

UNIVERZITA PALACKÉHO V OLOMOUCI

Filozofická fakulta
Katedra asijských studií

DIPLOMOVÁ PRÁCE

Comprehension and processing of active and passive construction
in L1-Czech L2-Korean learners

Olomouc 2024 Martin Spáčil

Vedoucí diplomové práce: George Saad, PhD.

Prohlašuji, že jsem tuto diplomovou práci vypracoval samostatně za použití uvedených pramenů a literatury.

V Olomouci dne 8.5.2024



Martin Spáčil

Anotace

Jméno a příjmení:	Bc. Martin Spáčil
Fakulta a katedra:	Filozofická fakulta, Katedra asijských studií
Název práce:	Porozumění a zpracování aktivní a pasivní konstrukce u českých studentů korejštiny.
Vedoucí práce:	George Saad, PhD.
Počet stran:	64
Počet titulů použité literatury:	92
Počet příloh:	3 (celkem 29 stran)
Klíčová slova:	korejština, pasivní konstrukce, jazyková dovednost, prohazování slovosledu, analýza učebnic

Tato práce se zabývá porozuměním a zpracováním aktivních a pasivních konstrukcí u českých studentů korejštiny a zkoumá, jak mezijazykový vliv, úroveň dovednosti jazyka a obsah učebnic společně ovlivňují porozumění a zpracování. Výzkumná část zahrnuje úlohu hodnocení přijatelnosti vět, které se účastnilo 29 českých studentů korejštiny a 20 rodilých mluvčích korejštiny. U studentů byla měřena i rychlost reakce (zpracování). Výsledky odhalily rozdíl v hodnocení přijatelnosti vět mezi oběma skupinami. Dále se u studentů projevila prodlená reakce u hodnocení sufixálních pasivních konstrukcí. To je způsobeno absencí pasivních konstrukcí v analyzovaných učebnicích, což naznačuje, že expozice konkrétním konstrukcím u studentů ovlivňuje jejich porozumění a rychlost reakce. Výsledky dále zdůrazňují, že typ konstrukce a pořadí slov ovlivňují rychlost reakce, ačkoli dopad se liší v závislosti na typu konstrukce. Tyto poznatky mají hluboké důsledky pro vývoj výukových materiálů a výukových strategií, což zdůrazňuje potřebu vyváženého zahrnutí aktivních i pasivních konstrukcí pro efektivní učení jazyka. Tato práce přispívá do oblasti výzkumu osvojování si druhého jazyka tím, že poskytuje hlubší pochopení faktorů, které ovlivňují porozumění jazyka a zpracování v kontextu interakce českého a korejského jazyka.

Abstract

Name and surname:	Bc. Martin Spáčil
Faculty and department:	Faculty of Arts, Department of Asian studies
Title:	Comprehension and processing of active and passive construction in L1-Czech L2-Korean learners
Supervisor:	George Saad, PhD.
Number of pages:	64
Number of resource titles:	92
Number of appendices:	3 (total of 29 pages)
Keywords:	Korean, passive construction, proficiency, scrambling, L2 textbook analysis

This thesis investigates the comprehension and processing of active and passive constructions in L1-Czech L2-Korean learners and examines the influence of Cross-Linguistic Influence (CLI), proficiency levels, and classroom input on the comprehension and processing. The study employs an acceptability judgment task involving 29 Czech-speaking learners and 20 Korean native speakers to assess the acceptance of these constructions. For the L2 learners, their processing speed was measured as well. The results revealed a difference in the acceptability ratings between the two groups. Furthermore, L2 learners exhibited longer processing times in suffixal passive constructions. This is attributed to the absence of passive constructions in the analyzed L2 textbooks, suggesting that exposure to specific constructions affects learners' comprehension and reaction times. The findings underscore the importance of construction type and word order in influencing processing speed, although the impact varies depending on the construction. These insights have profound implications for the development of L2 instructional materials and teaching strategies, highlighting the need for a balanced inclusion of both active and passive constructions to facilitate effective language learning. The thesis contributes to the field of SLA by providing a deeper understanding of the factors that influence language comprehension and processing in the context of Czech and Korean language interaction.

Rád bych touto cestou vyjádřil poděkování George Saadovi, PhD., za jeho cenné rady a trpělivost při vedení mé diplomové práce. Vděk patří také Gyu-Ho Shinovi, PhD., za počáteční vedení a konzultace. Rovněž bych chtěl poděkovat za vstřícnost, ochotu a věnovaný čas účastníků dotazníkového šetření.

I would like to take this opportunity to thank George Saad, PhD., for his valuable advice and patience in supervising my master's thesis. Also, I am grateful to Gyu-Ho Shin, PhD., for initial guidance and consultations. I would also like to thank the participants of the questionnaire for their kind contribution and willingness to spare their time.

Table of contents

List of figures and tables	8
Abbreviations	9
Glossing	10
Transcription	11
I. Introduction	12
1.1. Background.....	12
1.2. Research question and hypotheses.....	14
1.3. Organization of the thesis	15
II. Literature review	16
2.1. Factors for L2 acquisition	16
2.1.1. Proficiency.....	16
2.1.2. Cross-linguistic influence.....	16
2.1.3. Working memory	18
2.1.4. L2 textbook input	18
2.2. Active and passive constructions in Czech and Korean	19
2.2.1 Active vs. passive voice in Czech and Korean.....	19
2.2.2 Active transitive construction in Czech and Korean	20
2.2.3 Passive construction in Czech and Korean.....	22
III. Methodology	29
3.1. Methods	29
3.1.1. Participants	29
3.1.2. Stimuli	30
3.1.3. Procedure.....	31
3.2. Analysis	33
3.2.1. C-test	33
3.2.2. Digit span cognitive task	33
3.2.3. Acceptability judgement.....	34
3.2.4. L2 textbook input	35
3.3. Prediction	37
IV. Results and discussion	38
4.1. Results: Learners' background	38
4.2. Results: Acceptability judgement	38

4.2.1. Multiple linear regression (L1 vs. L2): acceptability ~ group * cx * wo	38
4.2.2. Multiple linear regression (L2-internal): acceptability ~ cx * wo * proficiency * wm	40
4.2.3. Multiple linear regression (L2 reaction time): rt ~ cx * wo * proficiency * wm .	44
4.3. L2 textbook input.....	47
4.4. Evaluation of research hypotheses.....	48
4.5. Discussion.....	50
V. Conclusion.....	53
5.1. Summary of the study.....	53
5.2. General discussion.....	53
5.3. Limitations and future research.....	55
References.....	57
List of appendices.....	64
Appendix 1. Research sentences.....	65
Appendix 2. C-test.....	79
Appendix 3. L2 textbook analysis.....	80

List of figures and tables

Figure 1. Example of point assignment.	32
Figure 2. Sequence keypad.....	33
Figure 3. Example of textbook visual.	36
Figure 4. Linear regression model of L2 learners' judgement vs. proficiency	43
Figure 5. Interaction plot of the working memory and proficiency effect on reaction time	46
Table 1. Rubric used for analysis of L2 textbooks.....	37
Table 2. Result: Acceptability judgment.....	38
Table 3. Multiple linear regression (L1 vs. L2)	39
Table 4. Simple linear regression: post-hoc analysis (L1 vs. L2)	40
Table 5. Multiple linear regression (L2)	41
Table 6. Simple linear regression: post-hoc analysis (L2)	42
Table 7. Result: Reaction time	44
Table 8. Multiple linear regression (L2 reaction time)	45
Table 9. Summary of the findings form L2 textbook construction analysis	47
Table 10. Summary of the findings form L2 textbook passive verb analysis.....	48

Abbreviations

L1 – first language

L2 – second language

CLI – cross-linguistic influence

ERPs – event-related potentials

ISLA – instructed second language acquisition

pLV – passive light verb

SLA – second language acquisition

UBT – the usage based theory

UG – the universal grammar [theory]

WM – working memory

Glossing

ACC – accusative case

CAS – causative

COM – comitative case

DECL – declarative mood

GEN – genitive case

INCH – inchoative

INF – infinitive

INST – instrumental case

LOC – locative case marker

NOM – nominative case

PAS.PTCP – passive participle

PST – past tense

PSV – passive

SG – singular

Ø – zero morpheme

Transcription

To linguistically gloss example sentences in a consistent way throughout the thesis, I use the Yale romanization system (Martin, 1942, the only publicly available descriptions are from 1992), one of the commonly used transcription systems in Korean.

Hangul consonants	Yale romanization	Hangul vowels and diphthongs	Yale romanization
ㄱ	k	ㅏ	a
ㄲ	kk	ㅑ	ay
ㄴ	n	ㅓ	ya
ㄷ	t	ㅕ	yay
ㄸ	tt	ㅗ	e
ㄹ	l	ㅛ	ey
ㅁ	m	ㅜ	ye
ㅂ	p	ㅠ	yey
ㅃ	pp	ㅡ	o
ㅅ	s	ㅘ	wa
ㅆ	ss	ㅙ	way
ㅇ	ng	ㅚ	oy
ㅈ	c	ㅝ	yo
ㅉ	cc	ㅜ	wu
ㅊ	ch	ㅟ	we
ㅋ	kh	ㅞ	wey
ㅌ	th	ㅟ	wi
ㅍ	ph	ㅠ	ywu
ㅎ	h	ㅡ	u
		ㅟ	uy
		ㅣ	i

I. Introduction

1.1. Background

This thesis ventures into a less explored area of Second Language Acquisition (SLA) by focusing on Czech native speakers learning Korean as a second language. It investigates how factors such as Cross-Linguistic Influence (CLI), proficiency level, and input from L2 classrooms affect the learners' understanding and usage of two Korean sentence constructions: active transitive and suffixal passive. The study measures the learners' acceptance of these constructions and their response speed, and further explores if scrambling of pre-verbal arguments leads to comprehension challenges. It also examines whether these learners can develop sentence processing strategies similar to native Korean speakers. An additional layer of analysis involves examining selected textbooks to determine the frequency of Korean passive constructions relative to active transitive ones. As research on SLA involving Czech and Korean is limited, the results of this study will shed light on the interaction between these two languages during the learning process of active transitive and suffixal passive constructions.

SLA refers to learning language(s) other than the first / native language(s). It is a process which is complex and influenced by various factors. These factors pose challenges for learners to acquire second language (L2) and achieve native-like L2 proficiency (Hartshorne, Tenenbaum, & Pinker, 2018). General SLA research aims to explain why learning challenges occur in certain ways by proposing various theories and hypotheses that account for different aspects of L2 learning. This makes SLA an important topic for both academic inquiry and practical application in L2 teaching.

The primary concern of SLA is how learners develop linguistic competence, with a focus on grammatical competence (Ellis, 1985). The usage-based theory (UBT) states that language is a tool for communication and social interaction in which L2 learners learn how to use language by observing and participating in communicative events. They not only pay attention to how words and structures are used in various contexts and with different meanings, but also remember how often they encounter certain words and structures and use them more frequently. They do not need a fixed set of rules that apply to all languages, but rather create their own rules based on their experience. Ellis and Wulff (2015) further clarify the definition of UBT as a term that hosts various approaches to SLA with two conditions: (i) L2 learning is based on language usage and obtained knowledge, and (ii) by using general cognitive mechanisms, not just those specific to language acquisition, learners infer the rules of their second language from

the input. Generally, UBT investigates how we learn language while we engage in the interpersonal communicative and cognitive processes that shape language (Ellis et al., 2016).

Much information concerning what can be acquired through SLA has been discovered over the course of several decades in SLA research but remains a complex and multifaceted phenomenon in the field of linguistic research (Al-Dali, 2018). This can be attributed to scholars and researchers who study SLA from a variety of fields, with various theories and different research methods (Saville-Troike, 2012). As Ipek (2009) mentions, there are many aspects of SLA, such as linguistic, cognitive, social, affective, and individual factors which influence the process of SLA. Since the beginning of the study of SLA in the 1970's, the prevalent theoretical influences have come from the fields of linguistics and psycholinguistics (Mitchell, Myles & Marsden, 2019).

According to Luo (2021), it is now widely accepted that the linguistic knowledge of L1 speakers is learned and represented in the form of constructions, which are one of the major constructs of the usage-based theory in SLA. The phenomena of using existing knowledge of a construction from an L1 to learn an L2 is known as language transfer, or cross-linguistic influence (CLI). In other words, CLI is a process by which learners use their linguistic knowledge from L1 to accelerate the acquisition of another language. In some cases, the CLI can also refer to influence of linguistic knowledge in L2 on L1. But this is less common, and the effect of L2 on L1 differs significantly from the effect of L1 on L2 (Kecskes, 2008).

Weinreich (1953) defined CLI as "interference" between languages as 'those instances of deviation from the norms of either language which occur in the speech of bilinguals as a result of their familiarity with more than one language'. Lado (1957) expands this idea, stating that elements similar in L1 and L2 are easier to understand by the learners, and those elements that are different, will cause difficulty in knowledge acquisition. Constructions are further defined by Ellis and Wulff (2018) as form-function mappings that are conventionalized units of language that express meaning/function, formal properties, and a speaker's perspective in a unified manner (Ellis, 2002; Goldberg, 1995). Constructions, however, may differ between languages in various ways. This creates difficulty and CLI becomes an important factor in SLA.

Language learning, according to Ellis (2015), entails determining structures from usage, which requires the complete range of cognition and assumes that learning is a conscious and deliberate process with strategies. Remembering utterances and episodes, categorizing experience, detecting patterns among and between stimuli, generalizing conceptual schema and prototypes from exemplars, and reasoning with cognitive models, metaphors, analogies, and imagery are all examples of this. Working memory (WM) is the limited memory capacity that

allows us to hold and manipulate a small amount of information for completing some cognitive tasks. WM can affect L2 processing efficiency by influencing how well second language learners can access, integrate, and store linguistic information (Joh & Plakans, 2017). WM can also predict individual differences in L2 processing, as measured by online methods such as event-related potentials (ERPs) or self-paced reading (Reichle, Tremblay & Coughlin, 2016).

Over the last decade, Korean as an L2 has seen a surge in popularity, sparking significant interest in the study of Korean SLA (Li & Han, 2023). While much of the existing research has concentrated on L1-English or L1-Mandarin L2-Korean speakers, this thesis shifts the focus to L1-Czech L2-Korean learners to explore how CLI, proficiency, and L2 classroom input interplay and impact their language acquisition and processing of two constructions: the active transitive and the suffixal passive. The empirical part of this study assesses their acceptability judgement and reaction times, and further investigates whether the scrambling of pre-verbal arguments results in processing difficulties for L1-Czech L2-Korean learners. Additionally, I analyze selected textbooks accessible to the learners to determine the frequency of the Korean passive constructions compared to active transitive ones. Given the scarcity of research on SLA between Czech and Korean, this study's findings will provide insights into how these two languages interact during the acquisition of the active transitive and suffixal passive constructions. These insights could potentially aid educators in devising more effective teaching methods and materials for Czech students learning Korean. Furthermore, because previous studies have primarily focused on languages without case marking, such as English L1 (e.g., Brown & Iwasaki, 2013; Cho, 2006; Min & Lee, 2023; Park, 2016; Seo et al., 2022) and Mandarin L1 (e.g., Jeong, 2014; Lee, 2020; Oh, 2018; Ryu, 2017; Shin & Park, 2021), this study may be relevant to other Slavic L1s as well as case-heavy L1s learning Korean or another case language as an L2.

1.2. Research question and hypotheses

Research question: How do CLI, proficiency, and L2 classroom input influence comprehension and processing of the active and passive construction among L1-Czech L2-Korean learners?

Hypothesis: CLI, proficiency, and L2 classroom input will jointly influence comprehension and processing of active and passive construction among L1-Czech L2-Korean learners.

Supporting hypothesis (1): L2 learners will perceive the active transitive construction as more acceptable compared to the suffixal passive construction.

Supporting hypothesis (2): With an increase in proficiency, L2 learners will demonstrate improved accuracy in their acceptability judgments of both active transitive and suffixal passive constructions.

Supporting hypothesis (3): The effect of working memory capacity on the comprehension is moderated by their proficiency level. Specifically, for learners with lower proficiency, a greater working memory capacity will facilitate greater comprehension of active and passive construction. However, for learners with higher proficiency, the effect of working memory capacity on comprehension may be less pronounced.

Supporting hypothesis (4): The analysis of L2 textbooks is expected to reveal a significantly lower frequency of passive constructions compared to active constructions. This scarcity of passive constructions in the learning materials will lead to longer average processing times and/or lower acceptability judgments of suffixal passive constructions by L2 learners.

1.3. Organization of the thesis

In Chapter 2, I discuss the factors relevant for L2 acquisition, including proficiency, CLI, WM, and L2 textbook input. Then I describe the function of active and passive voice, focusing on the variations in active transitive and passive constructions between Czech and Korean with regard to word order.

Chapter 3 describes the methodology of this thesis, including the participants, methods, procedures, and data analysis.

Chapter 4 presents the results of the learners' background questionnaire, acceptability judgement, and L2 textbook analysis, as well as a discussion of the findings.

Chapter 5 provides a conclusion and facilitates a general discussion of their implications. Finally, I discuss the limitations of my thesis.

II. Literature review

2.1. Factors for L2 acquisition

2.1.1. Proficiency

Proficiency refers to the ability to use a language effectively and accurately in various contexts (Thomas, 2001). It is a crucial factor in the process of SLA for several reasons. Mainly, it enables learners to communicate effectively with native speakers of the target language. This can facilitate social and professional interactions, as well as enhance cross-cultural understanding. In addition, proficiency can also have cognitive advantages.

In the field of SLA, all scholars are interested in monitoring the progress made during the SLA process. Consequently, a reliable and valid developmental index for measuring L2 proficiency is essential. Standardized measurements such as English TOEFL and TOEIC, or Korean TOPIK are typically employed to assess a learner's four-skills capacity in the target language. However, alternative methods for measuring L2 proficiency in research are available: for example, cloze tests, institutional status, independent proficiency tests, self-assessments, elicited imitation, and oral proficiency interviews (among many others). Each method possesses its own advantages and disadvantages, necessitating researchers to select the most appropriate one based on their research questions and objectives.

One such method is the C-Test (see Lee-Ellis, 2009). This test measures learner's language abilities by introducing linguistic messages with noise or interference, wherein parts of certain words are missing, and examinee must fill in the blanks. The underlying rationale is that languages possess inherent redundancy, enabling speakers to understand linguistic items under such conditions. Despite being praised for its high reliability, ease and efficiency of test administration, and objectivity of scoring, the C-Test has been criticized for its lack of validity and poor item discrimination. Nonetheless, evidence from previous studies supports the notion that the C-Test is as capable and valid in measuring proficiency as other language assessment measures.

2.1.2. Cross-linguistic influence

One of the key objectives of SLA is to explore the role of the learner's L1 in learning the L2. This helps researchers to comprehend how learning one language affects learning another language. It also clarifies how two distant languages may or may not interact with one another when learning a new language (Yang et al., 2017).

SLA inherently presents challenges to the learner. These result from the requirement to understand new language features, which frequently differ dramatically from the L1. Such

distinctions can make certain features of the language particularly difficult to grasp. This is an important subject to examine, especially in light of the link between L1 and L2. The learner forms this link both consciously and subconsciously during the process of language acquisition. This already acquired inventory of patterns and arrangements of words in a given language may influence the knowledge in the additional target language.

The role of CLI in SLA is complex. The resulting effect can be either positive (successful, SLA enabling) or negative (unsuccessful). Language distance is an early indicator of the transfer result, which is important because it indicates how the L1 influences the L2 based on their typological similarity. In other words, an L2 that has similar structure to L1 is more likely to be learned more efficiently and well because structural similarity should lead to positive L1 transfer (Yan, Mai & Zhao, 2023). This leads to CLI's overall influence on acquisition process for achieving a given level of language proficiency. However, the occurrence of positive CLI is not always certain due to its complex nature and other variables that may affect the transfer (e.g., Bates & MacWhinney, 1989; Tokowicz & MacWhinney, 2005). These variables are age, proficiency, psychotypology (i.e., learner's own perception of differences and similarities between L1 and L2), language markedness (i.e., words semantically or morphologically marked different from another), typology of language and status of L2, exposure to language, frequency, and recency of language usage.

Negative transfer can be seen in three main forms. First, error production which is frequently considered by researchers as a proper approach to interpret the negative transfer in SLA. However, many errors are caused by language differences and the errors tend to increase or decrease in different ways at various levels of learning (Chen, 2022). Second, underproduction (or avoidance) occurs when L2 learners are not familiar with a language structure and want to avoid mistakes. Therefore, they tend to adhere to constructions they have learned or know better. According to Kamimoto, Shimura and Kellerman (1992), underproduction is exhibited in numerous ways: 1) lack of an important and specific part of L2 knowledge; however, learners may understand its function via the L1; 2) learners know the specific structure, but it is difficult to use due to low proficiency; and 3) learners can produce the correct structure, but they are unwilling to use it for a specific reason. Lastly, overproduction refers to the behavior in which L2 learner creates certain constructions in the L2 more frequently than native speakers would. It is important to note that both underproduction and overproduction are not grammatically wrong; rather, the constructions created by the learner may appear unnatural.

2.1.3. Working memory

Working memory (WM) is a cognitive system that allows for the storage manipulation of temporary knowledge. Advanced cognitive functions such as communication, learning, calculation, comprehension, and reasoning rely on it (Cowan, 2014). Given its characteristics, WM is regarded as an essential element in SLA. All parts of L2 learning need information storage and processing. During reading, for example, a reader holds earlier segments of incoming information in memory until they are merged with later segments (Shen & Park, 2020). Because WM capacity is limited, there is a trade-off between information processing and storage. This means that learners may struggle to retain new information, lose memory traces, and ultimately fail in overall comprehension.

Due to the importance of WM in SLA, researchers have intensively studied its impact on L2 learning and multilingual processing (Linck et al., 2013). However, because of additional cognitive stress imposed on L2 learners, the importance of WM is said to be greater in the L2 than in the L1 (Li, 2023). More research is needed to better understand the relationship between working memory and second language acquisition, especially in reading and writing.

To measure and test the WM capacity, a variety of cognitive tasks are used. The most commonly used ones are WM span tasks, such as listening span, reading span, and operation span. These tasks require participants to process and store information simultaneously which helps researchers to evaluate the amount of information that can be held in working memory at any given time. The digit span cognitive task has been extensively researched and debated in terms of what it assesses and its accuracy as a measurement tool (Jones & Macken, 2015). The primary idea behind this task is to present a person with a series of digits that they must then repeat. If the participant correctly repeats the sequence, a lengthier sequence is displayed. This continues until the person can no longer successfully repeat the pattern. The person's digit span is the longest sequence they can remember.

2.1.4. L2 textbook input

Instructed second language acquisition (ISLA) is a subfield of SLA that studies any sort of L2 acquisition that occurs because of alteration (or manipulation) of the acquisition processes. The language classroom, which can take many different forms, is the paradigmatic context for ISLA. According to Leow (2015), however, it is important to note that much L2 learning occurs outside of the classroom. For example, the virtual L2 classroom is increasingly popular, including hybrid and entirely online settings (see Benson & Reinders, 2011) and there are instances, such as learner self-study, in which the learning conditions are systematically

manipulated (in contrast to uninstructed or naturalistic SLA which occurs when learners are simply exposed to the target language but make little or no intentional effort to acquire it). Wulff and Ellis (2018) maintains that general SLA is dependent on at least two hypotheses: input is the main source, and cognitive mechanisms are implemented by language learners.

According to Mangubhai (2001), input is the form-based or meaning-based data that a learner receives either in a formal classroom or in a naturalistic setting. However, the emphasis on its importance differs in different theories. In the UBT, Krashen's (1982) input hypothesis labels input as critical in the process of SLA and learning and Long (1981) considers input as "a basic requirement" for SLA. On the other hand, UG (universal grammar) regards the factor of input as a secondary concern for SLA (Cook, 1985).

Nevertheless, the relevance of language input has certainly been a central theme for many researchers resulting in a substantial body of research on L2 classrooms (e.g., Benson & Reinders, 2011; Carlson, 2020; De Graaf & Housen, 2009; Ellis & Shintani, 2013; Ellis & Wulff, 2015; Leow, 2015; and many more). This is also the case for study abroad scenarios, where learners have direct contact with the target culture for a predetermined amount of time (e.g., Köylü, 2022; Sanz, 2014; Xuija, 2019; and many more). Kersten (2021) states that input is one of the most important prerequisites for SLA, but it cannot be regarded as detached from the specific contexts in which the L2 is encountered by the learners. Therefore, the input shall be delivered in a narrow sense with supporting teaching techniques, rendering the input comprehensible.

As Hall (2020) stated, "individuals are socialized through language to use language" (p. 100) which may have different implications, one of which is teacher-student interaction. This interaction creates learning environment for effective ISLA through language input. The intentional choices and actions teachers make are projected through their instructional activities, which are manipulated, and shape not only the linguistic resources available to learners (i.e., input), but also the ways in which L2 learners use the said resources (Hall, 2019). Presumably, most learners use some form of study support, such as books, computer programs, or apps, to aid them in the process of learning a language.

2.2. Active and passive constructions in Czech and Korean

2.2.1 Active vs. passive voice in Czech and Korean

Active and passive voice constitute two distinct grammatical structures capable of transmitting equivalent information, albeit with a shift in emphasis. The active voice is characterized by a grammatical arrangement in which the sentence's subject performs the

action. Conversely, the passive voice is typified by a grammatical configuration where the sentence's subject is the recipient of the action. In the context of both Czech and Korean, there is a general preference for the active voice, attributable to its straightforwardness. Nonetheless, the passive voice holds utility in specific circumstances, such as when the actor is either unknown or irrelevant, or when the action itself, rather than actor, is the focal point. Despite the prevalence of cross-linguistic variation in the employment of active and passive voice, they exhibit a similar functionality in both Czech and Korean. This can be attributed to the universal characteristics of these grammatical structures, which are ubiquitous across numerous languages globally, albeit with minor variations.

According to O'grady et al. (1989) the active voice construction is a grammatical structure in which the agent is the subject of the sentence and performs the action. Korean and Czech both typically adhere to the agent-before-theme strategy, which means that the subject appears earlier than the object in the construction. This word order is called canonical (or neutral) word order. Both languages can also implement scrambled word order by switching the positions of subject and object.

This scrambling is possible only because both languages have specific systems that assign thematic roles on a morphosyntactic level. In Czech, the roles can be deduced from inflectional grammatical morphemes that denote case, gender, and number. In Korean, this is done through particles which are defined by Sohn (1999) as "postpositional function words that either indicate the syntactic relation of the cooccurring element with other constituents of the sentence, delimit the meaning of the element to which they are attached, or perform some other function such as plurality, conjunction, quotation, or politeness" (p. 212-213).

However, in the passive voice construction, according to O'grady et al. (1989), the grammatical subject expresses the theme or patient of the verb (i.e., the one who undergoes the action or has its state changed.) Typically, an active construction is converted into a passive one in a process known as passivization. The canonical passive construction in both languages follows theme-before-agent ordering which can be scrambled as well, due to the same reason as mentioned above.

2.2.2 Active transitive construction in Czech and Korean

2.2.2.1 Czech

In pragmatically unmarked clauses, Czech typically follows SVO word order (subject-verb-object). In an active transitive construction, the subject (agent) is denoted by nominative case, while the object (theme) is expressed by accusative case, as in (1).

- (1) *policie-Ø dopad-la zloděj-e*
 police[NOM.SG] catch-PST.3SG thief[SG]-ACC
 ‘The police caught the thief.’

It is possible to switch the word order, for example, into OVS (object-verb-subject), as in (2). The presence of case marking typically ensures that it is clear who is the subject (agent) and who is the object (theme).

- (2) *zloděj-e dopad-la policie-Ø*
 thief[SG]-ACC catch-PST.3SG police[NOM.SG]
 ‘The police caught the thief.’

2.2.2.2 Korean

Korean typically adheres to SOV word order (subject-object-verb). The active transitive construction in Korean has a similar reading to its Czech counterpart. The subject (agent) is denoted by a nominative case marker, while the object (theme) is expressed using an accusative case marker, as in (3).

- (3) *kyengchal-i totwuk-ul cap-ass-ta*
 police-NOM thief-ACC catch-PST-DECL
 ‘The police caught the thief.’

In Korean, it is possible to switch the word order, for example, into OSV (object-subject-verb) (4). Similarly to Czech, case marking allows for flexible word order.

- (4) *totwuk-ul kyengchal-i cap-ass-ta*
 thief-ACC police-NOM catch-PST-DECL
 ‘The police caught the thief.’

2.2.2.3 Expected challenges in L2 learners’ acquisition of active transitive construction

A transitive event, which involves a subject acting upon an object, is fundamental and prevalent in many languages worldwide (Theakston et al., 2012). The structural formation of this event, however, can differ due to the unique grammar, syntax, and linguistic devices of each language. Czech possesses an extensive inflectional morphology system which can shape the formation of transitive structures. Korean, however, uses case-markers to indicate the role of pre-verbal arguments and permits their rearrangement if the original meaning exhibits no

ambiguity. This scrambling varies in its frequency due to syntactic, semantic, and pragmatic factors.

A study by Son (2020) investigated whether L2 learners of Korean develop and share an abstract syntactic representation between L1 and L2 with different word orders. The results showed evidence of cross-linguistic syntactic priming between Korean and English, regardless of L2 proficiency, but only when prime and target structures shared identical functional assignments, information structures, and order of thematic roles. Another study by Frenck-Mestre et al. (2022) showed incremental processing based on case information, with no effect of scrambling or specific case in native speakers. The L2 group, however, showed no evidence of predictive processing and was negatively impacted by scrambling.

Therefore, it is expected that L2-Korean learners exhibit challenges in processing of scrambled structures.

2.2.3 Passive construction in Czech and Korean

2.2.3.1 Czech

In cases where it is not important who performs the action, but rather what happens, the passive construction is typically used (see Štícha, 1979). According to Dušková (1988), Czech distinguishes between two types of passive constructions: the periphrastic passive and the reflexive passive. The periphrastic passive (*složené pasivum*, also called *opisné pasivum*) always comprises of the auxiliary verb *být* ‘to be’ followed by the verb with the passive participle. As shown in (5), the theme, *zloděj-Ø* ‘thief[NOM.SG]’ is in subject position and is denoted by nominative case morpheme. Meanwhile, the agent, *polici-í* ‘police-INST’ is in object position and is expressed using instrumental case.

- (5) *zloděj-Ø* *byl* *dopad-en* *polici-í*
 thief[NOM.SG] AUX[PST.3SG] catch-PAS.PTCP police-INST
 ‘The thief was caught by the police.’

As in the case of Czech active transitive, it is possible to scramble the word order of the passive voice construction without a change in the meaning or thematic roles. As shown in (6), the agent *polici-í* ‘police-INST’ is now in subject position, while the theme *zloděj-Ø* ‘thief[NOM.SG]’ is in object position.

- (6) polici-í byl dopad-en zloděj-Ø
 police-INST AUX[PST.3SG] catch-PAS.PTCP thief[NOM.SG]
 ‘The thief was caught by the police.’

The reflexive passive (*zvrtné pasivum*), also called the quasi-passive reflexive construction (Mítkovská & Bužarovská, 2021). It is formed by using the reflexive pronoun *se* and the passive participle form of a transitive verb. The subject (theme) is denoted by nominative case, typically zero-marked, as in (7). Noticeably, even though the verb in the Czech reflexive passive construction is transitive, the object (agent) may be omitted. The Czech reflexive passive construction can be scrambled as well, as in (8).

- (7) okno-Ø se zavř-elo
 window[NOM.SG] REFL close-PST.3SG
 ‘The window got closed.’ (lit. ‘The window closed [by] itself.’)

- (8) zavř-elo se okno-Ø
 close-PST.3SG REFL window[NOM.SG]
 ‘The window got closed.’ (lit. ‘The window closed [by] itself.’)

According to contrastive studies of passive constructions between English and Czech (e.g., Babická, 2008; Dušková, 1999; Jelínek, 2012; Mathesius & Vachek, 1975; Poldauf, 1940; Studeník, 2015), passive constructions are less common in Czech than English; when translating from English, passive constructions are transformed into active ones (Štrublíková, 2012), as active constructions are more natural in Czech. Furthermore, Babická (2008) indicates that the reflexive passive is employed more frequently than the periphrastic passive construction. Except for very formal speeches, the periphrastic passive construction is quite literary and is rarely employed in spoken Czech.

2.2.3.2 Korean

The Korean passive constructions are defined by subject (theme) with nominative case marker *-i/ka* and object (agent) with the four dative postpositions *-eykey* (formal), *-hanthey* (informal, colloquial speech), *-kkey* (honorific form), and *-ey* (for inanimate objects and animals).

As Sohn (1999) summarizes, there are three types of passive constructions in Korean: suffixal, lexical, and phrasal. First, the suffixal passive is created through the combination of a transitive verb and one of four passive suffix variants: *-i* (9a), *-hi* (10a), *-li* (11a), and *-ki* (12a), the occurrence of which is mostly determined by the stem-final sound. The suffixal passive construction can be scrambled as well (9b, 10b, 11b, 12b). Even though scrambling in Korean doesn't change the general meaning, various semantic and pragmatic factors (e.g., specificity, presuppositionality, topic, focus) also play a crucial role in the acceptability of scrambled sentences because scrambling isn't just randomly rearranging words as there are rules and constraints (Ko, 2018).

(9a) Canonical

kwumong-i nongpwu-eykey pha-i-ess-ta
 hole-NOM farmer-DAT dig-PSV-PST-DECL
 'A hole was dug by the farmer.'

(9b) Scrambled

nongpwu-eykey kwumong-i pha-i-ess-ta
 farmer-DAT hole-NOM dig-PSV-PST-DECL
 'A hole was dug by the farmer.'

(10a) Canonical

totwuk-i kyengchal-eykey cap-hi-ess-ta
 thief-NOM police-DAT catch-PSV-PST-DECL
 'The thief was caught by the police.'

(10b) Scrambled

kyengchal-eykey totwuk-i cap-hi-ess-ta
 police-DAT thief-NOM catch-PSV-PST-DECL
 'The thief was caught by the police.'

(11a) Canonical

kimchi-ka halmeni-eykey phal-li-ess-ta
 kimchi-NOM grandmother-DAT sell-PSV-PST-DECL
 'Kimchi was sold by grandmother.'

(11b) Scrambled

halmeni-eykey kimchi-ka phal-li-ess-ta
grandmother-DAT kimchi-NOM sell-PSV-PST-DECL
'Kimchi was sold by grandmother.'

(12a) Canonical

kulus-i namphyen-eykey ssis-ki-ess-ta
bowl-NOM husband-DAT wash-PSV-PST-DECL
'The bowls were washed by husband.'

(12b) Scrambled

namphyen-eykey kulus-i ssis-ki-ess-ta
husband-DAT bowl-NOM wash-PSV-PST-DECL
'The bowls were washed by husband.'

According to Yeon (2003), passive sentences are considered to be generated from their corresponding active sentences through the passivization process. It should be pointed out, however, that only certain transitive verbs can take on this passive form. For example, dative or benefactive verbs, cognitive verbs, symmetrical verbs, as well as verbs ending in *ha* 'do' do not accept a passive suffix and other passive types can be used instead.

The second type are lexical passives which host two subtypes, one of which are lexically passive verbs (inherent passives). These are in passive form by default; therefore, their form is different from active verb and grammatical voice is expressed semantically. A typical example is the active verb *ttaylita* '(to) hit' (13) with its passive counterpart *macta* '(to) be/get hit' (14).

(13) *Chelswu-ka Yengi-lul ttayli-ess-ta*
Chelswu-NOM Yengi-ACC hit-PST-DECL
'Chelswu hit Yengi.'

(14) *Yengi-ka Chelswu-eykey mac-ass-ta*
Yengi-NOM Chelswu-DAT get.hit-PST-DECL
'Yengi got hit by Chelswu.'

The other subtype combines passive light verbs (pLV), for example *pat.ta* 'receive an action', with verbal nouns, for example *cwumok* 'attention' (from *cwumok-hata* 'to pay attention'), to form compound passives: *cwumok-pat.ta* 'to receive attention'. Such other verbs

are, for example, *tanghata* ‘(to) undergo’, *tut.ta* ‘(to) hear’, *macta* ‘(to) receive’, and *toyta* ‘(to) become’.

The last type includes the phrasal (or periphrastic) passive, which consist of a verb stem followed by the infinitive suffix *-e/-a* and inchoative verb *cita* ‘get to be, become’, which normally indicates a change of state. When combined with a transitive verb, it can also convey passive meaning, as in *cwuta* ‘give’ and *cwu-e-cita* ‘be given’. The inchoative verb *cita* tends to occur with native Korean verbs (15). Noticeably, the agent in a phrasal passive construction prefers the agentive construction *ey uyhay* ‘by’ instead of the dative case denoting particle.

- (15) *nwunsalam-i Mina-ey uyhay mantul-e-ci-ess-ta*
snowman-NOM Mina-by make-INF-INCH-PST-DECL
‘The snowman was made by Mina.’

In Korean, the choice between active and passive constructions appears to be determined by which of the two arguments is considered to have influence over the activity stated in the sentence (Klaiman 1984, 1988). Unfortunately, there is little research and no precise data on the usage frequency of Korean passive constructions. However, findings from the analysis of L1 input from caregivers and child production in Shin (2022) suggest, that even though suffixal passives are the most frequent ones, passive constructions are rare overall. Furthermore, analysis of passive constructions in Korean conducted by Shin and Jung (2021) revealed that the frequency of Korean passives was very low in both writing data from Korean natives and L2-Korean learners. These results indicate that in contrast to active verbs, passive ones may be rare in Korean language use.

2.2.3.3 Expected challenges in L2 learners’ acquisition of suffixal passive construction

L2-Korean learners are expected to encounter challenges when acquiring the suffixal passive. The causative and the passive in Korean typically make use of the same morphemes (suffixes *-i*, *-hi*, *-li*, *-ki*), although its allomorphic variation may differ between the two constructions (Jo, 2020). Causative constructions are used to indicate that a subject (agent or causer) causes someone or something else (patient or causee) to do or be something or causes a change in the state. However, not all verbs share the same suffix for the passive and causative form. For example, the active verb *mek-ta* ‘(to) eat’, takes the passive suffix *-hi* to create *mek-hi-ta* ‘(to) be/get eaten’, and the causative suffix *-i* to create the causative *mek-i-ta* ‘(to) feed [someone]’. In these instances, a learner can simply learn these different forms and their

meaning. However, some verbs, for example the active verb *ssis-ta* ‘(to) wash’, takes the passive suffix *-ki* to create *ssis-ki-ta* ‘(to) be/get washed’, and causative suffix *-ki* to create *ssis-ki-ta* ‘(to) make someone or something get washed’. In this case, the only way to distinguish between the passive and causative form of the verb is that the learner must pay attention to the construction, more specifically case marking of subject and object, and the overall context (16, 17, 18).

(16) Active transitive

haksayng-i chayk-ul ilk-ess-ta
 student-NOM book-ACC read-PST-DECL
 ‘The student read the book.’ (active transitive)

(17) Suffixal passive

chayk-i haksayng-eykey ilk-hi-ess-ta
 book-NOM student-DAT read-PSV-PST-DECL
 ‘The book was read by the student.’

(18) Causative

sensayngnim-i haksayng-eykey chayk-ul ilk-hi-ess-ta
 teacher-NOM student-DAT book-ACC read-CAS-PST-DECL
 ‘The teacher made student read the book.’

As Shin and Park (2021) point out, learning the Korean suffixal passive construction can be difficult due to its non-isomorphic mapping, where there isn't a direct relationship between form and meaning. In active transitive sentences, the nominative case marker typically signifies the agent. However, in the suffixal passive, it represents the theme. The dative marker, which usually denotes a recipient in a ditransitive construction, is used to indicate the agent in the passive. The same research examined the comprehension of Korean suffixal passive construction by Mandarin-speaking learners of Korean. The findings indicated a uniform preference for the canonical passive over the scrambled passive among the learners. With increasing proficiency, the judgment gap between the canonical active transitive and the canonical suffixal passive narrowed, while the gap between the canonical active transitive and the scrambled suffixal passive remained unchanged. Additionally, the study revealed that both learners and native speakers required more time to judge the acceptability of the canonical suffixal passive compared to other construction types.

It is expected that L1-Czech L2-Korean learners encounter difficulties in the acquisition of the suffixal passive construction. There are two main reasons: 1) Czech and Korean have different types and concepts of passive constructions which are expressed differently and behave differently, and 2) because of the existence of many overlapping suffixes in Korean. This could also be attributed to a multitude of factors surrounding L2 learners, including L2 input, the interface between L1 and L2, and the types of tasks. Additionally, it is expected that the learners will require more time to process the scrambled suffixal passive constructions due to their complex structure, non-isomorphic mapping, language-specific devices, and the low frequency of passive voice in input.

III. Methodology

3.1. Methods

The experiment focuses on Czech learners who are learning Korean as their second language. It explores how (CLI), proficiency, and classroom input impact the learners' understanding of two specific Korean constructions: active transitive and suffixal passive. The study measures learners' acceptability judgement and reaction time. It also investigates if changing the order of pre-verbal arguments causes any comprehension difficulties. One of the key questions this study aims to answer is whether these Czech learners can develop sentence processing strategies similar to native Korean speakers. Additionally, the research analyzes selected textbooks to find out how often Korean passive constructions appear compared to active transitive ones.

3.1.1. Participants

For the L1 group, 20 natives participated in this experiment (average age 27.75, SD = 4.84). They were either friends of mine or exchange students from partner universities. For the L2 group, a total of 29 students, with an average age of 20.90 (SD = 1.21), participated in this experiment. These students were enrolled in either the Korean for Business or Korean Studies undergraduate programs at Palacký University in Olomouc. All participants - who are studying at the same university - attended the same Korean classes and were taught by the same professors. Therefore, the curricula for both programs are quite similar apart from Korean for Business having specialized courses on economics. The level of language proficiency among students, however, could differ based on factors such as duration of study (average years of learning = 1.93, SD = 1.22) and individual methods of self-study or participation in exchange programs. Participants received Korean snacks as compensation for their involvement. The majority of the participants were female, with only one male student among the 29 participants. This is because most of the students of Korean for business and Korean studies are female. Due to this gender imbalance, the factor of gender was not considered in the subsequent analysis/discussion.

3.1.2. Stimuli

A total of 80 sentences were created and subsequently reviewed by native speaker (see appendix 1). The target test sentences were classified into two categories. The first category consisted of 20 active transitive sentences out of which 10 were canonical in a grammatical construction [**subject_(agent)-NOM object_(theme)-ACC verb**], shown in (19), and 10 were scrambled [**object_(theme)-ACC subject_(agent)-NOM verb**], shown in (20). All the sentences were grammatical.

Active transitive sentences

(19) Canonical word order

Minswu-ka Pola-lul cap-ass-ta
Minswu-NOM Pola-ACC catch-PST-DECL
'Minswu caught Pola.'

(20) Scrambled word order

Pola-lul Minswu-ka cap-ass-ta
Pola-ACC Minswu-NOM catch-PST-DECL
'Minswu caught Pola.'

The second category consisted of 20 suffixal passive sentences, out of which 10 were canonical in a grammatical construction [**subject_(theme)-NOM object_(agent)-DAT verb**], shown in (21), and 10 were scrambled [**object_(agent)-DAT subject_(theme)-NOM verb**], shown in (22). All the sentences were grammatical as well.

Suffixal passive sentences

(21) Canonical word order

Minse-ka Yeyci-eykey cap-hi-ess-ta
Minse-NOM Yeyci-DAT catch-PSV-PST-DECL
'Minse was caught by Yeyci.'

(22) Scrambled word order

Yeyci-eykey Minse-ka cap-hi-ess-ta
Yeyci-DAT Minse-NOM catch-PSV-PST-DECL
'Minse was caught by Yeyci.'

Alongside the test sentences, I included 40 fillers that were not related to the test sentences in order to mask the purpose of the experiment. Out of the 40 fillers, 20 sentences were grammatical and canonical, shown in (23), 20 were grammatical and scrambled, shown in (24), and 10 were ungrammatical, shown in (25).

Filler sentences

(23) Grammatical canonical sentence

Minswu-ka sicang-ulo ka-ass-ta
Minswu-NOM market-LOC go-PST-DECL
‘Minswu went to a market.’

(24) Grammatical scrambled sentence

nokcha-wa hongcha-lul Thaywu-ka masi-ess-ta
green.tea-COM black.tea-ACC Thaywu-NOM drink-PST-DECL
‘Thaywu drank green tea and black tea.’

(25) Ungrammatical sentence

Sekcwu-ka thaykpay-lo pat-ass-ta
Sekcwu-NOM package-INST receive-PST-DECL
‘(Sekcwu received a package.)’

3.1.3. Procedure

The data collection was carried out at the computer laboratory of the Faculty of Arts at Palacký University Olomouc, the Czech Republic, employing laptops as the primary tool. To safeguard against the disclosure of sensitive information, each participant was randomly assigned a unique ID, which was required to be entered at the beginning of every task. This also facilitated the link of results from experiment outcomes. First, participants were instructed to complete the Korean C-test (Lee-Ellis, 2009) on a paper (see appendix 2). Subsequently, they proceeded to an online digit span cognitive task facilitated by PsyToolkit (Stoet, 2010, 2017). The next phase involved an online acceptability judgement task, administered through Qualtrics. The final task required participants to provide additional information via a questionnaire hosted on Google Forms. To ensure the validity of the results, participants were not briefed about the content beforehand and were explicitly prohibited from seeking assistance from external sources, including other individuals, internet resources (such as translators), or educational materials. Only the C-test was given a limit of 20 minutes to guarantee equal conditions for all

participants. The cumulative duration for the completion of all four tasks was approximately one hour.

The Korean C-test (see chapter 2.1.1.) served as a tool to measure the proficiency of the learner participants. This test is composed of five paragraphs, each presenting a different level of reading difficulty, and requires the test taker to fill in the blanks within each paragraph, considering the overall theme or topic of the paragraph. Each blank filled correctly corresponds to one point towards the total score. In the context of this research, four out of the five paragraphs were incorporated. The blank could represent any morphological or semantical component. Consequently, participants could earn proficiency points for accurately assigning postpositions, which could be understood from the context, even if the blanks in the middle of the word were filled incorrectly or left empty (Figure 1). In this study, the maximum possible proficiency points one could get in C-test was 188. The average was 67.10 (SD = 26.07).


저는 대학   에 다닙니다.

Figure 1. Example of point assignment. Green denotes correctly filled syllable (in this case locative postposition *-ey*); red denotes incorrect/no writing of a syllable (in this case part of a word).

The digit span cognitive task is a well-established measure of short-term memory capacity (Jones & Macken, 2015). In this task, participants were presented with a sequence of two digits and asked to reproduce it. If they were successful, a longer sequence was presented, and this process continued until the participants were unable to accurately reproduce the sequence. According to Miller (1956), an individual can typically remember up to seven digits. In this study, the average maximum sequence length that participants were able to recall was 6.10 (SD = 0.99).

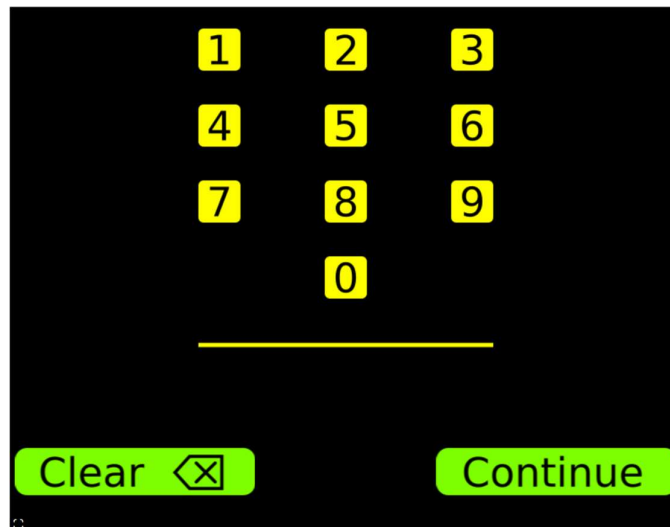


Figure 2. Sequence keypad. Participant needed to click on the digits in the order they have appeared.

The acceptability judgement task consisted of a total of 80 sentences and utilized a 6-point Likert scale, with 0 indicating 'very unacceptable' and 5 indicating 'very acceptable'. The sentences were pseudo-randomized to ensure that participants did not consecutively encounter two sentences with the same conditions, such as voice or word order. Furthermore, the participants' clicks were observed as well to record the reaction time.

Finally, the background questionnaire included questions to various factors such as age, gender, length of study, experience with the exchange program, participation in specific classes (particularly those involving exposure to the L2 textbooks being analyzed). Additionally, participants were asked to list some of the study materials they used.

3.2. Analysis

3.2.1. C-test

The participants' answers were assigned points, where the sum of the points equals the proficiency score and later was used as a factor for the group of L2 participants. The program used for statistical analysis was R (R Core Team, 2021). For the correct answers of Korean C-test (Lee-Ellis, 2009).

3.2.2. Digit span cognitive task

As previously mentioned, the final result of this task is the number of digits participants are able to repeat in a sequence and measures the capacity of working memory. These numbers

were extracted from PsyToolkit's output data files and later used as a factor for the L2 speakers. The program used for statistical analysis was R (R Core Team, 2021).

3.2.3. Acceptability judgement

3.2.3.1. Multiple linear regression (L1 vs. L2)

A multiple linear regression model was run to analyze the main effect of the overall group (L1 and L2 speakers of Korean), construction (cx; active transitive and suffixal passive), and word order (wo; canonical and scrambled), as well as their interaction effect on acceptability judgement. The program used for statistical analysis was R (R Core Team, 2021). The formula of this model is as follows:

$$\text{a) } \text{acceptability} \sim \text{group} * \text{cx} * \text{wo}$$

Additionally, for any occurrence of significant interaction between variables, a linear regression model was created as a post-hoc analysis to further analyze the effect of given interaction on acceptability.

3.2.3.2. Multiple linear regression (L2-internal)

A multiple linear regression model was run to analyze the main effect of the L2 group, construction (cx; active transitive and suffixal passive), and word order (wo; canonical and scrambled), as well as their interaction effect on acceptability judgement. The program used for statistical analysis was R (R Core Team, 2021). The formula of this model is as follows:

$$\text{b) } \text{acceptability} \sim \text{cx} * \text{wo} * \text{proficiency} * \text{wm}$$

Additionally, for any occurrence of significant interaction between variables, a linear regression model was created as a post-hoc analysis to further analyze the effect of given interaction on acceptability. Furthermore, to visualize the effect between proficiency and working memory on acceptability judgement and to evaluate one of the hypotheses, a graph for the linear regression model was created as well.

3.2.3.3. Multiple linear regression (L2 reaction time)

To find effects on learner participants' reading time, a multiple linear regression model was used with construction (cx; active transitive and suffixal passive), word order (wo; canonical and scrambled), proficiency, and working memory (wm) as a predictor variable and

with reading time (rt) as an outcome variable. The program used for statistical analysis was R (R Core Team, 2021).

c) $rt \sim cx * wo * proficiency * wm$

Additionally, for any occurrence of significant interaction between variables, a linear regression model was created as a post-hoc analysis to further analyze the effect of given interaction on reaction time. Furthermore, to visualize the effect between proficiency and working memory on reaction time and to evaluate one of the hypotheses, an interaction plot of the linear regression model was created as well.

3.2.4. L2 textbook input

Additionally, I analyzed six out of eight volumes of Sejong Korean textbooks (which are part of a King Sejong Institute curriculum) to find and count the number of active transitive and suffixal passive constructions' occurrences. King Sejong Institute is present at the Palacký University in Olomouc and provides additional education in Korean with exposure to the content of said textbooks. According to the curriculum, each of the textbook corresponds to eight different courses and their levels of difficulty ranging from 1A to 4B. The King Sejong Institute Olomouc, however, offers only courses from 1A to 3B which corresponds to six textbooks.

The analyzed content was limited to include only learning materials, i.e., individual learning units, listening scripts, and answers. The introduction, table of contents, and grammar tips were excluded from analysis.

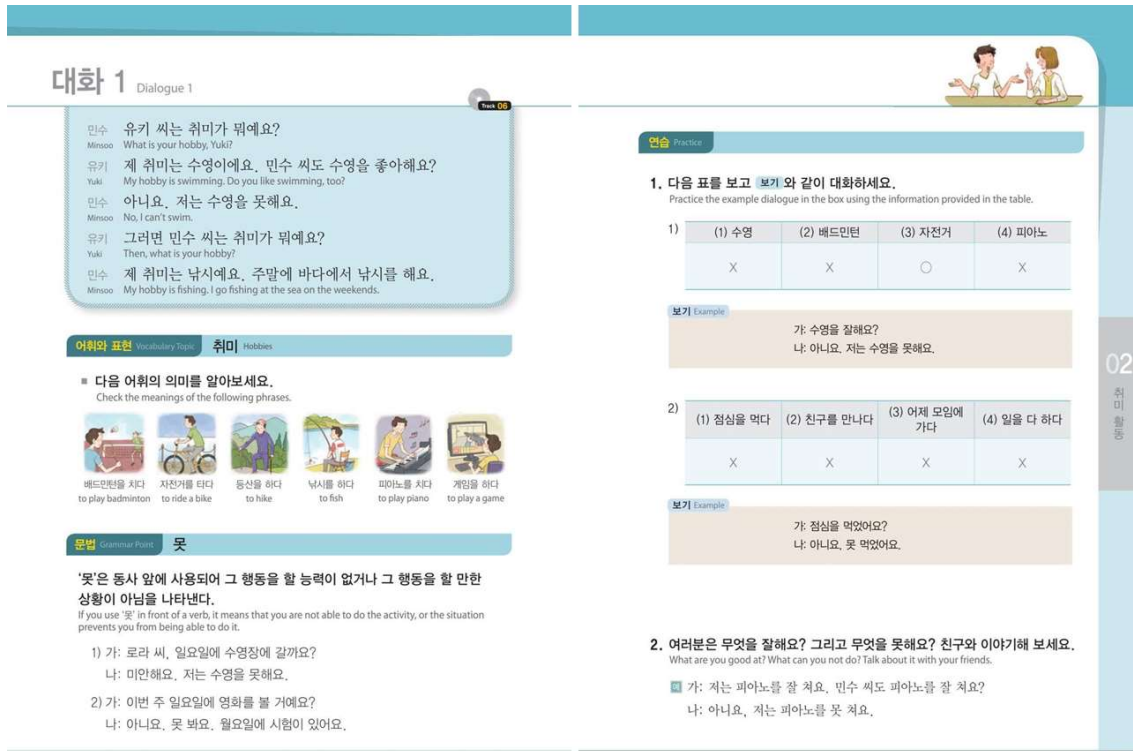


Figure 3. Example of textbook visual. Layout of the Sejong Korean 2.

First, I created a rubric (table 1) in order to categorize analyzed sentences and clauses as active transitive constructions or suffixal passive, lexical passive, or phrasal passive constructions based on the particles denoting specific functions, and predicates. Note, that the rubric shows a canonical word order and scrambled word order results from switching N_1 and N_2 .

Second, to precisely analyze the L2 textbooks, a number of rules has been set: (i) scrambling was allowed, (ii) the omission of agent, patient, or their function denoting particles was not allowed, (iii) analysis was conducted on a clause level within embedded clauses which are divided by conjunctive suffix, such as: *-ko(se)* ‘and’, *-(u)myense* ‘meanwhile’, *-(u)myen* ‘if’, *-jiman* ‘but’, *-kena* ‘or’, etc.

Lastly, I analyzed the L2 textbooks to find occurrences of all passive verbs (suffixal, lexical, phrasal) even with the omission of agent, patient, or their function denoting particles.

Table 1. Rubric used for analysis of L2 textbooks.

N ₁	N ₂	Predicate		Construction
NOM (agent) <i>-i/ka</i>	ACC (theme) <i>-ul/lul</i>	transitive verb		active transitive
NOM (theme) <i>-i/ka</i>	DAT (agent) <i>-eykey</i> (-hanthey, <i>-kkey</i>)	stem of a transitive verb	passive suffix	suffixal
		inherent passive verb		lexical
		compound passive verb		
NOM (patient) <i>-i/ka</i>	agentive construction <i>-ey uyhay</i>	stem of (di)transitive verb	<i>-e/a-cita</i>	phrasal

3.3. Prediction

If CLI, proficiency, and L2 classroom input jointly influence comprehension and processing of active and passive construction, L2 learners will perceive the active transitive construction as more acceptable compared to the suffixal passive construction.

In addition, with an increase in proficiency L2 learners will demonstrate improved accuracy in their acceptability judgments of both active transitive and suffixal passive constructions.

The effect of working memory capacity on the comprehension is moderated by their proficiency level. Specifically, for learners with lower proficiency, a greater working memory capacity will facilitate greater comprehension of active and passive construction. However, for learners with higher proficiency, the effect of working memory capacity on comprehension may be less pronounced.

I also believe the analysis of L2 textbooks is going to reveal a significantly lower frequency of passive constructions compared to active constructions. This scarcity of passive constructions in the learning materials will lead to longer average processing times and/or lower acceptability judgments of suffixal passive constructions by L2 learners.

IV. Results and discussion

4.1. Results: Learners' background

The average age of L2 participants was reported to be 20.90 (SD = 1.21) and their average years of learning was 1.93 (SD = 1.22). Out of the 29 participants only four had taken part in exchange program. Thirteen participants were enrolled in the Korean for Business program and 16 participants in the Korean Studies program. The most common sources reported for self-study were “Talk to me in Korean” (TTMIK; online courses and textbooks), the Naver dictionary, YouTube, and K-dramas among others. Czech was reported as being the L1 of all the participants. In addition, participants reported having a command of English and German and to a lesser extent Spanish, Russian, and Japanese

Moreover, 17 participants attended extracurricular classes from the King Sejong Institute, and therefore, had prior exposure to the analyzed L2 textbooks. The most advanced level of class attended was reported to be 2A which corresponds to the textbook 3. However, in total only 10 participants were exposed to the contents of textbooks 1 to 3, and seven participants took classes corresponding to only textbooks 1 or 2, or 1 and 3.

4.2. Results: Acceptability judgement

4.2.1. Multiple linear regression (L1 vs. L2): acceptability ~ group * cx * wo

Table 2 presents the results of participants' acceptability judgement in given constructions and word orders by the participant group (Group L1 and L2) with the number of responses (N), mean scores of their acceptability ratings (Mean), and standard deviation of responses (SD).

Table 2. Result: Acceptability judgment

Construction	Word order	Group	N	Mean (SD)
active transitive	canonical	L1	200	4.64 (0.78)
		L2	290	3.95 (1.22)
	scrambled	L1	200	3.71 (1.33)
		L2	290	2.46 (1.40)
suffixal passive	canonical	L1	200	4.04 (1.42)
		L2	290	3.18 (1.57)
	scrambled	L1	200	3.43 (1.49)
		L2	290	2.37 (1.44)

For the L1 group, in the active transitive construction, the L1-Korean group judged canonical word order as highly acceptable and the scrambled word order as acceptable. In the suffixal passive construction, the L1-Korean group evaluated the canonical word order as highly acceptable, and the scrambled word order as acceptable. For the L2 group, in the active transitive construction, the L2 group judged canonical word order as acceptable but dispreferred the scrambled word and judged it somewhat unacceptable. In the suffixal passive construction, the L2 group evaluated the canonical word order as acceptable but dispreferred the scrambled word order, rating it somewhat unacceptable.

Table 3 presents the outcome of the multilinear regression model including the L1 and L2 groups. This model revealed significant effect of *Group*, *Construction*, and *Word order* on participants' acceptability judgement ($p < 0.001$ for each), as well as effect of two-way interactions between *Group* and *Word order* ($p < 0.01$), and *Construction* and *Word order* ($p < 0.001$) on participants' acceptability judgement.

Table 3. Multiple linear regression (L1 vs. L2) (alpha level = .05)

	Estimate	Std. Error	<i>t</i>	<i>p</i>
(Intercept)	3.47	.03	110.87	< .001 ***
Group	.96	.06	15.41	< .001 ***
Construction	-0.43	.06	-6.92	< .001 ***
Word order	-0.96	.06	-15.34	< .001 ***
Group × Construction	-0.01	.13	-0.07	.948
Group × Word order	.39	.13	3.08	.002 **
Construction × Word order	.50	.13	4.00	< .001 ***
Group × Construction × Word order	-0.37	.25	-1.48	.138

To further analyze the effect of interactions above, a simple linear regression model (Table 4) was used as a post-hoc analysis with the alpha level adjusted to .025 to make results as conservative as possible. For the two-way interaction of *Group* and *Word order*, there was a significant difference between the acceptability judgment of word orders in both L1 and L2. Additionally, both groups demonstrated significant differences between canonical and scrambled word orders. For the two-way interaction of *Construction* and *Word order*, there was a significant difference between the acceptability judgment of word orders in active transitive construction, as well as suffixal passive construction. Additionally, there was a significant

difference between the acceptability judgment of constructions with canonical word order. Constructions with suffixal word order, however, showed no such difference between their acceptability judgement rating.

Table 4. Simple linear regression: post-hoc analysis (L1 vs. L2) (alpha level = .025)

Variable controlled	Predictor	Estimate	Std. Error	<i>t</i>	<i>p</i>
Group: L1	Word order	-0.77	.09	-8.33	< .0005 ***
Group: L2	Word order	-1.15	.08	-13.65	< .0005 ***
Word order: canonical	Group	.77	.09	8.79	< .0005 ***
Word order: scrambled	Group	1.16	.09	12.56	< .0005 ***
Construction: active transitive	Word order	-1.26	.08	-14.93	< .0005 ***
Construction: suffixal passive	Word order	-0.73	.10	-7.33	< .0005 ***
Word order: canonical	Construction	-0.70	.09	-8.06	< .0005 ***
Word order: scrambled	Construction	-0.17	.10	-1.70	.0904

4.2.2. Multiple linear regression (L2-internal): acceptability ~ cx * wo * proficiency * wm

Table 5 presents the outcome of the multilinear regression model for the L2 group. This model did not reveal any significant effect of *Construction*, *Word order*, *Proficiency*, or *Working memory* on L2 participants' acceptability judgement ($p > 0.05$ for each). However, the model revealed an effect of two-way interactions between *Construction* and *Proficiency*, *Word order* and *Working memory* ($p \leq 0.05$ for each), and effect of three-way interaction between *Construction*, *Proficiency*, and *Working memory* ($p \leq 0.05$) on participants' acceptability judgement.

Table 5. Multiple linear regression (L2) (alpha level = .05)

	Estimate	Std. Error	<i>t</i>	<i>p</i>
(Intercept)	2.71	.74	3.67	< .001 ***
Construction	2.74	1.48	1.85	.064
Word order	1.79	1.48	1.21	.225
Proficiency	-0.00	.01	-0.06	.951
Working memory	.01	.12	.12	.903
Construction × Word order	1.97	2.96	0.67	.506
Construction × Proficiency	-0.06	.02	-2.58	.010 *
Word order × Proficiency	-0.03	.02	-1.37	.171
Construction × Working memory	-0.43	.24	-1.79	.073
Word order × Working memory	-0.48	.24	-2.00	.046 *
Proficiency × Working memory	.00	.00	.34	.736
Construction × Word order × Proficiency	-0.03	.04	-0.81	.419
Construction × Word order × Working memory	-0.19	.48	-0.39	.697
Construction × Proficiency × Working memory	.01	.00	2.24	.025 *
Word order × proficiency × Working memory	.00	.00	1.36	.175
Construction × Word order × Proficiency × Working memory	0.01	.01	.78	.435

To further analyze the effect of interactions above, a simple linear regression model (Table 6) was used as a post-hoc analysis with the alpha level adjusted to .025 to make results as conservative as possible. For the two-way interaction of *Construction* and *Proficiency*, proficiency level showed a significant effect in acceptability judgment of active transitive constructions. In suffixal passive constructions, however, no such effect was observed. For the two-way interaction of *Word order* and *Working memory*, the working memory showed a significant effect in acceptability judgment of constructions with canonical word order. In the case of scrambled word order, there was no such effect. Lastly, the post-hoc analysis of the three-way interaction between *Construction*, *Proficiency*, and *Working memory* did not reveal any significant effect of working memory on any construction, or interaction between working memory and proficiency on any construction.

Table 6. Simple linear regression: post-hoc analysis (L2) (alpha level = .025)

Variable controlled	Predictor	Estimate	Std. Error	<i>t</i>	<i>p</i>
Construction: active transitive	Proficiency	.01	.00	2.85	.0045 **
Construction: suffixal passive	Proficiency	-0.00	.00	-0.26	.7970
Word order: canonical	Working memory	.14	.06	2.51	.0124 *
Word order: scrambled	Working memory	-0.03	.06	-0.50	.6170
Construction: active transitive	Working memory	.03	.06	.44	.6570
Construction: suffixal passive	Working memory	.09	.06	1.45	.1480
Construction: active transitive	Proficiency × Working memory	-0.00	.00	-1.26	.2081
Construction: suffixal passive	Proficiency × Working memory	.00	.00	1.65	.0996

Furthermore, to investigate the effect of proficiency on acceptability judgement in detail (Figure 4) and explore one of the hypotheses, a linear regression model was used. This model further revealed a general tendency of increased acceptability judgement ratings in both canonical and scrambled word orders of active transitive construction with the increase of proficiency. The suffixal passive construction with canonical word order, however, revealed stagnant rating with the proficiency increase. The suffixal passive construction with scrambled word order saw somewhat lower acceptability judgement ratings as the proficiency increased but this trend was insignificant.

Linear regression model of L2 learners' judgement vs. Proficiency

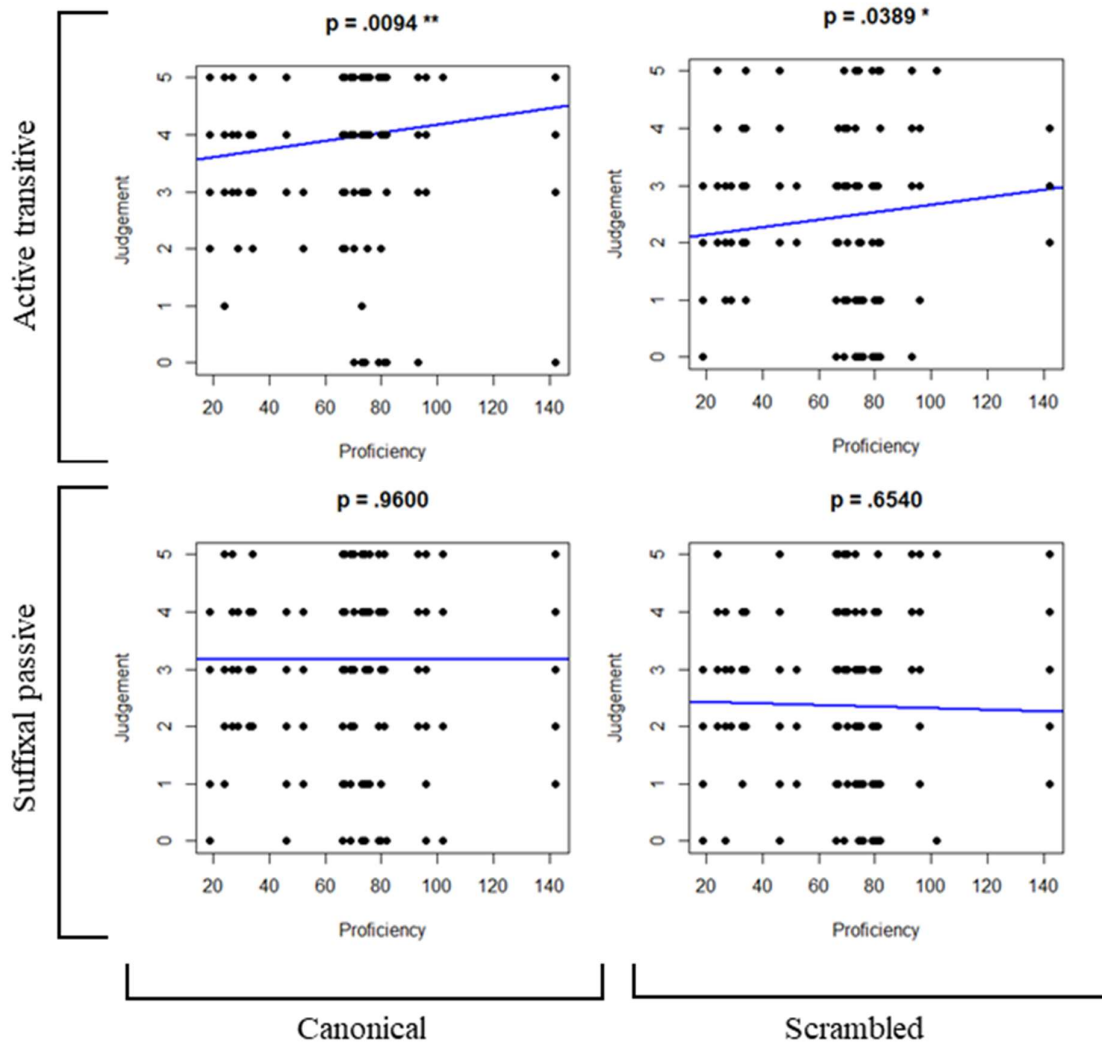


Figure 4. Linear regression model of L2 learners' judgement vs. proficiency. Horizontal axis represents word order and vertical axis represents construction (alpha level = .025).

4.2.3. Multiple linear regression (L2 reaction time): $rt \sim cx * wo * proficiency * wm$

Table 7 presents the results of participants' reaction time during acceptability judgement of given constructions and word orders by the number of responses (N), their average reaction time (Mean; measured in seconds), and standard deviation of the reaction time (SD). Reaction time measures the time from the moment the test sentence appears on the screen and ends with the participant's submission of acceptability judgement for given test sentence. To improve the accuracy of analysis, reaction times longer than 40 seconds were excluded, as outliers can distort statistical measures like the mean, standard deviation, and accuracy of the regression model itself.

Table 7. Result: Reaction time

Construction	Word order	N	Mean (SD)
active transitive	canonical	290	7.75 (5.64)
	scrambled	290	8.45 (5.38)
suffixal passive	canonical	285	9.96 (6.26)
	scrambled	289	9.02 (6.12)

The results indicate that the mean reaction time varies depending on the construction and word order used. In the active transitive construction, the mean reaction time was 7.75 seconds for the canonical word order and 8.45 seconds for the scrambled word order. In the suffixal passive construction, the mean reaction time was 10.76 seconds for the canonical word order and 9.14 seconds for the scrambled word order.

Table 8 presents the outcome of the multilinear regression model for L2 group. This model revealed a significant effect of *Proficiency* and *Word order* on L2 participants' reaction time ($p < 0.001$ for each), as well as an effect of a two-way interaction between *Proficiency* and *Working memory* ($p < 0.001$) on L2 participants' reaction times.

Table 8. Multiple linear regression (L2 reaction time) (alpha level = .05)

	Estimate	Std. Error	<i>t</i>	<i>p</i>
(Intercept)	-13.03	3.47	-3.75	< .001 ***
Construction	6.85	6.95	.99	.324
Word order	1.59	6.95	.23	.819
Proficiency	0.25	.05	4.93	< .001 ***
Working memory	3.48	.56	6.23	< .001 ***
Construction × Word order	6.16	13.89	0.44	.657
Construction × Proficiency	-0.10	0.10	-1.01	.311
Word order × Proficiency	-0.04	0.10	-0.41	.684
Construction × Working memory	-0.83	1.12	-0.74	.460
Word order × Working memory	-0.37	1.12	-0.33	.742
Proficiency × Working memory	-0.04	0.01	-4.77	< .001 ***
Construction × Word order × Proficiency	-0.18	0.20	-0.87	.387
Construction × Word order × Working memory	-1.47	2.23	-0.66	.511
Construction × Proficiency × Working memory	0.02	0.02	1.05	.294
Word order × Proficiency × Working memory	0.01	0.02	.45	.655
Construction × Word order × Proficiency × Working memory	0.03	0.03	0.93	.355

Furthermore, to investigate the effect of proficiency and working memory on reaction time in detail, an interaction plot of the linear regression model was used (Figure 4). The plot uses *Reaction time* as dependent variable, *Working memory* as a predictor variable, and *Proficiency* as mediator. The “Mean” line of proficiency denotes the average proficiency. The “-1 SD” line, i.e., one point decrease in standard deviation from average, represents lower proficiency. The slope of the line suggests that for learners with lower proficiency, an increase in working memory capacity significantly increases reaction time. On the other hand, the “+1 SD” line, i.e., one point increase in standard deviation from average, represents higher proficiency. This line is much less steep compared to the lower proficiency line and suggests

that for learners with higher proficiency, an increase in working memory capacity results in an insignificant decrease in reaction time.

Interaction effect between working memory and proficiency on reaction time.

*Reaction time ~ Working memory * Proficiency*

$p < .0005^{***}$

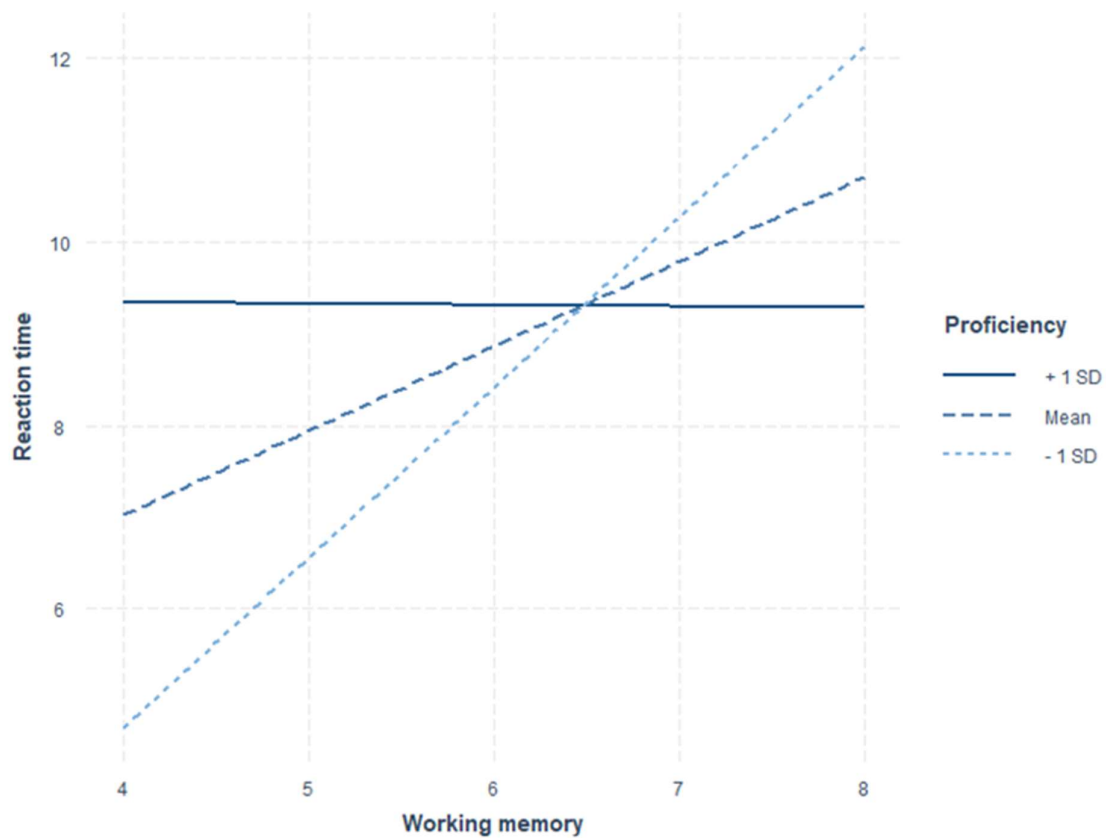


Figure 5. Interaction plot of the working memory and proficiency effect on reaction time. Horizontal axis represents working memory, vertical axis represents reaction time, and the lines depict changes in proficiency (alpha level = .025).

4.3. L2 textbook input

Table 9 presents findings of constructions from the L2 textbook analysis in a given textbook by the construction and word order with the number of constructions found. Note, that passive constructions are not represented by their sub-categories (suffixal, lexical, and phrasal) for the sake of simplicity given the results.

Table 9. Summary of the findings form L2 textbook construction analysis

	Active transitive construction		Passive constructions	
	Canonical	Scrambled	Canonical	Scrambled
Textbook 1	7	0	0	0
Textbook 2	11	0	0	0
Textbook 3	15	0	0	0
Textbook 4	32	0	0	0
Textbook 5	23	0	0	0
Textbook 6	36	1	0	0

The L2 analysis revealed no presence of suffixal passive, lexical passive, or phrasal passive construction in any of the six textbooks, based on the rules of rubric (see section 3.2.4 and table 1). The active transitive construction, however, was observed in all the six textbooks. The least number of constructions is present in textbook 1 (N = 7) and the highest amount of active transitive constructions can be seen in textbook 6 (N = 37). There was only one active transitive construction with the scrambled word order which was found in the textbook 6. For the complete list of found construction see appendix 3.

Table 10 summarizes findings from the additional L2 textbook analysis with the objective of finding passive verbs and the total of their occurrences. Textbook 6 had the highest number of passive verbs found, and most passive verb occurrences in all textbooks were suffixal, except for textbook 6 where the majority were lexical. Textbooks 1 and 2 had the least number of passive verbs found (N = 4). Textbook 5 showed a balanced use of both suffixal (N = 47) and lexical (N = 46) passive verbs.

Table 10. Summary of the findings form L2 textbook passive verb analysis

	Number of passive verbs found	Passive verbs occurrences		
		suffixal	lexical	phrasal
Textbook 1	4	5	3	0
Textbook 2	4	13	0	0
Textbook 3	14	26	6	3
Textbook 4	19	37	11	3
Textbook 5	36	47	46	8
Textbook 6	45	32	48	10

In textbook 1, the suffixal passive verb *ssu-i-ta* ‘to be written’ had the most occurrences (N = 4). The greatest number of occurrences in textbook 2 has been observed in the suffixal passive verb *mo-i-ta* ‘to be gathered’ (N = 9) which appeared in all six textbooks. The most common passive verb in textbook 3 was suffixal *noh-i-ta* ‘to be put/placed’ (N = 6). The suffixal passive verb *po-i-ta* ‘to be seen’ was the most common in both textbook 4 (N = 20) and textbook 5 (N = 13). The textbook 6, however, had the most occurrences with the lexical passive verb *sayong-toy-ta* ‘to be used’ (N = 12). For the complete list of verbs found see appendix 3.

4.4. Evaluation of research hypotheses

I presented the research question, "How do CLI, proficiency, and L2 classroom input influence comprehension and processing of active and passive construction among L1-Czech and L2-Korean learners?" Based on this research question, I proposed four hypotheses. In this section, I evaluate each hypothesis using the results of the experiment.

The main hypothesis was that CLI, proficiency, and L2 classroom input will jointly influence comprehension and processing of active and passive construction among L1-Czech L2-Korean learners. While not all aspects of the main hypothesis are fully supported, the results of this study do indicate that Cross-Linguistic Influence (CLI), proficiency, and L2 classroom input have some influence on the comprehension and processing of active and passive construction among L1-Czech L2-Korean learners. This general finding underscores the complex interplay of these factors in second language acquisition. However, the influence of these factors is not uniform and varies depending on the specific aspects of language comprehension and processing being considered. Therefore, to gain a more nuanced understanding of these influences, it is necessary to delve deeper and examine each supporting

hypothesis separately. The following paragraphs will address each supporting hypothesis in detail.

The first supporting hypothesis was that the learners would perceive the active transitive construction as more acceptable compared to the suffixal passive construction. The mean scores of acceptability judgement ratings revealed that the suffixal passive constructions received somewhat similar ratings to the active transitive constructions. The statistical analysis revealed that there was no significant difference between the constructions' rating.

The next supporting hypothesis was that L2 learners would demonstrate improved accuracy in their acceptability judgments of both active transitive and suffixal passive constructions as the proficiency increased. The results revealed that as proficiency increased the acceptability judgement of active transitive construction increased as well. The suffixal passive construction, however, did not see any increase in acceptability judgement ratings.

Another supporting hypothesis was that the effect of working memory capacity on the comprehension is moderated by their proficiency level. Specifically, for learners with lower proficiency, a greater working memory capacity would facilitate greater comprehension of active and passive construction. In the learners with higher proficiency, the effect may be less pronounced. As a result, the multiple linear regression revealed an effect of two-way interaction between proficiency and working memory on L2 participants' reaction time. Furthermore, the interaction plot revealed that for learners with lower proficiency, an increase in working memory capacity significantly increases reaction time. Therefore, for learners with lower proficiency a greater working memory capacity does not necessarily facilitate greater comprehension of active and passive constructions. Instead, it seems to lead to longer reaction times, which could indicate more difficulty in comprehension. In the learners with higher proficiency, an increase in working memory capacity indeed results in a decrease in reaction time. The decrease, however, is insignificant. This somewhat aligns with the latter part of this hypothesis.

The last supporting hypothesis expected the analysis of L2 textbooks to reveal a significantly lower frequency of passive constructions compared to active constructions and I predicted this scarcity of passive constructions in the learning materials would lead to longer average processing times and/or lower acceptability judgments of suffixal passive constructions by L2 learners. During the L2 textbook analysis, I didn't find any passive construction that would fit into the rubric "template". However, I found many passive verbs throughout the six volumes of L2 textbooks and suffixal passive verbs were more common. The results indeed

showed both longer average processing times and lower acceptability judgement in suffixal passive constructions than in the active transitive constructions.

4.5. Discussion

Considering that all the constructions in experiment were grammatical, L2 learners showed overall lower acceptability judgement than the L1 group. Notably, the mean scores of scrambled word order for both active transitive and suffixal passive constructions were in the range of being somewhat unacceptable. This indicates that the L2 learners had little to no exposure to scrambled word orders. Several studies, e.g., Hopp et al., 2023; Erdocia et al., 2014; Vettori et al., 2023, have already suggested that L2 learners tend to stick to specific word orders they have learned, and this can affect their comprehension and acceptability judgments of sentences with different word orders. The word order that L2 learners are exposed to and become familiar with can significantly influence their comprehension and processing of sentences in the L2. However, if an L2 learner is presented with a sentence that follows a different word order than what they're used to, it can lead to confusion and misunderstanding, and they might misinterpret the sentence or find it unacceptable.

The results also revealed that as proficiency increased the acceptability judgement of active transitive construction increased as well. The suffixal passive construction, however, did not see any increase in acceptability judgement ratings. This implies that even with the increase in proficiency learners may be struggling with the passive constructions. Similarly, the suffixal passive construction received overall lower acceptability judgement ratings from L2 learners than in the active transitive construction. These findings align with the study from Lee, Shin and Jung (2023) who also found that L2 learners had difficulty comprehending the suffixal passive construction in Korean. However, our results contrast with Shin and Park (2021) which found that L2 learners were able to comprehend scrambled word orders in Korean. This discrepancy might be due to differences in the learners' proficiency levels or the amount of exposure they had to scrambled word orders.

Furthermore, the L2 textbook analysis revealed no presence of suffixal passive construction in the six volumes of textbooks, as well as only one construction with scrambled word order which was active transitive. The construction with scrambled word order was found in textbook 6 which (according to the data from L2 participants' background data) no L2 participant had chance to be exposed to. This implies that the L2 learners' acceptability judgement and reaction time might depend on the exposure to the constructions. Study from Benati and Schwieter (2019) suggests that exposure to grammar in textbooks can indeed be

beneficial for L2 learners, while the results from Fernández (2011) imply that the way grammar is presented in textbooks can vary, and this variation could potentially impact how well L2 learners acquire grammar. This underscores the importance of including a variety of constructions in L2 textbooks.

During the L2 textbook analysis, I didn't find any passive construction that would fit into the rubric "template". However, I found many passive verbs throughout the six volumes of L2 textbooks and suffixal passive verbs were more common. The results showed both longer average processing times and lower acceptability judgement in suffixal passive constructions than in the active transitive constructions. This could mean that learners were exposed to passive verbs but had no exposure to their use in constructions. Unfortunately, there is little research and no precise data on the usage frequency of Korean passive constructions. Findings from the analysis of L1 input from caregivers and child production in Shin (2022) suggest, that even though suffixal passives are the most frequent ones, passive constructions are less common than active transitive ones. Furthermore, analysis of passive constructions in Korean conducted by Shin and Jung (2021) revealed that the frequency of Korean passives was very low in both writing data from Korean natives and L2-Korean learners.

One of the more concerning findings from the analysis of the L2 textbooks was the lack of dedicated sections focusing on Korean passive constructions. Despite the fact that the frequency of passive verb occurrences clearly increases with each textbook volume, these are merely part of the vocabulary and are simply labeled as passive forms. This is a significant oversight, given the complexity and uniqueness of passive constructions in the Korean language. The absence of construction or grammar focused content could potentially hinder learners' understanding and mastery of these constructions, particularly if they are relying on these textbooks as their primary learning resource. This gap in the instructional material underscores the need for comprehensive resources that cover all aspects of the language, including those that may be challenging for learners. It also raises questions about the effectiveness of current language learning materials and calls for a reevaluation of their content to ensure they adequately prepare learners for real-world language use.

The findings also suggest that for less proficient learners, having a larger working memory doesn't necessarily lead to better understanding of active and passive language structures. Instead, it appears to result in extended response times, which might imply a struggle with comprehension. This could be due to these learners still learning the language and needing to allocate more cognitive resources to process the information, resulting in longer response times. For more proficient learners, an increase in working memory capacity leads to a

negligible reduction in response time. This might be a sign that learners have already achieved a certain level of language proficiency, allowing them to process the information more efficiently and respond more quickly. For instance, a study by Manchón et al. (2022) found that working memory did not directly impact second language writing performance, but there was a significant interaction between working memory, proficiency, and task complexity in relation to L2 writing performance. Conversely, Linck et al. (2014) found that working memory is positively correlated with both L2 processing and proficiency outcomes. Li (2023) demonstrated that WM is largely unrelated to overall writing proficiency. It is predictive of specific aspects of L2 composition such as complexity, accuracy, and fluency. The role of WM varies as a function of genre, proficiency, target structure, instruction type, and task demand.

In the background questionnaire, the L2 learners reported sources for self-study which included many online sources, including machine translators. The use of machine translators in language learning can have a significant impact on learners. Kim (2022) explored how Korean-to-English machine translation systems deal with Korean passive constructions. The results showed that both translation systems generally produced semantically correct translations but varied in their ability to produce grammatically correct passive structures. There were instances where active voice was used instead and sometimes, they produced semantically inappropriate forms, such as relative clauses instead of full sentences, or active voice sentences with incorrect meanings. This inaccuracy could potentially affect learners' understanding and acquisition of these structures in the target language and lead to misconceptions. Moreover, the reliance on these tools could also have implications for learners' motivation and attitudes towards learning. If learners heavily rely on machine translators, it could either motivate them by aiding their understanding, or demotivate them if the translations lead to confusion or misconceptions.

V. Conclusion

5.1. Summary of the study

This thesis delves into an under-researched area of Second Language Acquisition (SLA) by examining Czech native speakers learning Korean as a second language. The study investigates the impact of factors such as Cross-Linguistic Influence (CLI), proficiency level, and L2 classroom input on learners' comprehension and usage of active transitive and suffixal passive Korean sentence structures. It measures learners' acceptance of these constructions, their response speed, and the potential comprehension challenges posed by rearranging pre-verbal arguments. The study also explores whether these learners can develop sentence processing strategies akin to native Korean speakers. An additional analysis examines the frequency of Korean passive constructions relative to active transitive ones in selected textbooks. Given the limited research on SLA involving Czech and Korean, this study aims to illuminate the interaction between these two languages during the learning process of active transitive and suffixal passive constructions.

The study involved two groups: a control group (L1-Korean) consisting of 20 native speakers, who were either my friends or exchange students from partner universities, and an experimental group (L1-Czech L2-Korean) of 29 students enrolled in either the Korean for Business or Korean Studies undergraduate programs at Palacký University in Olomouc. Data collection employed several methods to assess various aspects of the learner participants' language proficiency and cognitive abilities. A Korean C-test was used to measure language proficiency, while a Digit Span cognitive task was utilized to evaluate working memory. An Acceptability Judgement task was conducted to rate the acceptability of the constructions and compare the results with the native sample. Additionally, a background questionnaire was administered to gather supplementary information. This multi-faceted approach to data collection allowed for a comprehensive analysis of the participants' understanding and usage of active transitive and suffixal passive Korean sentence structures.

5.2. General discussion

The findings of this thesis offer valuable insights into the challenges faced by L2 learners when grappling with suffixal passive constructions. Despite their frequent appearance in learning materials, these constructions seem to pose a significant challenge for learners, as indicated by the longer average processing times and lower acceptability judgments. This complexity could stem from various factors, including the inherent complexity of passive

constructions, their presentation in learning materials, and the learners' proficiency level and working memory capacity. The same can be said for word order scrambling.

The analysis of the L2 textbooks revealed an intriguing pattern: while many passive verbs were found throughout the six volumes, none of these constructions fit into the typical passive constructions and many times some of the pre-verbal arguments were omitted. This suggests that the textbooks might not be providing learners with a consistent or standardized model for understanding and using passive constructions. Furthermore, it was found that suffixal passive verbs were more prevalent type in the textbooks. This aligns with the earlier findings regarding the prevalence of suffixal passive constructions in learning materials and their perceived importance for L2 learners. However, the absence of passive constructions in the textbooks could potentially contribute to the difficulties learners face when trying to understand and use these constructions.

Unfortunately, there is a lack of research and precise data on the usage frequency of Korean passive constructions. This data gap makes it challenging to assess the representativeness of the constructions presented in the textbooks and their relevance for real-world language use. It also underscores the need for more research in this area, particularly corpus-based analysis, to gain a better understanding of the usage frequency and contexts of Korean passive constructions.

The results of this thesis underscore the need for a reevaluation of current teaching methods for these constructions. Given the struggles learners face, it might be beneficial to explore alternative approaches, such as providing more explicit instruction on suffixal passive constructions or incorporating more varied and frequent exposure to these constructions in authentic contexts. Additionally, strategies aimed at enhancing learners' working memory capacity, such as cognitive training exercises, could be explored to facilitate the comprehension and processing of complex linguistic constructions.

This study underscores the importance of understanding individual differences among language learners, particularly in terms of working memory capacity. This understanding can enable educators to tailor their teaching strategies to meet the specific needs of each learner. For instance, learners with lower proficiency levels who have a greater working memory capacity might benefit from a slower pace of learning, allowing them more time to process and understand the information. Conversely, learners with higher proficiency levels seem to be somewhat able to process information more efficiently as their working memory capacity increases, suggesting the potential for the development of advanced learning strategies that capitalize on this efficiency.

Furthermore, the findings of this thesis suggest that the construction and word order can influence reaction time, although the direction of this influence can vary depending on the specific construction used. This opens an intriguing avenue for further research into the cognitive processes at play.

In conclusion, there is an important question about the effectiveness of current teaching methods for suffixal passive constructions and suggests the need for more research, particularly corpus-based analysis, to gain a better understanding of the usage frequency of Korean passive constructions. The insights gained from this research could inform the development of more effective teaching strategies and learning materials, ultimately facilitating the language learning process for L2 learners.

This thesis represents a fundamental exploration into the realm of language knowledge and linguistic study, specifically focusing on L1-Czech L2-Korean learners. It lays the groundwork and provides a source of inspiration for future research in this area. To draw more concrete conclusions, there is a pressing need for additional studies that delve into the understanding of grammatical constructions and CLI, given the limited number of linguistic studies conducted between these two languages. In particular, the challenges and complexities associated with active transitive and suffixal passive constructions, as highlighted in this study, underscore the need for such focused research. This would not only enrich our understanding of L2 learning dynamics but also inform the development of more effective teaching strategies and learning materials.

5.3. Limitations and future research

This study, while providing valuable insights into the knowledge of active transitive and suffixal passive constructions among L2 Korean language learners from Palacký University in Olomouc, Czech Republic, encountered several limitations that should be considered when interpreting the results.

One significant challenge was the limited availability of participants with L2 knowledge of Korean, as the Korean language is not widely taught in the Czech Republic. This resulted in a relatively small sample size, which may lead to decrease in the representativeness of the results and could potentially affect the generalizability of the study's findings.

The study also faced a limitation in the selection of verbs used to create test sentences for acceptability judgement. With only 10 verbs utilized, the complexity and variability of verb usage in the Korean language may not have been fully represented. This restricted selection could potentially influence the participants' judgement of sentence acceptability.

Further, the study was limited by the participants' reported use of self-study sources. While the analysis included six L2 textbooks, it was uncertain whether the additional self-study resources exposed the participants to active transitive or suffixal passive constructions, or their word order scrambling. This introduced an element of uncertainty into the study's findings.

Another acknowledged limitation was the use of working memory as a variable. While working memory plays a significant role in language comprehension and processing, it does not encompass the entire complexity of these cognitive processes. Therefore, the results of this study, while valuable, may not fully reflect the intricacies of comprehension and processing in second language acquisition.

Despite these limitations, this work presents one of the basic studies on the topic of language knowledge and linguistic study in general in L1-Czech L2-Korean and lays out the 'foundation' and inspiration for future studies. To conclude more definitive results, there is a need for more studies dealing with knowledge of grammatical constructions and CLI, as very few linguistic studies have been conducted between these two languages. Future research in this area may benefit from a larger and more diverse sample size, a broader range of verbs for acceptability judgement, tracking or accounting for the variable of self-study resources, and incorporating additional cognitive factors for a more holistic understanding of language comprehension and processing.

References

- Al-Dali, H. M. A. (2018). On the Internal Mechanisms of L2 Acquisition: Linguistic and Cognitive Accounts. *Asian Journal of Humanities and Social Studies*, 6(1).
- Babická, B. (2008). The passive voice in English and Czech and some implications for teaching. *Discourse and Interaction*, 1(2), 19-30. <https://journals.muni.cz/discourse-and-interaction/article/view/6914>
- Bates, E., & MacWhinney, B. (1989). Functionalism and the competition model. *The crosslinguistic study of sentence processing*, 3, 73-112.
- Benson, P., & Reinders, H. (Eds.). (2011). *Beyond the language classroom*. Springer.
- Brown, L., & Iwasaki, N. (2013). Cross-linguistic Influence in the L2 Acquisition of Korean Case Particles by Japanese-Speaking and English-Speaking Learners: L1-L2 Proximity and Learner Perceptions. *Electronic Journal of Foreign Language Teaching*, 10(2), 176-195.
- Carlson, C. (2020). *Elementary school L2 English teachers' language performance and children's second language acquisition*. Universitätsverlag Hildesheim.
- Chen, Y. (2022). The role of cross-linguistic influence in second language acquisition. *Journal of Higher Education Research*, 3(1), 98-101. <https://doi.org/10.32629/jher.v3i1.659>
- Cho, I. J. (2006). Comparative linguistic analysis of subject and object case marking errors by English speaking learners of Korean. *Journal of Korean Language Education*, 17(3), 281–299.
- Cook, V. J. (1985). Chomsky's universal grammar and second language learning. *Applied linguistics*, 6(1), 2-18. <https://doi.org/10.1093/applin/6.1.2>
- Cowan N. (2014). Working Memory Underpins Cognitive Development, Learning, and Education. *Educational psychology review*, 26(2), 197–223. <https://doi.org/10.1007/s10648-013-9246-y>
- De Graaff, R., & Housen, A. (2009). Investigating the effects and effectiveness of L2 instruction. *The handbook of language teaching*, 726-755. <https://doi.org/10.1002/9781444315783.ch38>
- Dušková, L. et al. (2006): *Mluvnice současné angličtiny na pozadí češtiny* [A grammar of contemporary English with reference to Czech] (3rd ed.). Academia.
- Dušková, L. (1999). *Studies in the English Language*. Karolinum.

- Ellis, N.C. (2002). Frequency Effects in Language Processing: A Review with Implications for Theories of Implicit and Explicit Language Acquisition. *Studies in Second Language Acquisition*, 24(2), 143-188. <https://doi.org/10.1017/S0272263102002024>
- Ellis, N. C., & Wulff, S. (2015). Second language acquisition. *Handbook of cognitive linguistics*, 409-431. <https://doi.org/10.1515/9783110292022-020>
- Ellis, N. C., Römer, U., & O'donnell, M. B. (2016). Usage-based approaches to language acquisition and processing: Cognitive and corpus investigations of construction grammar. *Applied linguistics*, 39(3), 437-441. <https://doi.org/10.1093/applin/amx037>
- Ellis, R. (1985). *Understanding second language acquisition*. Oxford University Press.
- Ellis, R. (2015). *Understanding second language acquisition* (2nd ed.). Oxford university press.
- Ellis, R., & Shintani, N. (2013). *Exploring Language Pedagogy through Second Language Acquisition Research* (1st ed.). Routledge.
- Erdocia, K., Zawiszewski, A., & Laka, I. (2014). Word order processing in a second language: From VO to OV. *Journal of psycholinguistic research*, 43, 815-837. <https://doi.org/10.1007/s10936-013-9280-4>
- Goldberg, A. E. (1995). *Constructions: A construction grammar approach to argument structure*. University of Chicago Press.
- Hall, J. K. (2019). The contributions of conversation analysis and interactional linguistics to a usage-based understanding of language: Expanding the transdisciplinary framework. *The Modern Language Journal*, 103, 80-94. <https://doi.org/10.1111/modl.12535>
- Hall, J. K. (2020). L2 classroom interaction and its links to L2 learners' developing L2 linguistic repertoires: A research agenda. *Language Teaching*, 55(1), 100–115. <https://doi.org/10.1017/S0261444820000397>
- Hartshorne, J. K., Tenenbaum, J. B., & Pinker, S. (2018). A critical period for second language acquisition: Evidence from 2/3 million English speakers. *Cognition*, 177, 263–277. <https://doi.org/10.1016/j.cognition.2018.04.007>
- Hopp, H., Schimke, S., Gastmann, F., Öwerdieck, D., & Poarch, G. J. (2023). Processing to learn noncanonical word orders: Exploring linguistic and cognitive predictors of reanalysis in early L2 sentence comprehension. *Studies in Second Language Acquisition*, 1–24. <https://doi.org/10.1017/s0272263123000451>
- Ipek, H. (2009). Comparing and Contrasting First and Second Language Acquisition: Implications for Language Teachers. *English Language Teaching*, 2, 155-163. <https://doi.org/10.5539/ELT.V2N2P155>

- Jeong, H. (2014). Processing and acquisition of Korean passive voice by Chinese L2 learners. *hankwuke kyoyuk* [Korean Education], 25(2), 165–186. <https://scholar.kyobobook.co.kr/article/detail/4010047488367>
- Jo, J. (2020). On the causative-passive correlation in Korean. *Studies in Generative Grammar*, 30, 517–545. <https://doi.org/10.15860/sigg.30.4.202011.517>
- Joh, J., & Plakans, L. (2017). Working memory in L2 reading comprehension: The influence of prior knowledge. *System*, 70, 107-120.
- Jelínek, T. (2012). *Trpný rod v odborných textech. Srovnání anglických odborných textů a jejich ekvivalentů* [Bachelor's thesis, Univerzita Tomáše Bati ve Zlíně]. Theses. <https://theses.cz/id/jt1vcn/>
- Jones, G., & Macken, B. (2015). Questioning short-term memory and its measurement: Why digit span measures long-term associative learning. *Cognition*, 144, 1-13.
- Kamimoto, T., Shimura, A., & Kellerman, E. (1992). A second language classic reconsidered—the case of Schachter's avoidance. *Interlanguage studies bulletin (Utrecht)*, 8(3), 251-277.
- Kecskes, I. (2008). The effect of the second language on the first language. *Babylonia*, 2(2), 31-34.
- Kersten, K. (2021). L2 input and characteristics of instructional techniques in early foreign language classrooms—Underlying theory and pedagogical practice. *The European Journal of Applied Linguistics and TEFL*, 10(2), 27-59.
- Kim, C. E. (2022). Analysis of Korean-to-English Machine Translation Systems' Treatment of Passives. *Journal of Pan-Pacific Association of Applied Linguistics*, 26(1), 87-103.
- Klaiman, M. H. (1984). The grammar of doing and undergoing in Korean. *Language Research*, 20(4), 331-343.
- Klaiman, M. H. (1988). Affectedness and control: A typology of voice systems. *Passive and voice*, 25–83. <https://doi.org/10.1075/tsl.16.05kla>.
- Ko, H. (2018). Scrambling in Korean syntax. In *Oxford Research Encyclopedia of Linguistics*.
- Köylü, Z. (2022). Correlational Analysis in SLA: Insights from the Study Abroad Research. *Research Methods in Language Teaching and Learning: A Practical Guide*, 215-229.
- Krashen, S. (1982). *Principles and Practices in Second Language Acquisition*. Pergamon press.
- Lado, R. (1957). *Linguistics across Cultures: Applied Linguistics for Language Teachers*. The University of Michigan Press.

- Lee, C., Shin, G. H., & Jung, B. K. (2023). How 'good-enough' is second language comprehension? Morphological causative and suffixal passive constructions in Korean. *Applied Linguistics Review*. <https://doi.org/10.1515/applirev-2022-0152>.
- Lee, E. (2020). The universal topic prominence stage hypothesis and L1 transfer: A study of L2 Korean written narratives by L1 English and L1 Chinese speakers. *Linguistic Approaches to Bilingualism*, 10(2), 184-215.
- Lee-Ellis, S. (2009). The development and validation of a Korean C-Test using Rasch Analysis. *Language Testing*, 26(2), 245–274. <https://doi.org/10.1177/0265532208101007>
- Lehmann, C. (2004). Interlinear morphemic glossing. 2. *Halbband: Ein internationales Handbuch zur Flexion und Wortbildung*, 1834-1857, <https://doi.org/10.1515/9783110172782.2.20.1834>
- Leow, R.P. (2015). *Explicit Learning in the L2 Classroom: A Student-Centered Approach* (1st ed.). Routledge. <https://doi.org/10.4324/9781315887074>
- Li, S. (2023). Working memory and second language writing: A systematic review. *Studies in Second Language Acquisition*, 45(3), 647-679. <https://doi.org/10.1017/S0272263123000189>
- Li, X., & Han, J. (2023). What Motivates Korean Language Learners to Learn? Motivational Characteristics and their Relationships with Learning Engagement. *The Asia-Pacific Education Researcher*, 33, 1-10. <https://doi.org/10.1007/s40299-023-00726-0>
- Linck, Jared & Osthus, Peter & Koeth, Joel & Bunting, Michael. (2013). Working memory and second language comprehension and production: A meta-analysis. *Psychonomic bulletin & review*, 21, 861-883. <https://doi.org/10.3758/s13423-013-0565-2>
- Loewen, S., & Sato, M. (Eds.). (2017). *The Routledge Handbook of Instructed Second Language Acquisition* (1st ed.). Routledge. <https://doi.org/10.4324/9781315676968>
- Long, M. H. (1981). Input, interaction, and second-language acquisition. *Annals of the New York Academy of Sciences*, 379, 259–278. <https://doi.org/10.1111/j.1749-6632.1981.tb42014.x>
- Luo, H. (2021). Cognitive Linguistics and Second Language Acquisition. *The Routledge Handbook of Cognitive Linguistics*, 556–567. <https://doi.org/10.4324/9781351034708-37>
- Mangubhai, F. (2001). Book floods and comprehensible input floods: providing ideal conditions for second language acquisition. *International Journal of Educational Research*, 35, 147-156. [https://doi.org/10.1016/S0883-0355\(01\)00012-X](https://doi.org/10.1016/S0883-0355(01)00012-X)

- Martin, S. E. (1992). *A reference grammar of Korean: A complete guide to the grammar and history of the Korean language*. C.E. Tuttle.
- Mathesius, V., & Vachek, J. (1975). *A functional analysis of present day English on a general linguistic basis*. De Gruyter Mouton. <https://doi.org/10.1515/9783110813296>
- Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, 63(2), 81–97. <https://doi.org/10.1037/h0043158>
- Min, H., & Lee, S. A. (2023). L2 Acquisition and Processing of Korean Direct Object and Oblique Relative Clauses by English Speakers. *Journal of Cognitive Science*, 24(3), 355-400. <https://doi.org/10.17791/jcs.2023.24.3.355>
- Mitchell, R., Myles, F. & Marsden, E. (2019). *Second Language Learning Theories* (4th ed.). Routledge. <https://doi.org/10.4324/9781315617046>
- Mitkovska, L., & Bužarovska, E. (2021). Quasi-passive reflexive constructions: Bridging autonomous and passive situations. *Linguistic Typology*, 25(2), 303-343. <https://doi.org/10.1515/lingty-2020-2062>
- National Institute of Korean Language. (2019). *Sejong Korean* (Vols. 1-6) (2nd ed.). King Sejong Institute Foundation
- O'grady, W., Dobrovolsky, M., & Aronoff, M. (1989). *Contemporary linguistics: An introduction*. St. Martin's Press
- Oh, E. (2018). Effects of L2 experience on the production of Korean stop contrasts by Mandarin Chinese learners. *Linguistic Research*, 35(1), 233-251. <https://doi.org/10.17250/khisli.35.1.201803.009>
- Ortega, L. (2014). *Understanding second language acquisition*. Routledge.
- Park, S. H. (2016). L2 Acquisition of Korean locative construction by English L1 speakers: Learnability problem in Korean Figure non-alternating verbs. *Proceedings of the 30th Pacific Asia Conference on Language, Information and Computation*, 493-499.
- Poldauf, I. (1940). Podstata anglického pasiva a anglické vazby zájmové účasti [The essence of the English passive and the English interested participation]. *Časopis pro moderní filologii* [Journal of Modern Philology], 26, 358-363.
- R Core Team (2021). R: A language and environment for statistical computing. *R Foundation for Statistical Computing*. <https://www.R-project.org/>.
- Reichle, R., Tremblay, A. & Coughlin, C. (2016). Working memory capacity in L2 processing. *Probus*, 28(1), 29-55. <https://doi.org/10.1515/probus-2016-0003>

- Ryu, N. Y. (2017). Perception of Korean contrasts by Mandarin learners: The role of L2 proficiency. *Toronto Working Papers in Linguistics*, 38. <https://twpl.library.utoronto.ca/index.php/twpl/article/view/28072>
- Sanz, C. (2014). Contributions of study abroad research to our understanding of SLA processes and outcomes. *Language acquisition in study abroad and formal instruction contexts*, 13, 1-16. <https://doi.org/10.1075/aals.13.01ch1>
- Saville-Troike, M. (2012). *Introducing Second Language Acquisition* (2nd ed.). Cambridge University Press. <https://doi.org/10.1017/CBO9780511888830>
- Seo, Y., Dmitrieva, O., & Cuza, A. (2022). Crosslinguistic Influence in the Discrimination of Korean Stop Contrast by Heritage Speakers and Second Language Learners. *Languages*, 7(1), 6. <https://doi.org/10.3390/languages7010006>
- Shen, W., & Park, H. (2020). Working Memory and Second Language Learning: A Review of the Past Twenty Years' Research in China. *Journal of Pan-Pacific Association of Applied Linguistics*, 24(1), 85-106. <https://doi.org/10.25256/PAAL.24.1.5>
- Shin, G. H., & Jung, B. K. (2021). Automatic analysis of passive constructions in Korean: Written production by Mandarin-speaking learners of Korean. *International Journal of Learner Corpus Research*, 7(1), 53-82. <https://doi.org/10.1075/ijlcr.20002.shi>
- Shin, G. H., & Park, S. H. (2021). Isomorphism and language-specific devices in comprehension of Korean suffixal passive construction by Mandarin-speaking learners of Korean. *Applied Linguistics Review*, 14(3), 503-531. <https://doi.org/10.1515/applirev-2020-0036>
- Shin, G. H. (2022). Automatic analysis of caregiver input and child production: Insight into corpus-based research on child language development in Korean. *Korean Linguistics*, 18(2), 125-158. <https://doi.org/10.1075/kl.20002.shi>
- Slabakova, R. (2008). *Meaning in the second language*. Mouton de Gruyter.
- Slabakova, R. (2016). *Second language acquisition*. Oxford University Press.
- Sohn, H. (1999). *The Korean language*. Cambridge University Press.
- Stoet, G. (2010). PsyToolkit – A software package for programming psychological experiments using Linux. *Behavior Research Methods*, 42(4), 1096-1104. <https://doi.org/10.3758/BRM.42.4.1096>
- Stoet, G. (2017). PsyToolkit: A novel web-based method for running online questionnaires and reaction-time experiments. *Teaching of Psychology*, 44(1), 24-31. <https://doi.org/10.1177/0098628316677643>

- Studeník, T. (2015). *The passive voice in English and Czech* [Bachelor's thesis, Univerzita Palackého v Olomouci]. Theses. <https://theses.cz/id/px21it/>
- Štícha, F. (1979). K užívání a významu dvojí formy trpného rodu v současné češtině [To the use and meaning of the two passive voice forms in contemporary Czech]. *Naše řeč* [Our speech], 62, 57-71. <http://nase-rec.ujc.cas.cz/archiv.php?art=6109>
- Štrublíková, E. (2012). *The Passive Voice in Czech and in English* [Bachelor's thesis, Univerzita Palackého v Olomouci]. Theses. <https://theses.cz/id/xzc4lz/>
- Thomas, M. (2001). Assessment of L2 Proficiency in second language acquisition research. *Language Learning*, 44(2), 307–336. <https://doi.org/10.1111/j.1467-1770.1994.tb01104.x>
- Tokowicz, N., & MacWhinney, B. (2005). Implicit and explicit measures of sensitivity to violations in second language grammar: An event-related potential investigation. *Studies in second language acquisition*, 27(2), 173-204. <https://doi.org/10.1017/S0272263105050102>
- Vettori, G., Casado Ledesma, L., Tesone, S., & Tarchi, C. (2023). Key language, cognitive and higher-order skills for L2 reading comprehension of expository texts in English as foreign language students: a systematic review. *Reading and Writing*, 37(5) 1-39. <https://doi.org/10.1007/s11145-023-10479-3>
- Weinreich, U. (1953). Languages in Contact. *The Hague: Mouton*.
- Wulff, S., & Ellis, N. C. (2018). Usage-based approaches to second language acquisition. *Bilingual cognition and language: The state of the science across its subfields*, 54, 37–56. <https://doi.org/10.1075/sibil.54.03wul>
- Xujia, D. (2019). The impact of semester-abroad experiences on post-sojourn L2 motivation. *Studies in Second Language Learning and Teaching*, 9(1), 117-155. <https://doi.org/10.14746/SLLT.2019.9.1.6>
- Yan, S., Mai, Z., & Zhao, Y. (2023). Positive cross-linguistic influence in the representation and processing of sentence-final particle by L2 and heritage learners of Chinese. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1145493>
- Yang, C., Crain, S., Berwick, R. C., Chomsky, N., & Bolhuis, J. J. (2017). The growth of language: Universal Grammar, experience, and principles of computation. *Neuroscience & Biobehavioral Reviews*, 81, 103-119. <https://doi.org/10.1016/j.neubiorev.2016.12.023>
- Yeon, J. (2003). *Korean Grammatical Constructions*. Saffron Books.

List of appendices

Appendix 1. Research sentences	65
Appendix 2. C-test	79
Appendix 3. L2 textbook analysis	80

Appendix 1. Research sentences

List of target sentences used for conducting research

Active transitive construction

영수가 영미를 밟았다.

Yengswu-ka Yengmi-lul palp-ass-ta
Yengswu-NOM Yengmi-ACC step.on-PST-DECL
'Yengswu stepped on Yengmi.'

민수가 보라를 잡았다.

Minswu-ka Pola-lul cap-ass-ta
Minswu-NOM Pola-ACC catch-PST-DECL
'Minswu caught Pola.'

재희가 정우를 안았다.

Cayhuy-ka Cengwu-lul an-ass-ta
Cayhuy-NOM Cengwu-ACC hug-PST-DECL
'Cayhuy hugged Cengwu.'

지애가 현우를 밀었다.

Ciay-ka Hyenwu-lul mil-ess-ta
Ciay-NOM Hyenwu-ACC push-PST-DECL
'Ciay pushed Hyenwu.'

미주가 동희를 찼다.

Micwu-ka Tonghuy-lul cha-ass-ta
Micwu-NOM Tonghuy-ACC kick-PST-DECL
'Micwu kicked Tonghuy.'

유미가 석주를 쫓았다.

Ywumi-ka Sekwu-lul ccoch-ass-ta
Ywumi-NOM Sekwu-ACC pursue-PST-DECL

‘Ywumi pursued Sekwu.’

민지가 윤화를 보았다.

Minci-ka Ywunhwa-lul po-ass-ta
Minci-NOM Ywunhwa-ACC see-PST-DECL

‘Minci saw Ywunhwa.’

나래가 지우를 물었다.

Nalay-ka Ciwu-lul mwul-ess-ta
Nalay-NOM Ciwu-ACC bite-PST-DECL

‘Nalay bit Ciwu.’

은지가 견우를 긁었다.

Unci-ka Kyenwu-lul kulk-ess-ta
Unci-NOM Kyenwu-ACC grasp-PST-DECL

‘Unci scratched Kyenwu.’

유리가 진수를 꼬집었다.

Ywuli-ka Cinswu-lul kkocip-ess-ta
Ywuli-NOM Cinswu-ACC pinch-PST-DECL

‘Ywuli pinched Cinswu.’

Suffixal passive construction

유미가 미나에게 밟혔다.

Ywumi-ka Mina-eykey palp-hi-ess-ta
Ywumi-NOM Mina-DAT step.on-PSV-PST-DECL

‘Ywumi was stepped on by Mina.’

민서가 예지에게 잡혔다.

Minse-ka Yeyci-eykey cap-hi-ess-ta
Minse-NOM Yeyci-DAT catch-PSV-PST-DECL

‘Minse was caught by Yeyci.’

영호가 슬기에게 안졌다.

Yengho-ka Sulki-eykey an-ki-ess-ta
Yengho-NOM Sulki-DAT hug-PSV-PST-DECL

‘Yengho was hugged by Sulki.’

상희가 남규에게 밀렸다.

Sanghuy-ka Namkywu-eykey mil-li-ess-ta
Sanghuy-NOM Namkywu-DAT push-PSV-PST-DECL

‘Sanghuy was pushed by Namkywu.’

혜지가 남주에게 차였다.

Hyeyci-ka Namcwu-eykey cha-i-ess-ta
Hyeyci-NOM Namcwu-DAT kick-PSV-PST-DECL

‘Hyeyci was kicked by Namcwu.’

선미가 하니에게 쫓겼다.

Senmi-ka Hani-eykey ccoch-ki-ess-ta
Senmi-NOM Hani-DAT pursue-PSV-PST-DECL

‘Senmi was pursued by Hani.’

찬미가 재우에게 보였다.

Chanmi-ka Caywu-eykey po-i-ess-ta
Chanmi-NOM Caywu-DAT see-PSV-PST-DECL

‘Chanmi was seen by Caywu.’

헤리가 유미에게 물렸다.

Hyeyli-ka Ywumi-eykey mwul-li-ess-ta
Hyeyli-NOM Ywumi-DAT bite-PSV-PST-DECL

‘Hyeyli was bitten by Ywumi.’

민호가 헤리에게 긁혔다.

Minho-ka Hyeyli-eykey kulk-hi-ess-ta
Minho-NOM Hyeyli-DAT scratch-PSV-PST-DECL

‘Minho was scratched by Hyeyli.’

정우가 찬규에게 꼬집혔다.

Cengwu-ka Chankywu-eykey kkocip-hi-ess-ta
Cengwu-NOM Chankywu-DAT pinch-PSV-PST-DECL

‘Cengmin was pinched by Chankywu.’

Active transitive construction (scrambled)

영미를 영수가 밟았다.

Yengmi-lul Yengswu-ka palp-ass-ta
Yengmi-ACC Yengswu-NOM step.on-PST-DECL

‘Yengswu stepped on Yengmi.’

보라를 민수가 잡았다.

Pola-lul Minswu-ka cap-ass-ta
Pola-ACC Minswu-NOM catch-PST-DECL

‘Minswu caught Pola.’

정우를 재희가 안았다.

Cengwu-lul Cayhuy-ka an-ass-ta
Cengwu-ACC Cayhuy-NOM hug-PST-DECL

‘Cayhuy hugged Cengwu.’

현우를 지애가 밀었다.

Hyenwu-lul Ciay-ka mil-ess-ta
Hyenwu-ACC Ciay-NOM push-PST-DECL

‘Ciay pushed Hyenwu.’

동희를 미주가 찼다.

Tonghuy-lul Micwu-ka cha-ass-ta
Tonghuy-ACC Micwu-NOM kick-PST-DECL

‘Micwu kicked Tonghuy.’

석주를 유미가 쫓았다.

Sekwu-lul Ywumi-ka ccoch-ass-ta
Sekwu-ACC Ywumi-NOM pursue-PST-DECL

‘Ywumi pursued Sekwu.’

윤화를 민지가 보았다.

Ywunhwa-lul Minci-ka po-ass-ta
Ywunhwa-ACC Minci-NOM see-PST-DECL

‘Minci saw Ywunhwa.’

지우를 나래가 물었다.

Ciwu-lul Nalay-ka mwul-ess-ta
Ciwu-ACC Nalay-NOM bite-PST-DECL

‘Nalay bit Ciwu.’

견우를 은지가 긁었다.

Kyenwu-lul Unci-ka kulk-ess-ta
Kyenwu-ACC Unci-NOM grasp-PST-DECL

‘Unci scratched Kyenwu.’

진수를 유리가 꼬집었다.

Cinswu-lul Ywuli-ka kkocip-ess-ta
Cinswu-ACC Ywuli-NOM pinch-PST-DECL

‘Ywuli pinched Cinswu.’

Suffixal passive construction (scrambled)

미나에게 유미가 밟혔다.

Mina-eykey Ywumi-ka palp-hi-ess-ta
Mina-DAT Ywumi-NOM step.on-PSV-PST-DECL

‘Ywumi was stepped on by Mina.’

예지에게 민서가 잡혔다.

Yeyci-eykey Minse-ka cap-hi-ess-ta
Yeyci-DAT Minse-NOM catch-PSV-PST-DECL

‘Minse was caught by Yeyci.’

슬기에게 영호가 안겼다.

Sulki-eykey Yengho-ka an-ki-ess-ta
Swulki-DAT Yengho-NOM hug-PSV-PST-DECL

‘Yengho was hugged by Swulki.’

남규에게 상희가 밀렸다.

Namkywu-eykey Sanghuy-ka mil-li-ess-ta
Namkywu-DAT Sanghuy-NOM push-PSV-PST-DECL

‘Sanghuy was pushed by Namkywu.’

남주에게 혜지가 차였다.

Namcwu-eykey Hyeyci-ka cha-i-ess-ta
Namcwu-DAT Hyeyci-NOM kick-PSV-PST-DECL

‘Hyeyci was kicked by Namcwu.’

하니에게 선미가 쫓겼다.

Hani-eykey Senmi-ka ccoch-ki-ess-ta
Hani-DAT Senmi-NOM pursue-PSV-PST-DECL

‘Senmi was pursued by Hani.’

재우에게 찬미가 보였다.

Caywu-eykey Chanmi-ka po-i-ess-ta
Caywu-DAT Chanmi-NOM see-PSV-PST-DECL

‘Chanmi was seen by Caywu.’

유리에게 혜리가 물렸다.

Ywuli-eykey Hyeyli-ka mul-li-ess-ta
Ywuli-DAT Hyeyli-NOM bite-PSV-PST-DECL

‘Hyeyli was bitten by Ywuli.’

혜리에게 민호가 긁혔다.

Hyeyli-eykey Minho-ka kulk-hi-ess-ta
Hyeyli-DAT Minho-NOM scratch-PSV-PST-DECL

‘Minho was scratched by Hyeyli.’

찬규에게 정우가 꼬집혔다.

Chankywu-eykey Cengwu-ka kkocip-hi-ess-ta
Chankywu-DAT Cengwu-NOM pinch-PSV-PST-DECL

‘Cengwu was pinched by Chankyw

List of filler sentences used for conducting research

Grammatical sentences (canonical)

영수가 학교에 갔다

Yengswu-ka hakkyo-ey ka-ass-ta

Yengswu-NOM school-LOC go-PST-DECL

‘Yengswu went to a school.’

민수가 시장으로 갔다.

Minswu-ka sicang-ulo ka-ass-ta

Minswu-NOM market-LOC go-PST-DECL

‘Minswu went to a market.’

지애가 화장실을 갔다.

Ciay-ka hwacangsil-ul ka-ass-ta

Ciay-NOM bathroom-ACC go-PST-DECL

‘Ciay went to a bathroom.’

유미가 편지를 경찰서에 보냈다.

Yumi-ka phyenci-lul kyengchalse-ey ponay-ess-ta

Yumi-NOM letter-ACC police.station-LOC send-PST-DECL

‘Yumi sent letter to a police station.’

석주가 음식을 방송국으로 보냈다.

Sekcwu-ka umsik-ul pangsongkwuk-ulo ponay-ess-ta

Sekcwu-NOM meal-ACC broadcast.station-LOC send-PST-DECL

‘Sekcwu sent meal to a broadcasting station.’

유리가 문을 열었다.

Yuli-ka mwun-ul yel-ess-ta
Yuli-NOM door-ACC open-PST-DECL
'Yuli opened a door.'

진수가 사탕만 먹었다.

Cinsu-ka sathang-man mek-ess-ta
Cinsu-NOM sweets-only eat-PST-DECL
'Cinsu ate only sweets.'

영호가 친구의 운동화를 신었다.

Yengho-ka chinkwu-uy wuntonghwa-lul sin-ess-ta
Yengho-NOM friend-GEN sneakers-ACC wear-PST-DECL
'Yengho wore friend's sneakers.'

슬기가 할머니와 집에 왔다.

Sulki-ka halmeni-wa cip-ey o-ass-ta
Sulki-NOM grandmother-COM house-LOC come-PST-DECL
'Sulki came home with grandmother.'

성자가 집 샀다.

Sengca-ka cip-Ø sa-ass-ta
Sengca-NOM house-(ACC) buy-PST-DECL
'Sengca bought a house.'

견우가 창 밖만 바라보았다.

Kyenwu-ka chang pakk-man po-ass-ta
Kyenwu-NOM window outside-only look-PST-DECL
'Kyenwu only looked out of a window.'

하니가 친구도 만났다.

Hani-ka chinkwu-to manna-ass-ta
Hani-NOM friend-also meet-PST-DECL
'Hani also met a friend.'

미나가 지호에게 책을 주었다.

Mina-ka Ciho-eykey chak-ul cwu-ess-ta
Mina-NOM Ciho-DAT book-ACC give-PST-DECL
'Mina gave Ciho a book.'

원호가 시아에게 음식을 건넸다.

Wenho-ka Sia-eykey umsik-ul kenney-ess-ta.
Wenho-NOM Sia-DAT food-ACC pass-PST-DECL
'Wenho passed Sia food.'

유미가 물을 컵에 채웠다.

Yumi-ka mul-ul khep-ey chaywu-ess-ta
Yumi-NOM water-ACC cup-LOC fill-PST-DECL
'Yumi filled water into the glass.'

지수가 책으로 책상을 쌓았다.

Ciswu-ka chayk-ulo chayksang-ul ssah-ass-ta
Ciswu-NOM books-INST desk-ACC pile-PST-DECL
'Ciswu piled the table with books.'

유리가 페인트를 벽에 칠했다.

Ywuli-ka pheynthu-lul pyek-ey chilha-yess-ta
Ywuli-NOM paint-ACC wall-LOC paint-PST-DECL
'Ywuli painted the wall.'

수호가 종이를 상자에 넣었다.

Suho-ka congilul sangca-ey neh-ess-ta
Suho-NOM book-ACC box-LOC put-PST-DECL
'Suho put a paper in the box.'

지호가 세미와 계획을 의논하였다.

Ciho-ka Seymi-wa kyeyhoyk-ul uynonha-yess-ta
Ciho-NOM Seymi-COM plan-ACC discuss-PST-DECL
'Ciho discussed with Seymi.'

지후가 밥을 시켰다.

Cihwu-ka pap-ul sikhi-ess-ta
Cihwu-NOM food-ACC order-PST-DECL
'Cihwu ordered food.'

Grammatical sentences (scrambled)

영화를 은지가 보았다.

yenghwa-lul Unci-ka po-ass-ta
movie-ACC Unci-NOM see-PST-DECL
'Unci saw a movie.'

선물을 석주가 숨겼다.

senmwul-ul Sekcwu-ka swumki-ess-ta
present-ACC Sekcwu-NOM hide-PST-DECL
'Secwu hid a present.'

노래를 은수가 불렀다.

nolay-lul Unswu-ka pwulu-ess-ta
song-ACC Unswu-NOM sing-PST-DECL
'Unswu sang a song.'

책을 선미가 읽었다.

chayk-ul Senmi-ka ilk-ess-ta
book-ACC Senmi-NOM read-PST-DECL

‘Senmi read a book.’

카페에서 지갑을 태희가 잃어버렸다.

khapey-eyse cikap-ul Thayhuy-ka ilhepli-ess-ta
café-LOC wallet-ACC Thayhuy-NOM lose-PST-DECL

‘Thayhuy lost wallet at café.’

녹차와 홍차를 태우가 마셨다.

nokcha-wa hongcha-lul Thaywu-ka masi-ess-ta
green.tea-COM black.tea-ACC Thaywu-NOM drink-PST-DECL

‘Thaywu drank green tea and black tea.’

자전거를 소미가 탔다.

cacenke-lul Somi-ka tha-ass-ta
bike-ACC Somi-NOM rode-PST-DECL

‘Somi rode a bike.’

도서관을 윤화가 알았다.

tosekwan-ul Yunhwa-ka al-ass-ta
library-ACC Yunhwa-NOM know-PST-DECL

‘Yunhwa knew a library.’

가게를 지우가 찾았다.

akey-lul Ciwu-ka chac-ass-ta
store-ACC Ciwu-NOM found-PST-DECL

‘Ciwu found a store.’

열쇠도 나래가 찾았다.

yelsoy-to *Nalay-ka* *chac-ass-ta*
key-also Nalay-NOM find-PST-DECL
'Nalay found a key also.'

Ungrammatical sentences

민기가 돈이 주었다.

Minki-ka *ton-i* *cwu-ess-ta*
Minki-NOM money-NOM give-PST-DECL
'(Minki gave money.)'

범수의 친구를 만났다.

Pemswu-uy *chinkwu-lul* *manna-ass-ta*
Pemswu-GEN friend-ACC meet-PST-DECL
'(Pemswu met a friend.)'

하니가 다리에게 다쳤다.

Hani-ka *tali-eykey* *tachi-ess-ta*
Hani-NOM leg-DAT injure-PST-DECL
'(Hani injured [her] leg.)'

지후가 문제의 풀었다.

Cihwu-ka *mwuncey-uy* *phwul-ess-ta*
Cihwu-NOM problem-DAT solve-PST-DECL
'(Cihwu solved a problem.)'

영호가 결론에서 믿었다.

Yengho-ka *kyellon-eyse* *mit-ess-ta*
Yengho-NOM conclusion-LOC trust-PST-DECL
'(Yengho trusted the conclusion.)'

석주가 택배로 받았다.

Sekcwu-ka thaykpay-lo pat-ass-ta
Sekcwu-NOM package-INST receive-PST-DECL
'(Sekcwu received a package.)'

찬미가 모자에게 썼다.

Chanmi-ka moca-eykey ssu-ess-ta
Chanmi-NOM hat-DAT wear-PST-DECL
'(Chanmi wore a hat.)'

현우가 국에 밥에 말았다.

Hyenwu-ka kwuk-ey pap-ey mal-ass-ta
Hyenwu-NOM soup-LOC rice-LOC put.in-PST-DECL
'(Hyenwu put rice into soup.)'

슬기가 직원에서 소개했다.

Sulki-ka cikwen-eyse sokayha-yess-ta
Sulki-NOM employee-LOC introduce-PST-DECL
'(Sulki introduced employee.)'

지수를 물로 손이 씻었다.

Ciswu-lul mwul-lo son-i ssis-ess-ta
Ciswu-ACC water-INST hand-NOM wash-PST-DECL
'(Ciswu washed hands with water.)'

Appendix 2. C-test

Korean C-test which measured the proficiency of learner participants.

안녕하세요. 제 이름은 김철수입니다. 저는 대학__ __ 다닙니다. 아침에 일어__ __ 학교 체육__ __ 갑니다. 체육__ __ 운동을 합__ __. 운동을 한 다__ __ 아침을 먹습니다. 아침은 기숙__ __ 식당에서 먹습니다. 저는 대학__ __ __ 한국어를 배__ __ __. 한국어 수__ __ 매일 오__ __ 10 시에 시작__ __ __. 한국어는 쓰__ __ 말하기가 어__ __ __ __. 그렇지만 듣__ __ 읽기는 쉽__ __ __. 한국어 배__ __ __ 것이 참 재미__ __ __ __. 주말에는 친__ __ __ 같이 극__ __ __ 영화를 봅니다. 영화를 __ __ 후에 한국 식당에서 저__ __ 먹습니다. 한국 식__ __ 극장 바__ __ 옆에 있습니다. 불고__ __ 맛있습니다. 김치찌개는 맵습니다.

올 여름에는 가족들과 함께 제주도에 여행을 가려고 해요. 제 주도는 한반__ __ 남쪽에 있__ __ 섬이에요. 한국의 하와이라 불__ __ 제주도는 자__ __ 아름다워서 신혼__ __ 장소로 인__ __ 굉장히 많__ __. 오늘은 여행__ __ 전화를 걸__ __ 서울에서 제주도__ __ 왕복 비행__ __ __ 네장 예__ __ __ __. 여행__ __ __ 호텔도 소개__ __ 주었지만 호텔은 아직 안 정__ __ __. 인터넷으로 정__ __ 더 찾아 보__ __ 어느 호텔이 좋__ __ 지 알아 보__ __ __ 해요. 요__ __ 인터넷이 있__ __ 호텔 뿐 아__ __ 유명한 관__ __ 명소와 맛__ __ 식당도 찾아 볼 __ __ 있어서 참 편리해요.

안녕하세요. 서울역 앞에 위치한 서울 백화점입니다. 저희 백화점__ __ __ 겨울철을 맞__ __ 겨울옷과 난__ __ 제품을 세일__ __ __ 있습니다. 직장 여__ __ 위한 여성복 코너__ __ 여성 정__ __과 겨울 속__ __ 50 프로 세일하고 있__ __, 삼층 아동__ __ 코너에서도 코__ __, 목도리, 장__ __ 등의 겨__ __ 상품이 각 30 프로씩 할__ __ __ 가격에 판__ __ __ __ 있습니다. 칠__ __에서는 집안을 따__ __ __ 해 줄 전__ __ 히터와 가스 난__ __ 등 다양__ __ 난방용 가__ __ 제품을 특가판__ __ __ __ 있습니다. 저__ __ 서울 백화점과 함__ __ 겨울나기 준__ __ __ 시작하세요. 고객 여러분의 많은 성원 부탁드립니다. 감사합니다.

도시의 가장 큰 문제점이라면 뭐니뭐니해도 교통 문제가 제일 크다. 도로에서는 교__ __ 체증으로 인__ __ __ 에너지와 시__ __ 낭비된다. 특히 출__ __ __ 시간에는 한꺼__ __ __ 차량이 일제__ __ 몰려서 도__ __ __ 아주 북__ __ __ __. 게다가 뉴욕 같은 대도__ __ 주차난은 때__ __ 심각한 수준__ __ __. 자동__ __ __ 점점 많아__ __ __ 반면 주__ __ 공간은 제__ __ __ __ 있기 때__ __ __ 주차난이 생__ __ __. 주차장이 부족하면 사람__ __ __ 주택 가 골__ __ __이나 도로에까지 주차를 하__ __ 경우가 많다. 이렇게 불__ __ __으로 주__ __ __ 차량은 또 다시 교통 혼__ __ __ 원인이 되__ __ __ 더 심__ __ __ 교통 체증을 일으킨다. 따라서 교통 문제를 해결하기 위해서는 자가용보다는 버스나 지하철을 많이 이용해야 할 것이다.

Appendix 3. L2 textbook analysis

List of active transitive and suffixal, lexical, and phrasal passive constructions found in six volumes of Sejong Korean textbooks (following the set rules and rubric).

Sejong Korean 1

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
1. 여자가 무엇을 사요?					
여자-가[NOM]	무엇-을[ACC]	사다	active transitive	canonical	74
2. 남자가 무엇을 사요?					
남자-가[NOM]	무엇-을[ACC]	사다	active transitive	canonical	74
3. 남자가 무엇을 사요?					
남자-가[NOM]	무엇-을[ACC]	사다	active transitive	canonical	74
4. 여자가 무엇을 사요?					
여자-가[NOM]	무엇-을[ACC]	사다	active transitive	canonical	84
5. 남자가 무엇을 사요?					
남자-가[NOM]	무엇-을[ACC]	사다	active transitive	canonical	84
6. 동작이 이루어지는 장소를 나타낸다.					
동작-이[NOM]	장소-를[ACC]	나타내다	active transitive	canonical	92

Sejong Korean 2

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
1. 친구가 여러분 집을 찾아갈 수 있도록					
친구-가[NOM]	집-을[ACC]	찾아가다	active transitive	canonical	63
2. 여자가 전화 번호를 잘못 알았어요.					
여자-가[NOM]	번호-를[ACC]	알다	active transitive	canonical	70
3. 다른 사람이 전화를 받았어요.					
사람-이[NOM]	전화-를[ACC]	받다	active transitive	canonical	71
4. 그러면 나중에 제가 식당을 예약할게요.					
저-가[NOM]	식당-을[ACC]	예약하다	active transitive	canonical	122

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
5. 제가 식당을 예약할게요.					
저-가[NOM]	식당-을[ACC]	예약하다	active transitive	canonical	123
6. 동생이 저보다 운동을 잘해요.					
동생-이[NOM]	운동-을[ACC]	잘하다	active transitive	canonical	132
7. 어제 제가 문자 메시지를 보냈어요.					
저-가[NOM]	메시지-를[ACC]	보내다	active transitive	canonical	164
8. 제가 토요일에 산에서 다리를 좀 다쳤어요.					
저-가[NOM]	다리-를[ACC]	다치다	active transitive	canonical	165
9. 제가 식당을 예약할게요.					
저-가[NOM]	식당-을[ACC]	예약하다	active transitive	canonical	174
10. 제가 교실을 예약할게요.					
저-가[NOM]	교실-을[ACC]	예약하다	active transitive	canonical	174
11. 제가 발표 순서를 정할게요.					
저-가[NOM]	순서-를[ACC]	정하다	active transitive	canonical	174

Sejong Korean 3

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
1. 친구들이 무엇을 좋아하는지					
친구들-이[NOM]	무엇-을[ACC]	좋아하다	active transitive	canonical	29
2. 친구들이 무엇을 좋아하는지					
친구들-이[NOM]	무엇-을[ACC]	좋아하다	active transitive	canonical	29
3. 수진 씨가 지갑을 잃어버렸으니까					
수진 씨-가[NOM]	지갑-을[ACC]	잃어버리다	active transitive	canonical	35
4. 로라 씨가 이번에 승진을 했어요.					
로라 씨-가[NOM]	승진-을[ACC]	하다	active transitive	canonical	36
5. 그런데 지금은 제가 방을 치우고 있어요.					
저-가[NOM]	방-을[ACC]	치우다	active transitive	canonical	48
6. 지금 제가 여러가지 음식을 만들고 있어서					
저-가[NOM]	음식-을[ACC]	만들다	active transitive	canonical	48

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
7. 제가 집에 사과자를 만들었어요.					
저-가[NOM]	사과자-를[ACC]	만들다	active transitive	canonical	85
8. 여자가 추천한 여행지에서는 무엇을 할 수 있어요?					
여자-가[NOM]	무엇-을[ACC]	하다	active transitive	canonical	86
9. 제가 치엔 씨 선물을 준비했어요.					
저-가[NOM]	선물-을[ACC]	준비하다	active transitive	canonical	122
10. 이번 주에 제가 한국 회사에서 오는 사람들하고 중요한 회의를 해야 해요.					
저-가[NOM]	회의-를[ACC]	하다	active transitive	canonical	142
11. 어떤 사람들이 이 글에 관심을 가질 것 같아요?					
사람들-이[NOM]	관심-을[ACC]	가지다	active transitive	canonical	166
12. 며칠 전에 타완 씨가 시계를 잃어버렸어요.					
타완 씨-가[NOM]	시계-를[ACC]	잃어버리다	active transitive	canonical	171
13. 그런데 그 회의에서 제가 발표를 해야 해요.					
저-가[NOM]	발표-를[ACC]	하다	active transitive	canonical	171
14. 제가 핸드폰을 새로 샀는데					
저-가[NOM]	핸드폰-을[ACC]	사다	active transitive	canonical	175
15. 제가 방금 전에 집을 하나 보고 왔는데					
저-가[NOM]	집-을[ACC]	보고 오다	active transitive	canonical	176

Sejong Korean 4

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
1. 여러분이 외국 생활을 하거나					
여러분-이[NOM]	생활-을[ACC]	하다	active transitive	canonical	29
2. 그런데 고행에 계신 어머니께서 한국 음식을 많이 보내 주셨어요.					
어머니-께서[NOM]	음식-을[ACC]	보내 주시다	active transitive	canonical	24
3. 부모님께서 음식을 많이 보내 주셨거든요.					
부모님-께서[NOM]	음식-을[ACC]	보내 주시다	active transitive	canonical	37
4. 남자가 몽골 음식을 좋아해서					
남자-가[NOM]	음식-을[ACC]	좋아하다	active transitive	canonical	38

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
5. 로라 씨가 커피를 안 마셔요?					
로라 씨-가[NOM]	커피-를[ACC]	마시다	active transitive	canonical	50
6. 제가 중학교 때 우유를 ... 마셨거든요.					
저-가[NOM]	우유-를[ACC]	마시다	active transitive	canonical	51
7. 한국에서는 어른이 식사를 먼저 해요.					
어른-이[NOM]	식사-를[ACC]	하다	active transitive	canonical	59
8. 어른이 식사를 먼저 하다					
어른-이[NOM]	식사-를[ACC]	하다	active transitive	canonical	59
9. 그리고 어른이 먼저 식사를 시작해야 돼요.					
어른-이[NOM]	식사-를[ACC]	시작하다	active transitive	canonical	59
10. 여자는 친구의 부모님들이 식사를 시작하신 후에					
부모님들-이[NOM]	식사-를[ACC]	시작하다	active transitive	canonical	62
11. 중국에서는 시계가 죽음을 의미하니까					
시계-가[NOM]	죽음-을[ACC]	의미하다	active transitive	canonical	64
12. 멕시코나 브라질에서는 보라색 꽃이 죽음을 의미하니까					
꽃-이[NOM]	죽음-을[ACC]	의미하다	active transitive	canonical	64
13. 중동에서는 손수건이 이별을 의미해요.					
손수건-이[NOM]	이별-을[ACC]	의미하다	active transitive	canonical	64
14. 한국 사람들이 이런 질문을 하면					
사람들-이[NOM]	질문-을[ACC]	하다	active transitive	canonical	64
15. 그러니까 한국 사람들이 개인적인 질문을 하면					
사람들-이[NOM]	질문-을[ACC]	하다	active transitive	canonical	64
16. 로라 씨가 신경을 써 준 덕분에					
로라 씨-가[NOM]	신경-을[ACC]	써 주다	active transitive	canonical	69
17. 제가 아직 태국어 잘 못해서					
저-가[NOM]	태국어-를[ACC]	못하다	active transitive	canonical	70
18. 여자가 부탁을 하면					
여자-가[NOM]	부탁-을[ACC]	하다	active transitive	canonical	72
19. 미라 씨가 우리 두 사람을 소개해 준 덕분에					
미라 씨-가[NOM]	사람-을[ACC]	소개해 주다	active transitive	canonical	74
20. ... 신랑 신부가 한복을 입고 진행한다.					
신랑 신부-가[NOM]	한복-을[ACC]	입고 진행한다	active transitive	canonical	77

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
21. 다른 사람이 예약을 취소하면					
사람-이[NOM]	예약-을[ACC]	취소하다	active transitive	canonical	94
22. 미리 씨가 서류를 가지고 오기로 했어요?					
미리 씨-가[NOM]	서류를[ACC]	가지고 오다	active transitive	canonical	94
23. 다양한 장르의 노래를 부르는 가수들이 세계적으로 많은 사랑을 받고 있다.					
가수들-이[NOM]	사랑-을[ACC]	받다	active transitive	canonical	112
24. 여자 주인공이 연기를 정말 잘하지 않아요?					
주인공-이[NOM]	연기-를[ACC]	잘하다	active transitive	canonical	127
25. 민수 씨가 그렇게 노래를 잘해요?					
민수 씨-가[NOM]	노래-를[ACC]	잘하다	active transitive	canonical	127
26. 주인공들이 연기를 정말 잘해요.					
주인공들-이[NOM]	연기-를[ACC]	잘하다	active transitive	canonical	132
27. 왜 내가 한국어 공부를 시작했을까?					
나-가[NOM]	공부-를[ACC]	시작하다	active transitive	canonical	166
28. 정우 씨가 이제는 중국어를 정말 잘하는 것 같아요.					
정우 씨-가[NOM]	중국어-를[ACC]	잘하다	active transitive	canonical	170
29. 제가 맛있는 몽골 음식을 대접해 드릴게요.					
저-가[NOM]	음식-을[ACC]	대접해 드리다	active transitive	canonical	171
30. 제가 며칠 전에 방을 하나 예약했는데요.					
저-가[NOM]	방-을[ACC]	예약하다	active transitive	canonical	174
31. 공항에서 제가 다른 사람 가방을 가지고 온 거예요.					
저-가[NOM]	가방-을[ACC]	가지고 오다	active transitive	canonical	174
32. 로라 씨가 미역국을 끓여 주면					
로라 씨-가[NOM]	미역국-을[ACC]	끓여 주다	active transitive	canonical	175

Sejong Korean 5

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
1. 제가 한국 노래를 좋아해서					
저-가[NOM]	노래-를[ACC]	좋아하다	active transitive	canonical	34

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
2. 전 세계의 청소년들이 한국 아이돌 그룹의 노래를 부르고					
청소년들-이[NOM]	노래-를[ACC]	부르다	active transitive	canonical	40
3. 사람들이 무엇을 하고 있어요?					
사람들-이[NOM]	무엇-을[ACC]	하다	active transitive	canonical	56
4. 제가 직접 케이크를 만들어 드릴 거예요.					
저-가[NOM]	케이크-를[ACC]	만들어 드리다	active transitive	canonical	61
5. 사람들이 물건을 살 때					
사람들-이[NOM]	물건-을[ACC]	사다	active transitive	canonical	67
6. 그래서 많은 사람들이 인터넷 쇼핑을 이용하고 있다.					
사람들-이[NOM]	쇼핑-을[ACC]	이용하다	active transitive	canonical	74
7. 어떤 선물이 어떤 의미를 지나고 있는지					
선물-이[NOM]	의미-를[ACC]	지나다	active transitive	canonical	79
8. 여러분이 여가 생활을 할 수 있을 때					
여러분-이[NOM]	생활-을[ACC]	하다	active transitive	canonical	81
9. 여러분이 여가 생활을 하면서					
여러분-이[NOM]	생활-을[ACC]	하다	active transitive	canonical	81
10. 좋아하는 가수가 콘서트를 하거든.					
가수-가[NOM]	콘서트-를[ACC]	하다	active transitive	canonical	85
11. 여자가 남자보다 여가 생활을 중요하게 생각한다.					
여자-가[NOM]	생활-을[ACC]	생각하다	active transitive	canonical	86
12. 한국 사람들이 여가 생활을 할 때					
사람들-이[NOM]	생활-을[ACC]	하다	active transitive	canonical	88
13. 민수가 아까 행사장 약도를 이메일로 보냈어					
민수-가[NOM]	약도-를[ACC]	보내다	active transitive	canonical	94
14. 여러분이 자주 안부를 못 전해					
여러분-이[NOM]	안부-를[ACC]	전하다	active transitive	canonical	107
15. 그리고 상대가 무슨 일을 어떻게 도와주어야 하는지					
상대-가[NOM]	일-을[ACC]	도와주다	active transitive	canonical	132
16. 만일 상대가 부탁을 거절하면					
상대-가[NOM]	부탁-을[ACC]	거절하다	active transitive	canonical	132

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
17. 상대가 부탁을 거절하면					
상대-가[NOM]	부탁-을[ACC]	거절하다	active transitive	canonical	132
18. 만일 누군가가 화를 내면					
누군가-가[NOM]	화-를[ACC]	내다	active transitive	canonical	143
19. 상대방이 마음의 준비를 할 수 있도록 한다.					
상대방-이[NOM]	준비-를[ACC]	하다	active transitive	canonical	146
20. 사람들이 첫 번째로 경제적인 여유를 바라네요.					
사람들-이[NOM]	여유-를[ACC]	바라다	active transitive	canonical	160
21. 여러분 나라에서는 사람들이 언제 소원을 빌어요?					
사람들-이[NOM]	소원-을[ACC]	빌다	active transitive	canonical	171
22. 다른 사람이 부탁을 했을 때					
사람-이[NOM]	부탁-을[ACC]	하다	active transitive	canonical	180
23. 하지만 우리가 모든 사람의 마음을 읽을 수 있다면					
우리-가[NOM]	마음-을[ACC]	읽다	active transitive	canonical	181

Sejong Korean 6

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
1. 사람들이 여행을 할 때					
사람들-이[NOM]	여행-을[ACC]	하다	active transitive	canonical	13
2. 그랬더니 그 아주머니가 나를 호텔까지 데려다 주셨다.					
아주머니-가[NOM]	나-를[ACC]	데려 주다	active transitive	canonical	20
3. 제가 아끼는 커피 잔을 깨면					
저-가[NOM]	잔-을[ACC]	깨다	active transitive	canonical	23
4. 제가 발표를 해야 하는데					
저-가[NOM]	발표-를[ACC]	하다	active transitive	canonical	26
5. 사장님이 보실 서류를 아직도 정리하지 않았어요?					
사장님-이[NOM]	서류-를[ACC]	정리하다	active transitive	canonical	27
6. 여러분 나라에서는 사람들이 자신의 잘못에 대해 보통 어떻게 사과를 하나요?					
사람들-이[NOM]	사과-를[ACC]	하다	active transitive	canonical	31

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
7. 남자와 여자가 악수를 한다.					
남자와 여자-가[NOM]	악수-를[ACC]	하다	active transitive	canonical	33
8. 배 하나를 두 사람이 나누어 먹는다.					
사람-이[NOM]	하나-를[ACC]	나누어 먹다	active transitive	scrambled	33
9. 타완 씨가 이야기를 안 해 줬으면					
타완 씨-가[NOM]	이야기-를[ACC]	해 주다	active transitive	canonical	34
10. 숫자 '4'의 발음이 죽음을 뜻해서					
발음-이[NOM]	죽음-을[ACC]	뜻하다	active transitive	canonical	34
11. 마이클 모어가 얼마 전 한국을 방문해					
마이클 모어가-[NOM]	한국-을[ACC]	방문하다	active transitive	canonical	40
12. 패키지 여행은 여행사가 여행 일정과 경비를 미리 정하고					
여행사-가[NOM]	경비-를[ACC]	정하다	active transitive	canonical	43
13. 기존의 여행이 차를 이용하여					
여행-이[NOM]	차-를[ACC]	이용하다	active transitive	canonical	45
14. '걷기 여행'은 우리가 차를 지나가느라					
우리-가[NOM]	차-를[ACC]	지나가다	active transitive	canonical	45
15. 포르투갈 사람이 1502년 1월 1일에 이곳을 발견하였는데					
사람-이[NOM]	이곳-을[ACC]	발견하다	active transitive	canonical	50
16. 그 뒤로 시드니, 런던, 파리, 뉴욕이 2위를 차지했다.					
[...]뉴욕-이[NOM]	2위-를[ACC]	차지하다	active transitive	canonical	55
17. 다른 사람이 다음과 같은 행동을 하면					
사람-이[NOM]	행동-을[ACC]	하다	active transitive	canonical	67
18. 저 사람이 강아지를 데리고					
사람-이[NOM]	강아지-를[ACC]	데리다	active transitive	canonical	70
19. 화장실 앞에 사람들이 줄을 서 있어요.					
사람들-이[NOM]	줄-을[ACC]	서다	active transitive	canonical	73
20. 과장님이 붙여 좋은 메모를 보지 못해서					
과장님-이[NOM]	메모-를[ACC]	보다	active transitive	canonical	84
21. 저쪽에 내가 직접 찍은 사진을 걸어 뒀어.					
나-가[NOM]	사진-을[ACC]	걸어 두다	active transitive	canonical	87
22. 수진 씨가 지난주에 무릎을 다쳐서					
수진 씨가-[NOM]	무릎-을[ACC]	다치다	active transitive	canonical	118

Sentence					
Agent	Theme	Predicate	Construction	Word order	Page
23. 그렇다면 통신수단이 많은 요즘에도 무소식이 곧 희소식을 의미할까?					
무소식-이[NOM]	희소식-을[ACC]	의미하다	active transitive	canonical	122
24. 여러분이 다른 사람의 말을 전달해야 할 때는					
여러분-이[NOM]	말-을[ACC]	하다	active transitive	canonical	124
25. 여러분이 상대방을 직접 만나서					
아러분-이[NOM]	상대방-을[ACC]	만나다	active transitive	canonical	125
26. 저희 부서원들이 의견을 모으고 있습니다.					
부서원들-이[NOM]	의견-을[ACC]	모으다	active transitive	canonical	128
27. 선배들이 야유회 준비를 맡아 하고 있다.					
선배들-이[NOM]	준비-를[ACC]	맡다	active transitive	canonical	130
28. 어제 동생이 장난을 치다가					
동생-이[NOM]	장난-을[ACC]	치다	active transitive	canonical	139
29. 고객님의께서 문의하신 환불 건은 전문 기술자가 제품 상태를 직접 확인한 후					
기술자-가[NOM]	상태-를[ACC]	확인하다	active transitive	canonical	142
30. 아저씨의 정성이 사람들을 감동시켰다.					
정성-이[NOM]	사람들-을[ACC]	감동시키다	active transitive	canonical	143
31. 주로 수리 기사들이 집을 방문해서					
기사들-이[NOM]	집-을[ACC]	방문하다	active transitive	canonical	146
32. 내 옆 자리에 앉은 사람이 전하를 받더니					
사람-이[NOM]	전하-를[ACC]	받다	active transitive	canonical	156
33. 벨기에에서는 각자 자기가 밥값을 냅니다.					
각자 자기-가[NOM]	밥값-을[ACC]	내다	active transitive	canonical	175
34. 여러분이 회사 생활을 시작하면서					
여러분-이[NOM]	생활-을[ACC]	시작하다	active transitive	canonical	180
35. 이 말은 사람들이 언어를 배우면서					
사람들-이[NOM]	언어-를[ACC]	배우다	active transitive	canonical	181
36. 대부분의 한국 사람들이 아파트에서 살기를 바라고					
사람들-이[NOM]	살기-를[ACC]	바라다	active transitive	canonical	187
37. 아저씨가 대학 안에서 10 년 동안 구두를 고치고 있다.					
아저씨-가[NOM]	구두-를[ACC]	고치다	active transitive	canonical	189

List of passive verbs found in six volumes of Sejong Korean textbooks.

Sejong Korean 1

Verb	Occurrences	Page	Type
지정되다	1	17	lexical
구성되다	2	22 (2x)	lexical
쓰이다	4	29, 122, 124, 134	suffixal
모이다	1	67	suffixal

Sejong Korean 2

Verb	Occurrences	Page	Type
쓰이다	2	35, 36	suffixal
모이다	9	43, 122, 126 (3x), 127, 128 (3x)	suffixal
보이다	1	78	suffixal
풀리다	1	149	suffixal

Sejong Korean 3

Verb	Occurrences	Page	Type
쓰이다	1	26	suffixal
열리다	4	43, 44, 118, 174	suffixal
모이다	3	44, 60 (2x)	suffixal
걸리다	4	48, 55, 118, 174	suffixal
기대되다	1	65	lexical
닫히다	2	118, 181	suffixal
놓이다	6	118, 119 (2x), 122, 174, 181	suffixal
쌓이다	4	118 (2x), 174, 181	suffixal
켜지다	1	118	phrasal
꺼지다	2	118, 181	phrasal
잠기다	2	118, 122	suffixal
시작되다	2	133 (2x)	lexical
계속되다	2	133, 175	lexical

Verb	Occurrences	Page	Type
세련되다	1	172	lexical

Sejong Korean 4

Verb	Occurrences	Page	Type
쌓이다	5	15, 18, 21, 170 (2x),	suffixal
바뀌다	2	29 (2x)	suffixal
만들어지다	1	43	phrasal
모이다	3	44, 111, 171	suffixal
구분되다	4	44, 45, 146 (2x)	lexical
선택되다	1	70	lexical
보이다	20	78, 82, 121, 150 (5x), 151 (4x), 152, 156, 163, 176, 177, 184 (3x)	suffixal
간소화되다	1	78	lexical
포함되다	1	79	lexical
걸리다	2	83 (2x)	suffixal
꺼지다	1	88	phrasal
진행되다	1	89	lexical
막히다	3	102, 106, 174	suffixal
구성되다	1	145	lexical
나뉘다	1	146	suffixal
보존되다	1	147	lexical
빨개지다	1	156	phrasal
시작되다	1	171	lexical
묻히다	1	183	suffixal

Sejong Korean 5

Verb	Occurrences	Page	Type
사용되다	14	16, 60, 82, 84 (2x), 92, 94 (2x), 102, 104, 116, 126, 128, 147	lexical
진행되다	2	20, 64	lexical
조사되다	2	20, 181	lexical

Verb	Occurrences	Page	Type
풀리다	9	23, 78, 81 (2x), 85, 139, 187, 189	suffixal
떨어지다	3	25, 27, 30	phrasal
갈히다	2	26, 31	suffixal
예상되다	3	30, 31, 174	lexical
열리다	2	40, 181	suffixal
도입되다	1	45	lexical
보장되다	1	45	lexical
뽑히다	1	45	suffixal
보이다	13	48 (2x), 49 (2x), 50 (3x), 51, 175 (5x)	suffixal
개최되다	2	54, 55	lexical
통제되다	1	54	lexical
모이다	5	64, 169 (3x), 170	suffixal
품절되다	1	70	lexical
초대받다	3	77, 78, 79	lexical
바뀌다	12	92 (3x), 96, 104 (3x), 105 (2x), 156, 178, 187	suffixal
잡히다	1	92	suffixal
취소되다	1	92	lexical
변경되다	1	96	lexical
염려되다	1	104	lexical
개발되다	1	108	lexical
알려지다	1	108	phrasal
느껴지다	2	111, 113	phrasal
관련되다	1	133	lexical
걱정되다	1	135	lexical
쌓이다	2	138, 174	suffixal
정리되다	1	139	lexical
해당되다	1	143	lexical
켜지다	1	152	phrasal
시작되다	3	156, 176, 179	lexical
대중화되다	1	156	lexical
당첨되다	3	160, 167, 181	lexical
만들어지다	1	176	phrasal

Verb	Occurrences	Page	Type
유지되다	1	190	lexical

Sejong Korean 6

Verb	Occurrences	Page	Type
사용되다	12	16, 24, 51, 68, 98, 104, 116, 118, 126, 128, 136, 169	lexical
조사되다	3	20 (2x), 21,	lexical
깨지다	2	29, 37	phrasal
접수되다	2	30, 31	lexical
출시되다	1	31	lexical
당첨되다	1	37,	lexical
보이다	4	37, 59, 84, 95	suffixal
잘못되다	1	41	lexical
개발되다	1	45	lexical
등재되다	2	50, 55	lexical
모이다	3	51, 78, 181	suffixal
열리다	2	54, 79	suffixal
생산되다	2	54, 55	lexical
선정되다	3	55 (3x)	lexical
뽑히다	3	55 (2x), 179	suffixal
연결되다	1	55	lexical
바뀌다	2	58, 71	suffixal
풀리다	1	58	suffixal
생각되다	1	64	lexical
놓이다	1	85	suffixal
설치되다	1	89	lexical
만들어지다	3	98, 98, 166	phrasal
전달되다	1	99	lexical
구분되다	1	99	lexical
갖추어지다	4	102 (2x), 104, 187	phrasal
불리다	1	108	suffixal
보도되다	3	108, 109, 188	lexical
뽑히다	2	109, 179	suffixal

Verb	Occurrences	Page	Type
잡히다	2	117 (2x)	suffixal
승진되다	1	117	lexical
강조되다	2	132, 133	lexical
확정되다	1	133	lexical
감염되다	4	138, 139, 140, 189	lexical
닫히다	1	138	suffixal
꺼지다	1	139	suffixal
켜지다	1	139	suffixal
꽃히다	1	139	suffixal
걸리다	3	141, 142, 174	suffixal
쌓이다	2	142, 143	suffixal
탈락되다	1	150	lexical
인식되다	2	156, 157	lexical
지속되다	1	167	lexical
끝리다	1	167	suffixal
막히다	1	174	suffixal
느껴지다	1	182	phrasal