (1), Korean (11), Kazah (1), Japanese (3), French (2), Chinese (6), and Arabic (24). Based on the outcome of his study, Izumi (2003) found that both the NPAH and the PDH complete each other as each hypothesis contributes in its own way to determine the processing or difficulty order of RC sentences. On the other hand, he found limited support for the SOHH in which his results were not in agreement with the hypothesis.

2.5 Summary of the Chapter

To sum up, there are three key components which form an English relative clause (ERC) and those are the head noun, the relative pronoun (RP), and the relativized constituent (gapped constituent) inside the ERC. The head noun is located inside the matrix clause (MC) and it can be either an animate or inanimate. The RP, which substitutes for the head noun in the RC, marks that what follows is a RC. The relativized constituent, that represents one of the six types of the ERC based on the NPAH, is the gapped constituent inside the RC.

In addition, previous studies had shown that there are different hypotheses and categorizations (such as; Parallel Function Hypothesis (PFH), Perceptual Difficulty Hypothesis (PDH), and Subject-Object Hierarchy Hypothesis (SOHH)) for examining the production of ERCs in second language acquisition (SLA). However, as was previously mentioned, the one that is most widely used is the Noun Phrase Accessibility Hierarchy (NPAH) proposed by Keenan and Comrie (1977) as has been noted in earlier studies (Alotaibi, 2016; Izumi, 2003; Yas, 2016). Those studies focusing on ERC production have so far focused on first language (L1), second language (L2), and foreign language (FL) learners with different nationalities and mother tongues, but have not focused on Malaysian L1 Malay adult speakers. Among these studies, data were gathered from various instruments (sentence joining, grammatical judgment, and free composition tasks). The results derived from these studies also indicated that various rank orders of the ERC types were detected such as those by Abdolmanafi and Rahmani (2012) and Gass (1979).

CHAPTER 3: METHODOLOGY

3.1 Introduction

In this chapter, the researcher explains the methodology used and the process of conducting the current study. This chapter involves six sections, comprising the research design & theoretical framework, the theoretical framework- Noun Phrase Accessibility Hierarchy (NPAH), the framework for analysis, the sample of the study, the instrument, data collection and analysis, and the ethical considerations.

3.2 Research Design & Theoretical Framework

This study is quantitative-qualitative in nature. The quantitative aspect is the statistical analysis derived from the data results while the qualitative aspect refers to the data generated from 540 combined sentences through sentence combination task which was also the approach used to extract the data. From the sentence combination task administered on 30 students, the current study was able to analyze the participants' knowledgeability of the English relative clauses (ERCs) and their ability to produce these in their written tasks. This also provided insights into understanding the kind of deviations they encountered when producing the ERC constructions. This then led to the understanding of which type of ERC was the easiest and the hardest for participants to construct.

The analysis helped to provide answers for the two research questions formulated. In the attempt to determine the Malaysian L1 Malay participants' production of the ERC, this study applied the Noun Phrase Accessibility Hierarchy (NPAH) framework to see if it is applicable for examining and analyzing the data provided by the chosen sample. The idea was to see whether these L1 Malay participants produced the ERCs according to the NPAH proposed by Keenan and Comrie (1979).

3.3 Theoretical Framework- Noun Phrase Accessibility Hierarchy (NPAH)

The categorization of the English relative clause (ERC) types on the Noun Phrase Accessibility Hierarchy (NPAH), go hand in hand with the instrument of this study (Sentence combination task). Therefore, the hypothesis proposed by Keenan and Comrie (1977) serves as the theoretical framework for the current study. Gass (1979) asserted that the production of RCs by L2 learners could be ascertained on the basis of NPAH.

Specifically, this hypothesis had a great influence on many other works such as those of Pavesi (1986), Eckman, Bell and Nelson (1988), Wolfe-Quintero (1992), and Izumi (2003). These researchers have also taken to examining the relative difficulty of acquiring and producing the ERCs by L2 learners. Linked to this, the NPAH hypothesis has also been of considerable influence in second language acquisition (SLA) and Syntax (Ozeki & Shirai, 2007).

In the past decades, it became obvious that the scope of studies on RCs was limited and that a wider investigation by learners of other languages is required (Gass & Selinker, 2008). As a matter of fact, Comrie (as cited in Gass & Selinker, 2008) suggested that a different hierarchy order of NPAH can be obtained from native speakers of some East Asian languages such as Japanese, Chinese, and Korean. As a result, this framework (i.e. NPAH) was also applied for the current study in examining how Malaysian L1 Malay participants produced ERCs. Moreover, Alotaibi (2016) and Izumi (2003) had observed that the various proficiency levels of participants do not constantly reflect differences in the degrees of their familiarity of the ERCs. In this regard, the current study did not take into account the proficiency levels of the participants when examining their ERC productions.

3.4 Framework for Analysis

This study aimed to answer whether the sample chosen was familiar with the structure of English relative clause (ERC) and its six types (SU> DO> IO> OPREP> GEN> OCOMP) as categorized by the Noun Phrase Accessibility Hierarchy (NPAH). Following Yamaguchi and Kawaguchi (2015), the data compiled were then classified into these six categories. It is hereby also noted that the first is the easiest and the last is the hardest, as recommended by Keenan and Comrie (1977).

Table 3.1, borrowed from Izumi (2003), shows example sentences for the different types of ERC on the hierarchy. Added to that, it shows two different positions of the head noun in the matrix clause (MC); however, NPAH is concerned only with the constituent that is gapped or relativized inside the ERC as mentioned in earlier studies (Diessel & Tomasello, 2005; Izumi, 2003; Yas, 2016):

Table 3.1: Framework for Categorizing the English Relative Clauses (ERCs)

Head Noun Position in the MC	ERC Type	Examples
Subject	SU	The <u>woman</u> [who__ speaks Russian fluently] is my aunt Janet.
	DO	The <u>car</u> [which the man drove__] is very fast and has Strikingly beautiful appearance.
	IO	The <u>man</u> [who(m) I gave the book to__] is my colleague since 2015.
	OPREP	The <u>woman</u> [who(m) Bill is looking for__] is beautiful with a very good heart.
	GEN	The <u>man</u> [whose__ car broke down today morning] is my boss.
	OCOMP	The <u>mountain</u> [which Mt. Fuji is higher than__] is Mt. Takao in Japan.
Object	SU	The teacher liked the hard-working <u>girl</u> [who__ passed the exam easily].
	DO	We like the blue <u>coat</u> [which Marry wears__ for school usually].
	IO	Mary likes the <u>man</u> [who(m) I gave the book to__ while I was heading to the dean's office this morning].

	OPREP	She is the <u>woman</u> [who(m) Tom wants to live with___ forever].
	GEN	I know the <u>woman</u> [whose___ husband is a professor at the University of Malaya].
	OCOMP	I know the big and the most beautiful <u>hotel</u> [which Hilton is cheaper than___].

3.5 Sample of the Study

Thirty Malaysian Malay students (15 females and 15 males) participated in the study. They are L1 Malay speakers who are also from the most dominant ethnic group whose L1 Malay is also the official language of the country (Percillier, 2016). All were students of the University of Malaya: 14-undergraduates, 16 postgraduates (15 Master's and 1 PhD).

The participants who were enrolled in the study were from the Academy of Islamic Studies (6 Master's degree), and various faculties; Computer Science & Information Technology (3 undergraduates), Business & Accountancy (1 Master's degree), Languages and Linguistics (2 undergraduates and 1 Master's degree), Engineering (3 undergraduates and 1 Master's degree), Economics & Administration, Built Environment (1 Master's degree), Arts & Social Sciences (1 undergraduate, 1 Master's degree, and 1 PhD), the Faculty of Medicine (1 Master's degree), the Faculty of Dentistry (2 undergraduates), and finally, the Faculty of Science (3 undergraduate and 3 Master's degree). It is hoped that having such range of the participants' various educational levels (undergraduate and postgraduate) and of their different educational backgrounds (different faculties) will assist to detect concrete syntactic challenges that the L1 Malay speakers encounter when producing the structure of English relative clauses (ERCs). It is also hoped that having this range will give a better representation of the population.

The participants were recruited based on the non-probability convenience sampling approach. Through this sampling criterion, where the researcher chose who were conveniently accessible, basic data and directions could be obtained without the intricacies of processing a random sampling. Only thirty participants were gathered as has been determined by Creswell (2014) to be adequate for an exploratory study of this nature. The only criteria set was that, the participants must speak Malay as their native language and L1, both at home and outside of home. Their ages ranged between 20 to 33 years old, with the mean age being 25. This age group was considered suitable (Creswell, 2014) because the participants were deemed to have sufficient experience in using English. Their current background information depict that they are both undergraduates and postgraduates, hence they have knowledge of writing in English as well as making the ERC constructions.

3.6 Instrument, Data Collection & Analysis

A sentence combination task was administered to collect data. The instrument employed and further modified by the researcher was borrowed from Alotaibi (2016) who adapted it from Gass (1979), Hamilton (1994), and Izumi (2003). In the present study, the task involved 18 sentences, comprising 3 sentences for each of the six types of English relative clause (ERC) noted in the Noun Phrase Accessibility Hierarchy (NPAH). So, total of 90 sentences on each ERC type for each participant and total of 540 sentences on the six ERC types for all the 30 participants.

To examine the usage of the established test (sentence combination test), a pilot study with small data set was administered in an early stage preceding the data collection to determine the validity of the sentences used in the instrument of the current study. The pilot study was conducted on 4 male and female native speakers of Arabic who were students of the University of Malaya: 1-undergraduate, 3 postgraduates (2

Master's and 1 PhD). The participants who enrolled in the pilot study were from the faculties of computer science and information technology, languages and linguistics, Engineering, and economics and administration. Their ages ranged between 25 to 42 years old, with the mean age being 29.5. Furthermore, the only criteria set was that, the participants must speak Arabic both as their native language and with their families. The hierarchical order noted from the sentence combination task in the pilot study was: (GEN> IO> SU> DO> OPREP, OCOMP), which was slightly different from the NPAH. As noted from the difficulty order of the hierarchy, the most difficult types of the ERC for the L1 speakers of Arabic were the object of preposition (OPREP) and object of comparison (OCOMP) while the easiest type was the genitive (GEN) ERC. Based on the findings of the pilot study, it was deduced that the instrument could appropriately be employable and well-designed to be properly used in the main study.

As it was stated by Izumi (2003), relative clause (RC) acquisition in L2 studies has a whole lot more relied on production measures. Sentence combination is considered a common kind of task employed by researchers, such as Eckman, Bell and Nelson (1988), Flanigan (1995), Gass (1979), Hamilton (1994), and Izumi (2003) in examining participants' productive ability of ERCs. This recommendation was thus implemented in the present study.

Each first language (L1) Malay student was randomly approached by the researcher to ask if s/he was willing to participate in the sentence combination task. S/he who agreed was then given some background information about the study, the procedure and the task involved. Each participant was informed that s/he was required to finish the task in maximum sixty (60) minutes and that s/he was not permitted to change answers after completion. The process of the task which took place inside the University of

Malaya was administered individually for each participant and the researcher was with him/her throughout the task.

Analysis of data, which determines whether the Malay participants are knowledgeable in the correct usage of ERCs, was conducted via Excel. The calculations were then noted as percentages which were displayed according to the six types of ERC on the NPAH and the types of deviations detected in the participants answers. The method of scoring used with respect to the sentence combination task in the current study was adopted from Izumi (2003). One (1) point was scored only when the intended ERC type was produced and zero point (0) was scored for that which was unintended. For example, if a participant produced a subject (SU) ERC for an item for which a direct object (DO) ERC was expected, the answer would be considered incorrect and (0) point would be scored. Errors such as spelling and tense were neglected based on the condition that they were irrelevant to the production of the ERCs (Izumi, 2003). A sample of the test is shown in Appendix B.

3.7 Ethical Considerations

Prior to the test, a consent form, which is shown in Appendix A, was given and explained to the participants. The participants were informed that they were free to withdraw whenever they like.

3.8 Summary of the Chapter

To conclude, this chapter discussed the research design and theoretical framework-Noun Phrase Accessibility Hierarchy (NPAH) adopted for the current study. It also presents the framework used for analysis, sample chosen for the current study, instrument administered, data collection method, analysis conducted, and finally the ethical considerations taken into account prior to the task conducted.

CHAPTER 4: RESULTS & DISCUSSION

4.1 Introduction

This chapter answers the two research questions developed for the current study. It provides some insights into the analysis derived from the data that were accumulated and analyzed via Noun Phrase Accessibility Hierarchy (NPAH).

4.2 The Hierarchical Order of the English Relative Clause Types Noted in the Study

Figure 4.1 presents the percentages depicting the number of correct sentences made by the L1 Malay speakers for each English relative clause (ERC) type. These were classified according to the six types of ERC as noted by the NPAH. Consequently, it also answered (RQ1).

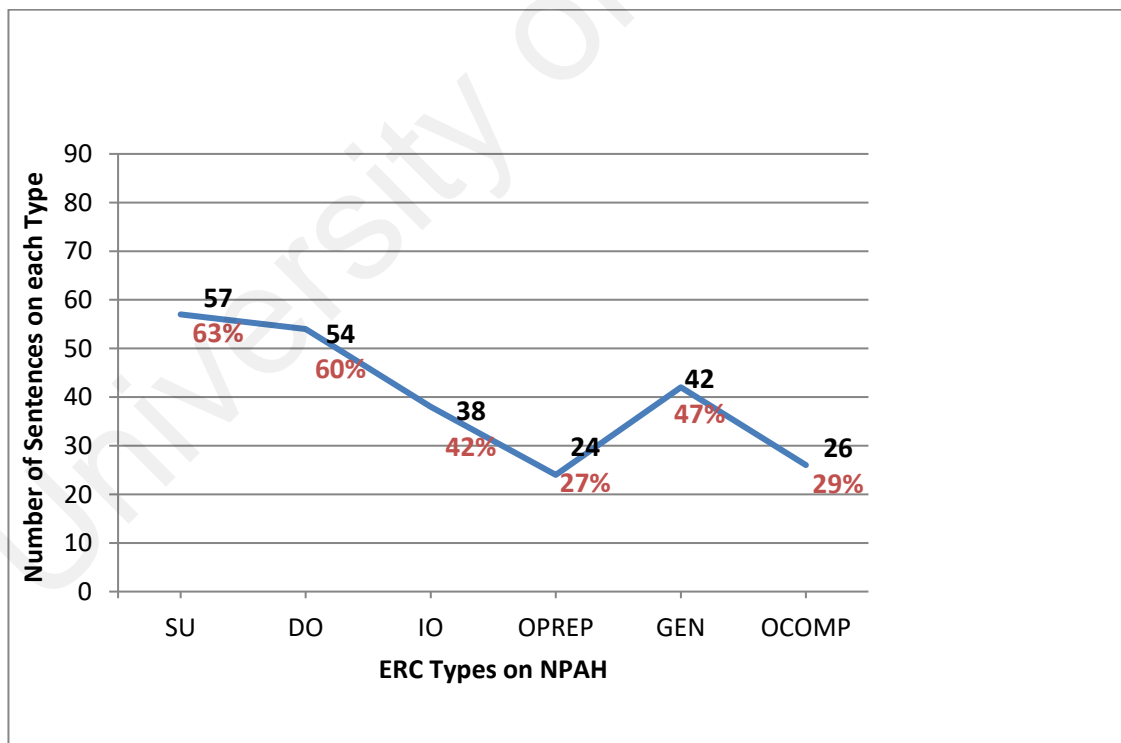


Figure 4.1: Participants' Correct Sentences on each English Relative Clause (ERC) Type on the Noun Phrase Accessibility Hierarchy (NPAH)

The statistics in figure (4.1) revealed that the easiest type of the ERC to be made by the participants was the subject ERC (SU), producing 57 correct sentences out of 90 total sentences for this type (percentage of correct sentences on SU= 63%). While the hardest construction was object of preposition ERC (OPREP), with 24 correct sentences only (percentage of correct sentences on OPREP= 27%). The following illustrates the hierarchical order noted in this study: (SU> DO> GEN> IO> OCOMP> OPREP), which was slightly different from the NPAH. To test the statistical significance of the difference between SU and OPREP, a paired sample t-test was performed, with an alpha level of $p<0.05$. This indicated that the difference between SU and OPREP was not statistically significant, $t\text{-stat}= 2.07$, $p= 0.08$.

The results clearly showed that the participants' difficulty in constructing the ERCs did not follow the difficulty order of the NPAH (SU> DO> IO>OPREP>GEN> OCOMP) except for the SU and direct object (DO) order. The reason behind SU and OPREP ERC types occupying such positions on the hierarchy may be attributed to "filler-gap" as hypothesized by Diessel and Tomasello (2005). This hypothesis refers to the relationship between the *filler* and the *gap* where the *filler* here indicates the head noun, and the *gap* indicates the relativized constituent or gap position in the ERC (Diessel & Tomasello, 2005).

The researchers claimed that an ERC type, with a short distance between the *filler* and the *gap* is easier for L2 adult learners of English to construct and understand than an ERC type that has a long distance between the *filler* and *gap*. This argument was also noted in several other studies such as Clancy, Lee, and Zoh, Hawkins, and Keenan and Hawkins (as cited in Diessel & Tomasello, 2005).

Based on the results, it is deduced that the L1 Malay speakers had experienced less difficulty in producing the SU ERC because it contained only one constituent, i.e. the

relative pronoun (RP) between the *filler* and *gap*. In contrast, they had more difficulty in producing the OPREP ERC because it contains a RP, subject, verb, and preposition (four constituents) between the *filler* and the *gap*. Examples of the SU and OPREP types from the participants' answers are shown successively in (56) and (57):

56. Sally helped the professor [who₍₁₎ _ rewarded the students]. (One constituent)

57. The couch [which₍₁₎ Jennifer₍₂₎ slept₍₃₎ on₍₄₎ _] is comfortable. (Four constituents)

Another major possible reason for the participants' ability in using the SU type better by obtaining the highest score, together with the DO type, as shown on the hierarchy is that only the SU and DO RC types are relativized in the Malay language (Keenan & Comrie, 1977; Nomoto, 2006; Percillier 2016). Consequently, they were easier for them since both SU and DO structures (SU and DO types of gaps) also exist in the participants' L1.

Examples of the Malay SU and DO RC types, which were borrowed from Percillier (2016, p.231), are shown in (58) and (59):

58. *Saya kenal se-orang yang main gitar.* (SU)

Gloss: I know one-person REL play guitar.

Trans: 'I know someone who plays guitar.'

59. *Sepatu yang saya beli itu bagus.* (DO)

Gloss: shoe REL I buy DEM good.

Trans: 'The shoes that I bought are good.'

The L1 effect with respect to the ERC types was further detected in the participants' answers. The participants avoided answering 76 out of 270 intended ERC types (comprising indirect object (IO), object of comparison (OCOMP), and object of preposition (OPREP)) by using SU and DO types instead, which in this case, zero point (0) was scored for each as it was considered incorrect. The intended ERC types (correct answers) are in parentheses as shown in examples 60-65 below:

60. Pauline married William [who(m) my father gave the ring to ____]. (IO)
61. John knows the girl [who(m) I wrote a letter to ____]. (IO)
62. Mark [who(m) Natalie is smarter than ____] passed the exam. (OCOMP)
63. I saw Jack [who(m) Robert is more intelligent than ____]. (OCOMP)
64. The couch [which (that) Jennifer slept on ____] is comfortable. (OPREP)
65. The snow ruined our holiday [which (that) we planned carefully for ____].
(OPREP)

In examples (60, 62, and 64), the intended ERC types (correct answers) that were supposed to be answered were IO, OCOMP, and OPREP. However, the participants turned to an avoidance strategy by using the SU ERC type instead which is unintended (incorrect answer), as shown in examples (66, 67, and 68) from the participants' answers on the sentence combination test. In addition, in examples (61, 63, and 65), the intended ERC types that were supposed to be answered were also IO, OCOMP, and OPREP. However, the participants turned to use the DO ERC type instead which is unintended (incorrect answer), as shown in examples (69, 70, and 71) from the participants' answers on the test:

66. My father gave the ring to William [who ____ married Pauline]. (SU)
67. Natalie is smarter than Mark [who ____ passed the exam]. (SU)

68. Jennifer slept on the couch [that__ is comfortable]. (SU)
69. I wrote a letter to the girl [whom John knows__]. (DO)
70. Robert is more intelligent than Jack [whom I saw__]. (DO)
71. We planned carefully for the holiday [that the snow ruined__]. (DO)

4.3 The Types of Deviations Noted in the English Relative Clause Production by the Participants

With regards to the (RQ2), the most common types of deviations detected in the participants' answers concerning English relative clause (ERC) productions were classified accordingly: a) incorrect relative pronouns selection (IRPS), b) non-adjacency (NA), c) omission of preposition (OP), and d) passivization (Pssv.). Two of these categorized deviation types (IRPS and NA) noted in participants' production knowledge of ERCs were mentioned in the earlier study by Gass (1979) which were later adopted by Izumi (2003). On the other hand, the passivization deviation type was noted in the earlier study by Alotaibi (2016).

These deviations are presented as percentages in Figure 4.2. To test the statistical significance of the difference between the four types of deviations, a single factor ANOVA (analysis of variance) with an alpha level of $p < 0.05$ was performed. The results of the ANOVA-single factor revealed a non-significant effect, although near to significance, between the four types of deviations, $F=2.48$, $p=0.06$.

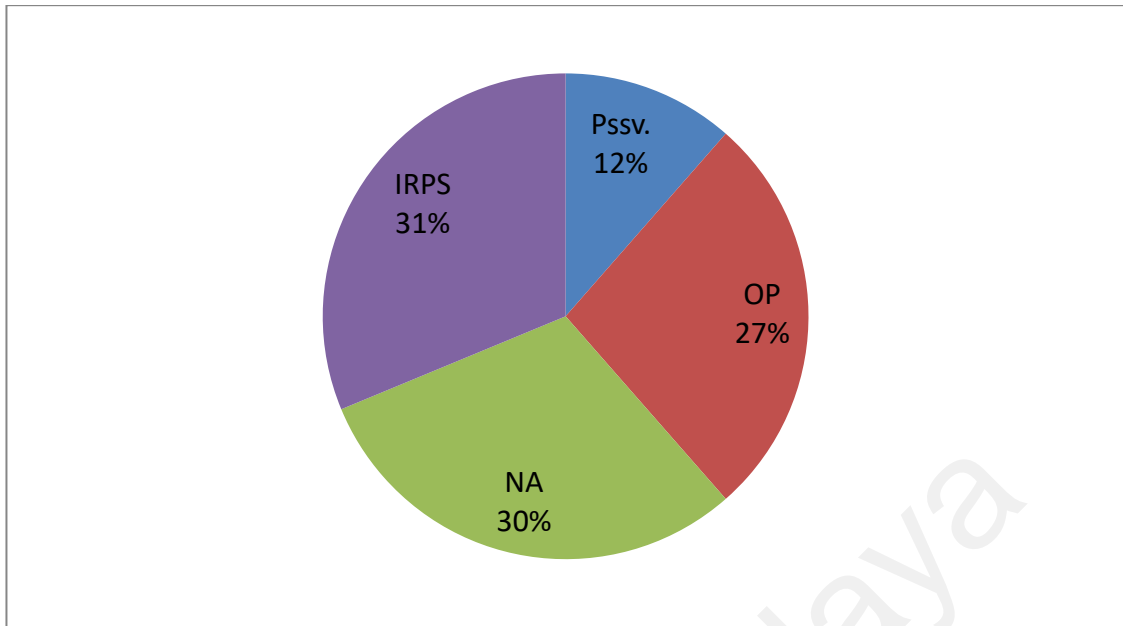


Figure 4.2: Percentage of the Participants' most Common deviation Types on the English Relative Clause (ERC) Production

A deviation in a combined ERC sentence type was counted when it was the only deviation preventing the combined sentence to be correct because it was considered that a deviation's effect had more efficiency only when it merely prevented a completely correct answer from occurring, as shown with examples from the participants' answers on the test in sections (4.3.1), (4.3.2), (4.3.3), and (4.3.4). That is, when there were two deviations in the same combined sentence, neither one was counted or included statically in this study as in examples (72) and (73) below with their correct versions (correct answers) in (74) and (75) from the IO and OPREP ERC types:

72. Pauline married William whose (deviation- IRPS) my father gave the ring
(deviation- to- OP). (IO)

73. I found the rock whose (deviation- IRPS) the robbers hit John over the head
(deviation- with- OP). (OPREP)

74. Pauline married William [who(m) my father gave the ring to ___]. (IO)

75. I found the rock [which (that) the robbers hit John over the head with ____].

(OPREP)

4.3.1 Incorrect Relative Pronouns Selection (IRPS)

This particular deviation type was the most common one among the L1 Malay participants. This deviation type appeared most frequently in genitive ERC (GEN) followed by subject ERC (SU), as illustrated in examples (76) and (77) taken from the participants' answers:

76. *Michael who (deviation) house was built by the government saw Amber.

(GEN)

77. *Sally helped the professor which (deviation) rewarded the students. (SU)

From example (76) where [*] means ungrammatical or ill-formed, some participants used the relative pronoun (RP) *who* instead of the correct one, i.e. *whose*. This suggests that they did not know that the GEN is only exclusive to the possessive pronoun *whose*. Example (77) also demonstrated that some participants had used the RP *which* instead of the correct one *who*. This incorrect application emphasized on the participants' lack of awareness about the use of RPs, where *which* is only used for inanimate nouns. Based on this, it is deduced that this could have been caused by the influence of their L1 since the Malay relative clause (MRC) is only exclusive to the RP- *yang*.

4.3.2 Non-adjacency (NA)

This deviation type was the second most commonly made deviation. The deviation was linked to the process where the English relative clause (ERC) was non-adjacent or not embedded directly after the head noun in the matrix clause (MC). This deviation type also frequently appeared in the GEN ERC followed by the SU, as shown in examples (78) and (79) extracted from the participants' answers:

78. *The girl was sad whose father died yesterday (deviation). (GEN)

79. *Rooney won the game who ranked number one (deviation). (SU)

From the two examples (78 and 79), it can be seen that some participants were not completely knowledgeable of the formation of ERCs. In other words, they were unaware of the fact that the ERC should be embedded directly after the head noun that precedes it, thereby being modified in the clause as in (80) and (81):

80. The girl [whose ___ father died yesterday] was sad. (GEN)

81. Rooney [who ___ ranked number one] won the game. (SU)

4.3.3 Omission of Preposition (OP)

This deviation type was the third most commonly made deviation, as noted in the participants' answers. It appeared in the object of preposition (OPREP) and the indirect object (IO) ERCs where both require a preposition (such as *for*, *about*, *to*, or *with*) at the end of the ERC or directly before the relative pronoun (RP), in order for these two ERCs to be correctly made. Apparently, most of the participants were unfamiliar with this strategy. Omission of prepositions (for and to), as shown in examples (82) and (83), were most frequently detected in OPREP ERC. This deviation is, thus, the major reason for the OPREP occupying the lowest position on the hierarchy (SU> DO> GEN> IO> OCOMP> OPREP) as was noted from the participants' answers:

82. *The snow ruined our holiday which we planned carefully (for- OP).
(OPREP)

83. *Pauline married William whom my father gave the ring (to- OP). (IO)

4.3.4 Passivization (Pssv.)

This type of deviation was the last most common deviation found in the participants' answers. Passivization refers to the process of conversion of a sentence from active

voice to passive voice where the focus is on the object rather than the subject (Kennedy, 2003). This deviation was most frequently detected in the indirect object (IO) ERC followed by the direct object (DO), as illustrated in examples (84) and (85) extracted from the participants' answers:

84. *Cathy read the book which was sent by Jack (deviation.). (IO)

85. *The teacher answered the question that has been asked by the student (deviation). (DO)

From the two examples (84 and 85), it can be seen that some participants passivized the ERC showing unawareness of the correct formation of the clause. The participants' usage of such a process can be considered as an avoidance strategy, which showed their unfamiliarity in forming the clause by using passivization, which is unnecessary as observed by Alotaibi (2016) in his study. Some of the Malay participants, as shown from the examples (84 and 85), clearly preferred using subject (SU) ERC containing passives over DO and IO ERCs in which both were the intended ERC types. The participants' use of this strategy may be attributed to Hawkins's (1999) claim which stated that the objective gap cases (such as, DO or IO) is less preferable than subjective gap case (SU) because the former requires more processing effort than the latter. In previous studies such as Tjung and Jaya (2009) and Sneddon (1996), it was argued that there is a tendency of turning the object RC (DO or IO) in Indonesian language into SU RC through the ease of passivization. Based on this type of deviation, which was made by some participants, it may be suggested that under certain circumstances, L1 Malay speakers in Malaysia may behave like speakers of Indonesian when producing DO and IO ERCs by tending to use subject ERC containing passive instead, as shown in example (86) in Indonesian language which was borrowed from Sneddon (1996, p.286).

Based on this argument resulted from this study, it may be discussed that this strategy has not, to date, been documented for adult native speakers of Malay.

86. *Tanah yang sudah digarap*

Gloss: Land REL already work.

Trans: 'The land which has been worked.'

4.4 The Syntactic Knowledge of the Participants on the Structure of English Relative Clauses

Figure 4.3 presents the total number of correct and incorrect sentences made by the L1 Malay participants in the current study. These sentences are out of a total of 540 sentences on the six types of the English relative clause (ERC) made by all the 30 participants.

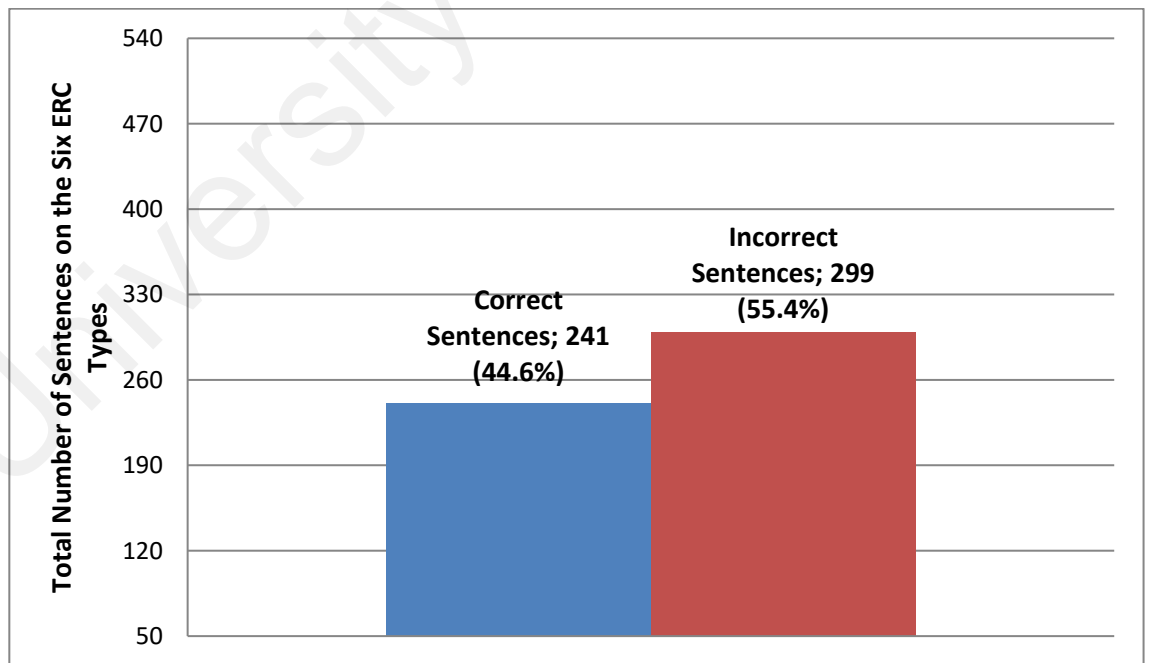


Figure 4.3: Total Number of Correct and Incorrect Sentences Made by the L1 Malay Participants on the Six Types of the English Relative Clause (ERC)

The statistics in figure (4.3) revealed that the L1 Malay participants produced 241 correct sentences out of 540 total sentences for all the ERC types from the sentence combination task (percentage of correct sentences on all ERC types= 44.6%). On the other hand, they produced 299 incorrect sentences out of 540 total sentences for all the ERC types from the sentence combination task (percentage of incorrect sentences on all ERC types= 55.4%). It is revealed that the participants are only (44.6%) syntactically knowledgeable of producing the structure of ERCs through the sentence combination task. Although the participants' sufficient experience in using English as well as their knowledge of writing in English, they still encountered much difficulty with making the constructions of these clauses in English. With its interference in their answers, the major reason behind this difficulty faced by the participants may be attributed to the influence of their mother tongue (Malay language) where only the SU and DO RC types are relativized in (Keenan & Comrie, 1977; Nomoto, 2006; Percillier 2016) as previously explained with examples in section 4.2.

4.5 Summary of the Chapter

To summarize, this chapter presents the hierarchical order of the English relative clause (ERC) types noted in the current study. It also details the four most common types of deviations detected in the participants' answers in the sentence combination task, comprising incorrect relative pronouns selection (IRPS), non-adjacency (NA), omission of preposition (OP), and passivization (Pssv.). Finally, this chapter concludes by revealing the syntactic knowledge of the participants on the structure of ERCs.

CHAPTER 5: CONCLUSION

5.1 Introduction

This chapter presents the results of the current study and it also suggests further studies and recommendations to be taken by researchers in future. As it was previously mentioned, the current study aimed to investigate the production of English relative clauses (ERCs) by (30) Malaysian L1 Malay speakers, who were recruited based on the non-probability convenience sampling approach. The framework used to detect this was based on the Noun Phrase Accessibility Hierarchy (NPAH) proposed by Keenan and Comrie (1977).

5.2 The Objectives & Results

Two research objectives were formulated in this study; firstly, to highlight which type of English relative clause (ERC), based on the NPAH, is the easiest and hardest for the Malaysian L1 Malay participants to produce, and secondly, to identify the types of deviations, if they exist, made by the Malaysian L1 Malay participants when producing ERCs. Based on the Results extracted from the sentence combination task which was the instrument administered in this study, the participants seemed to experience great difficulty in producing correct sentences on ERCs. The result showed that the participants are not fully aware of the formation of ERCs in which they made 241 correct sentences out of 540 total sentences on all the six ERC types. Therefore, it is revealed that the participants are only (44.6%) syntactically knowledgeable of producing the structure of ERCs through the sentence combination task. On the other hand, they produced 299 incorrect sentences out of 540 total sentences for all the ERC types (percentage of incorrect sentences on all ERC types= 55.4%). The main reason behind this may be attributed to the effect of their native language (Malay) which greatly interfered in their answers.

Moreover, the results showed that the order of the ERC types made by the participants were not consistent with the order of the NPAH (SU> DO> IO> OPREP> GEN> OCOMP). The current findings revealed that the Malaysian L1 Malay participants scored higher on the subject ERC (SU) (total percentage of correct sentences on SU type = 63%) and lower on the object of preposition ERC (OPREP) (total percentage of correct sentences on OPREP type =27%): (SU> DO> GEN> IO> OCOMP> OPREP) indicating the former to be the easiest for them to produce and the latter the most difficult to produce.

It is deduced that L1 Malay speakers may not have issues with SU and direct object (DO) RCs in English, but may find the other ERC types such as genitive (GEN), indirect object (IO), object of comparison (OCOMP), and object of preposition (OPREP) to be the more challenging ones to produce. Therefore, English as second language (ESL) teachers who are teaching adult L1 Malay speakers may see the concrete challenges related to ERCs encountered by learners of ESL. For instance, they can revert to using more teaching materials that comprise sentences types containing these ERC types as examples whether in conversation dialogues or any form of writing contexts. ESL teachers may also need to explain to the L1 Malay learners how these ERC types are formed in order to raise the Malay learners' awareness of the structure of the ERC.

The findings of this study also indicated that the deviations faced by the Malay participants when producing ERC sentences were mostly made on incorrect relative pronouns selection (IRPS), followed by non-adjacency (NA), omission of preposition (OP), and passivization (Pssv.). In this regard, ESL teachers who teach Malay students may need to have a rich knowledge of RC structure, both in the English language as well as the Malay language, to make comparisons and contrasts between the two

languages and between the relative pronouns (RPs) and RC types currently existing in both languages. Based on the participants' answers, it is possible that they mainly scored high on the SU and DO because these are the only RC types available in their first language of Malay. It is also possible that the Malay participants had IRPS as the first most common deviation type because unlike ERC which has six RPs, the Malay relative clause (MRC) is exclusive to one only RP which is *yang*. Thus, it is likely that the participants' L1 had partially influenced their answers on the test.

5.3 Suggestion for Further Studies

It is hoped that the findings of the current study will contribute to future research by highlighting the causes of this occurrence. Future endeavors may replicate this study by looking at a wider scope of Malaysians, such as native speakers of Mandarin and Tamil, and by comparing the outcomes with the current study findings. The outcome generated would be useful for ESL teachers and book writers too as the components to focus on for academic writing are clearly evident here.

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