



**TESTING THE PREDICTIONS OF
THE ASPECT AND DISCOURSE HYPOTHESIS:
EVIDENCE FROM THE WRITTEN NARRATIVES OF
INTERMEDIATE LEVEL TURKISH EFL LEARNERS**

PhD Dissertation

Yavuzcan DERE

Eskişehir 2025

**TESTING THE PREDICTIONS OF THE ASPECT AND DISCOURSE
HYPOTHESIS: EVIDENCE FROM THE WRITTEN NARRATIVES OF
INTERMEDIATE LEVEL TURKISH EFL LEARNERS**

YAVUZCAN DERE

PhD DISSERTATION

Department of Foreign Language Education

English Language Teaching Program

Supervisor: Assoc. Prof. Dr. Gonca SUBAŐI

Anadolu University

Graduate School

July 2025

Eskiőehir

APPROVAL OF JURY AND THE INSTITUTION



ABSTRACT

TESTING THE PREDICTIONS OF THE ASPECT AND DISCOURSE HYPOTHESIS: EVIDENCE FROM THE WRITTEN NARRATIVES OF INTERMEDIATE LEVEL TURKISH EFL LEARNERS

Yavuzcan DERE

Department of Foreign Language Education

English Language Teaching Program

Graduate School of Anadolu University, July, 2025

Supervisor: Assoc. Prof. Dr. Gonca SUBAŞI

The current study investigates the predictions of the Aspect Hypothesis (AH) and Discourse Hypothesis (DH) in the interlanguage of intermediate level of Turkish EFL learners. Specifically, it aims to examine the interaction among lexical aspect, verbal morphology, and discourse grounding by comparing learner narratives with instructional materials. A corpus-based, quantitative research design was employed with personal narratives written by eighty-eight learners and instructional data drawn from two textbooks and a graded reader. All finite predicates in both corpora were annotated for their lexical class, morphological form, and grounding. This process incorporated both manual analysis and the use of a large language model (ChatGPT-4o), representing a novel methodological contribution to the field. The annotated data was analyzed for significant associations and differences using cross-tabulations, Pearson's Chi-square, and one-way ANOVA. The findings revealed substantial empirical support for the predictions of both AH and DH, most notably the alignment of telic predicates with past morphology in foreground clauses. Furthermore, a high degree of structural similarity was observed between learner output and instructional input, reinforcing the influence of the input on learner production. These findings contribute to a deeper understanding of interlanguage development and yield pedagogical implications for curriculum design, particularly with respect to the selection and organization of instructional materials.

Keywords: Lexical Aspect, Discourse Hypothesis, Turkish EFL Learners, Verbal Morphology, Corpus-based Research

ÖZET

KILINIŞ VE SÖYLEM HİPOTEZLERİNDEKİ ÖNERMELERİN TEST EDİLMESİ: ORTA SEVİYE İNGİLİZCE ÖĞRENEN TÜRK ÖĞRENCİLERİN YAZILI ÖYKÜLERİNDEN BULGULAR

Yavuzcan DERE

Yabancı Diller Eğitimi Anabilim Dalı

İngilizce Öğretmenliği Programı

Anadolu Üniversitesi, Lisansüstü Eğitim Enstitüsü, Temmuz, 2025

Danışman: Doç. Dr. Gonca SUBAŞI

Mevcut çalışma İngilizce öğrenen orta seviye, Türk öğrencilerin aradillerinde Kılınış ve Söylem Hipotezlerindeki önermeleri araştırmaktadır. Spesifik olarak çalışma, öğrenci öykülerini ders materyalleri ile karşılaştırarak kılınış yüklem türleri, fiil morfolojisi ve söylem yapısı arasındaki etkileşimi incelemeyi amaçlamaktadır. Seksen sekiz öğrenci tarafından yazılan kişisel öyküler ve iki ders kitabı ve bir seviyelendirilmiş okuma kitabından alınan veriler, derleme dayalı nicel bir araştırma deseninde kullanılmıştır. Her iki derlemdeki bütün çekimli yüklem türleri, morfolojik ve söylem yapısı açısından etiketlenmiştir. Bu süreç manuel data analizi ile alana metodolojik bir yenilik sağlayacak olan büyük dil modeli (ChatGPT-4o) kullanımını bir araya getirmiştir. Etiketlenmiş veriler, istatistiki olarak anlamlı ilişkiler ve farklılıkları bulmak için çapraz tablolar, ki-kare testi ve tek yönlü varyans testi ile analiz edilmiştir. Bulgular hem Kılınış hem de Söylem Hipotezlerindeki önermeleri ampirik açıdan büyük ölçüde desteklemiştir, özellikle sonlu yüklem türlerinin ön plan bilgisinde geçmiş zaman morfolojisinde kullanımı ile. Ayrıca öğrenci çıktısı ile ders materyalinden sağlanan girdi arasında çok yüksek oranda benzerlik görülmüştür ki bu da sınıftaki girdinin öğrenci çıktısı üzerindeki önemini artırmaktadır. Bu bulgular aradıl gelişimi konusunda daha derin bir kavrayışa katkıda bulunurken özellikle ders materyallerinin seçimi ve organizasyonu konularında müfredat açısından da pedagojik öneriler barındırmaktadır.

Anahtar Sözcükler: Kılınış, Söylem Hipotezi, İngilizce öğrenen Türk öğrenciler, Fiil Morfolojisi, Derleme Dayalı Araştırma

ACKNOWLEDGEMENTS

I would like to extend my sincere gratitude to my advisor, Assoc. Prof. Dr. Gonca SUBAŐI, whose unwavering guidance and scholarly expertise have been central throughout the development of this study. Her exceptional attention to detail and constructive feedback have significantly enriched this research and contributed greatly to my academic growth.

I am also profoundly thankful to my thesis committee members, Asst. Prof. Dr. Selma KARA and Asst. Prof. Dr. Mesut AYDEMİR, for their valuable insights and critical evaluations at various stages of this work. Their academic perspectives have provided clarity and direction, helping shape this thesis into its final form. I also extend my appreciation to the members of the defence committee, Assoc. Prof. Dr. İlknur YÜKSEL and Asst. Prof. Dr. Samet TAŐCI, for generously dedicating their time to the evaluation process and for offering thoughtful observations that informed the final revision of this dissertation.

My heartfelt thanks go to my close friends, Cem Gürbüz and Sibel Gürbüz, whose steadfast support and encouragement have accompanied me throughout every stage of this journey. Their presence provided not only motivation but also a deep sense of belonging, akin to that of family, making the challenges of this process significantly more manageable.

I would also like to acknowledge my cat, Șans, whose calm companionship, affection, and light-hearted presence provided much-needed emotional balance and lifted my spirits during long hours of writing.

I would also like to extend my sincere gratitude to TÜBİTAK for awarding me the 2211-A Scholarship, whose generous financial support played a crucial role in facilitating my doctoral studies. This scholarship significantly alleviated the logistical and economic challenges of pursuing my PhD by covering the costs of my weekly intercity travels to attend classes and academic activities. The contribution of this program has been invaluable in enabling me to fully commit to the requirements of this research.

Finally, I am thankful to everyone who offered support, whether through kind words, thoughtful conversations, or attention to my well-being. This work has not been shaped only by academic work but also by the people who made it happen.

....../....../20....

STATEMENT OF COMPLIANCE WITH ETHICAL PRINCIPLES AND RULES

I hereby truthfully declare that this thesis/dissertation is an original work prepared by me; that I have behaved in accordance with the scientific ethical principles and rules throughout the stages of preparation, data collection, analysis and presentation of my work; that I have cited the sources of all the data and information that could be obtained within the scope of this study, and included these sources in the references section; and that this study has been scanned for plagiarism with “Scientific Plagiarism Detection Program” used by Anadolu University, and that “it does not have any plagiarism” whatsoever. I also declare that if a case contrary to my declaration is detected in my work at any time, I hereby express my consent to all the ethical and legal consequences that are involved.

.....

Yavuzcan DERE

....../....../20....

DECLARATION OF GENERATIVE ARTIFICIAL INTELLIGENCE USAGE

I declare that I received support from generative artificial intelligence programs (ChatGPT, Gemini, DALL-E, etc.) while preparing this thesis/dissertation. I have received support from generative artificial intelligence programs (e.g. language translation, access to scientific articles, etc.) during the preparation of the thesis/dissertation. I declare that I have checked the accuracy of the information I received from generative artificial intelligence programs.

I also declare that, if a case contrary to my declaration is detected in my work at any time, I hereby express my consent to all the ethical and legal consequences that are involved.....

.....

Yavuzcan Dere

TABLE OF CONTENTS

	Page
COVER PAGE	i
APPROVAL OF JURY AND THE INSTITUTION	ii
ABSTRACT	iii
ÖZET	iv
ACKNOWLEDGEMENTS	v
STATEMENT OF COMPLIANCE WITH ETHICAL PRINCIPLES AND RULES	vi
DECLARATION OF GENERATIVE ARTIFICIAL INTELLIGENCE USAGE	vii
THE LIST OF CONTENTS	viii
THE LIST OF TABLES	xi
THE LIST OF FIGURES	xiv
THE LIST OF ABBREVIATIONS	xv
1 INTRODUCTION	1
1.1. Background of the Study	1
1.2. The Statement of the Problem	2
1.3. The Statement of the Purpose and Research Questions	7
1.4. The Significance of the Study	8
2 LITERATURE REVIEW	11
2.1. Corpus Linguistics and Learner Corpus	11
2.2. Temporality and Temporal Semantics	13
2.3. Aspect Hypothesis	16
2.3.1. Grammatical aspect	16
2.3.2. Lexical aspect	17

2.3.3. Lexical aspect in first language acquisition	19
2.3.4. Lexical aspect in second language acquisition	22
2.3.5 Challenges to the aspect hypothesis: empirical counterevidence and interpretive nuances	28
2.3.6. A possible explanation for aspect hypothesis: distributional bias hypothesis and its implications on classroom input	30
2.3.7. Theoretical foundations of the aspect hypothesis: cognitive principles and distributional bias	32
2.4. Discourse Hypothesis	33
2.5. An Interface of Aspect and Discourse Hypothesis	35
2.6. The Role of Input in Second Language Acquisition: Theoretical Perspectives and Pedagogical Implications	44
2.7. ChatGPT as a Tool for Scholarly Inquiry	47
2.8. Summary and Rationale for the Present Study	48
3 METHODOLOGY	50
3.1. Research Design	50
3.2. Educational Setting and Participants	51
3.3. Data Collection and Description of the Learner and Instructional Corpora	52
3.4. Data Processing and Analysis	56
3.4.1. Data processing	56
3.4.2. Manual and ChatGPT-assisted annotation	57
3.4.3. Data analysis	64
3.5. Ethical Considerations	73
4 RESULTS	74
4.1. The Relationship between Lexical Classes and Verbal Morphology	74

4.2. Lexical Classes and Verbal Morphology across Grounding Types	83
4.3. A Comparison between Learner Narratives and Learning Materials	94
4.4. Additional Findings Concerning the Interlanguage of the Learners	106
5 CONCLUSION, DISCUSSION, AND SUGGESTIONS	114
5.1. Conclusion	114
5.2. Discussion	115
5.2.1. A summary and discussion of the findings regarding first research question	116
5.2.2. A summary and discussion of the findings regarding second research question	119
5.2.3. A summary and discussion of the findings regarding third research question	122
5.2.4 A summary and discussion of the additional findings	127
5.3. Suggestions	132
5.3.1. Theoretical implications	132
5.3.2. Pedagogical implications for language teachers	135
5.3.3. Pedagogical implications for textbook and materials designers	137
5.3.4. Pedagogical implications for curriculum developers	137
5.3.5. Limitations and suggestions for further research	138
REFERENCES	140
APPENDICES	
CURRICULUM VITAE	

THE LIST OF TABLES

	Page
Table 2.1. Lexical Classes Explained by the Underlying Semantic Features	18
Table 2.2. Overview of Empirical Studies on the Aspect Hypothesis, Discourse Hypothesis, and Their Interface	38
Table 3.1. Corpus Design Specifications: Learner and Instructional Narrative Corpora	56
Table 3.2. Inter-Rater Reliability Measures (Percentage Agreement and Cohen’s Kappa) Across Annotation Features for Learner and Instructional Datasets	64
Table 3.3. Summary of Analysis Procedures	71
Table 4.1. Total Word Count, Predicate Tokens, Lexeme Types, and Readings Identified in the Narrative Dataset	74
Table 4.2. Distribution of Predicates Across Lexical Classes in the Narrative Dataset	75
Table 4.3. Frequency Distribution of Predicates Across Verbal Morphology Types	76
Table 4.4. Cross tabulation of Predicates Across Lexical Classes and Verbal Morphology Types	77
Table 4.5. Chi-Square Test Results and Effect Size Measures for the Relationship between Morphology Types and Lexical Classes	80
Table 4.6. Descriptive Statistics and ANOVA Results for Predicate Frequency Across Lexical Classes	81
Table 4.7. Pairwise Comparisons Using Games-Howell Method	82
Table 4.8. Cross tabulation of Lexical Classes across Discourse Types	84
Table 4.9. Chi-Square and Effect Size Results for Lexical Class Distribution Across Discourse Types	85
Table 4.10. Descriptive Statistics and ANOVA Results for Predicate Frequency Across Lexical Classes in Background Contexts	86

Table 4.11. Games-Howell Pairwise Comparison Results for Background Discourse	87
Table 4.12. Descriptive Statistics and ANOVA Results for Predicate Frequency Across Lexical Classes in Foreground Discourse	88
Table 4.13. Games-Howell Pairwise Comparison Results for Foreground Discourse	89
Table 4.14. Cross tabulation of Morphology Types across Discourse Types	90
Table 4.15. Chi-Square and Effect Size Results for Morphology Type Distribution Across Discourse Types	92
Table 4.16. Descriptive Statistics and ANOVA Results for Past Morphology Across Discourse Types	93
Table 4.17. Descriptive Statistics and ANOVA Results for Continuous Morphology Across Discourse Types	93
Table 4.18. Comparison of Word Count, Predicate Tokens, Readings, and Lexeme Types in Learner Narratives and Instructional Materials	95
Table 4.19. Distribution of Predicates Across Lexical Classes in the Learner Dataset and Instructional Dataset	96
Table 4.20. Frequency of Predicates Across Verbal Morphology Types in Learner and Instructional Datasets	98
Table 4.21. Cross tabulation of Predicates Across Lexical Classes and Verbal Morphology Types in Instructional Data	98
Table 4.22. Results of Chi-Square Test and Measures of Effect Size for the Association between Morphology Types and Lexical Classes in Instructional Dataset.....	100
Table 4.23. Cross tabulation of Lexical Classes across Discourse Types in Instructional Data	102
Table 4.24. Cross tabulation of Morphology Types across Discourse Types in Instructional Data	104

Table 4.25. Results of Chi-Square Test and Measures of Effect Size for the Association between Discourse and Morphology Types in Instructional Dataset	105
Table 4.26. Lexemes Exhibiting High Contextual Variability in the Learner Dataset	107
Table 4.27. Representative Examples of Semantic Readings for Past Morphology in the Learner Data	108
Table 4.28. Lexemes with High Contextual Variability in Instructional Dataset and the Counterparts in Learner Data	110
Table 4.29. Examples of Present Morphology Used for Past Reference and Their Contextual Motivations	111
Table 4.30. Examples of Present Morphology Used for Present Reference and Their Discourse Functions	112

THE LIST OF FIGURES

	Page
Figure 2.1 Predicted Developmental Order of Verbal Morphology Across Lexical Classes	24
Figure 3.1. Sample Learner Narrative Collected for the Corpus	53
Figure 3.2. Example of Personal Narrative from Course book (English File Series)	54
Figure 3.3. Example of Personal Narrative from Graded Reader (Gulliver's Travels)	55
Figure 3.4. Sample Interaction for ChatGPT-Assisted Annotation: Input Prompt and Generated Output	61
Figure 3.5. Illustration of ChatGPT's Revisions and Justifications During the Annotation Negotiation Process	62
Figure 3.6. Sample Illustration of Lexeme-Based and Reading-Based Type Counts Extracted from Narratives	66
Figure 3.7. Illustration of Total Frequency-Based and Narrative-Level Frequency-Based SPSS Datasheets Prepared for Research Question 3	67
Figure 4.1. Proportional Distribution of Predicates Across Lexical Classes in the Narrative Dataset	75
Figure 4.2. Distribution of Predicates Across Verbal Morphology Types in Student Narratives	76
Figure 4.3. Distribution of Predicates Across Lexical Classes in Learner and Instructional Datasets	97

THE LIST OF ABBREVIATIONS

AH	: Aspect Hypothesis
DH	: Discourse Hypothesis
DBH	: Distributional Bias Hypothesis
DTH	: Defective Tense Hypothesis
SLA	: Second Language Acquisition
LCR	: Learner Corpus Research
EFL	: English as a Foreign Language
ESL	: English as a Second Language
LLM	: Large Language Model
L1	: First Language
L2	: Second Language
AI	: Artificial Intelligence
ANOVA	: Analysis of Variance

1. INTRODUCTION

This chapter begins by presenting the background of the study, outlining the theoretical foundations and the current position of the Aspect (AH) and Discourse Hypotheses (DH) within the field of second language acquisition (SLA). Following this, the statement of the problem is provided, highlighting the key gaps and limitations identified in the existing body of research. The subsequent section introduces the purpose of the study and clearly formulates the research questions guiding the investigation. Finally, the significance of the study is discussed, emphasizing the specific ways in which the present research addresses the identified gaps and contributes to the advancement of the relevant literature.

1.1 Background of the Study

Corpus linguistics involves the investigation of large amount of data from authentic language with the help of computers and similar methods. The collection, storage, retrieval, and analysis of vast amounts of data are made possible via technology. By the examination of empirical data, the frequency information of language items, temporal and contextual variation, error information, and unexplored language elements could be captured. On a more categorical level, an investigation through corpora provides insights concerning grammatical, morphological, lexical, phonological, and discourse information. From a theoretical perspective, corpus linguistics enables the access to empirical results without a need to generate theories (Krieger, 2003; Silver, 2003; Nesselhauf, 2005; Johansson, 2008; Stubbs & Halbe, 2012). It also constitutes a valuable source of language use for testing hypotheses (McEnery et al., 2019), particularly within the scope of second language acquisition (SLA) research.

Phraseology, formulaicity, lexical acquisition of particular properties such as collocations (e.g. Durrant & Schmitt, 2010), complex grammatical units (e.g. causatives), and an analysis of discourse elements (e.g. stance markers) have largely constituted the empirical agenda of corpus studies. Apart from the descriptive trend, corpus research has sought a basis in SLA theorizing recently (Myles, 2015). Myles (2015) also reminds the need for learner corpus research (LCR) to take into account the advancements in SLA theories. Corpus linguistics, especially LCR, is an ideal ground for the testing of SLA theories and hypotheses. The hypothesis concerning the primacy of lexical aspect (Aspect Hypothesis)

is among many hypotheses in SLA, which has been researched through empirical data, namely either in LC and native corpora or a comparison of both.

SLA researchers have long probed into the acquisition of morphological elements, particularly that of tense and aspect. In addition to the research eliciting information about the acquisitional order of verb morphology, researchers of language acquisition have wondered how verbs are combined with morphological markers by learners. The concepts of tense, grammatical aspect, and lexical aspect are associated with verbal morphemes. Identifying where a situation fits on the time line is related to the first concept, tense. Usually, a second time point is involved such as the time of utterance. The second concept, grammatical aspect, displays the variety in the viewpoints related to temporal construction of situations. Progressive and perfect are the instances of grammatical aspect in English (Andersen & Shirai, 1996). The last of the three, lexical aspect, is dissimilar to grammatical aspect since it corresponds to how predicates represent the inherent features in situations or events. In other words, this type of aspect relates to the predicates, not the verbs separately (Robison, 1995). Lexical aspect drew attention once morphology studies revealed that lexical aspect is marked with early verbal morphemes sooner than tense in first or second language acquisition processes. Extensive research has been conducted since then in order to figure out the relationship between lexical aspect and verbal morphemes, and explain the phenomenon internally and in regard to other principles.

Another related hypothesis is called Discourse Hypothesis, which assumes that verbal morphology is used by learners in order to distinguish the information moving the narrative forward (foreground information) from the information setting the scene (background information) in the structure of narratives. A few studies have attempted to confirm the hypothesis (e.g. Bardovi-Harlig, 1995) and even fewer to relate the hypothesis to AH (e.g. Bardovi-Harlig, 1998).

1.2 The Statement of the Problem

A substantial body of research conducted within the framework of the AH—as articulated in its current form by Andersen and Shirai (1994)—has examined the association between various lexical categories of predicates (e.g., statives, activities) and the verbal morphology used to mark past tense (e.g. progressive, simple past). Numerous empirical studies have sought to confirm the hypothesis that specific lexical aspectual

categories are systematically linked to particular verbal morphology types (e.g. Robison, 1990; 1995; Andersen, 1991; Camps, 2005; Comajoan, 2006). In parallel, the DH (Bardovi-Harlig, 1994) has also been empirically investigated, although, as Bardovi-Harlig (2000) notes, it has received comparatively less attention in the literature. Research on the DH has predominantly focused on how verbal morphology interacts with discourse structure, particularly with respect to the foreground-background distinction.

Interestingly, Andersen and Shirai (1994), in formulating the AH, also highlighted the natural alignment between lexical aspectual classes and discourse functions, suggesting that certain predicate types are inherently suited for encoding foreground information while others tend to function in the background. This alignment, they argued, contributes to the emergence of specific morphology-aspect pairings. Similarly, Bardovi-Harlig (2000) underscored the notion that the semantic features distinguishing discourse grounding—such as punctuality—are also foundational to the categorization of lexical aspect. Comajoan and Pérez-Saldanya (2005) have offered a related explanation grounded in prototype theory (Andersen & Shirai, 1994; 1996), which posits that shared semantic features underlie and interconnect the systems of lexical aspect, grammatical morphology, and discourse structure.

Despite these theoretical intersections, empirical research examining the interface of AH and DH remains limited. Only a small number of studies have attempted to investigate this relationship systematically (e.g. Kumpf, 1984; Housen, 1993; Bardovi-Harlig, 1998; Comajoan, 2005; Domínguez et al., 2013). Bardovi-Harlig and Comajoan-Colomé (2020) have recently drawn attention to this gap, emphasizing the need for more studies exploring the role of discourse grounding in the development and distribution of aspectual morphology.

Another factor found to influence the development and distribution of lexical aspect in learner language is the nature of input received during the early stages of tense-aspect morphology acquisition. This relationship was initially conceptualized by Andersen (1986; 1990) as the Distributional Bias Hypothesis (DBH), and later elaborated by Andersen and Shirai (1994), who highlighted the alignment between the input learners are exposed to—particularly through native-speaker interaction—and the prototypical form-function pairings described in the AH. Subsequent research into the influence of input has branched into two major strands: studies that investigate native speaker corpora

as representations of authentic input, and studies that explore instructional input in classroom settings.

Within the first strand, several studies have analyzed corpora of native language use (e.g. Wulff et al., 2009, Tracy-Ventura & Cuesta-Medina, 2018) to determine whether the distributional patterns observed in target languages such as English and Spanish mirror the associations predicted by the AH. These studies have generally confirmed that native input tends to exhibit similar form-function pairings, thereby supporting the predictions of the DBH and reinforcing the idea that the structure of input plays a critical role in shaping learner output.

The second strand has focused on instructional input, particularly in classroom contexts. This line of research has examined how formal instruction and the language of teaching influence learners' use of verbal morphology. For instance, Camps (2005) investigated the effects of explicit instruction on tense-aspect marking, Collins et al. (2012) analyzed language use in classroom discourse, and Daidone (2019) focused on instructor talk as a source of input. While these studies confirmed that classroom input can significantly affect learners' morphological development, they also raised concerns about the quality and completeness of input, noting that impoverished or structurally limited classroom language can disrupt the natural sequence of acquisition or limit exposure to prototypical pairings (e.g. Ishida, 2004). These findings underline both the pedagogical importance of instructional input and the potential risks of divergence from native usage norms.

Despite these contributions, several gaps remain in the literature. Most notably, a direct connection between instructional input and learner production has seldom been established. While prior studies have provided important insights into input quality and distribution, they have typically examined classroom input in isolation, without linking it systematically to learners' actual language use. Additionally, the investigation of written input, such as textbooks and supplementary materials (e.g. graded readers), has been largely overlooked. The majority of input-focused studies have concentrated on spoken interaction, such as classroom discourse or instructor talk (e.g. Collins et al., 2012; Daidone, 2019). Finally, there is an absence of research that considers instructional input in relation to discourse grounding, particularly within the scope of the DH, and even more so when compared to learner data. These gaps underscore the need for a comparative,

corpus-based approach that integrates instructional and learner data while examining all three key dimensions: lexical aspect, verbal morphology, and discourse structure.

In addition to the limited number of studies that examine the AH and the DH in tandem, and the noticeable gap in research connecting instructional input to learner production, another important shortcoming in the literature is the scarcity of studies involving Turkish EFL learners in investigations of lexical aspect and discourse grounding. In existing studies that focus on English as a second language, participants generally come from a variety of L1 backgrounds, including French (e.g. Collins, 2002; Ayoun & Salaberry, 2008), Japanese (e.g. Collins, 2004), Catalan-Spanish (e.g. Muñoz & Gilabert, 2011), Chinese (e.g. Fuchs & Werner, 2018), Italian (e.g. Chan et al., 2012), German (e.g. Fuchs & Werner, 2018), and Arabic (e.g. Zhao & Shirai, 2018). However, Turkish EFL learners remain significantly underrepresented in the scope of tense-aspect and discourse studies.

There have been only a handful of studies situated within the Turkish EFL context that are directly relevant to these frameworks. One early example is the M.A. thesis by Zıngır (1999), who examined whether the tense errors produced by intermediate-level Turkish EFL learners were influenced by lexical aspect categories. Her findings pointed to difficulties with past progressive and present tense forms, influenced in part by L1 interference and challenges with stative verbs. Boran (2006) conducted a study focusing on the influence of both lexical aspect and discourse grounding on verbal morphology through written narratives produced by intermediate Turkish EFL learners. Her findings indicated that both factors contributed to morphological choices. Similarly, Bada and Genç (2007) examined oral narratives of Turkish EFL learners and native speakers and found that only discourse grounding, rather than lexical aspect, had a significant effect on morphological marking. More recently, Ateş (2022) investigated the influence of lexical aspect and grounding on the use of verbal morphology in both comprehension and production tasks. The study involved Turkish EFL learners from multiple proficiency levels as well as native speakers, and the results showed that both lexical aspect and grounding had an effect on learners' use of tense-aspect forms.

While these studies offer important contributions, they are few in number and vary widely in terms of research design, genre, and depth of analysis. The examination of lexical aspect and discourse grounding among Turkish EFL learners remains underexplored, highlighting a clear need for further empirical research that expands and deepens our

understanding of how these theoretical frameworks operate within this specific learner population. Such research can help bridge existing gaps in the literature and contribute to more comprehensive models of interlanguage development.

A final noteworthy methodological gap in the investigation of the AH and DH is the absence of Large Language Models (LLMs) in the data analysis process. While LLMs such as ChatGPT have demonstrated clear benefits across a wide range of academic applications, their potential for linguistic data annotation remains largely untapped within aspectual and discourse-grounded research. Previous studies have emphasized the value of chatbot-based tools for ensuring objective, consistent, and efficient data analysis (Alshater, 2022). As Atlas (2023) notes, tasks such as data summarization and pattern recognition, which typically require labor-intensive manual work, can now be completed by LLMs in a fraction of the time—dramatically increasing research productivity.

In addition to their general utility, the responsible use of LLMs in data analysis under human oversight has gained support in the academic literature (e.g. Eke, 2023). A separate but rapidly growing line of research has focused specifically on the annotation capabilities of LLMs. For example, Gilardi et al. (2023) evaluated ChatGPT's annotation performance in comparison to both crowd workers and trained annotators. The results revealed that ChatGPT surpassed crowd workers in terms of accuracy and achieved higher intercoder agreement than both groups. In a similar comparative study, Törnberg (2023) assessed the annotation reliability of ChatGPT-4 and concluded that it outperformed human annotators in consistency, accuracy, and reduced bias. Supporting these findings, Kuzman et al. (2023) observed that traditional human annotation processes often suffer from low intercoder agreement, and they explicitly recommended the adoption of ChatGPT as an alternative to labor-intensive manual annotation sessions.

More recently, Nasution and Onan (2024) conducted a detailed comparison between human annotators and ChatGPT-4 across multiple annotation tasks. Their results confirmed that ChatGPT either slightly lagged behind or exceeded human performance across different measures, while still substantially surpassing many other LLMs and automated tools. However, they also cautioned that LLMs may face limitations in accurately interpreting contextual or culture-specific information, underscoring the importance of human supervision in LLM-based annotation workflows.

Taken together, the current body of research suggests that ChatGPT performs at least as well as, and in some cases better than, human annotators in terms of accuracy, reliability, and efficiency. Its integration into annotation tasks can enhance both the validity and replicability of linguistic research—especially in large-scale or feature-rich datasets—while preserving transparency through human oversight. Therefore, the incorporation of LLMs such as ChatGPT into studies grounded in the AH and DH represents an important methodological innovation. It not only addresses an existing research gap but also offers a scalable and reliable alternative to traditional human-based annotation practices.

1.3 The Statement of the Purpose and Research Questions

The present study primarily aims to investigate whether the predictions of the AH and the DH, both independently and in combination, are borne out in the written personal narratives of intermediate-level Turkish EFL learners. Specifically, the study seeks to determine whether verbal morphology in learner narratives is systematically marked on predicate structures in accordance with the lexical aspect of verbs and their discourse grounding. Additionally, the relationship between lexical aspect and grounding information is examined to further illuminate the nature of interaction among these three components—lexical classes, discourse structure, and verbal morphology—in learner interlanguage.

In line with the DBH, which posits that the distributional patterns observed in learner language reflect those present in native speaker input, the study also aims to explore whether the distributions found in learner narratives mirror the input they have received through classroom materials. To this end, the analysis incorporates instructional input data derived from two EFL textbooks and one graded reader used in the learners' curriculum.

Accordingly, the study is guided by the following research questions:

1. What is the relationship between verbal morphology and lexical predicate types in the written narratives produced by intermediate-level Turkish learners of English?
2. Does the discourse structure of narratives correlate with the distribution of verbal morphology and lexical aspect?

3. To what extent do the distributions of lexical aspect and discourse grounding in learner narratives align with those found in instructional input materials such as textbooks and graded readers?

1.4 The Significance of the Study

As stated by Myles (2015), learner corpus research constitutes an ideal empirical foundation for testing hypotheses in the field of Second Language Acquisition (SLA). Myles also underscores the importance of learner corpora for gaining deeper insights into the developmental nature of interlanguage. In alignment with this view, the current study makes a significant contribution to the understanding of interlanguage development by testing the AH and the DH—both individually and in combination—using a learner corpus composed of personal narratives written by intermediate-level Turkish EFL learners. Although Myles (2015) criticizes the use of comparative studies in which L2 learner output is juxtaposed with the learner’s native language, she supports the existence of native controls, particularly when contextual and task-related variables are carefully controlled through appropriate corpus design. In line with this recommendation, the present study incorporates a reference corpus of instructional materials that contains the same genre—personal narratives—as the learner data. This methodological decision enhances the completeness of the research by enabling the analysis of a potential source of the distributional patterns found in learner narratives, in accordance with the DBH (Andersen & Shirai, 1994).

The present study contributes to the existing literature by offering empirical findings related to both the AH and the DH. Its more substantial contribution, however, lies in addressing the scarcity of studies that investigate these two hypotheses simultaneously. By examining their interaction—an area explored only by a limited number of studies (e.g. Bardovi-Harlig, 1998)—this research attempts to bridge a critical gap in the field. Specifically, through the analysis of the relationships among verbal morphology, lexical aspect, and discourse grounding, the current study aims to enhance our understanding of how discourse structure influences the distribution of aspectual morphology, a gap that Bardovi-Harlig and Comajoan-Colome (2020) have emphasized in their review of the literature.

In addition to these theoretical contributions to the understanding of interlanguage development through a combined investigation of both the AH and the DH, the present

study also addresses a specific gap within the framework of the AH. More precisely, it contributes to the empirical investigation of one of its subhypotheses. In the most recent formulation of the AH (Andersen, 2002), the first two subhypotheses focus on the association of predicates with past/perfective morphology and the distinction between perfective and imperfective aspect. The third subhypothesis, on the other hand, concerns the marking of predicates with progressive morphology. As noted by Bardovi-Harlig and Comajoan-Colome (2020), this third subhypothesis has received comparatively little empirical attention. The present study responds to this gap by providing additional empirical evidence regarding the distribution of progressive marking (see also Bardovi-Harlig, 2012). This contribution is particularly noteworthy given that the learner data come from learners whose native language, Turkish, also features a distinct morphological marker for the progressive aspect, similar to that of English.

Beyond its theoretical contributions, the present study also introduces several methodological innovations. The first of these lies in its inclusion of instructional input as a variable in explaining the distribution of verbal morphology, lexical aspect, and discourse structure in learner production. Gass and Mackey (2014) emphasize that input plays a central role in second language acquisition, serving as the primary source of information from which learners construct linguistic hypotheses. Similarly, the DBH (Andersen & Shirai, 1994) posits that input plays a determining role in shaping the distributional patterns observed in learner language, as described in the AH. Despite this, as Römer (2004) notes, research focusing specifically on learner input remains limited. In contrast to existing input studies—such as Daidone (2019), which primarily examine oral instructor discourse—the present study adopts a novel approach by directly analyzing and comparing the distribution of verbal morphology, lexical aspect, and discourse structure in written instructional materials and the personal narratives produced by Turkish EFL learners. This parallel investigation of written input and learner output within the same genre strengthens the methodological rigor and contributes to a more comprehensive understanding of how instructional input may influence interlanguage development.

An additional methodological contribution of the present study to the research on AH and DH lies in its focus on a rarely investigated participant group: Turkish EFL learners. With the exception of a limited number of studies—mostly master's theses and doctoral

dissertations (e.g. Boran, 2006; Ateş, 2022)—there has been little empirical research examining the interaction of lexical aspect and discourse structure in this specific learner population. The current study distinguishes itself from these earlier works by incorporating both personal narratives as the genre of analysis and large language models (LLMs) as part of the annotation process, thereby offering a more comprehensive and innovative methodological approach.

A methodological innovation that sets the present study apart is the incorporation of large language models (LLMs), specifically ChatGPT-4o, as a second rater in the process of predicate annotation. Aldeen et al. (2023) investigated the performance of ChatGPT in various annotation tasks and reported that its high levels of accuracy demonstrated the model's efficiency in handling data annotation processes. To the best knowledge of the researcher, such use of ChatGPT—despite its growing application in other academic domains—has not yet been utilized in the analysis of data related to the AH or DH. By introducing ChatGPT into the annotation of verbal morphology, lexical aspect, and discourse grounding, this study offers a novel methodological direction that may contribute to increased consistency, efficiency, and objectivity in future research on interlanguage development.

2. LITERATURE REVIEW

This chapter presents a comprehensive review of the theoretical and methodological foundations that inform the present study. It begins with *Corpus Linguistics and Learner Corpus*, introducing corpus linguistics as a methodological approach and discussing the structure, representativeness, and annotation practices of learner corpora in second language acquisition research. The following section, *Temporality and Temporal Semantics*, traces how early form-based studies on verbal morphology evolved into meaning-oriented approaches, culminating in the Aspect and Discourse Hypotheses. The chapter then turns to *Aspect Hypothesis*, detailing the claims of the hypothesis and reviewing supporting evidence from both L1 and L2 acquisition studies. Subsections also address challenges to the hypothesis, including empirical counter-evidence and theoretical refinements, as well as its cognitive grounding and implications for classroom input. In *Discourse Hypothesis*, the focus shifts to the discourse-level structuring of temporality, particularly the role of foregrounding and backgrounding in narrative development. Section *An Interface of Aspect and Discourse Hypothesis* examines studies that integrate both frameworks, illustrating how lexical aspect and discourse grounding jointly influence interlanguage tense-aspect marking. The discussion then extends to *The Role of Input in Second Language Acquisition: Theoretical Perspectives and Pedagogical Implications*, highlighting how input frequency, distribution, and instructional design affect learners' acquisition of temporal morphology. Finally, *ChatGPT as a Tool for Scholarly Inquiry* reviews emerging evidence from recent studies supporting the use of large language models in linguistic annotation, analysis, and scholarly inquiry, with particular emphasis on their applicability to the present study's methodological needs.

2.1 Corpus Linguistics and Learner Corpus

Second language acquisition (SLA) research has long aimed to elucidate how learners develop linguistic features over time. However, much of its foundational empirical work (e.g. Wong Fillmore, 1976; Schumann, 1978) was grounded in small-scale, controlled investigations, which often lacked generalizability due to their reliance on elicited rather than naturally produced data (Gilquin, 2015; Granger et al., 2015). While these studies provided valuable insights into individual learner development, their limited scope and artificial data sources were increasingly regarded as inadequate for capturing authentic language use in context. As Granger (2017) notes, this constrained empirical base

constituted a critical shortcoming in representing the full spectrum of interlanguage behavior.

In response to these limitations, corpus linguistics has emerged as a transformative methodological paradigm across both theoretical and applied branches of linguistics. By enabling the systematic analysis of large, principled collections of authentic language data, corpus linguistics provides robust insights into frequency, variability, and co-occurrence patterns (Paquot & Plonsky, 2017). The field encompasses a wide array of linguistic phenomena, including vocabulary and phraseology (e.g. collocations and idiomatic expressions), grammatical structures (e.g. verb morphology), discourse organization, and error patterns. Both qualitative and quantitative techniques are employed, facilitating multi-dimensional analyses across learner proficiencies, L1 backgrounds, and instructional settings (Granger et al., 2015; Granger, 2017).

Situated at the intersection of SLA and corpus linguistics, learner corpus research (LCR) has emerged as a dynamic and interdisciplinary subfield. Learner corpora are defined as electronic repositories of natural or near-natural second language production, compiled according to explicit design criteria and intended to be representative of particular learner populations (Granger et al., 2015; Granger, 2017). Unlike traditional SLA datasets, which often consist of isolated sentence-level data, learner corpora capture extended spoken or written discourse, thereby enabling nuanced analyses of morphosyntax, lexis, discourse, and pragmatics (Gilquin, 2015; Granger, 2017).

One of the principal strengths of learner corpora lies in their versatility across research contexts. For instance, contrastive interlanguage analysis allows comparisons between learner productions and native-speaker corpora or among learners from different L1 backgrounds (Granger, 2017). Researchers also benefit from automated tools such as keyword extraction, part-of-speech tagging, and collocation analysis—made possible through the digital nature of the data (Granger et al., 2015). Furthermore, the inclusion of rich metadata (e.g. proficiency levels, L1, exposure duration) enables multivariate statistical analyses that account for individual variation (Paquot & Plonsky, 2017).

In addition to its descriptive contributions, LCR has gained pedagogical significance. Learner corpus data are increasingly leveraged to identify systematic errors, overuse, underuse, and non-native-like usage patterns (Granger, 2017). This has facilitated the development of pedagogic corpora and materials grounded in actual learner difficulties,

as opposed to idealized or hypothetical assumptions. As emphasized by Granger, LCR thus serves a dual role: contributing to both empirical SLA research and classroom-oriented language instruction.

Despite its advancements, LCR continues to face several methodological challenges. These include gaps in statistical literacy, the selection and application of appropriate analytical procedures, and the scarcity of longitudinal datasets (Paquot & Plonsky, 2017). Additionally, overreliance on significance testing, underreporting of dispersion metrics, and limited use of effect size measures have been noted as areas requiring improvement. Nonetheless, the increasing availability of multilingual and multimodal learner corpora, coupled with the growing integration of corpus-informed pedagogy, suggests that LCR is well-positioned to contribute meaningfully to both SLA theory and educational practice (Gilquin, 2015; Granger et al., 2015).

2.2 Temporality and Temporal Semantics

Over the past several decades, research on temporality in second language acquisition (SLA) has undergone significant development. One of the most prominent areas within this line of inquiry has been the study of tense-aspect morphology, which captures how temporality is encoded in learners' interlanguage. This system of verbal morphology involves the interaction of two core grammatical components—tense and grammatical aspect—each contributing to the representation of time in different ways. Tense serves to locate an event within a temporal framework, typically distinguishing between past, present, and future reference (Comrie, 1985). In contrast, grammatical aspect conveys the speaker's perspective on the temporal construction of the event itself, such as whether the event is viewed as complete or still in progress (Comrie, 1976; Smith, 1983; Bardovi-Harlig, 1999). For instance, the use of progressive morphology reflects an ongoing action from the speaker's viewpoint at a given moment in time.

Alongside these grammatical categories, lexical aspect—also referred to as inherent aspect or *Aktionsart*—has also played a central role in temporality research. Unlike grammatical aspect, which is marked morphologically, lexical aspect concerns the intrinsic temporal characteristics of the verb or predicate. These characteristics define whether an event is, for example, momentary (e.g. *notice*) or extended with a natural endpoint (e.g. *build a house*) (Vendler, 1967; Bardovi-Harlig, 1999). While grammatical aspect can vary through inflection (e.g. *he sang* vs. *he was singing*), a change in lexical

aspect typically requires a structural change in the predicate itself (e.g. *sing* vs. *sing a song*). Understanding the distinction between these components has been foundational in mapping how learners acquire the means to express temporality in a second language.

In the early stages of SLA research, investigations into tense-aspect morphology did not emerge as a distinct line of inquiry. Rather, studies on verbal morphology were initially embedded within broader examinations of grammatical morpheme acquisition and were treated as secondary concerns (Bardovi-Harlig, 1999). These early studies primarily focused on determining the accuracy order of morpheme use in learner language, following the precedent set by first language acquisition research (Brown, 1973; de Villiers & de Villiers, 1973). Verbal inflections, including tense and aspect markers, were included in these analyses as part of a general morphological inventory, without specific attention to their semantic or discourse-related functions.

In this context, early ESL research identified a relatively stable order in which certain verbal morphemes appeared, such as progressive *-ing*, irregular past forms, and third person singular *-s* (Dulay & Burt, 1973; Bailey, Madden, & Krashen, 1974; VanPatten, 1984). These findings were interpreted primarily in terms of accuracy, not developmental function. Over time, however, scholars began to question the ordering and treatment of these forms—particularly regarding the relative acquisition of regular versus irregular past tense—which led to growing debate within the morpheme-order tradition (Dulay & Burt, 1974; Hakuta, 1974; Larsen-Freeman, 1975; Rosansky, 1976; Krashen, 1977). Despite these debates, the early morpheme studies did not seek to explain how learners conveyed temporal meaning or how tense-aspect forms were integrated into the evolving semantic system of interlanguage.

Although morpheme-order studies contributed significantly to the early understanding of morpheme acquisition, they were later criticized—particularly in the early 1980s—for their lack of attention to meaning and the communicative functions associated with the forms they examined (Dittmar, 1981; Bardovi-Harlig & Bofman, 1989). Following this period, a number of studies began to associate learners' use of tense morphology with phonological constraints (e.g. Wolfram, 1984; 1985; 1989; Sato, 1986; Ellis, 1987). These findings contributed to a shift in research interest from the surface forms of morphology to the temporal semantics that underlie them. By the mid-1980s, the study of temporal expression in learner language began to expand in two distinct directions. One

of these was the form-oriented tradition, in which researchers focused on specific morphological forms and examined the functions those forms served in interlanguage (Long & Sato, 1984; Beretta, 1995). The other was the meaning-oriented tradition, where the starting point was a set of semantic categories or discourse structures, and the investigation centered on which linguistic forms learners used to realize them (von Stutterheim & Klein, 1987). Despite this methodological distinction, both strands reflected a shared shift in emphasis—from morphology as a formal system to temporality as a meaning-driven domain.

The concept-oriented approach frames the expression of temporality in second language acquisition through the use of pragmatic, lexical, and morphological resources (Dietrich, Klein, & Noyau, 1995). The employment of these resources has been observed to follow a developmental pattern in which discourse-level strategies emerge first, followed by lexical means such as temporal adverbials, and finally by morphological marking (Meisel, 1987; Schumann, 1987; von Stutterheim & Klein, 1987). The point at which tense-aspect morphology begins to appear in learner language marks the basis for the form-oriented strand of research (Bardovi-Harlig, 1999). This strand investigates how specific grammatical forms are distributed across semantic and discourse contexts in order to understand their usage and functions in interlanguage. Within this tradition, Bardovi-Harlig (1999) highlights two main functional domains examined in relation to tense-aspect morphology: its connection to lexical aspect and its role in discourse structure.

Two major hypotheses have emerged from the form-oriented line of research: the Aspect Hypothesis (AH) and the Discourse Hypothesis (DH). Both were developed to account for the distribution of verbal morphology in learner language, where such distribution follows systematic patterns grounded in semantics and discourse. The Aspect Hypothesis was formulated in response to findings that the use of past and past progressive morphology by language learners was not random, but rather shaped by the aspectual properties of verbs. This claim aligned with earlier observations from both first language acquisition studies (e.g. Bronckart & Sinclair, 1973; Antinucci & Miller, 1976) and research on adult interlanguage (e.g. Kumpf, 1984; Flashner, 1989; Robison, 1990). The Discourse Hypothesis, in contrast, focuses on the interaction between verbal morphology and the discourse structure of narratives, examining how grammatical forms correlate with foregrounding and backgrounding in learner storytelling. Bardovi-Harlig (1999)

describes these two hypotheses as separate yet parallel explanations for the behavior of verbal morphology within the broader form-oriented research tradition.

2.3 Aspect Hypothesis

This section outlines the theoretical foundations of the Aspect Hypothesis, followed by a detailed account of its key components, including grammatical aspect, lexical aspect, evidence from first and second language acquisition, and the explanatory role of the Distributional Bias Hypothesis. The section also addresses the significance of classroom input in shaping aspectual development.

2.3.1 Grammatical aspect

As a foundational work, Comrie (1976) explains that grammatical aspect does not indicate the point in time at which an event takes place, but rather describes how the event is internally represented by the speaker—whether it is seen as unfolding, completed, repeated, or taking on another internal character. In languages such as Russian, where aspectual distinctions are systematically encoded, the differences between various aspectual forms are particularly prominent. In English, although such distinctions are not marked through a wide range of inflections, the contrast between *he read* and *he was reading* serves as a clear example of how one and the same situation can be interpreted as either finished or still in progress (Comrie, 1976, pp. 3–5).

Within the framework of grammatical aspect, a core cross-linguistic division is observed between the perfective and imperfective aspects. The perfective conveys an event as a unified whole and treats it as a single instance, without drawing attention to what occurs within it. In contrast, the imperfective offers a more internal perspective, allowing the speaker to emphasize the continuity, repetition, or unfolding nature of the situation (Comrie, 1976, pp. 16–18). This contrast is morphologically marked in many languages, where the imperfective serves as the counterpart to the perfective. For example, revisiting the earlier illustration involving the verb *read*, *il lut* corresponds to the perfective third-person singular in French, while *il lisait* expresses the imperfective. Similarly, in Spanish, *leyó* and *leía* represent the perfective and imperfective forms, respectively. While both are used for past-time reference, the imperfective is typically chosen when referring to actions that were habitual or ongoing (Comrie, 1976).

Although languages like those in the Romance family do not draw a morphological line between the two subtypes of the imperfective—namely, the progressive and the habitual—English also lacks a dedicated pair of forms for the general perfective–imperfective distinction. In English, the habitual component of the imperfective is used to express regularly occurring events and is typically conveyed through expressions like *He used to smoke*. The progressive component refers to actions in motion at a particular moment and is marked through constructions such as *He is smoking* (Comrie, 1976, pp. 26–32). In English and similar systems, the progressive form serves as the primary indicator of imperfective meaning, especially when applied to dynamic (non-stative) verbs (Comrie, 1976).

A clear grasp of these types of aspectual contrasts is fundamental for any investigation based on the Aspect Hypothesis. In order to analyze how language learners apply verbal morphology to different verb classes, one must first understand how these aspectual categories are structured and interpreted across languages.

2.3.2 Lexical aspect

Lexical aspect, also referred to as inherent aspect or Aktionsart, captures the semantic character of verbal predicates, independent of overt tense markers or morphologically encoded grammatical aspect (Comrie, 1976; Andersen & Shirai, 1994; Robison, 1995). It concerns the internal configuration of an event as implied by the verb or verb phrase—whether it unfolds over time, culminates at a natural endpoint, or occurs in an instantaneous fashion. Unlike grammatical aspect, which expresses the speaker’s interpretive stance and is typically realized through auxiliary constructions or inflections, lexical aspect stems from the inherent semantic structure of the predicate and is shaped primarily by its syntactic context (Li & Shirai, 2000).

The identification of a verb’s inherent aspect requires analyzing the predicate as a whole rather than isolating the verb itself. This is primarily due to the fact that verb complements and arguments can shift the predicate’s semantic classification (Shirai & Andersen, 1995). While the verb *run* in isolation denotes an unbounded process, pairing it with a quantized object such as *a mile* or a directional phrase like *to the park* introduces a terminus, thereby altering the aspectual profile and relocating the predicate into a telic category.

A foundational framework for categorizing these semantic types is provided in Vendler’s (1957, 1967) four-way typology, which remains one of the most frequently cited

classifications of event types. His model divides predicates into four categories: states, activities, accomplishments, and achievements. These categories are distinguished according to three core semantic dimensions: dynamicity (whether the predicate denotes change or activity), telicity (whether it entails an inherent boundary or goal), and punctuality (whether the event occurs at a single moment in time) (Comrie, 1976). Different configurations of these three dimensions generate the four aspectual classes, each with distinct semantic behavior (Andersen & Shirai, 1994). Table 2.1 illustrates the interaction between three semantic dimensions and four lexical classes, as described by Andersen (1991).

Table 2.1

Lexical Classes Explained by the Underlying Semantic Features (Andersen, 1991)

	States	Activities	Accomplishments	Achievements
Dynamicity	-	+	+	+
Telicity	-	-	+	+
Punctuality	-	-	-	+

The category of states [–dynamic, –telic, –punctual] includes static conditions that persist over time without development or effort. Examples include verbs like *believe*, *know*, and *love*, which describe continuous experiences with no internally defined endpoint (Andersen, 1991). Activities [+dynamic, –telic, –punctual], by contrast, depict ongoing, unbounded processes such as *walk*, *talk*, or *swim*. These predicates involve dynamic action but do not imply a built-in conclusion (Shirai & Andersen, 1995). Accomplishments [+dynamic, +telic, –punctual] represent temporally extended actions that culminate in a goal or result. Verbal constructions like *build a house*, *write a letter*, or *clean the room* illustrate this category, as they indicate gradual progression toward completion (Andersen, 1991). Achievements [+dynamic, +telic, +punctual], on the other hand, involve momentary transitions that produce a new state. Verbs such as *recognize*, *win*, or *arrive* fall into this group, as they denote events that occur instantly and mark a shift from one condition to another (Robison, 1995).

An alternative structuring of these categories is offered by Mourelatos (1978), who reorganizes Vendler’s types into a hierarchical framework based on the gradual

accumulation of semantic features. In his proposal, predicates are first separated into static and dynamic types, with dynamic ones further subdivided into processes (activities) and events (accomplishments and achievements). This organization highlights the role each feature plays in differentiating aspectual classes. While Vendler's classification has remained central in typological and applied research (Salaberry, 2011), Mourelatos' model permits a simplified three-way distinction by merging accomplishments and achievements under the broader category of events. Nonetheless, the original four-way classification remains applicable across languages and continues to guide analyses of predicate semantics in cross-linguistic contexts (Andersen & Shirai, 1994).

In order to classify predicates accurately, researchers have introduced a range of diagnostic tools based on formal tests (e.g. Dowty, 1979; Shirai, 2013). One of the most prominent strategies involves assessing compatibility with temporal adverbials. For example, activity predicates typically co-occur with durational expressions introduced by "for" (e.g. *walk for an hour*), while accomplishments are more naturally expressed with bounded-time phrases introduced by "in" (e.g. *build a house in two weeks*) (Andersen & Shirai, 1994). Such diagnostics have become standard methodological tools in aspectual classification and are widely used in empirical investigations of predicate behavior.

In conclusion, lexical aspect captures the intrinsic temporal structure of predicates as determined by semantic dimensions such as dynamicity, telicity, and punctuality. The widely accepted Vendlerian framework, consisting of four core categories, remains a central tool for identifying these distinctions. However, the practical application of this typology requires careful contextual evaluation and may depend on empirical diagnostics to resolve classification challenges. A nuanced understanding of lexical aspect provides essential background for examining how these semantic classes interface with grammatical markers, particularly in the context of language acquisition research.

2.3.3 Lexical aspect in first language acquisition

One of the earliest contributions offering observational support that children rely on the type of situation a verb conveys before acquiring formal time marking was that of Bronckart and Sinclair (1973). Working with French-speaking children between the ages of three and nine, the researchers designed spoken tasks that encouraged the use of past forms. It was observed that the children most often used past constructions with verbs referring to outcomes or changes—those typically classified as accomplishments and

achievements. However, when referring to static or ongoing situations—such as those expressed by states or activities—the same children tended to fall back on present forms, and notably avoided past constructions that would typically describe extended or habitual actions. This pattern suggested that children’s early use of past markings was influenced by how the event was shaped in meaning, rather than by a broader understanding of tense distinctions.

In a similar effort focusing on children acquiring Italian, Antinucci and Miller (1976) followed ten children over time and examined how they used time-related expressions in their everyday speech. The results were strikingly similar to those reported by Bronckart and Sinclair. Children consistently attached past markers only to event types involving a clear boundary or result—namely, accomplishments and achievements—while atelic verbs were expressed using either the present or verb forms without any time reference. These findings supported the view that young learners do not initially treat tense as an abstract category but instead apply it according to how concrete and result-oriented the event is.

When considered together, these two studies point to a broader pattern in early language development. Despite focusing on two different languages, both works reached comparable conclusions: that learners first organize their understanding of time expression around how events are structured in meaning, especially in terms of completion and outcome. In line with a cognitive-developmental framework, both studies argued that children’s early attention to time is shaped by what they can most easily grasp. Since completed events are more tangible in experience than ongoing or unchanging ones, they become the earliest contexts in which children apply past markings. These insights later helped shape formal hypotheses about how learners, both first and second language, build tense and aspect systems.

Bloom et al. (1980) extended the investigation of verb inflections to English-speaking children. Their longitudinal analysis of naturally occurring speech revealed patterns resembling those found in earlier studies: past-tense morphology occurred primarily with telic verbs, whereas the progressive form was predominantly associated with activities. By focusing on the use of progressive constructions, the researchers were able to identify a clearer connection between inflectional patterns and the semantic characteristics of the predicates. This led them to reject the explanation based on Piagetian developmental

stages and instead emphasize the influence of lexical aspect. Their findings were particularly noteworthy in redirecting attention to the determining role of inherent verb semantics.

In the following year, Bickerton (1981) proposed the Language Bioprogram Hypothesis after reviewing earlier findings and drawing comparisons among creole languages. Based on the idea of an innate linguistic structure and the presence of predetermined features in the minds of learners, Bickerton (1981) suggested that the appearance of past morphology with telic verbs reflected an inborn distinction between punctual and non-punctual categories. However, building on the insights of de Lemos (1981) and Stephany (1981), Li (1989) reinterpreted these earlier accounts and attributed the observed pairings not to innate structures, but rather to external factors such as caregiver input and interaction.

In 1984, a further hypothesis was introduced and subsequently redefined and critiqued by Weist et al. Weist et al. (1984) reviewed the findings of earlier studies (e.g. Bronckart & Sinclair, 1973; Antinucci & Miller, 1976; Bloom et al., 1980) and formulated what they termed the “Defective Tense Hypothesis (DTH).” Their critique was aimed at the suggestion that early verbal morphology served only to reflect lexical aspect or was shaped by Piagetian developmental processes, without reference to tense. In contrast to previous studies, Weist and colleagues gathered both natural and controlled data from children acquiring Polish, and analyzed the data using Vendler’s four-category framework, a detail that differed from the approach taken in earlier studies. Their results demonstrated the presence of tense, not just lexical aspect, in early verbal production. According to Shirai and Andersen (1995), what Weist et al. (1984) primarily challenged was the strong form of DTH, characterized by the exclusive use of past morphology with telic verbs and the denial of any temporal function. A more tempered version of this position was later expressed, suggesting that while accomplishments and achievements often co-occur with past morphology in initial stages, this should be seen as a general tendency rather than a strict constraint (Andersen, 1989; Bloom & Harner, 1989). Regarding the idea of a cognitively grounded deficit, subsequent research in second language acquisition, to be addressed in the next chapter, confirmed the role of lexical aspect without supporting the view that children lack an understanding of time.

The studies reviewed thus far laid the foundation for the parallel research tradition in the field of second language acquisition. Although originally intended to examine the

function of verb morphology in child language, these early investigations ultimately revealed the precedence of lexical aspect over tense. Specifically, past-tense morphology was found to be more frequent with accomplishments and achievements, while the progressive form was typically applied to activities. These findings were also critical in differentiating the effect of lexical aspect from alternative explanations, such as those based on Piagetian development (Bloom et al., 1980), or in refining the scope and formulation of aspect-related hypotheses (Weist et al., 1984).

2.3.4 Lexical aspect in second language acquisition

Early studies examining the use of verbal morphology in relation to lexical aspect in second language learners produced patterns similar to those reported in first language acquisition. For instance, Kumpf (1982), in his analysis of the English interlanguage of a Spanish learner, concluded that the progressive *-ing* was employed to express continuous or habitual situations, rather than events or states. Likewise, Flashner (1982), in her analysis of the English interlanguage of Russian immigrants, reported that accomplishments and achievements were marked with past morphology, while imperfective aspect was typically conveyed through base forms. In 1985, Rothstein found that progressive *-ing* was used only with durative verbs in the English interlanguage of a Hebrew-speaking learner. Her study also revealed that dynamic verbs were marked with irregular past, whereas imperfective past was expressed by base forms. In the same year, Economides (1985) observed similar patterns in the interlanguage of a Vietnamese learner of English, noting the use of progressive morphology with durative verbs, and the marking of irregular past solely with punctual verbs.

Although the influence of lexical aspect had already been recognized in early work on both first and second language acquisition, the Aspect Hypothesis in its widely accepted formulation (Andersen & Shirai, 1994; Bardovi-Harlig, 1994) was initially presented under various labels, such as the defective tense hypothesis (Andersen, 1986; 1991), the relative defective tense hypothesis (Andersen, 1989), and the primacy of aspect hypothesis (Robison, 1990). In the defective tense hypothesis, Andersen (1991) proposed that verbal morphology in learner language is influenced more by lexical aspect than by the marking of tense or grammatical aspect. A milder version of this explanation was later offered by Andersen and Shirai (1994), who emphasized the initial influence of lexical

aspect. Bardovi-Harlig (1992a) and Robison (1995) also pointed to the early role of aspectual features, without directly opposing temporal explanations.

The Aspect Hypothesis in second language acquisition, described simply, proposes that the use of past morphology is influenced by lexical aspectual classes in the early stages of tense-aspect acquisition by adult learners. More specifically, telic predicates are expected to appear with perfective past, atelic verbs with imperfective past, and activity predicates with progressive morphology (Bardovi-Harlig & Comajoan-Colomé, 2020). Initially, Andersen (1991) described this process in terms of developmental sequences, progressing from present forms used for past reference to the eventual mastery of both perfective and imperfective past forms. In a subsequent effort to clarify the proposal, Andersen and Shirai (1996) reformulated the account into four subhypotheses based on Vendler's lexical categories:

1. Use of perfective past initially on achievements and accomplishments, later extending to activities and statives.
2. Succeeding appearance of perfective past, the emergence of imperfective past initially on statives, extending subsequently to activities, finally to accomplishments to achievements.
3. Progressive inflected on activities first, extending to accomplishments to achievements.
4. No incorrect overextension of progressive to statives (Andersen & Shirai, 1996, p.533).

The use of Vendler's classification in the formulation of the hypothesis was claimed to establish its status as a language universal, as the four categories were assumed to reflect cognitive-semantic distinctions across languages (Andersen & Shirai, 1994; 1996). This structure also allowed for clearer testing, with both lexical classes and corresponding grammatical aspects explicitly defined. In 2002, Andersen introduced a revised version of the hypothesis with minor modifications. In this updated account, the initial use of perfective past was associated with telic verbs, and imperfective past with atelic ones. The fourth subhypothesis was removed due to empirical evidence showing that progressive forms were sometimes extended to statives (Andersen & Shirai, 1996, p. 544). Andersen (2002) also restructured the earlier developmental sequences into two strands: the development of perfective past and the development of imperfective past. In 2004, Shirai further included the developmental sequence of progressive into the Andersen's scheme (2002). The resulting developmental strands are presented visually in Figure 2.1.

Figure 2.1*Predicted Developmental Order of Verbal Morphology Across Lexical Classes (Shirai, 2004, p.93)*

	State		Activity		Accomplishment		Achievement
(Perfective) Past	4	←	3	←	2	←	1
Progressive	?	←	1	→	2	→	3
Imperfective Past	1	→	2	→	3	→	4

In terms of empirical findings within English interlanguage, Robison (1990) conducted an interview-based study with a native Spanish speaker learning English, observing that past-tense morphology tended to occur with punctual verbs, while the progressive form was primarily used with verbs denoting durative situations. In a broader study, Bardovi-Harlig (1992a) investigated the evolving interlanguage of 135 ESL learners from various linguistic backgrounds and proficiency levels through written compositions and cloze tasks. Although a general tendency was observed—namely, that past forms were associated with punctual verbs and the progressive with durative ones—the author emphasized caution, noting that temporal inflections were also applied systematically across different lexical categories. Thus, the results were not deemed sufficient to conclusively support the Aspect Hypothesis.

A later investigation with a larger sample produced findings more directly aligned with the predictions of the Aspect Hypothesis. Bardovi-Harlig and Reynolds (1995) examined the English interlanguage of 182 ESL learners from diverse L1 backgrounds and varying proficiency levels. Using cloze passages as the data source, they found that past forms were primarily linked to telic predicates, whereas the progressive form was generally used with atelic ones. Notably, the association between past morphology and telic verbs appeared stronger among lower-proficiency learners. Additionally, stative verbs were frequently expressed using non-past forms. In the same year, Robison (1995) explored the influence of lexical aspect in the interlanguage of 26 Spanish-speaking learners of English. Through interviews conducted across four proficiency levels, he observed that punctual verbs tended to co-occur with past forms, while activity verbs appeared with the progressive. Another important finding was the increasing consistency of tense-related

morphology as learners progressed in proficiency, suggesting that the predictive power of the Aspect Hypothesis may be confined to earlier stages of acquisition.

Collins (2002), working with 70 and 91 Francophone learners of English, used cloze tests and written film retellings. The results were consistent with the Aspect Hypothesis: past simple forms appeared with telic verbs, progressive forms with activities, and present tense with statives. An L1 effect was also observed. In a follow-up study, Collins (2004) carried out a comparative analysis of learner data from speakers of French and Japanese. Using cloze tasks, the study reported that past forms first occurred with telic verbs before spreading to atelic ones. The frequent use of present morphology and the appearance of non-past forms with stative verbs further supported the influence of lexical aspect. Collins interpreted these findings as evidence for the universal applicability of lexical aspect in guiding early tense-aspect development.

Muñoz and Gilabert (2011) collected interviews and picture-based narratives from 147 bilingual Catalan-Spanish learners of English. Their findings partially aligned with the Aspect Hypothesis, as accomplishments were sometimes marked with progressives depending on the task. Chan et al. (2012) investigated the English interlanguage of four learners—two Italian and two Punjabi speakers—through a longitudinal design involving film retellings and interviews. Their findings also aligned with the Aspect Hypothesis, showing that past morphology co-occurred with telic predicates, and progressive forms with activity verbs. Collins et al. (2012) examined approximately 40 hours of input in intensive Canadian EFL classrooms. The distribution of verbal morphology in the instructional input closely followed the form-function pairings predicted by the Aspect Hypothesis. Zhao and Shirai (2018) analyzed a written cloze test and oral personal narratives from 20 Arabic-speaking EFL learners. The findings aligned with the Aspect Hypothesis regardless of proficiency level.

Evidence in support of the Aspect Hypothesis has also been found in interlanguages beyond English, including French, Spanish, and Portuguese. Salaberry (1998), for example, conducted a study on the French interlanguage of English-speaking learners using cloze tasks and film retellings. The findings reflected the expectations of the Aspect Hypothesis: the perfective past (*passé composé*) tended to precede the use of the imperfective past (*imparfait*), with telic verbs occurring with perfective morphology and atelic verbs with imperfective forms. Regarding Spanish interlanguage, in addition to

Andersen's earlier contributions (1986, 1991), Liskin-Gasparro (2000) examined oral narratives produced by eight advanced English-speaking learners of Spanish. The results supported the core assumptions of the Aspect Hypothesis, with perfective forms used for telic verbs—even in contexts where the imperfective might be more appropriate—and imperfective morphology predominantly linked to atelic verbs.

Andersen (1991) analyzed two English-speaking children learning Spanish through conversational samples. The results supported the Aspect Hypothesis. Giacalone Ramat (1995) analyzed oral narratives and picture stories from 16 learners of Italian from mixed language backgrounds and found results supporting the Aspect Hypothesis. Shirai and Kurono (1998), working with 17 learners of Japanese from mixed L1 backgrounds, used judgment tests and reported findings supporting the Aspect Hypothesis. Salaberry (1999) documented a developmental shift from tense-based to aspect-based morphology in oral movie narratives produced by 20 college-level L1 English learners of Spanish over two data collection points. Learners demonstrated minimal sensitivity to lexical aspect at early stages, which increased over time.

Salaberry (2002) tested intermediate and advanced English-speaking learners of Spanish through cloze tasks and found partial support for the Aspect Hypothesis, with stronger alignment among higher-proficiency learners. Camps (2005) studied written production from 30 beginning learners of Spanish and found a clear lexical aspect–morphology alignment: the preterite was frequently used with achievements and accomplishments, while the imperfect marked states and activities. Labeau (2005) collected oral and written narratives, grammar cloze tests, and editing tasks from 61 advanced Anglophone learners of French and 6 native speakers. The study supported the Aspect Hypothesis in some areas, such as stable perfective use with telics, but also noted limitations such as inconclusive progressive extension due to lack of overt morphology.

Salaberry (2005) investigated 70 university-level English-Spanish bilingual learners of Portuguese through a written narrative and verb-selection task. The results were found to be consistent with the Aspect Hypothesis, although learners demonstrated considerable difficulty with stative verbs. Comajoan (2006) analyzed narratives and folktales from three English-speaking multilingual learners of Catalan and reported lexical aspect–morphology alignment: preterite forms were used with telic verbs, while atelic verbs were marked with the imperfective. Sugaya and Shirai (2007) studied 80 adult L2 learners of

Japanese grouped by L1 type (progressive vs. non-progressive). Through acceptability judgment tests and oral picture descriptions, they found that the progressive meaning of *-te i-ru* was easier to acquire than its resultative meaning, with the L1 progressive group performing better on the progressive uses.

Ayoun and Salaberry (2008) tested 21 high school French EFL learners and 21 American controls using a cloze task and a personal narrative. Results were generally consistent with the Aspect Hypothesis, although past morphology appeared more frequently with states than telic verbs. Tracy-Ventura and Cuesta-Medina (2018) used a Spanish oral corpus to investigate input frequency, finding that naturalistic distribution patterns were consistent with the predictions of the Aspect Hypothesis. González and Quintana Hernández (2018) investigated written production by 22 English-speaking and 31 Dutch-speaking learners of Spanish, along with 16 native controls. The results supported the Aspect Hypothesis, revealing that lexical aspect and L1 background influenced the distribution of verbal morphology, with durativity and dynamicity also playing notable roles.

A major contribution to the field has been the comprehensive review by Bardovi-Harlig and Comajoan-Colomé (2020), who synthesized the findings of 36 key studies on the Aspect Hypothesis published between 1999 and 2019. Their review assessed whether the results from these studies conformed to the three subhypotheses formulated by Andersen (2002). The authors reported consistent support for all three: perfective morphology was regularly aligned with telic predicates, imperfective forms appeared with atelic predicates, and perfective emerged in learner production prior to the use of imperfective forms. Furthermore, progressive morphology was most frequently found with activity verbs.

Taken together, these studies provide broad empirical support for the Aspect Hypothesis across a wide variety of target languages, learner backgrounds, and task types. While deviations and L1-specific effects are occasionally reported, the general trend remains consistent: learners tend to associate perfective morphology with telic predicates and imperfective/progressive morphology with atelic predicates, particularly in early stages of acquisition.

2.3.5 Challenges to the aspect hypothesis: empirical counterevidence and interpretive nuances

Although the Aspect Hypothesis (AH) has garnered substantial empirical support in second language acquisition research (Andersen & Shirai, 1994; Bardovi-Harlig, 2000), a growing body of literature has reported patterns that appear to diverge from its central predictions. To accurately interpret these findings, it is first necessary to delineate what constitutes legitimate counterevidence. Bardovi-Harlig (1999) identified the most compelling form of counterexample as the uniform distribution of verbal morphology across all lexical aspectual categories—namely, states, activities, accomplishments, and achievements—without showing the selective patterning predicted by the AH. Such non-differentiated distributions would fundamentally undermine the hypothesis's core claim that morphological marking initially emerges with prototypical verb categories based on their telicity and stativity, and only later extends to less prototypical categories.

Several empirical studies have documented these nonconforming patterns. For instance, Bardovi-Harlig and Reynolds (1995), Ayoun and Salaberry (2008), and Zhao and Shirai (2018) observed that in certain contexts, states were marked with past morphology either earlier or more frequently than anticipated. These findings challenge the AH's initial prediction, which posits that stative verbs are the last to be marked with past or perfective morphology. Similarly, Domínguez et al. (2013) and González and Quintana (2018) reported instances where the expected telic-to-atelic progression in morphological development was not observed. Domínguez et al. (2013), for example, found that beginner and intermediate learners of L2 Spanish exhibited no aspectually conditioned morphological usage, although this alignment emerged among advanced learners, partially reinstating support for the hypothesis.

In a study focusing on Arabic learners' acquisition of English past morphology, Zhao and Shirai (2018) reported that intermediate learners marked states and achievements more frequently than activities in a cloze task, a pattern that contradicts the predicted developmental sequence. Earlier findings by Alruwaili (2014) similarly revealed that Arabic learners were more inclined to accept progressive "-ing" morphology on states and activities than on achievements, thus violating the third and fourth predictions of the AH regarding progressive marking.

Despite these deviations, many are not inherently fatal to the hypothesis. As Bardovi-Harlig and Comajoan-Colomé (2020) have argued, several of these apparent contradictions can be attributed to confounding factors such as task type, learner proficiency, and instructional input. For example, the early emergence of past morphology on stative verbs in English may be a consequence of the frequent and obligatory use of the verb *be*, which tends to occur in high-frequency constructions and is nearly always inflected. Moreover, the lack of competing imperfective forms in English, as found in Romance languages, may lead to the premature application of past tense morphology to stative verbs.

In addition, other variables such as phonological salience (Wolfram, 1985; Goldschneider & DeKeyser, 2001), morphological regularity (Housen, 2002), and default tense marking (Salaberry, 2000, 2008) have been proposed as alternative explanatory factors that interact with, or occasionally override, aspectual distinctions. However, rather than refuting the AH, these factors suggest the need for auxiliary explanations that account for particular stages of development or specific learner profiles. For instance, Salaberry (2008) contended that the early use of perfective morphology across all aspectual categories may reflect a default marking strategy among low-proficiency learners, with aspectual sensitivity developing over time as learners receive more exposure.

Furthermore, methodological issues—such as whether the analysis unit is a verb or a predicate, the analytic framework used (within-category vs. across-category analysis), and the modality of the task (e.g. oral narratives vs. cloze tests)—exert significant influence on reported findings. Bardovi-Harlig and Comajoan-Colomé (2020) underscored that analyses based on verb forms, rather than predicates, may lead to misclassification and obscure genuine AH-aligned patterns. Zhao and Shirai (2018) similarly acknowledged that task type significantly shaped aspectual alignment, with oral narratives yielding stronger support for the AH compared to form-focused tasks like cloze procedures.

In sum, although some empirical findings appear to deviate from the Aspect Hypothesis, many of these discrepancies can be accounted for by contextual, methodological, or learner-related factors. Rather than undermining the hypothesis, such findings call for a more refined and context-sensitive interpretation, whereby the AH is conceptualized not as a universal law, but as a robust developmental tendency shaped by cognitive, linguistic,

and instructional variables. As Ryu et al. (2015) aptly note, the AH should be regarded as a cross-linguistic generalization that manifests under specific conditions, rather than as an invariant principle of interlanguage development.

2.3.6 A possible explanation for aspect hypothesis: distributional bias hypothesis and its implications on classroom input

In 1986, Andersen introduced the concept of *distributional bias* as a potential explanation for the patterning observed in the Aspect Hypothesis. In 1990, this concept was formalized as a principle, in which Andersen proposed that the distributional tendencies described by the hypothesis were not limited to learner language, but were also evident in native speaker interactions. According to this view, learners exposed to such regularities in the input begin to adopt similar distributional patterns in their own use of the language. In this initial formulation of the distributional bias principle, no distinction was drawn between the naturally occurring speech of native speakers and the simplified or adapted input directed at learners. However, research in both first language acquisition (e.g. Stephany, 1981) and second language acquisition (e.g. Shirai, 1990) provided evidence that learner-directed speech displayed even stronger alignment with the patterns predicted by the Aspect Hypothesis (Andersen & Shirai, 1994).

Early empirical work testing the Aspect Hypothesis further substantiated the claims of the Distributional Bias Hypothesis (DBH), showing that native speaker output also conformed to the predicted aspectual patterns (Andersen, 1992; 1993; Huang, 1993; Robison, 1993 in SLA; Shirai, 1991 in L1 acquisition). Expanding on this line of inquiry, Huang (2008) investigated the potential influence of instructional input by examining classroom materials, specifically language textbooks. Huang proposed that learners might not possess an explicit understanding of aspectual distinctions in the target language but instead mirror the patterns found in their input. Awareness tests administered to learners revealed limited sensitivity to semantic features such as stativity, punctuality, and telicity. A corpus-based analysis of textbook language showed consistency with the predictions of the Aspect Hypothesis, and a comparison with learner production further supported the claims of the DBH. In a subsequent study employing oral production data, Vraciu (2013) explored the interlanguage of Catalan and French learners of English, observing that telic predicates were consistently expressed with past-tense forms, while activities and accomplishments tended to appear with progressive morphology. An analysis of native

speaker production yielded parallel patterns, lending additional support to the DBH by demonstrating that learners and native speakers exhibited comparable aspect–morphology associations.

The theoretical framework proposed by the DBH places particular emphasis on the role of exposure in shaping learner language, thus bringing the nature and quality of input to the forefront of discussion. Gass and Mackey (2014) underscore the centrality of input in language learning, asserting that learners formulate hypotheses about the target language based on the linguistic data they encounter. Earlier studies in both first (e.g. Brown, 1973; Stephany, 1981) and second language acquisition similarly acknowledged that input characteristics exert a significant influence on learners. With its focus on how input shapes verbal morphology, the DBH has prompted investigations into both native speech and classroom discourse. In English as a Second Language (ESL) contexts, research has often centered on the input available through native interactions, while studies in English as a Foreign Language (EFL) environments have focused more on pedagogical materials and instructional settings (e.g. Collins et al., 2012; Daidone, 2019).

Römer (2004) emphasized the need for a comprehensive analysis of learner input, suggesting that such inquiry should include both textbook content and naturally occurring speech, as well as learner output. She also highlighted the substantial role of textbooks in shaping the language that learners are exposed to in EFL contexts. In parallel, Sakata (2019) argued that EFL learners are highly dependent on textbook content as their primary source of input. In line with these concerns, Huang (2008) compared lexical aspect patterns in textbooks and learner production, finding consistent results that pointed to the influential role of instructional materials. Alongside this focus on input, Gass and Mackey (2014) also addressed the idiosyncratic nature of learner-directed speech, often referred to as modified input. They suggested that such adjustments in language may support learner comprehension. However, Sakata (2019) cautioned that input presented in educational materials often diverges from authentic usage, particularly in terms of lexical frequency. As a result, essential vocabulary items may be underrepresented, potentially limiting natural vocabulary expansion and broader language development.

In summary, prior research has repeatedly demonstrated that input significantly shapes language acquisition, and in EFL settings, the linguistic material provided by textbooks plays a prominent role in guiding learners' development of verbal morphology.

2.3.7 Theoretical foundations of the aspect hypothesis: cognitive principles and distributional bias

A substantial body of research supporting the Aspect Hypothesis (AH) has demonstrated that the observed developmental patterns in tense-aspect morphology are not random but rather stem from underlying cognitive principles that guide learners' early form-meaning mappings. These principles, grounded in how both native speakers and L2 learners organize and interpret linguistic information within ongoing discourse, offer an explanatory framework for the early alignment between grammatical forms and inherent lexical aspect categories (Andersen & Shirai, 1994; Andersen, 2002). In particular, Roger W. Andersen (1993) proposed four fundamental cognitive operating principles that explain these regularities in acquisition: the *Relevance Principle*, the *Congruence Principle*, the *One-to-One Principle*, and the *Principle of Prototypicality*.

The *Relevance Principle* posits that learners initially attend to the most salient semantic features of a verb when acquiring grammatical morphology. Since aspect is more intrinsically tied to a verb's inherent semantics than other categories such as tense, mood, or agreement, learners tend to associate morphological markers with aspectual distinctions in early stages of acquisition (Andersen & Shirai, 1994; Andersen, 2002). This explains why verb morphemes that are eventually used to mark tense—such as the English past tense marker *-ed*—are initially interpreted as indicators of aspectual completion.

The *Congruence Principle* builds on this by suggesting that learners will select the morpheme whose inherent meaning is most congruent with the aspectual meaning of the verb it marks. This results in early preferences such as using past or perfective morphology with telic predicates like accomplishments and achievements, and progressive morphology with atelic predicates like activities (Andersen & Shirai, 1994; Andersen, 2002). This alignment reflects a cognitive bias that favors semantic consistency between grammatical form and verb class.

The *One-to-One Principle* asserts that learners are predisposed to assign a single meaning and function to each new morphological form they encounter. This leads to an initial tendency to use forms like the past tense *-ed* exclusively to mark completion, or the progressive *-ing* solely to express ongoing action (Andersen, 1984; Andersen & Shirai, 1994). Over time, as learners receive more diverse input, this restrictive interpretation

becomes more flexible, allowing for the application of the same forms to a broader range of lexical items and discourse functions.

The *Principle of Prototypicality* further explains how learners generalize grammatical functions from the input. Learners are hypothesized to derive the prototypical meaning of a tense-aspect marker from the most frequent and semantically salient exemplars they encounter. For example, the perfective aspect is typically instantiated by punctual, completed events with clear results—prototypically situated in the past (Dahl, 1985; Andersen & Shirai, 1994). Consequently, early learner uses of past morphology are often limited to such prototypical contexts. As learners' exposure broadens, these associations are gradually extended to less prototypical verbs, leading to a more sophisticated and contextually appropriate use of morphology (Andersen & Shirai, 1994).

These four principles jointly account for the early developmental regularities observed in tense-aspect acquisition and are further shaped by input patterns described in the *Distributional Bias Hypothesis (DBH)*. According to the DBH, even native speakers display preferences in the co-occurrence of specific tense-aspect markers with certain verb types (Andersen, 1986; Andersen & Shirai, 1994). L2 learners, exposed to this skewed input distribution, often interpret these associations as categorical, resulting in an overgeneralization of form-function pairings during early interlanguage development. While this bias is more absolute in L2 learners, native speakers also exhibit a relative distributional bias, indicating that both groups are influenced by similar communicative and cognitive pressures (Andersen & Shirai, 1994). These shared patterns reflect a broader discourse-driven motivation, wherein tense-aspect choices help structure narrative information—foregrounding main events and backgrounding supportive or contextual information (Andersen & Shirai, 1994). Thus, the link between verb semantics and grammatical marking is ultimately rooted in the communicative need to highlight the informational status of events within discourse (Andersen & Shirai, 1994).

2.4 Discourse Hypothesis

In parallel with the substantial empirical support garnered by the Aspect Hypothesis (AH), an alternative yet complementary line of inquiry began to gain prominence in second language acquisition research: the Discourse Hypothesis (DH). Whereas AH focuses on the influence of lexical properties of predicates on the acquisition and deployment of verbal morphology, DH originates from the recognition that

morphological marking of temporal relations in learner language cannot be comprehensively explained without reference to the structure of discourse (Godfrey, 1980). The emergence of DH was thus motivated by the inadequacy of semantic accounts alone to account for learners' morphological choices, particularly in narrative contexts.

Initial observations pointed to a clear alignment between learners' use of temporal morphology and the underlying structure of narratives, alongside predicate-level semantics. These observations formed the conceptual basis for the development of DH. As one of the earliest contributions, Godfrey (1980) contended that learners' use of tense-aspect morphology could be better understood in light of how they organized narrative content. According to this view, learner output was influenced not solely by inflectional competence but also by temporal cohesion and event sequencing. This emphasis on the interaction between narrative construction and morphological selection laid the theoretical foundation for DH. Research following Godfrey's study built upon this premise by focusing on a fundamental distinction in discourse: that between foreground and background information. Theoretical investigations by Hopper (1979), Longacre (1981), Givón (1982), and Dahl (1984) supported the notion that this dichotomy is a cross-linguistic feature of narrative structure. In learner language, foregrounded elements—those advancing the storyline—were found to occur predominantly with simple past morphology, whereas background information—typically descriptive or contextual—was associated with imperfective, progressive, or uninflected forms.

Within the DH framework, empirical studies (e.g. Kumpf, 1984) emerged during the 1980s and early 1990s. Early case studies, such as Flashner (1989) and Housen (1994), offered evidence that learners distinguished between foreground and background discourse segments using different morphological forms. Flashner (1989), for instance, found that Russian-speaking learners of English employed past tense forms for foregrounded narrative events and base forms for background information, a distribution that paralleled native speaker patterns. Similarly, Housen's (1994) analysis of an American learner of Dutch revealed that present perfect was used to express foreground content, while non-finite and present forms were reserved for background clauses. Collectively, these early findings underscored the influence of narrative structure on learners' morphological choices.

As DH developed further as a theoretical construct, it also became the subject of critical scrutiny. Wolfram (1985; 1989), for example, questioned the robustness of the findings presented by earlier studies—particularly Kumpf's (1984)—and proposed that phonological factors might better account for the observed patterns. Nevertheless, subsequent empirical investigations addressed these criticisms. Notably, Bardovi-Harlig (1992b; 1995) conducted studies with larger participant groups using structured narrative tasks, which provided systematic evidence for the role of grounding in determining verbal morphology. These studies revealed a strong association between past morphology and foregrounded narrative content, lending considerable support to DH. In a more recent contribution, Giacalone-Ramat (2002) examined the oral narratives of Italian learners of English and similarly found that learners favored perfective past forms in foreground contexts, while imperfective forms appeared more frequently in background segments. Such empirical results consistently affirm the relevance of grounding as proposed in the Discourse Hypothesis.

2.5 An Interface of Aspect and Discourse Hypothesis

As demonstrated thus far, studies seeking to identify the factors influencing the distribution of verbal morphology have, for the most part, examined the Aspect Hypothesis (AH) and the Discourse Hypothesis (DH) as distinct and independent constructs. While a number of theoretical accounts have acknowledged a potential relationship between the two (e.g. Hopper, 1979; Dahl, 1984), only a limited body of empirical research (e.g. Bardovi-Harlig, 1998; Domínguez et al., 2013) has directly investigated the simultaneous impact of lexical aspect and discourse grounding on the morphological encoding of temporality. Among the foundational works within the AH framework, Andersen and Shirai (1994) offered a compelling account of how these two factors may intersect. According to their proposal, accomplishments and achievements are more likely to function as narrative-advancing elements, thereby making them suitable candidates for past perfective marking. Conversely, atelic predicates are typically used to support or elaborate on the narrative context, which aligns them more closely with past imperfective or progressive forms, particularly in the case of activities.

This conceptual link was further elaborated in Bardovi-Harlig (1998), who addressed the apparent contrast between the two hypotheses by arguing that they are, in fact, underpinned by shared semantic foundations. Drawing on Reinhart's (1984)

characterization of foregrounded discourse—namely, that it is marked by *sequentiality*, *punctuality*, and *completeness*—Bardovi-Harlig observed that two of these features, punctuality and completeness, also define telic predicates. She further contended that completeness is a prerequisite for sequencing events, thereby establishing an indirect connection between sequentiality and telicity (Bardovi-Harlig, 2000). As such, the semantic overlap between telicity and discourse foregrounding provides a theoretical basis for the expectation that empirical data might support both hypotheses concurrently (Bardovi-Harlig, 1998).

Turning to empirical evidence from second language acquisition, Bardovi-Harlig (1998) examined the interaction between AH and DH using narrative data from 51 learners representing diverse L1 backgrounds and a range of proficiency levels. The findings revealed that achievements exhibited the highest rates of past-tense morphology, regardless of grounding. In contrast, accomplishments and activities were more susceptible to discourse context. Accomplishments were largely associated with past morphology, with a notably higher frequency in foreground clauses. Activities demonstrated comparatively lower rates of past morphology among dynamic predicates, even though they were predominantly used in the foreground. Progressive morphology was also observed with activity verbs, but this form appeared exclusively in background contexts. Stative predicates, on the other hand, occurred almost entirely in background positions, which precluded a meaningful comparison between foreground and background usage for this class.

In a subsequent study, Howard (2004) reported similar findings. Foregrounded achievements were frequently marked with past morphology, whereas background statives rarely bore such marking. Howard interpreted these results in light of the prototypical alignment between certain verb types and specific morphological forms. In particular, foregrounded achievements constituted the most prototypical pairing with past-tense morphology. The following year, Comajoan et al. (2005) conducted a longitudinal study on six learners of Catalan as a foreign language from mixed backgrounds. Data were collected through video retellings and storybook retellings. The results were consistent with both the Aspect Hypothesis and the Discourse Hypothesis, showing that past telic predicates appeared in foreground clauses, while imperfective atelic predicates were used in background clauses. More recently, Salaberry (2011)

investigated both AH and DH using a forced-choice task administered to English-speaking learners of Spanish. The distributional patterns observed in learner responses supported both hypotheses, indicating that both lexical aspect and discourse structure influenced the use of past morphology. In 2013, Domínguez et al. examined 60 English-speaking learners of Spanish, alongside native controls, using one comprehension task and three oral tasks. The findings indicated that dynamicity determined the use of past forms, and that the spread of forms was not predicted by the Aspect Hypothesis. Moreover, discourse sensitivity was found to develop at the intermediate level.

Among the studies situated at the intersection of the two hypotheses, Bardovi-Harlig's (1998) work remains particularly influential. She emphasized that an integrated approach—one which accounts for both lexical semantics and discourse-level organization—is necessary for a more comprehensive understanding of the factors that govern the distribution of verbal morphology in learner language.

Within the Turkish EFL context, empirical investigations examining the acquisition of tense-aspect morphology remain relatively limited. One of the earliest contributions to this area is Zingir's (1999) M.A. thesis, which represents a preliminary application of the Aspect Hypothesis. The study explored whether intermediate-level Turkish EFL learners' tense errors were influenced by lexical aspectual categories. The findings revealed persistent difficulties in the accurate use of past progressive and present tense forms, with particular challenges arising from the use of stative verbs and the potential influence of L1 interference.

Subsequent studies have adopted a more integrated perspective by considering both lexical aspect and discourse grounding. Boran (2006), for instance, investigated the extent to which these two factors affected the use of verbal morphology in written narratives by intermediate-level Turkish EFL learners. The results suggested that both lexical aspect and grounding significantly contributed to morphological choices. In a similar vein, Bada and Genç (2007) analyzed oral narratives produced by Turkish EFL learners and native speakers, reporting that only discourse grounding—not lexical aspect—had a statistically significant influence on the selection of verbal morphology. More recently, Ateş (2022) conducted a comprehensive study incorporating both comprehension and production tasks across multiple proficiency levels. The results demonstrated that both lexical aspect and discourse grounding influenced the learners' distribution of tense-aspect morphology,

providing further empirical support for the combined relevance of these two factors in the Turkish EFL context.

The preceding discussion has outlined the empirical findings related to lexical aspect, discourse grounding, and the interface between these two dimensions, including evidence from studies conducted within the Turkish EFL context. Table 2.2 provides a synthesized overview of the principal empirical studies (ordered chronologically) addressing the Aspect Hypothesis, the Discourse Hypothesis, and research exploring their intersection.

Table 2.2

Overview of Empirical Studies on the Aspect Hypothesis, Discourse Hypothesis, and Their Interface

Study	Hypo. Studied	Participants	Data Collection	Main Findings
Robison (1990)	AH	A Spanish speaking learner of English	Interviews	Consistent with Aspect Hypothesis; punctual verbs in past, durative verbs in progressive
Andersen (1991)	AH	2 English speaking children learning Spanish	two conversational samples	Results supporting the Aspect Hypothesis
Bardovi-Harlig (1992a)	AH	135 ESL learners from various backgrounds at various levels	A cloze passage; a composition	Results supporting the Aspect Hypothesis
Bardovi-Harlig (1992b)	DH	16 intermediate adult ESL learners; 24 native English speakers	Oral and written story-retell task	ESL learners used past tense for foreground and non-past for background clauses, a strategy differing from native speakers for discourse organization

(Continued) Overview of Empirical Studies on the Aspect Hypothesis, Discourse Hypothesis, and Their Interface

Study	Hypo. Studied	Participants	Data Collection	Main Findings
Bardovi-Harlig (1995)	DH	37 adult ESL learners	Oral and written film retell task	Identified a developmental pattern in tense/aspect morphology distribution tied to narrative structure (foreground/background); variation in previous findings attributed to learner proficiency
Bardovi-Harlig & Reynolds (1995)	AH	182 ESL learners from mixed background at various proficiency levels	Short cloze passages	Results supporting the Aspect Hypothesis
Giacalone-Ramat (1995)	AH	16 learners of Italian from mixed language backgrounds	oral narratives, picture stories	Results supporting the Aspect Hypothesis
Robison (1995)	AH	26 Spanish speaking learners of English	Interviews	Results supporting the Aspect Hypothesis in early stages; punctual verbs in past; activities in progressive
Bardovi-Harlig (1998)	AH;DH	51 ESL learners at Indiana University	oral and written narratives	Results supporting both hypotheses
Salaberry (1998)	AH	39 English speaking learners of French; 30 native speakers	A cloze test; A written narration	Results supporting the Aspect Hypothesis; telic-atelic distinction determined verbal morphology
Shirai & Kurono (1998)	AH	17 learners of Japanese from mixed backgrounds	Judgment Tests	Results supporting the Aspect Hypothesis

(Continued) Overview of Empirical Studies on the Aspect Hypothesis, Discourse Hypothesis, and Their Interface

Study	Hypo. Studied	Participants	Data Collection	Main Findings
Salaberry (1999)	AH	20 college-level L1 English students; 4 native Spanish speakers (control)	Oral movie narratives (collected twice, 2 months apart)	Gradual developmental shift from tense-based to aspect-based verb morphology, with minimal influence of lexical aspect at beginner levels and increasing sensitivity to aspectual distinctions over time
Liskin-Gasparro (2000)	AH	8 advanced English speaking learners of Spanish	Oral narratives	Results aligned with the predictions of Aspect Hypothesis; perfective with telic verbs, imperfective with atelics
Collins (2002)	AH	70/ 91 Francophone learners of English	Cloze tests / Written film retelling	Results consistent with Aspect Hypothesis; Past Simple with telics, Progressive with Activities, Present used for Statives. L1 effect observed
Giacalone-Ramat (2002)	DH	4 English speaking learners of Italian	Film retellings	Results consistent with DH; perfective in foreground, imperfective in background
Salaberry (2002)	AH	Intermediate/Advanced level English-speaking learners of Spanish	Cloze tests	Partial support for AH, getting stronger with higher level learners
Howard (2004)	AH;DH	18 Irish learners of French	Interviews	Results consistent with both hypotheses; perfective with telic verbs in foreground, imperfective with atelics in background

(Continued) Overview of Empirical Studies on the Aspect Hypothesis, Discourse Hypothesis, and Their Interface

Study	Hypo. Studied	Participants	Data Collection	Main Findings
Camps (2005)	AH	30 beginning learners of Spanish	Written production (analysis of imperfect use and morphological marking of state verbs)	Clear lexical aspect– morphology alignment in early Spanish L2 writing; preterite strongly favored with Achievements and Accomplishments, imperfect with States and Activities.
Comajoan, Pérez Saldanya & Eddington (2005)	AH; DH	Six learners of Catalan as a foreign language from mixed backgrounds	Video retellings; Storybook retellings (Longitudinal)	Results consistent with Aspect and Discourse Hypotheses; past telics in foreground, imperfect atelics in background
Labeau (2005)	AH	61 Advanced Anglophone learners; 6 native French speakers (control group)	Oral and written narratives, grammar cloze-test, written editing task	limitations of AH in advanced L2 French; stable PC-perfective use across levels; early overuse of IMP-perfective combinations; inconclusive progressive extension due to lack of overt morphological marker
Salaberry (2005)	AH	70 university-level English-Spanish bilingual learners of Portuguese 16 native speakers of Portuguese	A written narrative and a verb-selection task	Results consistent with Aspect Hypothesis with considerable struggle in Statives; Positive transfer from L2 to L3

(Continued) Overview of Empirical Studies on the Aspect Hypothesis, Discourse Hypothesis, and Their Interface

Study	Hypo. Studied	Participants	Data Collection	Main Findings
Comajoan (2006)	AH	3 English-speaking multilingual learners of Catalan	video/ storybook narratives, and a folktale.	Preterite marking with telic predicates (achievements, accomplishments); imperfective marking with atelic predicates (activities, states); lexical aspect–morphology alignment in L2 Catalan.
Sugaya & Shirai (2007)	AH	80 adult L2 learners in Tokyo; grouped by L1 (Progressive vs Non-progressive)	Acceptability judgment test and oral picture description task	Progressive meaning of <i>-te i-ru</i> was easier than resultative; L1 Progressive group favored progressive use
Ayoun & Salaberry (2008)	AH	21 high school French EFL learners; 21 American controls	a cloze task and a personal narrative	Results consistent with Aspect Hypothesis, except states used with past more than telics; Potential L1 effect
Muñoz & Gilabert (2011)	AH	147 bilingual Catalan-Spanish learners of English	an interview; a picture elicited narrative	Partial alignment with Aspect Hypothesis, where accomplishments were associated with progressives in one task
Salaberry (2011)	AH; DH	286 English speaking learners of Spanish	Forced-choice task	Results consistent with both hypotheses
Chan, Finberg, Costello and Shirai (2012)	AH	2 Italian speaking learners of English; 2 Punjabi speaking learners of English	Film retellings; Interviews	Results consistent with Aspect Hypothesis; telic verbs in past, activities in progressive

(Continued) Overview of Empirical Studies on the Aspect Hypothesis, Discourse Hypothesis, and Their Interface

Study	Hypo. Studied	Participants	Data Collection	Main Findings
Collins, White, Trofimovich, Cardoso, & Horst (2012)	AH	Intensive EFL classrooms in Canada	Classroom input (Recording of 40 hours)	Results consistent with the pairings predicted by Aspect Hypothesis
Dominguez, Tracy-Ventura, Arche, Mitchell & Myles (2013)	AH; DH	60 English-speaking learners of Spanish; Native controls	One comprehension Task; Three Oral Tasks	Dynamicity determines the use of past forms; the spread of forms not predicted by AH; Discourse sensitivity develops at intermediate level
Tracy-Ventura & Cuesta-Medina (2018)	AH	-	Spanish oral corpus (Input frequency)	Naturalistic data consistent with Aspect Hypothesis; Distributional Bias in L1 Spanish
Zhao & Shirai (2018)	AH	20 Arabic EFL learners	Written cloze test; Oral Personal Narrative	Results consistent with Aspect Hypothesis regardless of proficiency level
González & Quintana Hernández (2018)	AH	22 English-speaking learners of Spanish; 31 Dutch-speaking learners of Spanish, 16 native controls	A written production task	Lexical aspect and L1 effect account for verbal morphology; with durativity and dynamicity found to play roles in the distribution of morphemes

2.6 The Role of Input in Second Language Acquisition: Theoretical Perspectives and Pedagogical Implications

The pivotal role of input in Second Language Acquisition (SLA) has been extensively investigated across a range of theoretical paradigms and empirical studies, constituting a foundational dimension in understanding the mechanisms of second language development. Input, broadly defined as the linguistic data to which learners are exposed (Ellis & Wulff, 2014), must be distinguished from *intake*, which refers to the portion of that input that is actually processed, internalized, and subsequently employed by the learner (Corder, 1967). This distinction underscores the notion that mere exposure is insufficient for acquisition; cognitive engagement and meaningful assimilation are essential for input to become developmentally effective. The centrality of input in SLA is highlighted in several influential models. Krashen's Input Hypothesis (Krashen, 1982; 1985), for instance, posits that language acquisition is facilitated when learners are exposed to comprehensible input that is slightly beyond their current linguistic competence (i.e., 'i+1'). According to this model, successful acquisition occurs when learners can understand the overall message even without full mastery of the grammatical forms involved. Nonetheless, Krashen's hypothesis has been criticized for lacking specificity regarding how input is transformed into intake and which cognitive processes underpin this transformation.

Expanding on these foundational claims, the Interaction Approach has evolved into a more comprehensive framework that integrates the interrelated roles of input, interaction, and output in SLA (Gass & Mackey, 2014). Also referred to as the input–interaction–output model (Block, 2003) or interaction theory (Carroll, 1999), this approach proposes that opportunities for meaning negotiation, comprehension checks, and modified output—all situated in communicative interaction—facilitate acquisition (Gass & Mackey, 2014). Within this framework, strategies such as negotiation for meaning and the provision of feedback are seen as mechanisms through which learners notice gaps in their interlanguage, thereby refining their internalized system. Recasts—defined as reformulations of erroneous learner utterances by interlocutors—represent a notable form of corrective feedback that makes target-like input available without overtly interrupting the interaction (Ishida, 2004). However, despite their pedagogical value, research has demonstrated that learners do not always interpret recasts as corrective input, sometimes

perceiving them instead as alternative formulations or content acknowledgements (Mackey et al., 2000; McDonough & Mackey, 2006; Gass & Mackey, 2014).

Complementing these perspectives, usage-based approaches provide an alternative theoretical lens through which to understand the function of input. These frameworks assert that language acquisition is fundamentally grounded in the frequency and distribution of linguistic forms, which learners extract from contextualized exposure to authentic language use (Ellis & Wulff, 2014). Within this perspective, language learning is driven by the statistical analysis of linguistic input and the associated perceptual and cognitive activities of the learner. Abstract constructions are not innately specified but instead emerge from repeated encounters with concrete usage instances, enabling learners to establish form–function pairings through domain-general learning mechanisms (Rebuschat & Williams, 2012). The extent to which a particular construction is acquired depends on both the frequency of its occurrence in the input and the reliability of the mapping between form and meaning (Ellis & Wulff, 2014).

The significance of input is particularly pronounced in research on the acquisition of grammatical aspect, especially within the frameworks of the Aspect Hypothesis (AH) and, by extension, the Discourse Hypothesis. Since the early 1990s, the influence of input frequency on the development of tense and aspect has been a focal point in SLA research, with extensive empirical efforts devoted to testing the AH (Andersen, 1993; Andersen & Shirai, 1994; 1996; Camps, 2005). The AH posits a principled relationship between the inherent lexical aspect of verbs—classified as States, Activities, Accomplishments, or Achievements—and the morphological markers L2 learners employ in past-tense contexts (Camps, 2005; Wulff et al., 2009). Empirical findings consistently indicate that perfective morphology tends to emerge earliest and is preferentially associated with telic verbs, such as Accomplishments and Achievements, while progressive or imperfective morphology is initially linked to atelic predicates, such as Activities and States (Ishida, 2004; Wulff et al., 2009).

The prototype account offers a refinement of the AH by emphasizing that early grammatical aspect marking is based on prototypical pairings between aspectual morphology and lexical aspect. Specifically, learners first associate perfective forms with punctual, telic predicates (e.g. Achievements) and imperfective forms with durative or stative predicates (e.g. States), based on the salient and frequent co-occurrence of these

pairings in the input (Shirai & Andersen, 1995; Li & Shirai, 2000; Shirai, 2002). Over time, these associations may be generalized to cover less prototypical verb types. Studies examining the acquisition of Spanish past tense forms (Preterit vs. Imperfect) offer further evidence for the influence of input frequency and distributional tendencies. Tracy-Ventura and Cuesta Medina (2018), for example, identified a distributional bias in native Spanish corpora, wherein telic verbs were predominantly marked with the Preterit and atelic verbs with the Imperfect. Notably, these distributions followed a Zipfian pattern, in which a small number of highly frequent verbs accounted for the majority of token occurrences, thereby increasing their likelihood of acquisition. Although the AH has been widely studied, comprehensive investigations of how input characteristics—such as token frequency, form–function reliability, and lexical aspect prototypicality—contribute to learners’ morphological development remain relatively scarce (Wulff et al., 2009). Nevertheless, recent scholarship has begun to address this gap, with studies demonstrating that such input features significantly affect the acquisition of tense–aspect morphology (Ellis & Wulff, 2014). While the Discourse Hypothesis is not always delineated as an input-oriented framework, it is deeply implicated in how learners process and produce temporally structured language in extended discourse. Ishida (2004), for instance, acknowledges the crucial role of instructional input—mediated by learners’ developmental readiness—in the acquisition of Japanese aspectual forms such as *-te i-(ru)*, illustrating how input interacts with discourse-level processing.

Given this theoretical and empirical foundation, the quality, quantity, and contextual presentation of input have clear pedagogical implications. Research consistently shows that intensive instructional programs yield significantly greater gains in L2 development, especially in oral proficiency and listening comprehension (Collins et al., 2012). In Quebec, for example, intensive ESL programs provide approximately 400 hours of exposure within a single academic year, in contrast to conventional EFL settings that may offer as little as one hour per week (Collins et al., 2012). Such programs prioritize the provision of rich and comprehensible input, thereby enhancing the likelihood of intake and successful acquisition. Beyond the sheer quantity of exposure, the lexical content of instructional materials also plays a pivotal role. While pedagogical approaches often emphasize high-frequency vocabulary, research by Sakata (2019) suggests that lexical items frequently encountered in authentic language use may be underrepresented in textbook corpora. This disparity can limit learners’ exposure to forms that are crucial for

proficiency development. Sakata's findings demonstrate that frequently occurring words—despite their absence in textbooks—can substantially influence learner outcomes and account for proficiency differences among individuals with similar vocabulary sizes. These results emphasize the importance of supplementing textbook-based instruction with authentic, corpus-informed materials. In addition, pedagogical interventions aimed at optimizing input—such as the use of recasts—have been found to enhance learners' mastery of complex grammatical structures. Ishida (2004) reports that the frequency of recasts provided in instructional contexts is positively correlated with gains in the accurate use of aspectual forms, thus reinforcing the role of targeted input and corrective feedback in guiding interlanguage development. Collectively, these findings underscore the indispensable role of input in SLA, both as a theoretical construct and as a practical concern for language pedagogy.

2.7 ChatGPT as a Tool for Scholarly Inquiry

ChatGPT, one of the most recent advancements in large language models, demonstrates the capacity to comprehend and generate human-like texts. This competence stems from training on extensive datasets. Since its introduction, ChatGPT has shown considerable potential to impact academic research and scholarly practices.

Among its initial applications in academia, ChatGPT has been employed to assist researchers by summarizing articles and identifying relevant literature. It is also capable of generating texts that align with a specified style based on user-provided input. Furthermore, data analysis is frequently cited among the notable contributions of artificial intelligence to academic workflows. Such models can process vast volumes of data efficiently and detect patterns that would be time-consuming or impractical to identify manually.

Alshater (2022) draws attention to the role of AI-driven chatbots in enhancing the objectivity and consistency of data analysis. Similarly, Lund and Wang (2023) argue that these tools can reduce the time and effort required for routine tasks, thereby allowing researchers to allocate more energy to innovative or creative work.

Nevertheless, recent studies have also revealed limitations in ChatGPT's performance across various academic functions. A recurrent issue is the model's inability to reliably evaluate the accuracy of the information within its training data (Lund et al., 2023). In addition to the risk of misinformation, concerns have been raised about algorithmic

bias—either in favor of or against certain social or academic groups (Lund & Wang, 2023). One example, as noted by Lund et al. (2023), is the “Matthew Effect,” in which ChatGPT may reinforce citation inequalities by disproportionately highlighting highly cited sources during literature searches. Moreover, Alshater (2022) notes that ChatGPT may occasionally yield irrelevant results due to insufficient contextual understanding or lack of domain-specific knowledge. Ethical concerns have also been articulated, particularly regarding authorship and the use of AI-generated content in academic publishing. Some prominent journals, as Lund et al. (2023) report, explicitly prohibit the inclusion of chatbot-generated text in submitted manuscripts.

Despite these concerns, there is broad agreement in the literature that ChatGPT can serve as a valuable academic tool when used ethically and with discretion. Lund et al. (2023), for instance, recommend using ChatGPT as a mechanism for reviewing and refining content rather than as a primary authoring tool. They advocate for its role in revising existing texts for clarity and coherence. Similarly, Eke (2023) supports the use of ChatGPT as a supplementary resource rather than a substitute for human intellectual effort, provided that contributions are appropriately acknowledged. Alshater (2022) further emphasizes the necessity of human oversight and intervention, arguing that transparent documentation of AI involvement is integral to responsible use.

The consensus on responsible application particularly highlights the utility of ChatGPT in supporting data analysis and language revision (Eke, 2023). Atlas (2023), for example, notes that the model can be instrumental in summarizing datasets and detecting non-obvious patterns, tasks that would otherwise require substantial labor. Alshater (2022) cautions, however, that ChatGPT may still require guided prompts or training to identify subtler patterns, a limitation consistent with his broader claim regarding the model’s dependency on contextual cues.

2.8 Summary and Rationale for the Present Study

Building on the theoretical and empirical foundations reviewed in this chapter, the present study aims to investigate the interplay between verbal morphology, lexical aspect, and discourse grounding in the written narratives of intermediate-level Turkish EFL learners. By testing the predictions of the Aspect Hypothesis and the Discourse Hypothesis—both individually and in combination—the study seeks to determine whether these components are systematically aligned in learner interlanguage. It also explores the extent to which

the distributions found in learner output reflect the patterns present in instructional input materials, thereby addressing broader questions concerning the role of input in second language development.

In addition to its theoretical scope, the study introduces several methodological innovations that distinguish it from previous research. Most notably, it incorporates classroom materials as a reference corpus to examine input–output relationships and employs large language models as part of the annotation process to enhance analytical reliability. By focusing on a relatively underrepresented learner group and integrating corpus-based tools with SLA theory, the study makes a novel contribution to the field and addresses significant empirical gaps identified in earlier research.



3. METHODOLOGY

This chapter begins by presenting the general methodological framework of the study, including *the research design*, the characteristics of the *participants* involved, and the *educational setting* in which the research was conducted. It then proceeds to provide a detailed account of the *data collection procedures*. Following this, the *datasets* obtained through these procedures are described comprehensively. In the subsequent section, *the preparatory steps* applied to the datasets—both for descriptive purposes and to ensure readiness for statistical analysis—are outlined. *The statistical analyses* performed are then introduced in a step-by-step manner. Finally, the chapter concludes with a *discussion of the ethical considerations* addressed throughout the research process.

3.1 Research Design

A quantitative, corpus-based research design was employed in this study to explore the potential interaction between lexical aspect, verbal morphology, and grounding in narrative texts produced by Turkish EFL learners and in selected instructional materials. This design allows for the identification of recurring linguistic patterns in naturally occurring language data and provides a replicable, data-driven approach to testing hypotheses in the field of second language acquisition (SLA) (Biber, Conrad, & Reppen, 1998; Granger, 2008).

The overall design of the study is both descriptive and comparative in nature. The study first aims to describe the distribution and usage of relevant linguistic phenomena within two corpora—learner narratives and instructional materials—and then to compare the patterns identified across the two datasets. As noted by Seliger and Shohamy (1989), descriptive research is particularly appropriate when the goal is to observe and report on natural language use without manipulating the environment. They also highlight that descriptive studies often involve frequency-based analyses, which aligns directly with the present study's methodology. In addition, the comparative dimension of the study is grounded in established corpus-linguistic practices, where learner corpora are frequently analyzed in contrast to reference corpora (Granger, 2015).

The current research is also theoretically informed by two well-established hypotheses in SLA: the Aspect Hypothesis (Andersen & Shirai, 1996) and the Discourse Hypothesis (Bardovi-Harlig, 1994). In line with numerous studies in the literature (e.g. Bardovi-Harlig & Comajoan-Colomé, 2020), this study focuses on the distribution and interaction

of lexico-grammatical forms—particularly those related to tense-aspect and grounding—within the specific discourse genre of personal narratives.

3.2 Educational Setting and Participants

The learner narratives analyzed in the present study were collected during the spring term of the 2022–2023 academic year. The spring term was deliberately chosen over the fall term for three primary reasons. First, students were required to write narrative paragraphs during the spring term as part of the course requirements for their writing class, which directly aligned with the narrative genre targeted in the current study. Second, the spring term allowed sufficient time for learners to develop a more stable mastery of the past tense—an essential grammatical domain underpinning the hypotheses investigated in this research. Third, conducting data collection in the latter half of the academic year ensured adequate exposure to instructional input, which was necessary to enable a meaningful comparison between the learner corpus and the instructional corpus.

The learner corpus was composed of narrative paragraphs written by eighty-eight Turkish EFL learners enrolled in a one-year intensive English language preparatory program at the School of Foreign Languages of a public university in Türkiye. Participants were selected through convenience sampling and were all first-year university students from various engineering departments. While they shared broadly similar educational experiences, having completed their secondary education in Türkiye, the learners exhibited comparable English proficiency levels upon entering the program.

Regardless of their initial proficiency, all learners received one academic year of structured English language instruction, guided by the Common European Framework of Reference for Languages (CEFR). In the fall term, learners were instructed using *English File Pre-Intermediate* (Oxford University Press), followed by *English File Intermediate* in the spring term. In addition to the main textbook-based classes (Main Course 1 and 2), students also took separate writing classes throughout the year. During the fall semester, instructional activities were limited to paragraph writing, while the spring semester expanded to include both paragraph writing and various essay types, including personal narratives. Throughout the academic year, students produced written texts as part of regular assignments and formal examinations within the scope of their writing courses.

To support reading development, learners were also assigned graded readers through the same Oxford University Press online tool used to access the course books. These

supplementary materials further exposed students to narrative structures and lexico-grammatical forms relevant to the study.

With regard to proficiency level, the learners who participated in this study were classified as intermediate-level students during the spring term. At the onset of the academic year, they completed a standardized placement examination, in which they obtained scores exceeding eighty. Based on the institution's placement criteria, these results corresponded to a Pre-Intermediate level at the time of testing, thereby qualifying them for Intermediate-level instruction in the subsequent term. According to Bardovi-Harlig and Comajoan-Colomé (2020), research on the acquisition of verbal aspect benefits from the inclusion of lower to intermediate-level learners, as higher-proficiency participants tend to exhibit less prototypical patterns. Therefore, the proficiency profile of the participants in this study is in line with recommended practices for investigating aspectual development in second language acquisition.

3.3 Data Collection and Description of the Learner and Instructional Corpora

Bardovi-Harlig and Comajoan-Colome (2020) characterizes personal narratives as *highly desirable* for tense-aspect research since they allow both foreground and background information, include the sequence of events, and provide an opportunity for the use of perfective past. Bardovi-Harlig (2000) also describes narratives as essential part of grounding analysis with the advantage of chronological order. Along with the abundance of previous studies employing narratives, adopting them as data source guarantee the comparability to other studies. Bailey (2013) touches upon the analytical leverage gained by narratives. Narratives, in which the temporal reference of sentences corresponds to past events, eliminate the ambiguity in the analysis of outlying forms such as present or base predicates. Therefore, the adoption of personal narratives in the current study provided an appropriate basis for the twofold investigation of lexical categories and discourse structure.

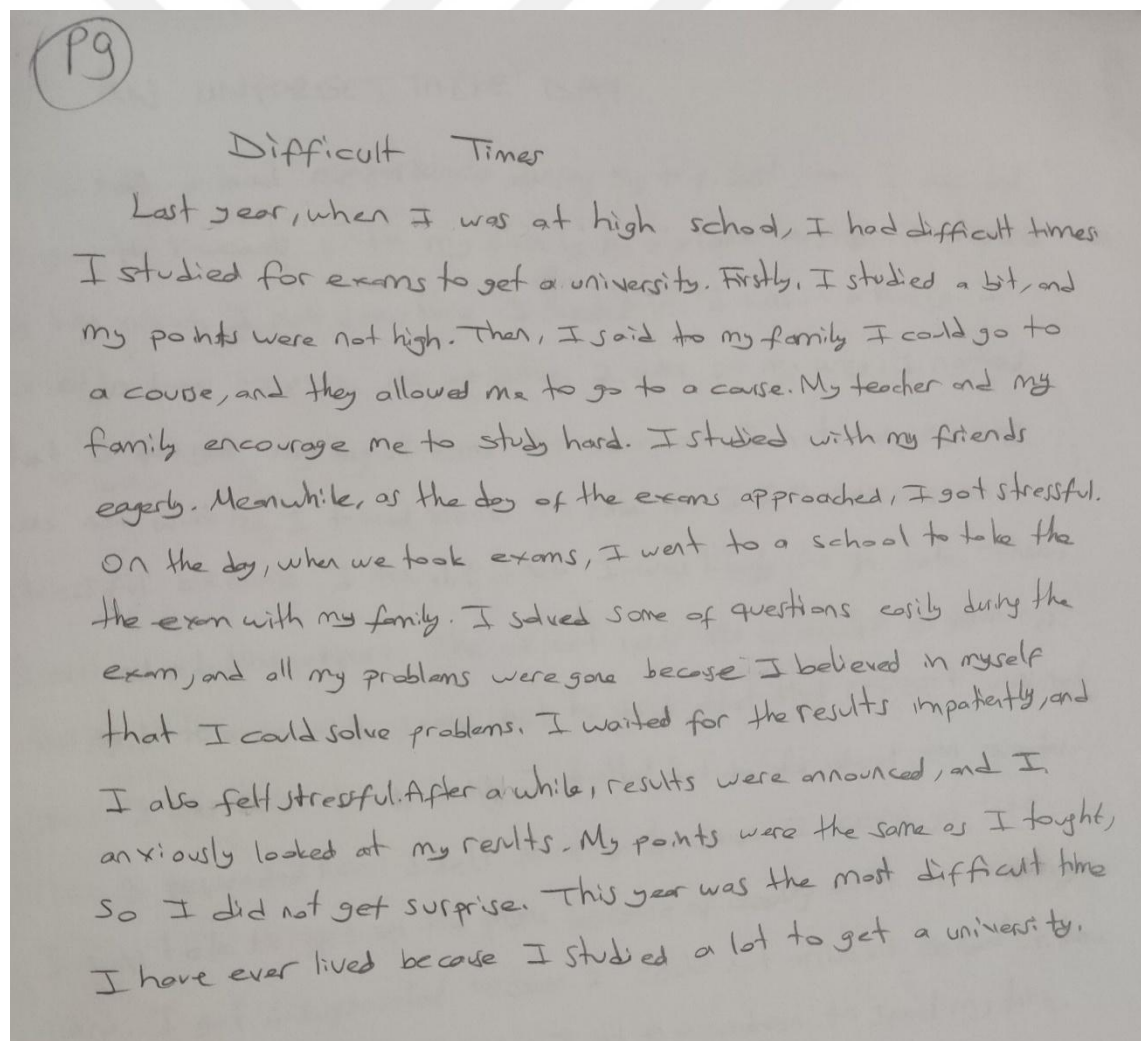
As previously noted, learners enrolled in the English language preparatory program were required to write personal narratives as part of their writing course. The specific writing task asked students to recount the events of their worst day. This task was completed during regular class hours under exam-like conditions, without any assistance from teachers or the use of technological tools. Upon completion of the task, students were informed about the research project and asked whether they would be willing to share

their written narratives for research purposes. A total of eighty-eight students voluntarily agreed to participate.

As a result, hard copies of eighty-eight personal narratives were collected, forming the basis of the learner corpus used in the present study. The number of narratives satisfies well the recommended threshold given that Plonsky (2014) reports the average sample size around twenty in the field. The learner narratives were handwritten and submitted in their original form. An illustration of a sample student submission is presented in Figure 3.1 to provide a visual representation of the collected material.

Figure 3.1

Sample Learner Narrative Collected for the Corpus



For the collection of reference data representing learner input, the genre was predetermined as personal narratives, in accordance with the recommendation by Gablasova et al. (2017), who argue that ensuring genre consistency across both sides of a comparative design is essential for maintaining comparability. Given that the learners had been consistently exposed to personal narratives throughout the academic year via their course books and graded readers, these two sources were selected as the basis for the instructional dataset.

The textbook data were drawn from the narrative passages embedded in *English File Pre-Intermediate* and *English File Intermediate* (Oxford University Press), both of which were used in classroom instruction. Regarding the graded reader component, among the storybooks assigned to learners during the year, *Gulliver's Travels* (B1–B2 level) was the only appropriate selection. Its use of first-person narration aligned with the learner-produced narratives, in contrast to the third-person, impersonal narration found in most other graded readers. Furthermore, the recurrent hardships faced by the protagonist in *Gulliver's Travels* mirrored the theme of “worst day” present in the learner narratives, thereby strengthening the basis for comparison.

Figure 3.2 presents an illustration of personal narratives drawn from the course books, while Figure 3.3 provides a sample page from the graded reader used in the instructional data.

Figure 3.2

Example of Personal Narrative from Course book (English File Series)

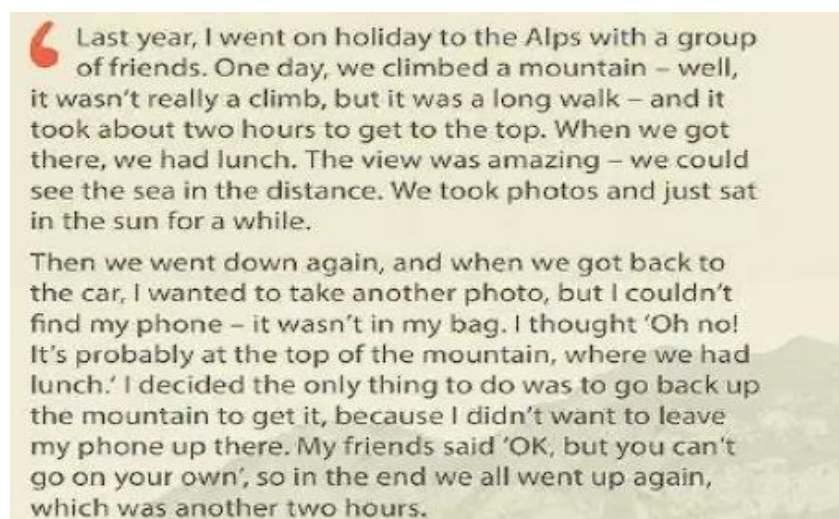


Figure 3.3

Example of Personal Narrative from Graded Reader (Gulliver's Travels)

When I woke up next morning, and tried to get up, I could not move. I was lying on my back and my whole body, my arms and legs were strongly fastened to the ground. Even my hair, which was long and thick, was tied to the ground. The sun began to grow hot, and I was very uncomfortable. Soon I felt something alive moving along my leg and up my body to my face, and when I looked down, I saw a very small human being, only fifteen centimetres tall. He had a bow and arrow in his hands, and there were forty more of these little men following him. I was so surprised that I gave a great shout. They all jumped back, very frightened, and some hurt themselves by falling off my body. Meanwhile, I was struggling to unfasten myself, but just as I managed to pull my left arm free of the ropes, I felt a hundred arrows land on my free hand, and more arrows on my face and body. This was very painful, and made me cry aloud. I lay quietly, to see what would happen next.

As a result of the data collection procedures described above, two substantial corpora of personal narratives were constructed—one representing learner production and the other representing instructional input. Both corpora were designed to be equivalent in size, each consisting of exactly 19,702 words. In instructional corpus, 9883 words were drawn from the two textbooks while 9819 words were extracted from the graded reader. Following the recommendations of Gablasova et al. (2017), the criterion of *representativeness* was met by selecting personal narrative as the target genre, a genre widely supported in the literature for studies involving aspect and discourse. Additionally, the criterion of *comparability* was addressed by ensuring that both corpora were matched in terms of word count.

The fulfillment of these two design principles—representativeness and comparability—also aligns with Biber's (2010) framework, which identifies *corpus composition* and *corpus size* as two essential considerations for the construction and valid comparison of corpora. A detailed overview of the characteristics of both the learner and instructional corpora is provided in Table 3.1.

Table 3.1*Corpus Design Specifications: Learner and Instructional Narrative Corpora*

Source	Learner Corpus	Instructional Corpus	
	Learner Narratives	Textbooks	Graded Reader
		Narratives in English File Pre-Intermediate & Intermediate	Narratives in Gulliver's Travels
Genre	Personal Narratives	Personal Narratives	Personal Narratives
Total Word Count	19702	9883	9819

3.4 Data Processing and Analysis

The procedures that followed data collection and corpus construction were carried out in three consecutive phases. The first phase, data processing, involved preparing the raw data for analysis. This included formatting, organizing, and standardizing the narrative texts to ensure consistency and readiness for annotation.

The second phase, manual and ChatGPT-assisted annotation, involved systematically labeling each predicate in terms of its lexical aspect class, discourse grounding status, and verbal morphology. The annotation was first conducted manually by the researcher, followed by a secondary annotation using ChatGPT. The outputs were then compared to check for consistency and to ensure annotation reliability.

The final phase, data analysis, included the manual calculation of frequency values as required for specific analyses, followed by descriptive and inferential statistical procedures carried out in SPSS. These analyses aimed to uncover distributional patterns and statistical relationships that would address the study's research questions.

3.4.1 Data processing

The present study employed the AI chatbot ChatGPT as a second rater in the data annotation process. ChatGPT-4o was preferred based on recent research demonstrating that it performs on par with, or even surpasses, human annotators in terms of accuracy, reliability, and intercoder agreement (Gilardi et al., 2023; Kuzman et al., 2023; Törnberg, 2023; Nasution & Onan, 2024). Given that typed text is the most reliable and compatible

input format for ChatGPT, all narrative data needed to be prepared in Microsoft Word to facilitate an efficient and consistent annotation workflow.

The learner narratives were originally handwritten and therefore required transcription into digital format. As a result, all eighty-eight narratives were manually typed into Microsoft Word to allow for seamless transfer and interaction with ChatGPT. During the transcription process, it was observed that the original texts contained a number of spelling errors and sentence-level issues, including incomplete structures and grammatical inaccuracies. Since accurate annotation by ChatGPT depends on a clear understanding of sentence meaning, minor corrections were applied to improve readability—provided that such corrections did not alter the linguistic properties relevant to the coding.

For example, one participant wrote, "*I didn't know what can I do*," which was adjusted to "*what I can do*" to ensure proper clause interpretation, as word order does not affect the annotation outcome. However, modifying the phrase "*can do*" to "*could do*" would have affected verbal morphology, and thus was intentionally left unchanged to preserve the integrity of the original data. This correction protocol was strictly followed to maintain both the comprehensibility of the text and the validity of the annotations produced.

For the transcription of the narratives selected from the two course books and the graded reader (*Gulliver's Travels*), a feature within Google Translate was utilized to convert image-based text into editable digital format. Specifically, the application's photo-to-text functionality was used, which allows users to capture an image of printed text and automatically generates a machine-readable version through artificial intelligence—assisted optical character recognition (OCR).

Following this initial conversion, all digital outputs were carefully proofread to identify and correct any errors introduced during the automated transcription process. Minor corrections were applied where necessary, although such instances were infrequent. Through this procedure, the instructional dataset—comprising a total of 19,702 words—was fully prepared for the subsequent annotation phase.

3.4.2 Manual and ChatGPT-assisted annotation

Each predicate in all the sentences from both the learner corpus and the instructional data was annotated for its lexical aspect class, verbal morphology, and discourse function. The

analyses focused exclusively on predicates rather than isolated verbs, in line with the emphasis by Bardovi-Harlig and Comajoan-Colome (2020), who caution against erroneous classifications that result in the misassignment of lexical aspect categories, such as coding accomplishments as activities.

All predicates were included in the analysis regardless of whether they appeared in obligatory contexts, following Shirai's (2007) recommendation to avoid the comparative fallacy. Additionally, forms such as copulas and ambiguous items were excluded in accordance with the guidelines of Shirai and Kurono (1998) and Shirai (2004), who argue that such forms complicate valid comparisons with lexical verbs. Past and present participles preceded by the verb 'get' were treated as single predicate units. The voice of the sentence (active vs. passive) was not considered in classification, as it was determined to have no effect on predicate categorization.

Lexical aspect classification was carried out based on Andersen's (1991) feature-based adaptation of Vendler's (1957) four-way typology. This classification relies on the presence or absence of three semantic features: dynamicity, telicity, and punctuality (see also Comrie, 1976; Mourelatos, 1981). States are defined by the absence of all three features. Activities differ from states through the presence of dynamicity. Accomplishments differ from activities by the added feature of telicity, while achievements are characterized by the presence of all three features.

To identify these features, two operational tests were employed (Dowty, 1979; Shirai, 2013), as detailed in Appendix 1. For instance, compatibility with the progressive aspect was used to detect dynamicity, while co-occurrence with time expressions using "for" or "in" indicated atelicity or telicity, respectively. Punctuality was assessed by checking for meaningfulness in the presence of punctual time adverbials. Although both tests served to support the basic classification, Shirai's framework offered additional tools for diagnosing punctuality and distinguishing accomplishments from achievements. Shirai (2013) draws on Bardovi-Harlig's (1998) statistical evidence to support treating these two telic classes separately, and further emphasizes their difference in progressive aspect usage.

Although Shirai (2013) recommends coding deictic verbs such as "come" and "go" as achievements, many other studies (e.g. Dowty, 1979; Jackendoff, 1996) advocate for a more context-sensitive approach, recognizing that motion verbs can reflect different

aspectual classes depending on context. The present study adopts this flexible, context-based coding for all predicates, including motion verbs. The application of both operational tests, combined with contextual semantic interpretation, facilitated the successful annotation of all predicates.

An important consideration in the annotation process was whether to allow for aspectual shifts—commonly known as "aspectual coercion." Defined by De Swart (1998) and Michaelis (2004), coercion refers to changes in the perceived lexical aspect due to contextual influence. This study accounted for three types of coercion. First, predicates that appeared to be accomplishments or achievements were coded as activities when used in the progressive form. Second, stative predicates were coded as achievements when a punctual inception point was emphasized (e.g. "I knew the answer" interpreted as onset). Third, some telic predicates were coded as states when used habitually or iteratively (e.g. "For months, she came home late"). While the latter two types were rare, the first form of coercion was widespread and explained the near-total absence of accomplishments or achievements marked with progressive morphology. This approach distinguishes the present study from others that did not account for coercion (e.g., Muñoz & Gilabert, 2011), which reported some accomplishments and achievements occurring with progressive aspect.

Despite all efforts toward transparent and replicable coding, it is acknowledged—as Shirai (2013) reminds—that a certain level of indeterminacy is inevitable due to the inherent complexities of lexical classification and the difficulty of accessing speaker intentions.

Regarding verbal morphology, all predicates were annotated according to standard practices established in prior research (e.g. Bardovi-Harlig, 1998). Since the hypotheses under investigation concern past-time reference, only forms expressing past meaning were included in the core analyses. Specifically, the "Past Morphology" category encompassed regular and irregular past forms, as well as past participles. The "Progressive Morphology" category consisted solely of predicates in the Past Continuous form.

Forms that were morphologically marked as present or base but clearly intended to convey past-time reference were also coded and reported. This follows previous practices, especially for two reasons. First, Bardovi-Harlig and Comajoan-Colome (2020)

emphasize the importance of including such interlanguage forms to obtain a fuller understanding of learner development. Second, some studies (e.g. Robison, 1995) have linked these forms to stative predicates. However, present or base forms expressing actual present or future time were excluded from the main descriptive and inferential analyses. They were only counted and selectively illustrated to provide a more complete view of interlanguage development patterns.

The annotation of discourse structure was guided primarily by the definition proposed by Hopper and Thompson (1980), who define foreground clauses as those that contribute the main events of the discourse, while background clauses function to support the speaker's communicative goal without advancing the plot. Dry's (1983) observation that foreground clauses typically introduce new information was adopted as an additional criterion to guide foreground identification. Furthermore, Reinhart's (1984) parameters of sequentiality, punctuality, and completeness were employed as diagnostic tools to validate the categorization of foreground discourse elements. In line with both lexical and discourse-level annotation principles, quoted material was excluded from the analysis, as Bardovi-Harlig (2000) characterizes quotations as non-representative of learner-generated output.

Following the procedures of manual annotation, the next phase involved the integration of ChatGPT-assisted annotation to ensure the consistency and reliability of the coding process. In line with Eke (2023) and several other studies advocating for the responsible and transparent use of artificial intelligence tools in research (e.g. Lund et al., 2023), the present study utilized ChatGPT-4o—OpenAI's most advanced model at the time of analysis—via a ChatGPT Plus subscription. The model was employed as a second annotator to provide comparative data coding across both corpora.

Specifically, ChatGPT was tasked with annotating each predicate in both the learner and instructional corpora with respect to its lexical aspect class, verbal morphology, and discourse grounding. In this dual-annotation approach, each predicate was independently coded first by the researcher and subsequently by the AI model. This procedure aimed to enhance the objectivity, reliability, and validity of the findings, thereby reducing potential bias and supporting the replicability of the coding process.

Prior to annotation, the model was explicitly calibrated through a structured series of prompts based on the complete coding guidelines developed for this study, covering

lexical classification, verbal morphology categories, and discourse structure distinctions. After this preparatory phase, ChatGPT was systematically prompted to analyze all predicates across the entire dataset. Throughout the annotation cycle, the researcher continuously monitored the outputs, provided corrective feedback, and issued refined prompts where necessary to ensure accuracy and completeness. An illustrative example of the input provided to the model and the output it generated during this interactive process is presented in Figure 3.4.

Figure 3.4

Sample Interaction for ChatGPT-Assisted Annotation: Input Prompt and Generated Output

According to "Ultimate Analysis Guidelines", let's analyze the following text: My father was a referee but that didn't influence me - in fact the opposite because I saw all the problems that he had as a referee. But as a child I was always attracted by the idea and at school I used to referee all kinds of sports, basketball, handball, volleyball and of course football. I was invited to join the Referee's Federation when I was only 14 years old. The worst? Well, that was something that happened very early in my career. I was only 16 and I was refereeing a match in a town in Spain and the home team lost. After the match, I was attacked and injured by the players of the home team and by the spectators. After all these years, I can still remember a mother, who had a little baby in her arms, who was trying to hit me. She was so angry with me that she nearly dropped her baby. That was my worst moment, and it nearly made me stop being a referee.

Here's the analysis of predicates from the given text based on the "Ultimate Analysis Guidelines":

1. was: BPastStat
2. didn't influence: FPastAct
3. saw: FPastAct
4. had: BPastStat
5. was: BPastStat
6. was attracted: BPastStat
7. used to referee: FPastAct
8. was invited: FPastAch
9. was: BPastStat
10. happened: FPastAch
11. was refereeing: BContAct
12. lost: FPastAch

Herhangi bir şey sor

+

Ara

Derin araştırma

Görsel oluştur

...

🔊

🔊

ChatGPT hata verabilir. Önemli bilgileri kontrol edin.

In addition to providing constructive feedback, the researcher prompted ChatGPT to revise its initial judgments for all predicates where a disagreement with the researcher's annotation emerged. In many instances, after the researcher supplied contextual information from the narrative data, ChatGPT reconsidered its original analysis and aligned its judgment with that of the researcher, offering reasoning to support its updated annotation. Conversely, there were also cases in which the researcher adopted ChatGPT's original analysis upon evaluating the rationale it provided. For those instances where disagreement remained unresolved, a third rater—an experienced academic in the field of Second Language Acquisition who had been familiar with the study from its inception—acted as the final adjudicator to determine the most appropriate coding. Figure 3.5 illustrates an example of ChatGPT's annotation revisions and corresponding justifications during this negotiation process.

Figure 3.5

Illustration of ChatGPT's Revisions and Justifications During the Annotation Negotiation Process

Revised Verbs with Reasoning

1. **Realize** (number 8): FPresAct -> FPresAch
 - **Reasoning:** The verb "realize" refers to a sudden moment of understanding or discovery, making it fit as an achievement.
2. **Didn't put** (number 9): FPastAct -> FPastAcc
 - **Reasoning:** The action "didn't put" involves failing to accomplish a task (adding a name), aligning more with an accomplishment.
3. **Say** (number 11): FPresAct -> FPresAch
 - **Reasoning:** "Say" serves as a specific communicative act with a clear endpoint, fitting better as an achievement.
4. **Opens** (number 16): FPresAct -> FPresAch
 - **Reasoning:** "Opens" denotes a discrete action with a clear result, aligning more as an achievement.
5. **Sees** (number 17): FPresAct -> FPresAch
 - **Reasoning:** "Sees" represents a sudden visual recognition, making it an achievement due to its punctual nature.
6. **Says** (number 18): FPresAct -> FPresAch
 - **Reasoning:** Similar to other communicative acts, "says" marks a specific point of action, classifying it as an achievement.
7. **Says** (number 22): FPresAct -> FPresAch
 - **Reasoning:** This verb also functions as a distinct communicative act with a clear conclusion, fitting as an achievement.
8. **Adds** (number 24): FPresAct -> FPresAch
 - **Reasoning:** "Adds" describes a punctual action of stating additional information, fitting as an achievement.
9. **Lost** (number 25): FPastAct -> FPastAcc
 - **Reasoning:** The verb "lost" suggests a broader accomplishment with lasting effects rather than a discrete event.

10 Herhangi bir şey sor

+

🌐

🔊

🔍

...

📤

🔊

Artstein and Poesio (2008) emphasize that in studies where categories are manually assigned to items, it is essential to demonstrate the reliability of the annotated data. In cases involving multiple coders, the degree of agreement between annotators serves as a direct indicator of annotation reliability. A high level of agreement reflects consistent application and shared understanding of the coding guidelines, thus ensuring that the annotation process is systematic and replicable. Moreover, achieving strong inter-rater reliability contributes to the overall validity of the study, as it confirms that the coding process has objectively and consistently captured the linguistic phenomena under investigation.

A preliminary measure of inter-rater reliability was obtained using the percentage of agreement, which provides an intuitive indication of the extent to which coders agree. However, as noted in the literature, this measure can be influenced by the number of coding categories and their distributional frequencies. Therefore, Cohen's Kappa (κ) was additionally calculated, as it adjusts for agreement that may occur by chance and is more robust in multi-category annotation contexts (Artstein & Poesio, 2008). In the present study, both the percentage of agreement and Cohen's Kappa were computed for three annotation features—verbal morphology, discourse grounding, and lexical aspect—in both the learner and instructional datasets.

For the learner dataset, the observed agreement for verbal morphology was 95.8%, with a Kappa value indicating almost perfect agreement ($\kappa = 0.850$). For discourse grounding, agreement reached 87.82%, while the corresponding Kappa reflected moderate reliability ($\kappa = 0.577$). In terms of lexical aspect classification, the agreement percentage was 72.4%, and the Kappa value was also moderate ($\kappa = 0.556$). Averaging across all three features, the overall agreement was calculated as 85.34%, which meets the commonly accepted threshold of reliability in annotation studies (Stemler, 2004). The average Kappa value across features was computed as $\kappa = 0.661$, indicating substantial inter-rater agreement according to the interpretive scale of Landis and Koch (1977).

For the instructional dataset, inter-rater reliability was likewise assessed through both the percentage of agreement and Cohen's Kappa (κ) across the three annotation dimensions. The agreement for verbal morphology was found to be exceptionally high at 99.36%, with a Kappa value indicating almost perfect agreement ($\kappa = 0.953$). Discourse grounding yielded a slightly lower percentage of agreement at 90.70%, with a Kappa value denoting

substantial reliability ($\kappa = 0.723$). In contrast, lexical aspect classification presented a lower agreement rate of 72.42%, with a corresponding Kappa value reflecting moderate agreement ($\kappa = 0.555$).

When averaged across features, the overall percentage of agreement for the instructional dataset was 87.5%, which was marginally higher than the corresponding figure in the learner dataset. Similarly, the average Kappa value reached $\kappa = 0.743$, indicating substantial agreement and slightly exceeding the learner data average. It is important to note that these reliability values were calculated prior to the collaborative resolution of annotation conflicts, including the negotiation process between the researcher and ChatGPT as well as adjudication by the third rater. These post-coding revisions ensured that final annotations reflected full consensus. The detailed results of inter-rater reliability analyses are presented in Table 3.2.

Table 3.2

Inter-Rater Reliability Measures (Percentage Agreement and Cohen's Kappa) Across Annotation Features for Learner and Instructional Datasets

	Percentage	Cohen's Kappa
Learner Dataset		
Verbal Morphology	95.8%	0.850
Grounding	87.82%	0.577
Lexical Aspect	72.4%	0.556
Overall Agreement	85.34%	0.661
Instructional Dataset		
Verbal Morphology	99.36%	0.953
Grounding	90.70%	0.723
Lexical Aspect	72.42%	0.555
Overall Agreement	87.5%	0.743

3.4.3 Data analysis

Frequency information regarding the annotated predicates served as the foundation for both descriptive and inferential statistical analyses. In order to generate and manage this frequency data, all coded annotations were entered into the statistical software package SPSS 26, which is widely used for quantitative linguistic research. A general SPSS

datasheet was constructed independently of the specific research questions. This master datasheet included frequency variables corresponding to all possible combinations of the three coded features—namely, 32 distinct permutations derived from the interaction of four lexical aspect categories, four verbal morphology types, and two discourse grounding types. The frequencies recorded in this general datasheet were subsequently utilized to populate additional SPSS files tailored to address each of the three research questions.

Prior to performing the main analyses, several preparatory procedures were conducted to characterize the datasets in greater detail. Total word counts for both the learner and instructional corpora were calculated using the word count tool in Microsoft Word. Predicate token counts, referring to the total number of annotated predicates, were calculated through SPSS and verified via parallel tabulations in Microsoft Excel. In addition to token-based analysis, type counts were also calculated in accordance with Robison's (1995) recommendation to report type-based frequencies in order to reduce potential data distortion arising from repeated use of the same predicates. Although Bardovi-Harlig (2000) highlights concerns regarding the use of type counts due to issues related to narrative integrity, she acknowledges their utility for various analytic purposes. Consequently, the present study opted to report both token and type counts to provide a more comprehensive overview of the dataset.

The type count analysis was conducted in two phases. In the first phase, all repeated instances of a predicate were collapsed into a single entry per lexeme, yielding a lexeme-based count. In the second phase, these lexemes were further differentiated based on their contextual function and classification, resulting in a reading-based count, which reflected different lexical aspect, morphology, or discourse characteristics within the same lexeme. This two-phase approach allowed for a more nuanced understanding of predicate variation across contexts. In summary, before addressing the main research questions, four types of frequency data were systematically analyzed for both datasets: total word count, predicate token count, lexeme-based type count, and reading-based type count. Figure 3.6 provides a visual example of how type counts were extracted and organized using a Microsoft Word document.

Figure 3.6

Sample Illustration of Lexeme-Based and Reading-Based Type Counts Extracted from Narratives

LEXEMES	READINGS	NOTES
go on: 2	fpastacc, fpastact	
climb: 3	fpastact, fpastacc, bcontact	
take: 4	fpastacc, fpastact, fpastach, bcontact	
have : 5	fpastact, bpaststat, fpastacc, fpastach, bcontact	
sit: 3	fpastact, fpastach, bcontact	
go: 4	fpastact, fpastach, fpastacc, bcontact	
want : 2	fpastach, bpaststat	
find: 1	fpastach	
think: 4	fpastact, bpaststat, fpastach, bcontact	
decide: 1	fpastach	
say: 2	fpastach, bcontact	
spend: 2	fpastact, fpastach	
start: 1	fpastach	
feel: 3	fpastach, bpaststat, bcontact	
let: 1	fpastach	

Following the general corpus analyses, the dataset was further prepared for statistical procedures aimed at answering the three research questions. To this end, two types of SPSS datasheets were constructed for each research question, depending on the nature of the analysis. The first type of datasheet was designed for descriptive statistics and inferential analyses involving categorical variables, such as Chi-square tests. These datasheets contained total frequency counts of 32 distinct predicate permutations, derived from the combination of four lexical aspect categories, four verbal morphology types, and two discourse grounding types.

The second type of datasheet was required for inferential analyses involving intertextual variation—particularly those based on variance analyses such as one-way ANOVA. For this type of analysis, frequency values for each of the 32 permutations needed to be recorded separately for each narrative, rather than in aggregate form. As a result, this structure required a row count equivalent to the number of narratives multiplied by the

number of permutations, which significantly increased the workload and complexity of data entry.

Altogether, six SPSS files were generated to address the three research questions—two per question, corresponding to the two types of data entry. For the first research question, which investigated the interaction between lexical aspect and verbal morphology in learner data, the datasheets recorded the frequencies of each combination accordingly. The second research question incorporated discourse grounding as a third variable, and thus the corresponding datasheets were extended to reflect this additional dimension. For the third research question, which focused on a comparative analysis of learner and instructional data, the datasheets contained the full set of lexical, morphological, and discourse variables for both datasets.

Figure 3.7 illustrates the two data-entry formats used for the third research question. The first format includes total frequencies across the full dataset, allowing for descriptive and categorical analyses, while the second format lists separate frequencies for each narrative, enabling variance-based statistical analyses such as ANOVA.

Figure 3.7

Illustration of Total Frequency-Based and Narrative-Level Frequency-Based SPSS Datasheets Prepared for Research Question 3

	Frequency	Morphology	PredicateType	Grounding	Source
1	227.00	1.00	1.00	1.00	1.00
2	263.00	1.00	1.00	1.00	2.00
3	.00	1.00	1.00	2.00	1.00
4	.00	1.00	1.00	2.00	2.00
5	.00	1.00	2.00	1.00	1.00
6	.00	1.00	2.00	1.00	2.00
7	319.00	1.00	2.00	2.00	1.00
8	391.00	1.00	2.00	2.00	2.00

	paper	grounding	morphology	lexical	Freq
1	1	1	1	1	1.00
2	1	2	1	1	.00
3	1	1	2	1	.00
4	1	2	2	1	.00
5	1	1	3	1	.00
6	1	2	3	1	.00
7	1	1	4	1	.00
8	1	2	4	1	.00

For the inferential analyses conducted in this study, statistical test selection was guided by best practices in corpus linguistics and second language acquisition research. Gablasova et al. (2017) identify the Chi-square test as the most commonly employed method to examine associations between categorical variables in corpus-based research. However, they also emphasize the importance of supplementing such analyses with methods that account for intertextual variation, such as Analysis of Variance (ANOVA), particularly when data are drawn from multiple texts or individuals.

Supporting this position, Brezina and Meyerhoff (2014) caution that the Chi-square test assumes that all observations are independent, a condition that is frequently violated in linguistic datasets, where multiple observations may originate from the same speaker or text. As a result, Chi-square tests may report statistically significant results even when the association is due to chance. Similarly, Salaberry (2011) advocates for the use of ANOVA, arguing that it provides a more powerful and context-sensitive measure of variation, particularly when differences across individual narratives or learners are of interest.

In alignment with these methodological recommendations, the present study employed both Chi-square tests to assess general associations between variables and ANOVA tests to examine intertextual variation in the distribution of features across individual narratives. This dual approach ensured both methodological rigor and a more nuanced interpretation of the data.

For the first research question, which examined the association between lexical aspect categories and verbal morphology types, the analysis proceeded through a series of descriptive and inferential statistical steps. Initially, frequency distributions were generated separately for each variable in order to describe the overall distribution of predicates across lexical classes and verbal morphology types. This was followed by a cross-tabulation analysis, which allowed for a preliminary examination of the potential association between the two variables. Although cross-tabulation alone does not yield statistical significance values, it provides a useful visual representation of distributional tendencies—such as the presence or absence of specific combinations—by highlighting the concentration or scarcity of frequency counts in particular cells.

To statistically evaluate the observed associations, a Pearson Chi-square test was subsequently applied to the cross-tabulated data. This test assessed whether the

distribution of frequencies across lexical class and morphology combinations was statistically significant. To further explore the distributional patterns and account for variation across individual narratives, a one-way Analysis of Variance (ANOVA) was conducted. This test was used to determine whether there were statistically significant differences among lexical aspect categories in their usage of verbal morphology, particularly past and continuous forms. Present and base forms were excluded from the ANOVA analysis, as their inclusion in the study served only to represent features of learner interlanguage rather than to contribute to the core analysis of variation in morphology types across lexical classes.

Following the ANOVA, post-hoc tests were conducted to examine pairwise differences between lexical categories. Given that Levene's test indicated unequal variances across groups, the Games-Howell procedure was selected for the post-hoc comparisons. This method is robust against violations of homogeneity of variance and is widely recommended when group variances are not equal.

For the second research question, which introduced discourse grounding as an additional variable, no separate descriptive analyses were conducted at the outset. Since the analyses were again based on learner data, and the distributions of lexical aspect and verbal morphology had already been examined in detail under the first research question, the analysis proceeded directly with inferential procedures. First, the association between lexical classes and discourse grounding was explored through cross-tabulation. This was followed by a Pearson Chi-square test to assess the statistical significance of the observed association.

Next, a one-way ANOVA was conducted to examine whether lexical classes differed significantly within background contexts. In cases where significant differences were detected, pairwise comparisons were performed using the Games-Howell procedure, selected for its robustness against unequal variances. The same process was then applied to foreground contexts: a separate one-way ANOVA was carried out among lexical classes, followed by Games-Howell post-hoc tests to identify significant pairwise differences.

Following the analyses involving lexical classes, the relationship between verbal morphology and discourse grounding was investigated. The four morphology types (past, continuous, present, and base) were cross-tabulated across grounding categories. A

Pearson Chi-square test was again used to evaluate the statistical association. To further investigate intertextual variation, two additional one-way ANOVA tests were conducted: one comparing the use of past morphology across background and foreground contexts, and the other comparing continuous morphology across the same discourse categories. Since each analysis involved only two groups, pairwise comparisons were not required, as the main ANOVA results were sufficient to capture the relevant differences.

For the third research question, which aimed to determine whether the patterns observed in learner data were reflected in instructional input, the distribution of lexical aspect categories and verbal morphology types in the instructional dataset was descriptively analyzed and directly compared to the corresponding distributions in the learner data. Following these descriptive comparisons, cross-tabulations of lexical classes and verbal morphology types were constructed for the instructional dataset and examined alongside those from the learner narratives to identify similarities and differences. Subsequently, Pearson Chi-square tests were conducted on the cross-tabulated data to assess the statistical significance of the observed associations.

As in the analyses conducted for the second research question, further cross-tabulations were performed to explore the relationship between lexical aspect categories and discourse grounding, as well as between verbal morphology and grounding. These associations were also subjected to Chi-square testing to determine whether discourse functions influenced the distribution of lexical and morphological features in instructional input. It is important to note that the instructional data did not contain any Present or Base forms, which were considered indicative of learner interlanguage and therefore exclusive to the learner dataset. As a result, the morphology analysis in the instructional dataset focused solely on Past and Continuous forms.

All cross-tabulation and Chi-square test results were then compared to those obtained from the learner data to evaluate the degree of alignment between input and learner production. ANOVA tests were not conducted for this research question, as the primary objective was to compare patterns between the two datasets rather than to explore intertextual variation or mean differences within the instructional data itself.

Table 3.3*Summary of Analysis Procedures*

Research Question	Descriptive Analyses	Inferential Analyses	Datasheets Used	Statistical Focus
RQ1: Lexical Aspect $\times$ Verbal Morphology (Learner Data)	Frequency Distributions; Lexeme and Reading - Based Counts; Cross-tabulations	Chi-square between Lexical Aspect and Verbal Morphology; One-way ANOVA between Lexical Classes; Games-Howell Post Hoc	Total Frequencies and Per-Narrative Frequencies for Lexical Classes and Verbal Morphologies for 88 learners (16 Permutations)	Inter-Lexical Class Variation in Morphology Use (Within-Class Interpretation)
RQ2: Lexical Aspect $\times$ Verbal Morphology $\times$ Grounding (Learner Data)	Frequency Distributions; Cross-tabulations	Chi-square between Lexical Aspect and Grounding; between Verbal Morphology and Grounding; One-way ANOVAs between Lexical Classes in Background, then Foreground; One-way ANOVAs for Past and then Continuous across Discourse Contexts; Games-Howell Post Hoc	Total Frequencies and Per-Narrative Frequencies for Lexical Classes, Verbal Morphologies, and Grounding for 88 learners (32 Permutations)	Inter-Lexical Class and Inter-Morphologies Variation in Discourse Contexts

(Continued) Summary of Analysis Procedures

Research Question	Descriptive Analyses	Inferential Analyses	Datasheets Used	Statistical Focus
RQ3: Learner vs. Instructional Data Comparison	Descriptive Frequency Comparisons; Lexeme and Reading - Based Counts; Cross-tabulations	Chi-square between Lexical Aspect and Verbal Morphology; Chi-square between Verbal Morphology and Grounding;	Total Frequencies for Lexical Classes and Verbal Morphologies (16 Permutations); Total Frequencies for Lexical Classes, Verbal Morphologies, and Grounding (32 Permutations); (No per-narrative breakdown)	Input–output alignment between learner and instructional datasets

As a final note concerning the data analysis and interpretation procedures applied across all three research questions, it is important to consider the methodological recommendations presented by Bardovi-Harlig and Comajoan-Colomé (2020) in their review of prior studies on the Aspect Hypothesis. In their examination of research practices, the authors identified a recurring issue in the interpretation of cross-tabulated frequency tables—specifically, that within-morphology readings may sometimes lead to results that appear inconsistent with the Aspect Hypothesis. To avoid such interpretive pitfalls, they recommend a within-lexical aspect approach, which focuses on how individual lexical classes distribute across morphological forms, rather than how morphological forms distribute across lexical classes.

In accordance with this recommendation, the present study adopts a within-lexical class approach as the primary basis for interpreting results related to the Aspect Hypothesis. While within-morphology results are also reported to ensure a comprehensive view of the

data, the interpretation relevant to the theoretical framework is grounded in the distributional patterns of morphological marking within each lexical class.

3.5 Ethical Considerations

The primary ethical considerations in this study concerned obtaining institutional and individual permissions, ensuring informed consent, and protecting the anonymity of participants. Prior to any data collection, formal approval was obtained from the School of Foreign Languages at the university where the EFL learners were enrolled (Appendix 2). Following institutional approval, consent was also requested from the instructors of the classes in which the personal narratives were written (Appendix 3).

Subsequently, all eighty-eight student participants were provided with informed consent forms detailing the purpose and scope of the study, the voluntary nature of participation, and the assurance of anonymity. These forms were signed by each participant prior to the inclusion of their narratives in the research (Appendix 4). To maintain participant confidentiality, each narrative was assigned a number from 1 to 88, with no identifying personal information recorded.

Regarding the use of instructional materials, official permission was obtained from Oxford University Press, contingent upon proper citation and acknowledgment of the source materials in the study (Appendix 5). Finally, with all institutional and participant permissions secured, research ethics approval was granted by the university where the doctoral study was conducted, following the submission of all relevant documentation (Appendix 6).

4. RESULTS

This chapter presents the findings of the current study, which investigates how lexical classes and grounding interact with verbal morphology in the Turkish EFL context. Specifically, the study addresses three key research questions: (1) the relationship between lexical classes and verbal morphology, (2) the ways in which the discourse structure of learner narratives interact with these elements, and (3) how similar patterns are reflected in the learning materials used in the classroom. The first two research questions are explored through an analysis of learner-produced narratives, while the third is addressed through an examination of texts from two course books and one graded reader. This chapter provides a comprehensive account of the findings for each research question and discusses additional insights gained from the narrative analysis.

4.1 The Relationship between Lexical Classes and Verbal Morphology

The data used to investigate the interaction between lexical classes and verbal morphology were obtained from eighty-eight narrative texts written by students, comprising a total of 19,702 words. The predicate analysis conducted on these texts revealed 2,308 tokens, accounting for 11.71% of the total word count. A subsequent reading-based analysis was carried out to account for the various uses of these predicates in context, yielding 578 unique readings, which constitute 25.04% of the total predicate tokens. Following this, a lexeme-based type analysis identified 354 distinct verb lexemes, representing 15.34% of the total predicate tokens (see Table 4.1).

Table 4.1

Total Word Count, Predicate Tokens, Lexeme Types, and Readings Identified in the Narrative Dataset

	Frequency	Percentage
Total Word Count	19,702	-
Predicate Token Count	2308	11.71 % of total words
Reading-Based Count	578	25.04 % of total tokens
Lexeme Type Count	354	15.34 % of total tokens

Following the general analysis of predicates, the frequency distribution of predicates across distinct lexical classes was examined. Table 4.2 presents the detailed distribution of predicates according to their lexical classes. Out of a total of 2,308 predicates, achievement predicates constituted the largest proportion, accounting for 53.1% (1,225 tokens). Activity predicates followed as the second most frequent category, making up 24.6% (568 tokens) of the total. State predicates and accomplishment predicates were found to occur in similar numbers; however, state predicates were slightly more frequent, comprising 11.7% (270 tokens), compared to accomplishment predicates, which represented the smallest proportion with 10.6% (245 tokens).

Table 4.2

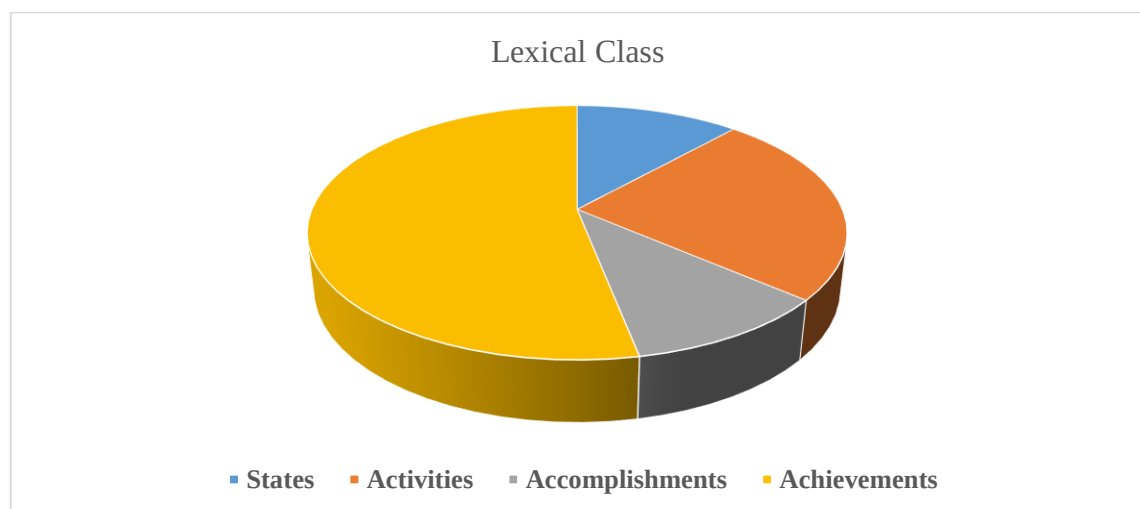
Distribution of Predicates Across Lexical Classes in the Narrative Dataset

	States	Activities	Accomplishments	Achievements	Total
Frequency	270	568	245	1225	2308
Percentage	11.7%	24.6%	10.6%	53.1%	100%

These findings highlight the dominance of achievement predicates in the dataset, while activities, states, and accomplishments display significantly lower frequencies. The proportional distribution of lexical classes provides an essential perspective on how the students utilized different verb categories in constructing their narratives (see Figure 4.1).

Figure 4.1

Proportional Distribution of Predicates Across Lexical Classes in the Narrative Dataset



The frequency distribution of predicates across verbal morphology types was examined following the analysis of their distribution across lexical classes. Table 4.3 presents the detailed distribution of predicates based on their morphological forms. Among the total of 2,308 predicates, 1,974 predicates (85.5%) were found to occur with past morphology, representing the dominant category. Continuous morphology accounted for 221 predicates (9.6%), while 107 predicates (4.6%) were conjugated with present morphology. Base morphology was observed in only 6 predicates (0.3%), indicating a minimal presence.

Table 4.3

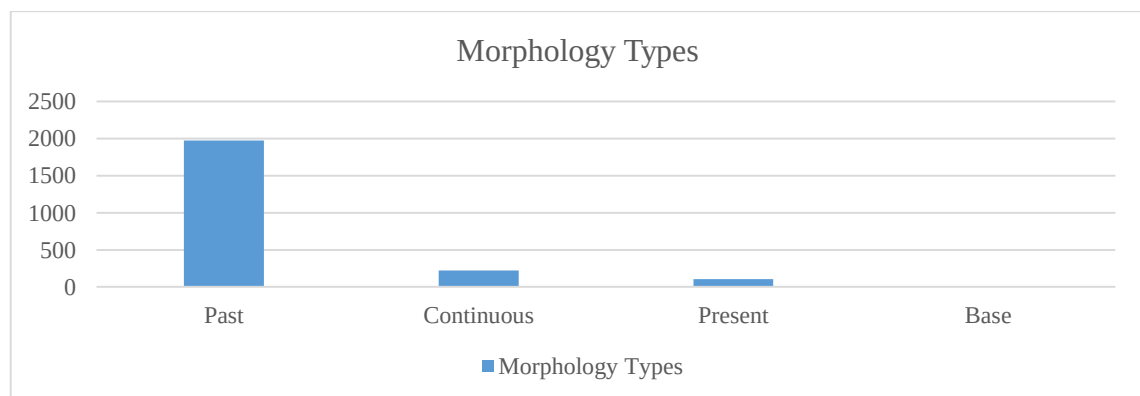
Frequency Distribution of Predicates Across Verbal Morphology Types

	Past	Continuous	Present	Base	Total
Frequency	1974	221	107	6	2308
Percentage	85.5%	9.6%	4.6%	0.3%	100%

This distribution highlights the predominance of past morphology in the dataset, with other forms following at much lower frequencies. The proportional distribution of verbal morphology provides important insights into how students employed different morphological forms in their narrative constructions, reflecting the predominance of past tense usage in their storytelling (see Figure 4.2).

Figure 4.2

Distribution of Predicates Across Verbal Morphology Types in Student Narratives



Following the initial analysis of predicates based on their lexical classes and morphology types, cross tabulation analyses were carried out to evaluate the potential associations between these two categorical variables. Additionally, Chi-square tests were conducted to measure the strength and statistical significance of these relationships. Table 4.4 presents the cross tabulated frequencies and percentages of predicates across lexical classes and morphology types, offering a detailed overview of the distribution.

Table 4.4

Cross tabulation of Predicates Across Lexical Classes and Verbal Morphology Types

	States	Activities	Accomplishments	Achievements	Total
Past Count	227	319	235	1193	1974
Expected Count	230.9	485.8	209.5	1047.7	1974
% for Morphology	11.5%	16.2%	11.9%	60.4%	100%
% for Aspects	84.1%	56.2%	95.9%	97.4%	85.5%
% for Total	9.8%	13.8%	10.2%	51.7%	85.5%
Continuous Count	0	221	0	0	221
Expected Count	25.9	54.4	23.5	117.3	221
% for Morphology	0%	100%	0%	0%	100%
% for Aspects	0%	38.9%	0%	0%	9.6%
% for Total	0%	9.6%	0%	0%	9.6%
Present Count	41	27	9	30	107
Expected Count	12.5	26.3	11.4	56.8	107
% for Morphology	38.3%	25.2%	8.4%	28.0%	100%
% for Aspects	15.2%	4.8%	3.7%	2.4%	4.6%
% for Total	1.8%	1.2%	0.4%	1.3%	4.6%
Base Count	2	1	1	2	6
Expected Count	7	1.5	6	3.2	6
% for Morphology	33.3%	16.7%	16.7%	33.3%	100%
% for Aspects	0.7%	0.2%	0.4%	0.2%	0.3%
% for Total	0.1%	0%	0%	0.1%	0.3%
Total	270	568	245	1225	2308
Expected Count	270	568	245	1225	2308
% for Morphology	11.7%	24.6%	10.6%	53.1%	100%
% for Aspects	100%	100%	100%	100%	100%
% for Total	11.7%	24.6%	10.6%	53.1%	100%

As displayed in Table 4.4, the majority of the predicates were used in Past morphology, accounting for 85.5% of the total predicates (1974 tokens). Among the predicates in Past morphology, achievement predicates held the largest share, making up 60.4% (1193 tokens). Activities followed with 16.2% (319 tokens), while accomplishments constituted 11.9% (235 tokens). States accounted for the smallest proportion within this dominant morphology type, representing 11.5% (227 tokens). These findings provide a clear view of the distribution of past morphology across lexical classes, highlighting the prominence of achievement predicates within this particular morphology category.

In relation to continuous morphology, all 221 predicates occurring with this type of morphology were exclusively categorized as activities. This result indicates that the remaining three lexical classes—states, accomplishments, and achievements—were not represented in the predicates marked with continuous morphology.

Present and base forms, which provide insights into the learners' interlanguage, were also analyzed. The frequency of predicates in present morphology was notably lower compared to those in past and continuous morphology, totaling 107 tokens. Within this category, state predicates constituted the largest proportion (38.3%, 41 tokens). Achievement predicates followed with 28% (30 tokens), while activities accounted for 25.2% (27 tokens). Accomplishments were the least used predicates with present morphology, comprising only 8.4% (9 tokens).

The analysis of base forms revealed an even smaller number of occurrences compared to other morphological types, with only 6 tokens. Among these limited instances, states and achievements were slightly more frequent, each contributing 33.3% (2 tokens), while activities and accomplishments were equally represented, each with 16.7% (1 token). These findings highlight the varying distribution of predicates across different morphological forms, with distinct patterns emerging for each lexical class.

Subsequent to the analysis of predicates across lexical classes within morphology types, it is essential to report the distribution of morphology types within each lexical class to provide a comprehensive perspective on the relationship between these variables. The detailed results of this analysis are presented below.

As previously illustrated in Table 4.4, the majority of state predicates were used with past morphology, accounting for 84.1% (227 tokens out of a total of 270). Present morphology followed with a smaller yet notable proportion of 15.2% (41 tokens). Continuous

morphology was not observed at all with state predicates, while base forms were recorded only twice, corresponding to 0.7%. These findings indicate that state predicates overwhelmingly occurred with past morphology.

In the case of activity predicates, past morphology was again the most frequently observed form, representing 56.2% of all activities (319 tokens out of 568). However, continuous morphology played a significant role within this lexical class, accounting for 38.9% (221 tokens). Present morphology was used much less frequently with activities than with states, comprising only 4.8% (27 tokens). Base forms were observed only once, forming 0.2% of all activities. The findings suggest that activity predicates were predominantly shared between past and continuous morphology, with past morphology being more prevalent.

For accomplishment predicates, past morphology dominated even more strongly than in states and activities, accounting for 95.9% of all accomplishments (235 tokens out of 245). Present morphology followed with a minimal share of 3.7% (9 tokens). Continuous morphology was not observed with accomplishments, while only one instance of a base form was identified, making up 0.4% of the total. These results suggest that accomplishment predicates were almost exclusively associated with past morphology.

Achievement predicates were similarly dominated by past morphology, with an overwhelming 97.4% of all achievements occurring in this category (1,193 tokens out of 1,225). This proportion was slightly higher than that of past accomplishments. Present morphology followed with a marginal share of 2.4% (30 tokens). Similar to accomplishments, no achievement predicates were observed with continuous morphology, and only two instances of base forms were recorded, corresponding to 0.2%.

The findings obtained from the within-lexical-class analysis indicate a clear pattern in the relationship between lexical classes and morphology types. Specifically, states, accomplishments, and achievements were predominantly associated with past morphology, reflecting a consistent preference for this form across these lexical classes. For instance, states were used with past morphology in 84.1% of cases, accomplishments in 95.9%, and achievements in 97.4%, further confirming the dominance of past morphology for these classes. On the other hand, activities exhibited a distinct tendency towards continuous morphology, which accounted for 38.9% of all activity predicates. Despite this notable presence of continuous morphology, activities also displayed a

significant association with past morphology, comprising 56.2% of their total occurrences. These results highlight the varying tendencies of lexical classes to align with specific morphology types, offering a detailed account of the distribution patterns across the dataset.

A chi-square test of independence was conducted to examine the statistical relationship between verbal morphology types and lexical classes. The findings are summarized in Table 4.5. The test results revealed a significant association between the two variables, χ^2 (3, N = 2195) = 753.154, $p < .001$. This significant association was further corroborated by the likelihood ratio (LR = 702.980, $p < .001$) and the linear-by-linear association test (LBA = 244.514, $p < .001$). Additionally, the minimum expected count of 22.86 confirmed that all assumptions of the chi-square test were satisfied, ensuring the reliability of the results.

To evaluate the strength of the observed association, effect size measures were calculated. Both Cramér's V and Phi were determined to be .586 ($p < .001$), which is indicative of a strong relationship between verbal morphology types and lexical classes. These findings provide robust statistical evidence for the interdependence between the two variables, highlighting a substantial association that underpins the observed distribution patterns.

Table 4.5

Chi-Square Test Results and Effect Size Measures for the Relationship between Morphology Types and Lexical Classes

Test/Measure	Value	df	Significance
Pearson Chi-square	753.154	3	.000
Likelihood Ratio	702.980	3	.000
Linear-by-Linear	244.514	1	.000
N of Valid Cases	2195		
Cramér's V	.586	-	.000
Phi	.586	-	.000

A one-way ANOVA was conducted to provide a more nuanced analysis of variance across individual cases, supplementing the insights obtained from the Chi-square test. The primary objective of this analysis was to examine differences in predicate frequency across the four lexical classes within Past and Continuous morphology. The descriptive statistics and results of the ANOVA are summarized in Table 4.6.

The ANOVA results indicated statistically significant differences among the lexical classes, $F(3, 1404) = 38.236$, $p < .001$. Descriptive statistics further revealed that Achievements had the highest mean frequency ($M = 3.3892$, $SD = 6.98547$), followed by Activities ($M = 1.5341$, $SD = 2.49078$), Accomplishments ($M = 0.6676$, $SD = 1.61907$), and States ($M = 0.6449$, $SD = 1.87396$). These findings suggest considerable variability in the distribution of predicates marked with Past and Continuous morphology.

Table 4.6

Descriptive Statistics and ANOVA Results for Predicate Frequency Across Lexical Classes

Lexical Class	N	Mean	Std.Deviation	Std.Error	95% Confidence Interval	
					Lower	Upper
States	352	0.6449	1.87396	0.09988	0.4484	0.8413
Activities	352	1.5341	2.49078	0.13276	1.2730	1.7952
Accomplishments	352	0.6676	1.61907	0.08630	0.4979	0.8373
Achievements	352	3.3892	6.98547	0.37233	2.6569	4.1215
Total	1408	1.5589	4.06163	0.10824	1.3466	1.7713
Source of Variation	Sum of Squares		df	Mean Square	F	Sig.
Between Groups	1753.116		3	584.372	38.236	0.000
Within Groups	21457.991		1404	15.283		
Total	23211.107		1407			

To determine the appropriate post-hoc test for pairwise comparisons, the homogeneity of variances assumption was evaluated. Levene's test yielded a significant result, $F(3, 1404) = 179.080$, $p < .001$, indicating that variances were not equal across lexical classes. Consequently, the Games-Howell method, which is robust to violations of the equal variances assumption, was selected for pairwise comparisons.

The pairwise comparisons conducted using the Games-Howell method are presented in Table 4.7. The results demonstrated that Achievements were significantly different from States (MD = 2.74432, $p < .001$), Activities (MD = 1.85511, $p < .001$), and Accomplishments (MD = 2.72159, $p < .001$). Additionally, Activities were found to differ significantly from States (MD = 0.88920, $p < .001$), Accomplishments (MD = 0.86648, $p < .001$), and Achievements (MD = -1.85511, $p < .001$). However, no significant difference was observed between States and Accomplishments (MD = 0.02273, $p > .05$), indicating that these two predicate types exhibited similar frequencies in Past and Continuous morphology.

Table 4.7

Pairwise Comparisons Using Games-Howell Method

Lexical Class (I)	Lexical Class (J)	Mean Dif. (I-J)	Std. Error	Sig.
State	Activity	-0.88920	0.16614	0.000
State	Accomplishment	-0.02273	0.13200	0.998
State	Achievement	-2.74432	0.38549	0.000
Activity	State	0.88920	0.16614	0.000
Activity	Accomplishment	0.86648	0.15834	0.000
Activity	Achievement	-1.85511	0.39529	0.000
Accomplishment	State	0.02273	0.13200	0.998
Accomplishment	Activity	-0.86648	0.15834	0.000
Accomplishment	Achievement	-2.72159	0.38220	0.000
Achievement	State	2.74432	0.38549	0.000
Achievement	Activity	1.85511	0.39529	0.000
Achievement	Accomplishment	2.72159	0.38220	0.000

The results of the descriptive statistics, one-way ANOVA, and post-hoc analysis corroborated the significant association identified by the Chi-square test between morphology types and lexical classes. Furthermore, the ANOVA results highlighted that lexical classes differ significantly in their distribution (except for States and Accomplishments). These findings reinforce the observation that specific morphology types are preferentially associated with certain lexical classes. Notably, within-class analysis revealed that States, Accomplishments, and Achievements predominantly occurred with Past morphology, while Activities were significantly associated with

Continuous morphology. Continuous morphology was particularly linked to Activities, whereas Past morphology was heavily utilized with Accomplishments and Achievements.

4.2 Lexical Classes and Verbal Morphology across Grounding Types

The data obtained from eighty-eight student narratives, comprising a total of 2,308 verb tokens, provided not only insights into the association between lexical classes and verbal morphology but also evidence regarding how these two linguistic features operate across different grounding types. Findings related to the first research question demonstrated a clear relationship between lexical classes and verbal morphology, indicating that learners' choices of verbal morphology were highly consistent with the lexical class of the respective verbs. The second research question investigates whether the choice of lexical classes and verbal morphology aligns with the discourse structure of narratives.

As the initial focus in addressing the second research question, the analysis began with an examination of lexical class distribution across grounding types. Specifically, the investigation focused on how verbs from distinct lexical classes were distributed across the two discourse categories of foreground and background. To this end, cross-tabulation analyses were first performed to identify the frequency and percentage distributions of lexical classes within each grounding type. Subsequently, Chi-square tests were conducted to determine whether there was a statistically significant relationship between the lexical class of a verb and the discourse structure of the sentence in which it occurred. The results of these analyses are presented in Table 4.8, which displays the frequency counts and corresponding percentages of lexical classes across the two grounding categories.

A horizontal reading of Table 4.8 clearly shows that a total of 270 stative predicates and 220 activity predicates were used in background clauses, accounting for approximately 55.1% and 44.9% of all background predicates, respectively. In contrast, neither accomplishment nor achievement predicates were attested in background contexts, just as stative predicates did not occur in foreground clauses. In foreground clauses, a total of 1,225 achievement predicates were observed, comprising 67.4% of all foreground predicates. These were followed by 348 activity predicates (19.1%) and 245 accomplishment predicates (13.5%). Overall, of the 2,308 verb tokens analyzed, 490 predicates (21.2%) occurred in background clauses, whereas 1,818 predicates (78.8%)

appeared in foreground clauses. These figures reflect the overall distribution of predicate types across grounding categories.

Table 4.8

Cross tabulation of Lexical Classes across Discourse Types

	States	Activities	Accomplishments	Achievements	Total
Background Count	270	220	0	0	490
Expected Count	57.3	120.6	52	260.1	490
% for Lexical Class	100 %	38.7 %	0 %	0 %	21.2 %
% for Grounding	55.1 %	44.9 %	0 %	0 %	100 %
% of Total	11.7 %	9.5 %	0 %	0 %	21.2 %
Foreground Count	0	348	245	1225	1818
Expected Count	212.7	447.4	193	964.9	1818
% for Lexical Class	0 %	61.3 %	100 %	100 %	78.8 %
% for Grounding	0 %	19.1 %	13.5 %	67.4 %	100 %
% of Total	0 %	15.1 %	10.6 %	53.1 %	78.8 %
Total	270	568	245	1225	2308
Expected Count	270	568	245	1225	2308
% for Lexical Class	100 %	100 %	100 %	100 %	100 %
% for Grounding	11.7 %	24.6 %	10.6 %	53.1 %	100 %
% of Total	11.7 %	24.6 %	10.6 %	53.1 %	100 %

A vertical reading of Table 4.8, adopting a within-category approach to lexical classes, revealed distinct distributional patterns across grounding types. Stative predicates occurred exclusively in background contexts, with 100% (n = 270) of all state predicates appearing in background clauses. In contrast, accomplishment and achievement predicates were found solely in foreground contexts, with 100% of accomplishment predicates (n = 245) and 100% of achievement predicates (n = 1,225) occurring in foreground clauses.

Activity predicates, unlike the other classes, were distributed across both discourse categories. A total of 220 activity predicates (38.7% of all activities) appeared in background contexts, while 348 activity predicates (61.3%) were used in foreground clauses. This distribution indicates that activity predicates were employed in both progressing the narrative and supporting background information. This distribution

pattern highlights the differing use of lexical classes across foreground and background contexts.

As the next step in the analysis, a Pearson Chi-square test was performed to investigate the statistical association between lexical classes and discourse types. The results of the analysis are presented in Table 4.9. The test revealed a statistically significant association between the two variables, $\chi^2(3, N = 2308) = 1502.000$, $p < .001$. The assumption of expected cell count was met, with no cells having an expected frequency less than 5. This result was further supported by the Likelihood Ratio test, $\chi^2 = 1628.127$, $p < .001$, as well as the Linear-by-Linear Association test, $\chi^2 = 1284.154$, $p < .001$.

To assess the strength of the relationship between lexical classes and discourse types, measures of association were calculated. Both Cramér's V and Phi coefficients were computed as .807 ($p < .001$), indicating a statistically significant and strong association. These findings demonstrate that the observed distribution of lexical classes across discourse types was not due to chance.

Table 4.9

Chi-Square and Effect Size Results for Lexical Class Distribution Across Discourse Types

Test/Measure	Value	df	Significance
Pearson Chi-square	1502.000	3	.000
Likelihood Ratio	1628.127	3	.000
Linear-by-Linear	1284.154	1	.000
N of Valid Cases	2308		
Cramér's V	.807	-	.000
Phi	.807	-	.000

To provide a more detailed analysis that considers individual cases, a one-way Analysis of Variance (ANOVA) was conducted. This test also served to support and complement the findings obtained through the Chi-square analysis. The primary aim of the ANOVA was to examine whether the distribution of lexical classes varied significantly within each discourse category, namely background and foreground. Separate analyses were conducted to assess lexical class variation in background contexts and in foreground

contexts, respectively. The results presented in Table 4.10 include the descriptive statistics and ANOVA findings related specifically to the background context.

The one-way ANOVA conducted to examine the distribution of lexical classes within background contexts revealed a statistically significant difference among the groups, $F(3, 1404) = 36.974$, $p < .001$. Descriptive statistics indicated that stative predicates had the highest frequency in background contexts ($M = 0.7670$, $SD = 1.88630$), followed by activity predicates ($M = 0.6250$, $SD = 1.64905$). In contrast, there were no occurrences of accomplishment or achievement predicates within background clauses. The results indicated that certain lexical classes were more frequently represented in background contexts than others.

Table 4.10

Descriptive Statistics and ANOVA Results for Predicate Frequency Across Lexical Classes in Background Contexts

Lexical Class	N	Mean	Std.Deviation	Std.Error	95% Confidence Interval	
					Lower	Upper
States	352	0.7670	1.88630	0.10054	0.5693	0.6948
Activities	352	0.6250	1.64905	0.08789	0.4521	0.7979
Accomplishments	352	0.0000	0.00000	0.00000	0.0000	0.0000
Achievements	352	0.0000	0.00000	0.00000	0.0000	0.0000
Total	1408	0.3480	1.29990	0.03464	0.2801	0.4160
Source of Variation	Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	174.077	3	58.026	36.974	0.000	
Within Groups	2203.398	1404	1.569			
Total	2377.474	1407				

Before conducting post-hoc pairwise comparisons, the assumption of homogeneity of variances was tested to determine the appropriate post-hoc procedure. Levene's test for equality of variances yielded a statistically significant result, $F(3, 1404) = 131.818$, $p < .001$, indicating that the variances across lexical class groups were not equal. Given the violation of this assumption, the Games-Howell procedure, which does not assume equal

variances and is robust to heterogeneity, was selected for conducting pairwise comparisons between lexical classes in background contexts.

The results of the Games-Howell procedure, conducted for pairwise comparisons of lexical classes in background contexts, revealed several statistically significant differences. Stative predicates were used significantly more frequently than both accomplishment predicates (MD = 0.76705, $p < .001$) and achievement predicates (MD = 0.76705, $p < .001$). Similarly, activity predicates occurred significantly more often than both accomplishment predicates (MD = 0.62500, $p < .001$) and achievement predicates (MD = 0.62500, $p < .001$). No statistically significant difference was observed between state and activity predicates ($p = .712$), nor between accomplishment and achievement predicates ($p = 1.000$). These findings indicate that lexical class frequencies varied significantly in background contexts, with only state and activity predicates being used, while accomplishment and achievement predicates were entirely absent from this discourse category. Games-Howell post-hoc results are presented in Table 4.11.

Table 4.11

Games-Howell Pairwise Comparison Results for Background Discourse

Lexical Class (I)	Lexical Class (J)	Mean Dif. (I-J)	Std. Error	Sig.
State	Activity	0.14205	0.13354	0.712
State	Accomplishment	0.76705	0.10054	0.000
State	Achievement	0.76705	0.10054	0.000
Activity	State	-0.14205	0.13354	0.712
Activity	Accomplishment	0.62500	0.08789	0.000
Activity	Achievement	0.62500	0.08789	0.000
Accomplishment	State	-0.76705	0.10054	0.000
Accomplishment	Activity	-0.62500	0.08789	0.000
Accomplishment	Achievement	0.00000	0.00000	1.000
Achievement	State	-0.76705	0.10054	0.000
Achievement	Activity	-0.62500	0.08789	0.000
Achievement	Accomplishment	0.00000	0.00000	1.000

As a follow-up to the previous analysis of background contexts, a one-way ANOVA was carried out to assess whether there were statistically significant differences in predicate frequency across lexical classes in foreground contexts. The analysis produced a significant result, $F(3, 1404) = 58.172$, $p < .001$, demonstrating that the frequency of lexical class usage varied across groups in foreground discourse. Descriptive statistics showed that achievement predicates occurred with the highest frequency ($M = 3.4801$, $SD = 6.95772$), followed by activity predicates ($M = 0.9886$, $SD = 2.15890$) and accomplishment predicates ($M = 0.6960$, $SD = 1.62291$). No instances of stative predicates were observed in foreground contexts. These results show that lexical classes were unevenly distributed in foreground discourse. The descriptive and ANOVA results are presented in Table 4.12.

Table 4.12

Descriptive Statistics and ANOVA Results for Predicate Frequency Across Lexical Classes in Foreground Discourse

Lexical Class	N	Mean	Std.Deviation	Std.Error	95% Confidence Interval	
					Lower	Upper
States	352	0.0000	0.0000	0.00000	0.00000	0.0000
Activities	352	0.9886	2.15890	0.11507	0.7623	1.2149
Accomplishments	352	0.6960	1.62291	0.08650	0.5259	0.8661
Achievements	352	3.4801	6.95772	0.37085	2.7508	4.2095
Total	1408	1.2912	3.95269	0.10534	1.0846	1.4978
Source of Variation	Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	2430.321	3	810.107	58.172	0.000	
Within Groups	19552.290	1404	13.926			
Total	21982.611	1407				

As in the previous ANOVA analyses, Levene's test for homogeneity of variances produced a statistically significant result, indicating a violation of the equal variances assumption. Consequently, the Games-Howell procedure was selected for post-hoc pairwise comparisons. The results revealed that achievement predicates were used significantly more frequently than state predicates ($MD = 3.48011$, $p < .001$), activity

predicates (MD = 2.49148, $p < .001$), and accomplishment predicates (MD = 2.78409, $p < .001$). In addition, activity predicates were used more often than state predicates (MD = 0.98864, $p < .001$), and accomplishment predicates were also employed significantly more than state predicates (MD = 0.69602, $p < .001$). No statistically significant difference was found between activity and accomplishment predicates ($p = .177$). The results indicated that lexical classes were used with varying frequencies in foreground contexts. Furthermore, state predicates were not attested in foreground clauses, while achievement predicates constituted the most frequently used class. Activity and accomplishment predicates were also observed in foreground discourse, albeit to a lesser extent. Games-Howell post-hoc results can be found in Table 4.13.

Table 4.13

Games-Howell Pairwise Comparison Results for Foreground Discourse

Lexical Class (I)	Lexical Class (J)	Mean Dif. (I-J)	Std. Error	Sig.
State	Activity	-0.98864	0.11507	0.000
State	Accomplishment	-0.69602	0.08650	0.000
State	Achievement	-3.48011	0.37085	0.000
Activity	State	0.98864	0.11507	0.000
Activity	Accomplishment	0.29261	0.14396	0.177
Activity	Achievement	-2.49148	0.38829	0.000
Accomplishment	State	0.69602	0.08650	0.000
Accomplishment	Activity	-0.29261	0.14396	0.177
Accomplishment	Achievement	-2.78409	0.38080	0.000
Achievement	State	3.48011	0.37085	0.000
Achievement	Activity	2.49148	0.38829	0.000
Achievement	Accomplishment	2.78409	0.38080	0.000

As a result of the analysis assessing the interaction between lexical classes and discourse types, a comparative evaluation of the distribution of the four lexical classes across the two discourse contexts—background and foreground—revealed distinct patterns. Stative predicates were found to occur exclusively in background discourse, while both achievement and accomplishment predicates were observed solely in foreground contexts. Activity predicates, in contrast, were present in both discourse types,

demonstrating a dual distribution pattern. These results reflect a clear differentiation in the use of lexical classes depending on discourse function within the narrative.

Following the analysis of lexical classes, the examination of how verbal morphology types functioned across discourse types constituted the second focus of the second research question. In this phase of the analysis, four morphology types—Past, Continuous, Present, and Base—were cross-tabulated with two discourse categories: background and foreground. This allowed for a descriptive comparison of their distributional patterns. Subsequently, a Pearson Chi-square test was conducted to determine whether a statistically significant association existed between morphology types and discourse context. The results of the cross-tabulation, including frequency counts and percentage distributions for each morphology type across background and foreground clauses, are presented in Table 4.14.

Table 4.14

Cross tabulation of Morphology Types across Discourse Types

	Past	Continuous	Present	Base	Total
Background Count	227	220	41	2	490
Expected Count	419.1	46.9	22.7	1.3	490
% for Grounding	46.3 %	44.9 %	8.4 %	0.4 %	100 %
% for Morphology	11.5 %	99.5 %	38.3 %	33.3 %	21.2 %
% of Total	9.8 %	9.5 %	1.8 %	0.1 %	21.2 %
Foreground Count	1747	1	66	4	1818
Expected Count	1554.9	174.1	84.3	4.7	1818
% for Grounding	96.1 %	0.1 %	3.6 %	0.2 %	100 %
% for Morphology	88.5 %	0.5 %	61.7 %	66.7 %	78.8 %
% of Total	75.7 %	0.0 %	2.9 %	0.2 %	78.8 %
Total	1974	221	107	6	2308
Expected Count	1974	221	107	6	2308
% for Grounding	85.5 %	9.6 %	4.6 %	0.3 %	100 %
% for Morphology	100 %	100 %	100 %	100 %	100 %
% of Total	85.5 %	9.6 %	4.6 %	0.3 %	100 %

The cross-tabulated data revealed clear distributional differences in the use of morphology types across background and foreground discourse. In background contexts,

past and continuous morphology types were observed with nearly equal frequency. Specifically, 227 instances of past-marked predicates were recorded, accounting for 46.3% of all background predicates, while 220 continuous predicates represented 44.9%. Present morphology followed with 41 occurrences (8.4%), and base forms were the least frequent, with only 2 instances (0.4%).

In foreground discourse, past morphology was overwhelmingly dominant, with 1,747 occurrences comprising 96.1% of all foreground predicates. Present morphology followed, with 66 instances (3.6%), while base forms were recorded 4 times, making up only 0.2% of the foreground predicates. Unlike its high frequency in background contexts, continuous morphology was observed only once in foreground discourse, corresponding to 0.1%.

A comparative analysis of morphology types across discourse types further illustrated the role of discourse. Of all predicates marked with Past morphology (N = 1,974), 88.5% were observed in foreground contexts, while 11.5% were used in background. In contrast, 99.5% of all Continuous morphology instances (N = 221) appeared in background contexts, with only a single occurrence (0.5%) found in the foreground. Present morphology (N = 107) was distributed more unevenly, with 61.7% used in foreground discourse and 38.3% in background. Base forms (N = 6) were rare overall but showed a similar tendency, with 66.7% occurring in foreground and 33.3% in background contexts. While Present and Base morphology types were included to reflect learner interlanguage, the findings overall clearly show that Past morphology was primarily associated with foreground discourse, whereas Continuous morphology was predominantly linked to background contexts.

To statistically confirm the association observed in the cross-tabulation between morphology types and discourse types, a Pearson Chi-square test was conducted. The results of the test are presented in Table 4.15. The analysis yielded a statistically significant result, $\chi^2(3, N = 2308) = 941.544, p < .001$, indicating a meaningful relationship between morphology type and discourse context. Although the number of cells with expected counts less than five slightly exceeded the recommended threshold of 20%—with 25% of cells affected—this deviation was attributed solely to the low frequency of base morphology forms. Given that base forms were included for the sake

of completeness and do not constitute the central focus of the second research question, this minor violation was not considered problematic for the overall validity of the test.

Table 4.15

Chi-Square and Effect Size Results for Morphology Type Distribution Across Discourse Types

Test/Measure	Value	df	Significance
Pearson Chi-square	941.544	3	.000
Likelihood Ratio	814.804	3	.000
Linear-by-Linear	436.738	1	.000
N of Valid Cases	2308		
Cramér's V	.639	-	.000
Phi	.639	-	.000

In addition to the Pearson Chi-square result, complementary tests further supported the significance of the association. The Likelihood Ratio test produced a value of $\chi^2 = 814.804$, $p < .001$, while the Linear-by-Linear Association test also yielded a significant result, $\chi^2 = 436.738$, $p < .001$. To assess the strength of the association, effect size measures were calculated. Both Phi and Cramér's V were computed as .639 ($p < .001$), indicating a strong association between morphology types and discourse types.

To account for individual variation and further support the earlier findings, two separate one-way ANOVA tests were conducted to examine whether the use of Past and Continuous morphology types differed significantly across discourse types. The first ANOVA was conducted to assess the variation in the use of Past morphology between background and foreground discourse. The analysis revealed a statistically significant difference, $F(1, 704) = 137.763$, $p < .001$. Descriptive statistics indicated that Past morphology was used considerably more frequently in foreground contexts ($M = 4.9631$, $SD = 6.64323$) than in background contexts ($M = 0.6449$, $SD = 1.87396$).

Subsequently, a second one-way ANOVA was conducted to evaluate the distribution of Continuous morphology across the same discourse categories. The results also indicated a statistically significant difference, $F(1, 704) = 50.052$, $p < .001$. According to descriptive statistics, Continuous morphology was used far more frequently in background discourse ($M = 0.6250$, $SD = 1.64905$) than in foreground discourse ($M =$

0.0028, SD = 0.05330). The descriptive statistics and corresponding ANOVA results are presented in Table 4.16 and Table 4.17, respectively.

Table 4.16

Descriptive Statistics and ANOVA Results for Past Morphology Across Discourse Types

Discourse Information	N	Mean	Std.Deviation	Std.Error	95% Confidence Interval	
					Lower	Upper
Background	352	0.6449	1.87396	0.09988	0.4484	0.8413
Foreground	352	4.9631	6.64323	0.35409	4.2667	5.6595
Total	704	2.8040	5.33447	0.20105	2.4092	3.1987
Source of Variation	Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	3281.818	1	3281.818	137.763	0.000	
Within Groups	16723.131	702	23.822			
Total	20004.949	703				

Table 4.17

Descriptive Statistics and ANOVA Results for Continuous Morphology Across Discourse Types

Discourse Information	N	Mean	Std.Deviation	Std.Error	95% Confidence Interval	
					Lower	Upper
Background	352	0.6250	1.64905	0.08789	0.4521	0.7979
Foreground	352	0.0028	0.05330	0.00284	-.0027	0.0084
Total	704	0.3139	1.20668	0.04548	0.2246	0.4032
Source of Variation	Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	68.126	1	68.126	50.052	0.000	
Within Groups	955.497	702	1.361			
Total	1023.624	703				

These two ANOVA tests support the patterns observed in the cross-tabulation analysis, specifically that Past morphology is primarily associated with foreground discourse,

while Continuous morphology is more closely linked to background contexts. In addition, these findings are in line with the Chi-square test results, which demonstrated a statistically significant association between discourse types and morphology types.

The combined results for the first and second research questions demonstrated that verbal morphology was systematically distributed across both lexical classes and discourse types. Analyses conducted for the first research question revealed that State, Accomplishment, and Achievement predicates were predominantly marked with Past morphology, while Activity predicates were marked with both Past and Continuous morphology. With the inclusion of discourse in the second research question, additional distributional patterns emerged. Achievement and Accomplishment predicates occurred exclusively in foreground contexts and were marked with Past morphology. State predicates appeared only in background contexts, also carrying Past morphology. Activity predicates were observed in both discourse types, being marked with Past in foreground contexts and with Continuous in background contexts. These findings collectively indicate that the use of verbal morphology is shaped in accordance with both the lexical aspect of the predicate and the narrative structure in which it occurs.

4.3 A Comparison between Learner Narratives and Learning Materials

The first two research questions focused on the analyses conducted using learner narratives. The results of these analyses indicated that lexical classes and discourse structure were systematically aligned with verbal morphology. The third research question investigated whether the patterns observed in learner narratives reflected the linguistic input provided by the instructional materials to which the learners had been exposed. Accordingly, the third research question aimed not only to identify the distributional patterns of lexical classes, discourse types, and verbal morphology in the learning materials but also to compare these findings with those obtained from learner narratives.

The dataset obtained from instructional materials consisted of 19,702 words, mirroring the word count of the learner narratives. From this dataset, a total of 1,882 verb tokens were identified, which is fewer than the 2,308 tokens recorded in the learner narratives. Following this, a reading-based type count was conducted to assess the contextual variety of predicate use, yielding 464 distinct predicate readings. In order to determine the underlying lexical variety, a separate lexeme-based count was performed, identifying 308

unique lexemes. Although both the number of predicate readings and the number of lexemes were lower than those observed in learner narratives, percentage-based comparisons revealed closely aligned proportions. Specifically, predicate readings in instructional materials constituted 24.65% of the total tokens, compared to 25.04% in learner narratives, while lexeme frequency accounted for 16.36% in instructional materials and 15.34% in learner narratives. A summary of these comparative results is presented in Table 4.18.

Table 4.18

Comparison of Word Count, Predicate Tokens, Readings, and Lexeme Types in Learner Narratives and Instructional Materials

	Frequency	Percentage
Learner Narratives		
Total Word Count	19,702	-
Predicate Token Count	2308	11.71 % of total words
Reading-Based Count	578	25.04 % of total tokens
Lexeme Type Count	354	15.34 % of total tokens
Instructional Materials		
Total Word Count	19,702	-
Predicate Token Count	1882	09.55 % of total words
Reading-Based Count	464	24.65 % of total tokens
Lexeme Type Count	308	16.36 % of total tokens

Following the token, type, and lexeme counts, the predicates identified in the instructional materials were analyzed in terms of their distribution across lexical classes, and the results were compared with those obtained from the learner narratives. A comparative overview of these distributions is provided in Table 4.19. Achievement predicates constituted the largest proportion in the instructional materials, representing 52.7% of all predicate tokens (n = 991 out of 1,882), closely aligned with their proportion in learner narratives (53.1%). Activity predicates ranked second in frequency, accounting for 28.1% (n = 529) of all tokens, slightly higher than the corresponding percentage in learner narratives (24.6%). Stative predicates followed with 14.0% (n = 263), again slightly higher than the 11.7% observed in learner narratives. Accomplishment predicates represented the

smallest share in instructional materials, comprising only 5.3% (n = 99), approximately half the share observed in learner narratives (10.6%).

Table 4.19

Distribution of Predicates Across Lexical Classes in the Learner Dataset and Instructional Dataset

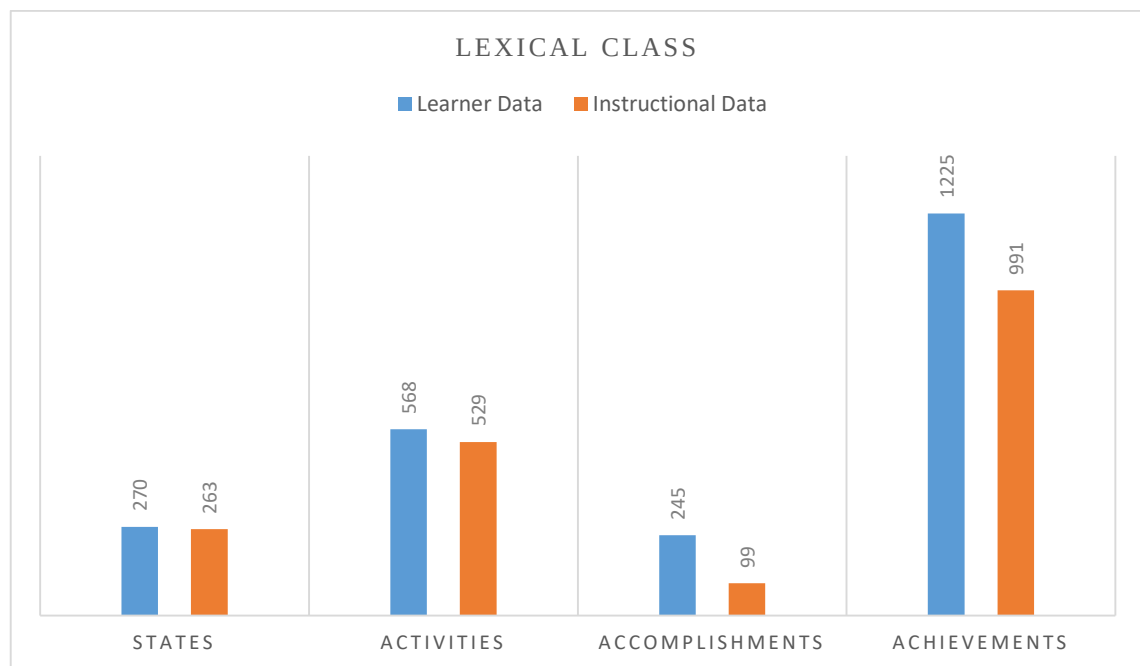
	States	Activities	Accomplishments	Achievements	Total
Learner Data					
Frequency	270	568	245	1225	2308
Percentage	11.7%	24.6%	10.6%	53.1%	100%
Instruction Data					
Frequency	263	529	99	991	1882
Percentage	14%	28.1%	5.3%	52.7%	100%

In terms of raw counts, activity predicates appeared in similar numbers across both datasets, with 568 instances in learner narratives and 529 in instructional materials. Similarly, stative predicates were recorded 270 times in learner narratives and 263 times in instructional materials. In contrast, learner narratives contained a notably higher number of achievement predicates (1,225 compared to 991 in instructional materials) and accomplishment predicates (245 compared to 99), contributing to the overall higher token count observed in the learner dataset. Despite minor differences in percentage values, the overall distributional pattern of lexical classes in learner narratives closely mirrors that of the instructional materials. In both datasets, Achievement predicates constituted the largest proportion, followed by Activities, States, and Accomplishments, respectively. This consistency in ranking suggests a parallel ordering of lexical class frequency across the two sources (see Figure 4.3).

The next stage of analysis focused on the distribution of morphology types in the instructional dataset, with a comparative perspective to learner data. One notable observation in the instructional data was the complete absence of Present and Base forms, which were present in the learner narratives and considered reflective of learners' developing interlanguage. Specifically, while the learner data contained 107 instances of Present morphology (4.6%) and 6 instances of Base forms (0.3%), no occurrences of either form were identified in the instructional materials.

Figure 4.3

Distribution of Predicates Across Lexical Classes in Learner and Instructional Datasets



With regard to the two primary morphology types—Past and Continuous—the instructional materials showed a higher proportion of Past-marked predicates, accounting for 92.7% ($n = 1,744$ out of 1,882), compared to 85.5% ($n = 1,974$) in the learner narratives. Although the absolute number of Past-marked predicates was higher in learner data, the relative percentage was greater in instructional materials. In contrast, Continuous morphology appeared less frequently in instructional data, with 138 instances (7.3%), compared to 221 instances (9.6%) in learner narratives. These frequency and percentage distributions are presented in Table 4.20.

While certain numerical differences were identified between the two datasets, the overall pattern remained consistent, with both datasets displaying a clear dominance of Past morphology over other forms.

Table 4.20*Frequency of Predicates Across Verbal Morphology Types in Learner and Instructional Datasets*

	Past	Continuous	Present	Base	Total
Learner Data					
Frequency	1974	221	107	6	2308
Percentage	85.5%	9.6%	4.6%	0.3%	100%
Instruction Data					
Frequency	1744	138	-	-	1882
Percentage	92.7%	7.3%	0%	0%	100%

Subsequently, the association between lexical classes and morphology types in the instructional dataset was examined using a Pearson Chi-square test, with the aim of determining whether the patterns observed mirrored those found in the learner data. The analysis was preceded by the cross-tabulation of the four lexical classes with the relevant morphology types. The cross-tabulation, demonstrating the interactions, is presented in Table 4.21.

Table 4.21*Cross tabulation of Predicates Across Lexical Classes and Verbal Morphology Types in Instructional Data*

	States	Activities	Accomplishments	Achievements	Total
Past Count	263	391	99	991	1744
Expected Count	243.7	490.2	91.7	918.3	1744
% for Morphology	15.1%	22.4%	5.7%	56.8%	100%
% for Aspects	100%	73.9%	100%	100%	92.7%
% for Total	14%	20.8%	5.3%	52.7%	92.7%
Continuous Count	0	138	0	0	138
Expected Count	19.3	38.8	7.3	72.7	138
% for Morphology	0%	100%	0%	0%	100%
% for Aspects	0%	26.1%	0%	0%	7.3%
% for Total	0%	7.3%	0%	0%	7.3%
Total	263	529	99	991	1882
Expected Count	263	529	99	991	1882
% for Morphology	14%	28.1%	5.3%	52.7%	100%
% for Aspects	100%	100%	100%	100%	100%
% for Total	14%	28.1%	5.3%	52.7%	100%

Within the instructional materials, predicates marked with Past morphology accounted for 92.7% of all verbal predicates. Among these, Achievement predicates constituted the largest share, representing 56.8% (n = 991) of all past-marked verbs. Activity predicates followed with 22.4% (n = 391), while Stative predicates accounted for 15.1% (n = 263). Accomplishment predicates were used the least frequently, comprising 5.7% (n = 99) of the total past-marked predicates, reflecting their relatively infrequent use in the instructional dataset. When compared to the learner narratives, the distribution pattern of lexical classes within Past morphology showed notable similarities. In both datasets, Achievement predicates constituted the dominant class, followed by Activities. However, in the instructional materials, Stative predicates occurred more frequently than Accomplishments, a pattern opposite to that observed in the learner narratives. Despite these differences, Achievement predicates remained the most frequently used class in past-marked contexts across both datasets.

With regard to predicates marked with Continuous morphology in the instructional materials, no instances of State, Accomplishment, or Achievement predicates were identified. All 138 occurrences of Continuous morphology were exclusively associated with Activity predicates. This complete alignment of Continuous aspect with Activity-type predicates mirrors the pattern observed in the learner narratives, where the same restriction of Continuous morphology to Activity predicates was also observed.

A within-lexical-class analysis further clarified the relationship between lexical classes and morphology types in the instructional data. As previously shown in Table 4.21, all 263 instances of stative predicates were marked with Past morphology, with no occurrences of Continuous morphology. This absence of continuous-marked statives corresponds directly to the pattern observed in the learner data. Similarly, all instances of both accomplishment and achievement predicates in the instructional dataset were marked exclusively with Past morphology, with no examples occurring in Continuous form—again, mirroring the distribution found in learner narratives.

In contrast, Activity predicates were marked with both Past and Continuous morphology. Of the total 529 activity predicates, 391 (73.9%) were marked with Past morphology, while 138 (26.1%) were marked with Continuous morphology. This distribution reflects a strong association between Continuous morphology and Activity predicates, while maintaining a predominant use of Past morphology within this lexical class. Overall, the

comparison of morphology distribution within lexical classes reveals a clear alignment between instructional data and learner narratives, further supporting the consistent association of morphology types with specific lexical categories.

The association observed in the cross-tabulation of lexical classes and morphology types within the instructional materials was further examined through a Pearson Chi-square test to determine the statistical significance of the relationship. The results of the analysis are presented in Table 4.22. A statistically significant association was found between the two variables, $\chi^2(3, N = 1882) = 380.885, p < .001$. The assumption of the test was satisfied, as no cells had an expected count less than 5.

Complementary statistical measures also supported the Chi-square result. The Likelihood Ratio test yielded $\chi^2 = 379.513, p < .001$, and the Linear-by-Linear Association test produced $\chi^2 = 101.715, p < .001$, both confirming the presence of a significant association. Measures of effect size were also calculated to assess the strength of this association. Both Cramér's V and Phi were computed as .450 ($p < .001$), indicating a statistically significant moderate to strong association between lexical classes and morphology types in the instructional dataset. When compared with the learner data, where the effect size was found to be .586, the instructional materials showed a slightly lower strength of association, although the relationship remained statistically significant in both datasets.

Table 4.22

Results of Chi-Square Test and Measures of Effect Size for the Association between Morphology Types and Lexical Classes in Instructional Dataset

Test/Measure	Value	df	Significance
Pearson Chi-square	380.885	3	.000
Likelihood Ratio	379.513	3	.000
Linear-by-Linear	101.715	1	.000
N of Valid Cases	1882		
Cramér's V	.450	-	.000
Phi	.450	-	.000

In addition to the association between lexical classes and morphology types, another significant association identified in the learner data was that between discourse types and lexical classes. This relationship had been examined prior to analyzing the association between discourse types and morphology types. To determine whether similar patterns were present in the instructional materials, the association between discourse and lexical classes was also analyzed in this dataset.

A cross-tabulation of discourse types and lexical classes revealed that background discourse was exclusively composed of State and Activity predicates. Specifically, 263 State predicates accounted for 65.6% of all background predicates, while 138 Activity predicates made up the remaining 34.4%. No instances of Accomplishment or Achievement predicates were observed in background contexts. This distribution closely mirrored the learner data, where State predicates also dominated the background, though to a slightly lesser extent (55.1%), with Activity predicates occupying a comparatively higher share.

In foreground contexts, State predicates were entirely absent. Achievement predicates constituted the majority, with 991 instances representing 66.9% of all foreground predicates. These were followed by 391 Activity predicates (26.4%) and 99 Accomplishment predicates (6.7%). The ordering of lexical classes in the foreground aligned precisely with the learner data, and the percentage of Achievement predicates was nearly identical (67.4%). However, the number of Accomplishment predicates was lower in instructional materials compared to learner narratives. Despite this variation, both background and foreground discourse in the instructional materials exhibited distributional patterns highly consistent with those observed in the learner data when analyzed from a horizontal perspective.

A vertical reading of the cross-tabulated data, focusing on the distribution of discourse types within each lexical class, showed that State predicates were used exclusively in background contexts, with no occurrences in foreground discourse. Similarly, both Accomplishment and Achievement predicates were observed only in foreground contexts, with no instances recorded in background discourse. These distributions for State, Accomplishment, and Achievement predicates aligned fully with the patterns observed in the learner data. Activity predicates, in contrast, appeared in both discourse types. Of all Activity predicates in the instructional materials ($n = 529$), 138 instances

(26.1%) occurred in background contexts, while 391 instances (73.9%) were used in foreground discourse. This dual distribution of Activity predicates mirrors the pattern found in the learner data, where 61.3% of Activity predicates were used in foreground contexts. Despite the slight difference in proportions, the within-class comparison confirmed that the distribution of lexical classes across discourse types in the instructional materials closely aligned with the learner data. The full distribution is presented in Table 4.23.

Table 4.23

Cross tabulation of Lexical Classes across Discourse Types in Instructional Data

	States	Activities	Accomplishments	Achievements	Total
Background Count	263	138	0	0	401
Expected Count	56.0	112.7	21.1	211.2	401
% for Lexical Class	100 %	26.1 %	0 %	0 %	21.3 %
% for Grounding	65.6 %	34.4 %	0 %	0 %	100 %
% of Total	14 %	7.3 %	0 %	0 %	21.3 %
Foreground Count	0	391	99	991	1481
Expected Count	207.0	416.3	77.9	779.8	1481
% for Lexical Class	0 %	73.9 %	100 %	100 %	78.7 %
% for Grounding	0 %	26.4 %	6.7 %	66.9 %	100 %
% of Total	0 %	20.8 %	5.3 %	52.7 %	78.7 %
Total	263	529	99	991	1882
Expected Count	263	529	99	991	1882
% for Lexical Class	100 %	100 %	100 %	100 %	100 %
% for Grounding	14 %	28.1 %	5.3 %	52.7 %	100 %
% of Total	14 %	28.1 %	5.3 %	52.7 %	100 %

A Pearson Chi-square test was conducted to statistically confirm the association observed in the cross-tabulation between discourse types and lexical classes in the instructional data. The analysis yielded a statistically significant result, $\chi^2(3, N = 1882) = 1273.669$, $p < .001$, providing robust evidence for the presence of an association between discourse structure and lexical class. The assumption of the test was met, since no cells had expected counts less than 5.

Additional statistical tests further supported the strength and reliability of this association. The Likelihood Ratio test resulted in $\chi^2 = 1342.488$, $p < .001$, and the Linear-by-Linear Association test produced $\chi^2 = 981.110$, $p < .001$. Measures of effect size were then examined to assess the strength of the association. Both Cramér's V and Phi coefficients were calculated as .823 ($p < .001$), indicating a statistically significant and strong relationship between discourse types and lexical classes. Notably, this effect size was identical to that found in the learner data (Cramér's V = .807), demonstrating a high degree of alignment between the two datasets. Overall, both the Chi-square test results and the associated effect size measures confirm that the operation of lexical classes across discourse types in instructional materials closely parallels the patterns identified in learner narratives.

Following the identification of a significant association between discourse types and lexical classes in the instructional data, an additional analysis was conducted to investigate the distribution of verbal morphology across discourse functions. To this end, Past and Continuous morphology types were cross-tabulated with foreground and background discourse categories in order to determine whether verbal morphology in the instructional data followed a pattern similar to that already observed for lexical classes in the learner narratives.

In background contexts, 263 predicates were marked with Past morphology, accounting for 65.6% of all background predicates, while 138 predicates (34.4%) were marked with Continuous morphology. While the learner data had shown nearly equal distributions of Past and Continuous forms in background discourse (227 and 220 instances, respectively), the instructional data reflected a stronger dominance of Past morphology. Nonetheless, both datasets confirmed that background discourse featured both Past and Continuous morphology types.

In contrast, all 1,481 predicates in foreground contexts were marked exclusively with Past morphology in the instructional data, with no instances of Continuous morphology observed. This finding supports the trend also seen in the learner data, in which foreground discourse was characterized solely by the use of Past morphology.

When the distribution of Past-marked predicates was evaluated across discourse types, 15.1% ($n = 263$) were found in background contexts, while the remaining 84.9% ($n = 1,481$) appeared in foreground contexts. These proportions closely resembled those

identified in the learner dataset. Similarly, the distribution of Continuous predicates was consistent across both datasets, with all 138 instances in the instructional data occurring exclusively in background contexts. The results of the cross-tabulation are presented in Table 4.24.

In sum, the cross-tabulation of discourse types and verbal morphology confirmed an identical pattern across instructional and learner datasets: Past morphology was primarily associated with foreground discourse, while Continuous morphology was restricted to background contexts.

Table 4.24

Cross tabulation of Morphology Types across Discourse Types in Instructional Data

	Past	Continuous	Total
Background Count	263	138	401
Expected Count	371.6	29.4	401
% for Grounding	65.6 %	34.4 %	100 %
% for Morphology	15.1 %	100 %	21.3 %
% of Total	14 %	7.3 %	21.3 %
Foreground Count	1481	0	1481
Expected Count	1372.4	108.6	1481
% for Grounding	100 %	0 %	100 %
% for Morphology	84.9 %	0 %	78.7 %
% of Total	78.7 %	0 %	78.7 %
Total	1744	138	1882
Expected Count	1744	138	1882
% for Grounding	92.7 %	7.3 %	100 %
% for Morphology	100 %	100 %	100 %
% of Total	92.7 %	7.3 %	100 %

A Pearson Chi-square test was conducted to determine whether the categories that appeared to be associated in the cross-tabulation of discourse types and morphology types were statistically related. The results of the Chi-square test, along with complementary statistical measures and effect size calculations, are presented in Table 4.25. The Pearson Chi-square test yielded a statistically significant result, $\chi^2(1, N = 1882) = 550.000$, $p < .001$, indicating a meaningful association between discourse and morphology types in the

instructional dataset. The assumption of the test was met, as no cells had expected counts less than 5.

Table 4.25

Results of Chi-Square Test and Measures of Effect Size for the Association between Discourse and Morphology Types in Instructional Dataset

Test/Measure	Value	df	Significance
Pearson Chi-square	550.000	1	.000
Likelihood Ratio	470.485	1	.000
Linear-by-Linear	549.708	1	.000
N of Valid Cases	1882		
Cramér's V	.541	-	.000
Phi	.541	-	.000

Additional tests further confirmed the presence of a statistically significant association. The Likelihood Ratio test produced $\chi^2 = 470.485$, $p < .001$, and the Linear-by-Linear Association test yielded $\chi^2 = 549.708$, $p < .001$. To evaluate the strength of the observed association, effect size measures were also calculated. Both Cramér's V and Phi coefficients were computed as .541 ($p < .001$), reflecting a statistically significant strong association between discourse structure and morphology type.

When compared to the learner data, in which the effect size had been reported as .639, the results from the instructional data indicated a slightly lower but still strong association. Overall, both the Chi-square outcomes and the effect size measures demonstrated a clear alignment between instructional and learner data with respect to the relationship between discourse types and verbal morphology.

The overall results addressing the third research question demonstrated a clear alignment between the learner data and the instructional materials. More specifically, the analysis of raw counts, the distribution of predicates across lexical classes and morphology types, the cross-tabulation of lexical classes with morphology types, the cross-tabulation of discourse types with lexical classes, and the cross-tabulation of discourse types with morphology types each revealed patterns that were highly consistent across both datasets. Furthermore, all corresponding Pearson Chi-square tests confirmed statistically

significant associations, providing additional support for the strong alignment observed between the learner narratives and the instructional input materials.

4.4 Additional Findings Concerning the Interlanguage of the Learners

The findings related to the three research questions have been detailed in the preceding sections. Nevertheless, both the learner and instructional datasets offered a wider scope of valuable insights that contribute to a more comprehensive understanding of interlanguage development and its relationship with instructional input. Accordingly, the supplementary findings, which emerged during the analysis and extend beyond those already reported, are presented here.

To begin with, a more refined examination of verb lexemes provides deeper insight into how verbal items function within the English interlanguage of learners, particularly when juxtaposed with instructional materials. As previously indicated, the learner corpus comprised 2,308 predicate tokens, drawn from 354 unique lexemes and exhibiting 578 distinct contextual uses. Although most verbs demonstrated no more than three semantic readings, twenty lexemes exhibited a greater degree of contextual variation.

As previously described in the *Methodology* chapter, the semantic interpretations of verb predicates were annotated using one of thirty-two unique combinations, generated through the intersection of four lexical aspect categories (abbreviated as *stat.*, *act.*, *acc.*, and *ach.*), four morphological types (*past*, *cont.*, *pres.*, and *base*), and two discourse grounding contexts (*b* and *f*). For the purposes of coding, these elements were systematically abbreviated to create composite labels such as *fpastact* or *bpresstat*. In the resulting case, among the twenty verbs in the learner data that displayed higher degrees of contextual variation, two verbs (*had* and *take*) occurred with seven distinct readings. Five verbs (*come*, *go*, *live*, *pass*, and *tell*) exhibited six readings; three verbs (*do*, *see*, and *think*) appeared in five readings; and ten verbs (*feel*, *get*, *hurt*, *like*, *look*, *play*, *run*, *say*, *sit*, and *stand*) occurred with four readings. An examination of their token frequencies revealed that a greater number of contextual readings did not necessarily correlate with higher frequency. For example, *take* appeared in seven different readings across 35 tokens, whereas *go* was used 199 times but had six readings. Among these verbs, *had* and *go* exceeded 100 instances, while *come*, *feel*, and *say* ranked among the next most frequent. Table 4.26 presents these twenty verbs, their token frequencies, and each distinct semantic reading observed in the learner corpus.

Table 4.26*Lexemes Exhibiting High Contextual Variability in the Learner Dataset*

Lexemes	Token Frequency	Readings
Have	115	bpaststat, bcontact, fpastact, fpastacc, fpastach, fpresact, bpresstat
Take	35	bcontact, fcontact, fpastact, fpastacc, fpastach, fpresact, fbaseacc
Come	85	bpaststat, bcontact, fpastacc, fpastach, fpresacc, fpresach
Go	199	bcontact, fpastact, fpastacc, fpastach, fpresacc, fbaseact
Live	12	bpaststat, bcontact, fpastacc, fpastach, bpresstat, fpresact
Pass	10	bpaststat, bcontact, fpastact, fpastacc, fpastach, fpresach
Tell	23	bcontact, fpastact, fpastacc, fpastach, fpresact, fbaseach
Do	20	bcontact, fpastact, fpastacc, fpastach, fpresact
See	50	bpaststat, fpastact, fpastacc, fpastach, fpresach
Think	46	bpaststat, bcontact, fpastact, fpastach, bpresstat
Feel	62	bpaststat, bcontact, fpastach, bpresstat
Get	24	bcontact, fpastacc, fpastach, fpresach
Hurt	13	bpaststat, bcontact, fpastact, fpastach
Like	11	bpaststat, fpastach, bpresstat, fpresach
Look	21	bpaststat, bcontact, fpastact, fpastach
Play	26	bcontact, fpastact, fpresact, fpresach
Run	16	bcontact, fpastact, fpastach, fpresact
Say	77	bcontact, fpastact, fpastach, fpresach
Sit	13	bcontact, fpastact, fpastach, fpresact
Stand	9	bpaststat, bcontact, fpastact, fpastach

As illustrated in the list of lexeme readings, the semantically rich verbs under analysis predominantly occurred with five frequent past morphology readings: *bpaststat*, *bcontact*, *fpastact*, *fpastacc*, and *fpastach*. In addition, several non-past forms employed to convey past temporal reference were also commonly observed, including *bpresstat*, *fpresact*, *fpresacc*, and *fpresach*. Table 4.27 provides representative examples of verbs marked with past morphology as they appeared in learner narratives. These examples illustrate the variation in morphological realizations of the twenty verbs and further clarify how individual lexemes behave across different temporal contexts in the dataset.

Table 4.27

Representative Examples of Semantic Readings for Past Morphology in the Learner Data

Readings	Samples from Learner Narratives
Have (bpaststat)	She <u>had</u> white hair and blue eyes (P7).
Have (fpastach)	My father <u>had</u> an accident at work (p26).
Have (bcontact)	We were <u>having</u> a wondrous time there until that day came (p61).
Take (fpastacc)	The teacher <u>took</u> me to his car and we went to doctor (p27).
Play (fpastact)	We <u>played</u> mobile games in the car (p13).
Come (fpastach)	After that, ambulance <u>came</u> (p18).
Come (fpastacc)	Then I <u>came</u> to school by walking through the campus garden (p73).
Go (fpastacc)	My mom said someone <u>went</u> to hospital with me (p1).
Go (fpastach)	... and then she <u>went</u> out of the school (p17).
Take (fcontact)	... our soldiers are <u>taking</u> this food to that aunt (p41).
Tell (fpastach)	I <u>told</u> him I could not ... (p12).
Tell (fpastact)	I <u>told</u> my teacher what happened to me (p60).
Live (bpaststat)	We <u>lived</u> in a small village with our relatives (p35).
Live (fpastach)	...I <u>lived</u> colossal event for a child who is at that age (p61).

As illustrated in Table 4.27, the verb *have* is represented with three semantically distinct readings. The first usage denotes possession of physical attributes, aligning with the category of States and typically situated in background contexts. In contrast, the second instance, *have an accident*, refers to a punctual event and is thus classified as a Foreground Achievement. The third usage, *have a wondrous time*, reflects an extended activity and is categorized as a Background Activity. The phrase *took me to his car* exemplifies an event with a clear endpoint, which qualifies it as a Foreground Accomplishment. The phrase *played mobile games* serves as a representative case of a Foreground Activity in the past tense.

For motion verbs such as *come* and *go*, both Accomplishments and Achievements are observed, with punctuality serving as the primary distinguishing factor. Instances like *ambulance came* or *she went out of the school* depict punctual events and are categorized as Achievements, whereas expressions such as *came to school* or *went to hospital* describe temporally extended actions with endpoints, thus fitting the Accomplishment category. The verb *tell* demonstrates a similar bifurcation: when referring to a brief utterance, it is

treated as an Achievement, whereas narrating extended content, such as a story or personal experiences, classifies it as an Activity.

A comparable semantic distinction is evident in two readings of the verb *live*. The phrase *lived in a small village* conveys a static condition and is identified as a Background State. In contrast, *lived a colossal event* reflects an interpretation likely influenced by negative L1 transfer from Turkish, where the verbs *live* and *experience* are expressed by the same lexical item; this leads the learner to use *live* in the context requiring *experience*, thereby producing a punctual, telic sense and qualifying as a Foreground Achievement. Notably, the sole instance of Foreground Continuous marking in the dataset appears in the phrase *are taking this food*, which reflects the use of present morphology typically in a foregrounding narrative context to describe a past event—commonly referred to as the historical present.

Collectively, these instances demonstrate the diversity of semantic readings attributed to the twenty most variably used verbs in the learner corpus and provide insight into how these readings manifest in authentic learner production.

For comparative analysis, the verbs with the highest number of semantic readings in the instructional dataset are examined in this section. As previously indicated, the instructional corpus comprised 1,882 tokens, encompassing 308 distinct verb lexemes, which were annotated with 464 different contextual readings. While the majority of verbs displayed a maximum of three semantic readings, only seven verbs exhibited a broader range of interpretations. Notably, these seven semantically rich verbs also appeared among the top twenty verbs in the learner corpus. The remaining thirteen verbs identified in the learner data, however, did not maintain similar variability in the instructional texts, having lost their present morphology readings and thus becoming less contextually diverse.

Among the instructional data, *do* and *have* each demonstrated five distinct readings, while *get*, *go*, *look*, *take*, and *think* displayed four readings. When compared to their counterparts in the learner data, four verbs (*go*, *have*, *take*, and *think*) showed a reduction in contextual variability, whereas three verbs (*do*, *get*, and *look*) retained the same number of readings. Consistent with findings from the learner corpus, a higher token frequency did not necessarily correspond to a greater number of semantic readings. For example, while *have*, *go*, and *think* occurred less frequently in the instructional materials, the other

four verbs appeared more frequently. Table 4.28 summarizes the token frequencies and contextual readings of these seven verbs across both corpora.

Table 4.28

Lexemes with High Contextual Variability in Instructional Dataset and the Counterparts in Learner Data

Instructional Lexemes	Token Frequency	Readings
Have	64	bpaststat, bcontact, fpastact, fpastacc, fpastach
Do	25	bpaststat, bcontact, fpastact, fpastacc, fpastach
Get	45	bcontact, fpastact, fpastacc, fpastach
Go	51	bcontact, fpastact, fpastacc, fpastach
Look	38	bpaststat, bcontact, fpastact, fpastach
Take	42	bcontact, fpastact, fpastacc, fpastach
Think	35	bpaststat, bcontact, fpastact, fpastach
Learner Lexemes	Token Frequency	Readings
Have	115	bpaststat, bcontact, fpastact, fpastacc, fpastach, fpresact, bpresstat
Do	20	bcontact, fpastact, fpastacc, fpastach, fpresact
Get	24	bcontact, fpastacc, fpastach, fpresach
Go	199	bcontact, fpastact, fpastacc, fpastach, fpresacc, fbaseact
Look	21	bpaststat, bcontact, fpastact, fpastach
Take	35	bcontact, fcontact, fpastact, fpastacc, fpastach, fpresact, fbaseacc
Think	46	bpaststat, bcontact, fpastact, fpastach, bpresstat

Following the analysis of semantic readings involving past morphology, a closer investigation into the use of present morphology for expressing past-time reference also yields valuable insights into the contextual factors influencing its distribution. The present morphology was observed in forty-one instances associated with Stative predicates occurring in Background contexts, while sixty-six instances corresponded to Activities, Accomplishments, and Achievements situated in Foreground. A detailed examination of these present-tense predicates indicates that Background uses are largely attributable to stative verb selection, whereas Foreground uses can be primarily explained by subordination and instances of the historical present. Table 4.29 presents illustrative examples from the learner narratives to clarify these contextual motivations.

Table 4.29*Examples of Present Morphology Used for Past Reference and Their Contextual Motivations*

Samples from Learner Narratives	Motivation
We had one very important problem. We <u>haven't</u> hotel or house (P24).	States
I thought we <u>are</u> very close and our friendship <u>last</u> forever (p29).	States
I was at university. There <u>are</u> a lot of students around the garden (p33).	States
Only he <u>believe</u> it (p38).	States
There <u>aren't</u> any cars and people at that hour (p58).	States
...but this job didn't go as we <u>think</u> (p79).	States
I <u>sit</u> in a canteen to spend my time (p10).	Historical Present
My parents and I <u>wake up</u> earlier (p14).	Historical Present
I made a bit problem but she <u>convince</u> me (p17).	Historical Present
The weather was rainy then my shoes <u>get</u> wet (p24).	Historical Present
Finally, the doctor <u>come</u> (p26).	Historical Present
Then we <u>turn</u> off the lamps and I went to bed (p31).	Historical Present
I took the ball and I <u>give</u> them (p39).	Historical Present
... and then, they <u>distribute</u> food (p41).	Historical Present
... but then they <u>realize</u> that...(p41).	Historical Present
I remembered how much shy I <u>am</u> (p17).	Subordination
When the door ring <u>play</u> , I woke up (p26).	Subordination
I didn't know what <u>can</u> I do (P29).	Subordination
I though what kind of situation this <u>is</u> (p29).	Subordination
She told my father we <u>have</u> to go to hospital urgently (p30).	Subordination
Could I jump with this bicycle when I <u>bike</u> (p35).	Subordination
Teacher gave us armbands so that we <u>can</u> stay on the surface (p49).	Subordination
While we <u>keep</u> playing, a friend of mine came running to us (p61).	Subordination
She was happy that I <u>wake up</u> (p72).	Subordination

As demonstrated in the table, stative verbs marked with present morphology were predominantly utilized to convey background information, whereas dynamic predicates—namely Activities, Accomplishments, and Achievements—were employed to progress the narrative. These instances constitute typical examples of the historical present, which was found to be primarily associated with the use of Activity and Achievement predicates ($n = 27$ and 30 respectively). Interestingly, one participant (p41) composed the main narrative only utilizing predicates in historical present. Cases involving subordination featured both stative and dynamic verbs, irrespective of their

discourse grounding. Notably, all examples of subordination indicated that learners consistently used present-tense forms within subordinated clauses, while the corresponding main clauses were appropriately marked with past morphology.

In both the learner and instructional corpora, present morphology was also employed to convey events situated in the present or future. Although the analysis of these constructions extends beyond the primary scope of the study, documenting such instances offers additional insight into learners' interlanguage development and the structuring of narrative discourse. A closer examination revealed that present-tense forms fulfilled a range of discourse functions across both datasets. Table 4.30 provides illustrative examples of present morphology and its associated discourse roles as observed in personal narratives.

Table 4.30

Examples of Present Morphology Used for Present Reference and Their Discourse Functions

Samples from Learner Narratives	Functions
People <u>stew</u> in one's own juice and I have a memory about this (p28).	Proverbial Intro
Today I <u>am</u> going to tell you an incident that I <u>am</u> very saddened by (p44).	Specific Intro
Learning something new <u>can</u> be scary and difficult (p49).	General Intro
My cousin <u>is</u> a police and <u>live</u> in ... (p24).	Background Info
This house <u>is</u> in a very safe neighborhood (p51).	Background Info
Life <u>is</u> short (p14).	Lesson
If you <u>have</u> good people in your life, you <u>should</u> never neglect them (p14).	Lesson
If you <u>don't</u> trust anybody, they <u>can</u> never hurt you (p29).	Lesson
If you <u>upset</u> someone, they <u>will</u> upset you too (p28).	Lesson
It <u>is</u> an interesting memory for me (p21).	Summary
Samples from Instructional Materials	Functions
I <u>am</u> Spanish.	Background Info
Sakura <u>are</u> light pink flowers that <u>arrive</u> in spring on cherry trees.	Background Info
I <u>love</u> this picture.	Summary
... and we now <u>have</u> a beautiful daughter called Beth.	Present Situation
I <u>remember</u> the Good Ticket Inspector on that late-night train to Peterborough.	Reflections

The first identified function of present morphology was to introduce the narrative. This use was exclusively found in the learner narratives. While many of these introductory

sentences were generic in nature, some participants employed more specific or personalized openings. Remarkably, a few learners utilized proverbial expressions to craft a more compelling entry into their stories. The second function involved the provision of background information regarding individuals, objects, settings, and similar contextual elements. This function was observed consistently across both learner and instructional datasets. Another notable function was the use of present morphology to conclude narratives. These conclusions typically manifested in the form of summaries, reflective remarks, updates on the present situation, or statements conveying lessons learned. Although this concluding function appeared in both datasets, the instructional materials notably lacked references to personal lessons or reflections.

Two additional predicate types—quoted predicates and copular constructions—were excluded from the primary analyses due to their limited relevance to the research objectives. In the learner narratives, the combined number of present-tense and quoted predicates totaled 399, while copular constructions appeared in 564 instances. Thus, the total number of predicates in the learner dataset amounted to 3,271, of which 2,308 tokens were subjected to analysis. Similarly, the instructional narratives included 308 present and quoted predicates, closely aligning with the learner data in terms of frequency. However, the number of copulas was comparatively lower, with 476 instances identified. Altogether, the instructional data comprised 2,666 predicates, of which 1,882 tokens were included in the analyses. These excluded predicate counts are reported here for the purpose of completeness and to enable a more comprehensive comparison between the two datasets.

5. CONCLUSION, DISCUSSION AND SUGGESTIONS

This chapter has been structured into three principal sections: Conclusion, Discussion, and Suggestions. The Conclusion section offers a concise synthesis of the study's core components, including its primary objectives, methodological framework, and key findings. The Discussion section provides both a brief summary and a comprehensive interpretation of the results, situating them within the broader context of pertinent theoretical and empirical literature. Lastly, the Suggestions section articulates the theoretical and pedagogical implications of the findings, addresses the limitations related to both content and methodology, and proposes directions for future research.

5.1 Conclusion

The present study primarily aimed to deepen the understanding of interlanguage patterns among Turkish EFL learners by exploring the interplay between inherent aspect, verbal morphology, and discourse grounding in their written narratives. Drawing upon the theoretical frameworks of the Aspect Hypothesis (AH), Discourse Hypothesis (DH), and Distributional Bias Hypothesis (DBH), the study investigated the extent to which learners' written productions reflect or diverge from prototypical temporality pairings. In addition, it examined how these patterns correspond to those presented in instructional materials. Accordingly, the study addressed three research questions concerning: (1) the aspectual distribution of predicates, (2) the relationship among lexical aspect, verbal morphology, and discourse grounding, and (3) the structural alignment between learner output and instructional input.

To fulfill these aims, a corpus-based methodology was adopted, comprising 88 learner narratives (19,702 words) and instructional data drawn from two course books and a graded reader (19,702 words). All finite predicates within both datasets were systematically annotated with respect to their lexical class, verbal morphology, and discourse function. Frequency analyses and chi-square tests were conducted to identify descriptive and statistical associations among the variables, while one-way ANOVA tests offered additional insight into individual variance. This methodological approach enabled a comprehensive examination of the predicted relationships both within and across the two corpora.

The findings lent empirical support to the central claims of both AH and DH. Achievements and Accomplishments occurred in foregrounded discourse and were

predominantly marked with past morphology, whereas Stative predicates appeared exclusively in background contexts and were primarily inflected with past forms. Activities, by contrast, demonstrated a dual distribution across discourse types, marked by either past or progressive morphology depending on grounding. The robust statistical associations observed in the three-way interaction among lexical aspect, verbal morphology, and grounding confirmed the presence of systematic form-function pairings in learner interlanguage. These results affirm the applicability of AH and DH in the context of Turkish EFL learners and contribute to a more nuanced understanding of how temporality is encoded in personal narratives by Turkish learners.

A notable contribution of the study lies in the observed alignment between learner output and instructional materials. The analysis of instructional input revealed prototypical pairings that closely mirrored those found in learner narratives. This parallelism confirms the predictions of DBH and underscores the role of input distributions in shaping interlanguage development. Critically, the absence of non-prototypical mappings in instructional materials was reflected in learner output, suggesting that the flexibility of form-function pairings may be constrained by the boundaries set through instruction.

Overall, the study addresses a significant gap in the literature by demonstrating a pronounced structural convergence between instructional input and learner output. Furthermore, it advances our understanding of the interlanguage system by evidencing that Turkish EFL learners apply the predicted aspectual and grounding restrictions in a systematic manner, thereby validating the explanatory scope of AH and DH. The observed convergence between two corpora offers compelling empirical support for usage-based approaches in SLA and highlights the pedagogical implications of input design. The findings suggest that learner language is shaped not only by internal developmental mechanisms but also by the form-function patterns modeled in instructional input.

5.2 Discussion

This section presents a comprehensive summary and discussion of the findings in relation to the research questions posed in the study. To facilitate a clearer and more structured presentation, the content is organized under distinct subheadings corresponding to each research question. Within each section, the findings are first summarized, followed by

theoretical interpretations, and subsequently complemented with references to relevant empirical studies that support or contrast the observed patterns.

5.2.1 A summary and discussion of the findings regarding first research question

The analysis of 88 learner narratives, comprising a total of 19,702 words, yielded 2,308 predicate tokens, which were classified into four lexical aspectual categories. Among these, Achievements emerged as the most frequently occurring class (53.1%), followed by Activities (24.6%), States (11.7%), and Accomplishments (10.6%). The morphological analysis of each lexical category revealed distinctive distributional tendencies:

1. Stative predicates were predominantly inflected with past morphology (84.1%), while present forms accounted for 15.2%, and base forms constituted only 0.7%. No stative predicates were marked with continuous morphology, indicating a strong learner preference for pairing stative predicates with past-tense forms.
2. Activity predicates displayed a more varied morphological profile: 56.2% were marked with past morphology, 38.9% with progressive, 4.8% with present, and 0.2% with base forms. These results suggest that both perfective and progressive forms were commonly applied to activity predicates.
3. Accomplishments were overwhelmingly marked with past morphology (95.9%), with limited instances of present (3.7%) and base (0.4%) forms. Notably, no accomplishment predicates were found to co-occur with progressive morphology, reflecting a strong alignment with perfective marking.
4. Achievements showed the most categorical distribution: 97.4% were inflected with past morphology, while only 2.4% occurred with present and 0.2% with base forms. No instances of progressive morphology were observed, marking Achievements as the most strongly associated with past-tense forms among the four categories.

These clear lexical aspect–morphology pairings were statistically supported by a Pearson Chi-square test, which confirmed a significant association between predicate class and verbal morphology ($\chi^2(3, N = 2195) = 753.154, p < .001$), with a strong effect size (Cramér's $V = .586$). To capture individual variation more precisely, a one-way ANOVA was also conducted, focusing on predicate frequency within past and continuous

morphologies across lexical classes. The test revealed significant differences ($F(3, 1404) = 38.236, p < .001$), reinforcing the initial findings by demonstrating a statistically meaningful distribution pattern influenced by lexical aspect.

The first research question sought to explore the relationship between inherent aspectual properties of predicates and the morphological choices learners make in narrative production, thereby situating the inquiry directly within the framework of the Aspect Hypothesis (AH). This line of investigation follows the conceptual tradition of Robison (1990; 1995), Andersen (1991), and Shirai and Andersen (1994), who interpret interlanguage development in terms of the alignment between grammatical and inherent aspect.

By employing Vendler's (1967) four-way classification, the present study adheres to the foundational assumptions of AH while extending its application to Turkish EFL learners in a narrative production context. This predicate-level approach increases comparability with prior studies adopting similar analytical designs (e.g. Collins, 2002; Salaberry, 2011; Shirai, 2013). Moreover, the use of robust statistical procedures, including both Chi-square and ANOVA, aligns with methodological recommendations in Salaberry (2011), Bardovi-Harlig (2012), Domínguez et al. (2013), and thereby enhancing the generalizability and credibility of the findings.

From an empirical standpoint, the results confirm existing trends in the literature. Achievements, the most frequent predicate class in this corpus, were strongly associated with past morphology, replicating core findings from earlier AH-based research (e.g. Robison, 1990; 1995, Andersen, 1991; Bardovi-Harlig, 2012). The high frequency and consistency of past marking for Achievements also reflect the prototype effect posited in early AH literature, as reaffirmed in Howard (2004), Salaberry (2011) and Domínguez et al. (2013).

Although Accomplishments appeared least frequently, their overwhelming co-occurrence with past forms reinforced the telic-perfective mapping also observed for Achievements. This result is consistent with previous research highlighting the perfective association of accomplishments (e.g. Comajoan, 2013; Salaberry & Comajoan, 2013; Gonzalez & Quintana, 2018).

Activity predicates, comprising nearly one-fourth of the dataset, exhibited a dual morphological distribution: 56.2% with past, and 38.9% with progressive marking. This

split reflects findings in studies such as Giacalone Ramat (2002), Muñoz & Gilabert (2011), and Vraciu (2013), which reported that activities may function both as telic and atelic predicates, appearing with either perfective or progressive forms.

When examined within the progressive category, a noteworthy pattern emerged: progressive morphology appeared exclusively with Activities and was not extended to any telic verb types. This finding contrasts with studies such as Bardovi-Harlig (1998) and Chan et al. (2013), where progressive inflection also extended, though infrequently, to telic predicates. As discussed in the Methodology chapter, this divergence may be attributable to the study's coding procedures, whereby borderline telic predicates were classified as Activities. Supporting this methodological stance, Shirai and Andersen (1995) noted that certain predicates may exhibit surface-level telicity but behave aspectually as atelic, justifying their classification as Activities. The present findings align with prototype-based mappings observed in Collins (2002) and Chan et al. (2012), reinforcing the notion that early acquisition follows prototypical associations.

Stative predicates in the learner corpus were largely marked with past forms (84.1%), with a significant share also appearing in present form (15.2%). This relatively high past-marking rate diverges from AH-based studies where statives were rarely marked with past forms (e.g. Robison, 1995; Salaberry, 2011). However, the current findings correspond with results reported by Ayoun & Salaberry (2008) and Zhao & Shirai (2018), which also noted regular past inflection on statives elicited in production tasks. A within-past morphology analysis across lexical classes identified statives as the least frequent class carrying past morphology, in line with AH's core predictions (Andersen & Shirai, 1996). Similarly, a within-present morphology reading showed statives to be most frequently used in present form (38.3%), consistent with early AH observations (e.g. Antinucci & Miller, 1976; Collins, 2004).

In terms of statistical strength, the Chi-square and ANOVA tests confirmed that learners' morphological choices are significantly shaped by the lexical aspectual nature of predicates. The effect sizes observed in this study are comparable to those reported in Ayoun & Salaberry (2008) and Salaberry (2011), affirming the predictive value of AH in the context of Turkish EFL learners.

In conclusion, the findings for the first research question demonstrate a strong and systematic relationship between lexical aspect and verbal morphology. Turkish EFL

learners in this study were found to follow prototypical AH-predicted mappings with considerable regularity, offering robust empirical support for the applicability of the Aspect Hypothesis in a production-based foreign language learning context.

5.2.2 A summary and discussion of the findings regarding second research question

The second research question was addressed through two distinct lines of inquiry: the association between lexical aspectual classes and discourse grounding, and the relationship between verbal morphology and discourse structure. From the total of 2,308 predicate tokens identified in the corpus, 1,818 tokens (78.8%) were embedded in foreground clauses, while 490 tokens (21.2%) appeared in background contexts.

The analysis of the interaction between lexical aspect and grounding revealed consistent and categorical distribution patterns:

1. Stative predicates occurred exclusively in background contexts ($n = 270$, 100%).
2. Accomplishments ($n = 245$, 100%) and Achievements ($n = 1,225$, 100%) appeared solely in foregrounded discourse.
3. Activity predicates were the only lexical class distributed across both discourse layers, with 38.7% ($n = 220$) occurring in background and 61.3% ($n = 348$) in foreground.

The association between lexical aspect and discourse grounding was confirmed as statistically significant through a Pearson Chi-square test ($\chi^2(3, N = 2308) = 1502.000, p < .001$), with a very strong effect size (Cramér's $V = .807$). One-way ANOVA results further substantiated these findings: in background discourse, only States and Activities were present, while telic predicates were completely absent, $F(3, 1404) = 36.974, p < .001$. Conversely, foreground discourse excluded only States and was predominantly composed of Achievements, followed by Activities and Accomplishments, $F(3, 1404) = 58.172, p < .001$.

The second analytical strand focused on the distribution of verbal morphology across discourse types, revealing the following patterns:

1. Past morphology overwhelmingly co-occurred with foreground clauses ($n = 1,747$, 88.5%), with a smaller portion appearing in background ($n = 227$, 11.5%).

2. Progressive morphology was almost exclusively found in background discourse, with 220 of 221 tokens (99.5%) marked in that context.
3. Present morphology was more evenly distributed across discourse types: 61.7% (n = 66) in foreground and 38.3% (n = 41) in background.
4. Base forms were exceedingly rare (n = 6) and insufficient for meaningful statistical interpretation, though a 66.7% occurrence in foreground and 33.3% in background was observed.

A Pearson Chi-square test also confirmed a statistically robust relationship between verbal morphology and discourse grounding ($\chi^2(3, N = 2308) = 941.544, p < .001$), with a strong effect size (Cramér's $V = .639$). Subsequent ANOVA analyses demonstrated that past morphology was significantly more frequent in foreground discourse ($M = 4.96$) than in background ($M = 0.64$), $F(1, 704) = 137.763, p < .001$. Conversely, progressive morphology was notably more frequent in background ($M = 0.625$) than in foreground ($M = 0.028$), $F(1, 704) = 50.052, p < .001$.

When both analytical strands are considered together, a more comprehensive mapping emerges. Stative predicates, confined to background contexts, were predominantly marked with past morphology, with occasional present-tense usage. Accomplishments and Achievements occurred exclusively in foreground positions and were consistently inflected with past morphology. Activities, however, displayed a dual distribution: in background, they were predominantly marked with progressive forms, typically serving descriptive or supportive discourse functions; in foreground, they were mainly marked with past morphology, contributing to narrative progression. These patterns provide compelling evidence of a three-way interaction among lexical aspect, verbal morphology, and discourse structure in the interlanguage of Turkish EFL learners.

Empirically, the findings align well with prior research. The exclusive use of Achievements and Accomplishments in foreground discourse, consistently marked with past morphology, supports longstanding claims that foreground clauses are responsible for advancing narrative events, and are typically composed of telic and bounded predicates (e.g. Bardovi-Harlig, 1998; 2012; Howard, 2004; Comajoan, 2005; Domínguez et al., 2013). Likewise, the observation that Stative predicates appeared only in background discourse and were mostly marked with past morphology resonates with findings from studies that either did not differentiate past Statives from other Past

categories (Salaberry, 2011) or reported a higher number of past-marked States (Ayoun & Salaberry, 2008; Zhao & Shirai, 2018).

Although the Aspect Hypothesis traditionally associates past morphology with telic predicates, the current results—indicating regular past marking on Statives—may be accounted for in two ways. First, as noted by Montrul & Salaberry (2003) and Salaberry (2011), past morphology on stative verbs in English may fulfill an imperfective function, akin to the Spanish imperfect. Since English lacks a dedicated imperfective marker for Statives, the past tense may serve as the default imperfective equivalent. Under this interpretation, past Statives in background clauses align with the predicted AH and DH patterns, in which background is typically expressed through imperfective forms. Furthermore, a frequency comparison of Past States to telic verbs in past, as common in early studies (e.g. Ayoun & Salaberry, 2008; Zhao & Shirai, 2018), might be irrelevant since they might function differently. Second, some studies (e.g. Shirai, 1997; Salaberry, 1999) have suggested that learners may resort to past morphology as a default tense, using it simply to express past-time reference. Given the low number of present-marked States in the data, learners in this study may have moved beyond the initial influence of lexical aspect. Nonetheless, both explanations are well-documented in the literature and provide coherent justifications for the present findings regarding Stative predicates.

The dual distribution of Activity predicates, present in both discourse layers, was reflected in their morphological realization: past morphology in foreground and progressive morphology in background. This dual pattern corresponds with findings from Collins (2002), Bardovi-Harlig (2012), and Vraciu (2013), which argue that Activities may serve both as durative background elements and dynamic foreground events depending on discourse function. The current data further support the position that semantic flexibility allows Activity predicates to alternate between narrative and descriptive roles (Michaelis, 2004; Vraciu, 2013).

In terms of morphology, the exclusive appearance of progressive forms in background discourse provides strong empirical support for a key prediction of the Discourse Hypothesis: that background information is typically encoded using imperfective aspect (Bardovi-Harlig, 1998; Comajoan, 2013; Domínguez et al., 2013). Similarly, the predominance of past morphology in foreground contexts confirms previous corpus and

narrative research indicating that perfective forms are generally used to mark bounded, sequential events in learner narratives (Howard, 2004; Comajoan, 2005; Salaberry, 2011). Importantly, unlike previous studies that reported occasional uses of progressive morphology with telic predicates (e.g. Shirai, 2013; Vraciu, 2013), the present study found no instances of Accomplishments or Achievements marked with progressive forms. This suggests a particularly robust adherence to form–function mappings among Turkish EFL learners. In sum, the three dominant interaction patterns observed—past-marked Statives in background, progressive-marked Activities in background, past-marked Activities and telic predicates in foreground—demonstrate that learner production in this context closely aligns with the theoretical predictions of both the Aspect Hypothesis and the Discourse Hypothesis.

5.2.3 A summary and discussion of the findings regarding third research question

The analysis of the instructional materials, encompassing a corpus of 19,702 words, yielded a total of 1,882 predicate tokens. Among these, Achievements emerged as the most frequent lexical category (52.7%), followed by Activities (28.1%), States (14%), and Accomplishments (5.3%). This ranking mirrors the distribution found in the learner dataset, where the same hierarchical order was observed. However, a closer comparison reveals subtle deviations: States were produced at a slightly lower portion (11.7%) while Accomplishments were significantly higher in number in learner data (10.6%).

In terms of verbal morphology, the instructional materials exhibited a markedly constrained range of forms. Past morphology overwhelmingly dominated the data, accounting for 92.7% of all tokens, while progressive morphology constituted the remaining 7.3%. Notably, no instances of present or base forms were identified in instructional input, in contrast to the learner corpus, which included 107 present-marked tokens and 6 base forms. These findings may reflect the presence of non-target-like or interlanguage-specific forms in learner production that were absent from the input.

The distribution of verbal morphemes across lexical classes in instructional materials demonstrated a highly structured pattern. All instances of States, Accomplishments, and Achievements were marked exclusively with past morphology. Likewise, all Activity predicates co-occurred solely with progressive morphology, with no instances of progressive marking applied to telic or stative predicates. This distribution closely paralleled the learner data, which similarly showed no overextensions of progressive

morphology and reflected the same morphological profiles for Activities. A Pearson Chi-square test confirmed a statistically significant relationship between lexical aspect and verbal morphology in the instructional data ($\chi^2(3, N = 1882) = 380.885, p < .001$), with a moderate-to-strong effect size (Cramér's $V = .450$). Although still substantial, this association was slightly weaker than that found in the learner dataset (Cramér's $V = .586$).

The distribution of lexical aspectual classes across discourse grounding in instructional materials also revealed a high degree of consistency with learner output. Stative predicates were confined to background clauses, while Accomplishments and Achievements occurred exclusively in foreground contexts. Activities were distributed across both discourse levels, with 26.1% occurring in background and 73.9% in foreground. These distributions across discourse types aligned almost perfectly with learner narratives, where Activities showed a slightly more balanced distribution (61.3% in foreground). A Chi-square analysis confirmed a strong and statistically significant association between lexical class and discourse structure ($\chi^2(3, N = 1882) = 1273.669, p < .001$), with a very high effect size (Cramér's $V = .823$), nearly identical to that in the learner data (Cramér's $V = .807$).

Further analysis explored the association between verbal morphology and grounding in the instructional data. Here, all predicates marked with progressive morphology were found exclusively in background contexts, while a substantial majority (84.9%) of predicates inflected with past morphology occurred in foreground positions. This pattern mirrored the findings from learner narratives with remarkable precision. A Chi-square test supported the significance of this relationship ($\chi^2(1, N = 1882) = 550.000, p < .001$), and the effect size (Cramér's $V = .541$) was only marginally lower than that observed in the learner corpus (Cramér's $V = .639$). The results again confirmed that the morphology-grounding pairings in instructional input are both structurally and statistically aligned with learner output.

In conclusion, the analysis of instructional materials revealed that nearly all morphological, lexical, and discourse-level pairings observed in learner data were also present in input. Moreover, the data provided internal validation for the three-way interaction among inherent lexical aspect, verbal morphology, and discourse grounding. The statistical tests conducted to explore these interrelationships confirmed that the

observed distributions were not arbitrary but rather reflected systematic structural convergence between the input learners are exposed to and the output they produce.

The investigation pursued under the third research question builds upon and extends a well-established tradition in Second Language Acquisition (SLA) research, which foregrounds the role of input frequency and form-function alignment in shaping interlanguage development. While the Distributional Bias Hypothesis (DBH) proposed by Andersen and Shirai (1994) provides a seminal framework linking instructional input to learners' morphological choices, the present study contributes to the broader body of research that identifies instructional salience and frequency as central determinants of morphological acquisition.

A range of studies—such as Bardovi-Harlig (1998), Camps (2005), Salaberry (2011), and Dominguez et al. (2013)—have demonstrated that learner output reflects not only prototypical form-function associations (e.g. the pairing of progressive morphology with activity predicates) but also the distributional prominence of these pairings in the input to which learners are exposed. Bardovi-Harlig (1999) has argued that the acquisition of subtle distinctions is unlikely in the absence of frequent or salient instructional representations. In parallel, Salaberry (2011) has shown that instructional emphasis on specific pairings may result in their overrepresentation in learner language. These findings collectively support the theoretical view that instructionally available tense-aspect mappings exert a decisive influence on learner production, sometimes outweighing predictions based on processing complexity.

Within this research trajectory, the present study offers compelling evidence of a near-complete structural alignment between learner and instructional data across three interrelated dimensions: lexical aspect, verbal morphology, and discourse grounding. In line with the calls by Comajoan (2005) and Bardovi-Harlig (2012) for more input-sensitive research designs—especially those that incorporate written pedagogical materials—the current study confirms that learners reproduce instructional distributions, even prior to full conceptual mastery (Ishida, 2004; Li & Shirai, 2000; Chan et al., 2012). As such, the data presented here serve as further empirical validation of the formative role of input in establishing systematic structural mappings within interlanguage, as envisaged by DBH and broader usage-based SLA theories.

With respect to aspectual contrasts, prior research has consistently shown that instructional materials tend to reinforce prototypical associations. Investigations by Robison (1990; 1995), Collins (2002), and Giacalone Ramat (2002) confirm that learners predominantly associate past morphology with telic predicates and progressive morphology with activities. More recent findings by Vraciu (2013) and Daidone (2019) echo this trend, emphasizing the abundance of such prototypical mappings in instructional input and their impact on learners' internal grammars.

However, Bardovi-Harlig (2012) and Shirai (2013) have raised concerns about the absence of non-prototypical pairings—such as progressive morphology on accomplishments—arguing that such gaps limit learners' flexibility in form-function associations. The findings of the current study substantiate this concern: the absence of non-prototypical structures in instructional materials is clearly mirrored by a similar restriction in learner output. As Ishida (2004), Camps (2005), and Salaberry (2011) note such shortfalls lead learner language to be restricted to what has been modeled.

This parallelism has also been highlighted in previous empirical work—such as that of Camps (2005), Comajoan (2005), and Dominguez et al. (2013)—where instructional emphasis was found to influence morphological selection, particularly with regard to prototypical mappings. For example, Dominguez et al. (2013) noted that the instructional modeling of Preterit Achievements and Imperfect Activities was directly reflected in learner productions. The current study contributes significantly to this line of research finding that the systematic input distributions lead to parallel learner representations, at all three levels of lexical aspect, verbal morphology, and discourse functions.

The present findings further reveal nuanced differences in lexical class distribution: while stative predicates appeared slightly less frequently in learner data (−2.3%), accomplishment predicates were comparatively overrepresented (+5.3%). This pattern aligns with earlier observations by Bardovi-Harlig and Bergström (1996) and Bardovi-Harlig (1998), who reported a generally limited use of stative verbs in learner corpora. Additional support comes from Bardovi-Harlig (1999) and Collins (2002), who pointed out that learners often omit many types of stative predicates in their productions. As a result, the increased occurrence of accomplishments may also be attributed to learners' tendency to prioritize narrative progression.

Notably, Present and Base forms did not appear in the instructional data, while they were attested in the learner corpus, suggesting the occasional use of non-target forms within the scope of learner interlanguage. This pattern has also been reported in previous studies (e.g. Robison, 1995). As a possible explanation for learners' use of these forms in the early stages of interlanguage development, Andersen (1993) emphasizes that learners tend to be more sensitive to inherent aspectual meaning than to tense, which leads to inflection choices based on verb semantics. Given that the meanings of stative verbs are more closely associated with Present and Base forms—both of which convey timeless situations—these forms are commonly employed with statives in early interlanguage (Andersen & Shirai, 1994). The use of Present and Base forms with other lexical categories is also in line with earlier morpheme development studies (e.g. Giacalone Ramat, 1992), which demonstrated that present or uninflected forms typically emerge at the beginning of morphological development. Thus, the findings of this study further support the notion that learners tend to rely on non-past forms before acquiring full control over past morphology, and that these forms diminish as proficiency increases (Bardovi-Harlig & Reynolds, 1995; Bardovi-Harlig, 2000).

To conclude, the outcomes related to the third research question offer a significant contribution to the literature by empirically demonstrating a high degree of structural convergence between instructional input and learner output in terms of lexical aspect, verbal morphology, and discourse function. This convergence not only corroborates the core tenets of the Distributional Bias Hypothesis (Andersen & Shirai, 1994) but also reinforces broader usage-based accounts of SLA that underscore the foundational role of frequency and salience in shaping interlanguage. The study affirms that instructional materials serve as powerful models for learners' internal grammatical representations and that the absence of variation in input may restrict the development of more flexible and nuanced morphological systems. By unifying the analysis of input and output within a single empirical framework, this study addresses a critical gap in the literature and provides robust evidence of the ways in which instructional design shapes both the form and function of learner language.

5.2.4 A summary and discussion of the additional findings

Beyond the primary findings related to the research questions, the study yielded additional insights into the semantic and morphological behavior of specific verb lexemes in learner interlanguage. A subset of twenty verbs exhibited high contextual variability, with up to seven distinct semantic readings distributed across lexical aspect, verbal morphology, and discourse grounding categories. Notably, verbs such as *have*, *go*, *come*, and *take* demonstrated flexible usage patterns, with morphological realizations frequently aligning with past-tense forms but also showing notable variation, including non-past forms used to express past reference—particularly in background stative contexts, as well as in historical present and subordinated clauses.

A comparative analysis of these semantically diverse verbs in the instructional materials revealed reduced contextual variability, suggesting that learners may extend verb usage beyond patterns attested in the input. Additionally, the use of present morphology for actual present or future reference served various discourse functions in learner narratives, including introductory remarks, background descriptions, thematic reflections, and summaries. These functions were more pronounced in the learner data, where personalized lessons and reflective closures appeared more frequently than in the instructional texts. Finally, quoted predicates and copular constructions—excluded from core analysis—were reported for completeness, contributing to a more comprehensive account of predicate usage in learner interlanguage.

With regard to the interpretation of these additional findings, the primary focus centers on the learners' use of present-tense morphology for both past and present/future temporal references, while the identification of verb lexeme readings constitutes a supplementary outcome of the analysis. As an explanatory element of interlanguage development, the use of non-past forms—such as base and present-tense inflections—for referring to past events provides meaningful insight into learners' evolving grasp of tense-aspect morphology. Conversely, the use of present morphology for temporally appropriate present or future events sheds light on narrative structuring strategies and learners' morphological choices across different discourse functions. The findings from the current study align with earlier observations in the literature, which have similarly emphasized non-past usage as a notable characteristic of learner language at various developmental stages.

One strand of research relevant to these findings pertains to the role of present morphology in the acquisition trajectory of past tense marking. Andersen (1991) proposed that both zero-marked and present-tense forms initially appear in learner language prior to the emergence of systematic past inflection across lexical aspectual classes. He suggested that morphological marking follows a sequenced pattern, with achievements and accomplishments first acquiring past-tense forms, followed by activities and, lastly, states. In explaining the delayed marking of activities and accomplishments, Andersen (1991) noted that in early stages, achievements tend to align with past-tense use, while states are initially associated with imperfective morphology. This developmental sequencing offers a plausible explanation for the use of non-past forms with activities and accomplishments observed in the present study.

In a related account, Fessi (2016) attributed the prevalence of zero or present inflection to an absence of fully developed past-tense knowledge in learner interlanguage. Supporting this view, their study reported a noticeable decline in the use of present forms as learners' proficiency increased. Similar findings were reported by Bardovi-Harlig (1998), who documented a significant reduction in non-past forms among learners at higher proficiency levels. Although the current study does not employ a longitudinal design and therefore cannot directly determine developmental phases, it appears that the intermediate-level learners in the present corpus continue to rely on present morphology for expressing past-time reference, reflecting an ongoing stage in the acquisition of tense-aspect morphology.

Among the four lexical aspectual classes, States have consistently been associated with the use of non-past morphology in the expression of past-time reference. Andersen and Shirai (1994) documented the occurrence of base and present forms with stative predicates, a finding further substantiated by Robison (1995) and Bardovi-Harlig and Reynolds (1995) in subsequent studies. Comajoan (2006) expanded on this observation, noting that high-frequency stative verbs are particularly prone to this morphological pattern. These earlier findings are in line with the present study, where states emerged as the most frequently marked class with present-tense morphology.

Several explanatory accounts have been proposed in the literature to clarify this associative tendency during early stages of tense-aspect development. Andersen and Shirai (1994) suggested that learners may perceive stative verbs as lexical items that do

not require overt tense marking. In a complementary explanation, Bardovi-Harlig and Reynolds (1995) highlighted the shared semantic feature of *continued existence* between stative predicates and present simple forms, thereby explaining learners' inclination to inflect statives with present morphology. Bardovi-Harlig (2000) further identified unboundedness as another common feature, reinforcing the morphological affinity between stative predicates and non-past inflections. These accounts provide a theoretically grounded rationale for the observed prevalence of present morphology with states in the current study.

In addition, some researchers have pointed to a broader connection between imperfectivity and present morphology. Kaplan (1987) observed that present forms were used predominantly to express imperfective processes. Similarly, Andersen (1991) posited that the present tense inherently carries an imperfective value. However, the findings of the current study do not strongly support this claim, as non-past forms were predominantly attested in foreground contexts, which are generally aligned with perfective aspectual readings. While the association of present morphology with stative verbs may suggest an underlying imperfective interpretation, other foreground uses—such as subordinated clauses or historical present constructions—do not easily conform to this explanation.

Nonetheless, caution is warranted in interpreting these patterns. Although raw frequency counts suggest a higher occurrence of present forms in foreground contexts (66 tokens) compared to background contexts (41 tokens), percentage-based analysis reveals the opposite: present morphology constitutes a greater proportion in backgrounded clauses (8.4%) than in foregrounded ones (3.6%). This higher proportion may reflect the imperfective nature of present morphology, particularly in non-salient narrative contexts.

Finally, Bardovi-Harlig (1999) proposed an expanded view of present morphology that includes not only statives but also durative predicates such as activities and accomplishments. This extended account may offer a plausible explanation for the presence of present-tense marking on activity and accomplishment predicates observed in the current study in addition to Andersen's (1991) explanation.

An alternative interpretation concerning the use of present morphology centers on its potential discourse-related motivation, rather than stemming solely from inherent lexical aspect. Andersen and Shirai (1994) initially speculated that such morphological choices

might be driven by discourse structuring. This idea was further refined by Bardovi-Harlig (1995), who argued that past morphology gradually replaces non-past forms in backgrounded contexts over the course of development. Empirical support for this claim was subsequently provided by Bardovi-Harlig (1999), whose study indicated that present and non-finite verb forms were significantly associated with background information, thereby reinforcing the discourse-based explanation. Similarly, Andersen (2002) explicitly discussed the link between backgrounding and the use of present morphology in learner language.

The distributional patterns observed in the current study appear to align with these previous findings. Specifically, the proportion of present morphology in backgrounded clauses (8.4%) was notably higher than in foregrounded ones (3.6%), reflecting a discourse-conditioned preference. Additionally, the frequent occurrence of present-tense predicates within subordinate clauses may be interpreted as an indication that learners perceive such clauses as contributing background information, in contrast to the event-advancing function typically assigned to main clauses in narrative structures.

In addition to present-tense usage with stative predicates and subordinate clauses, the most frequent application of present morphology in the learner data was the historical present. This phenomenon has been extensively examined in prior research. Dry (1983) identified a strong association between the historical present and foregrounded discourse segments. Building upon this, Bardovi-Harlig (2000) offered a compelling explanation, suggesting that the historical present reflects narrative grounding, particularly in relation to foregrounding. She further posited that while present forms used in background clauses may indicate a lack of access to past-tense morphology, their appearance in foreground clauses more likely signals an intentional deployment of the historical present. This interpretation aligns with the current study's findings regarding foreground-present usage. Similarly, Comajoan et al. (2005) regarded the historical present as an alternative perfective device functioning in place of the simple past, reinforcing its role in foregrounding. Additional support comes from Schiffrin (1981), who documented comparable tense shifts in native-speaker narratives, especially in foregrounded segments. Notably, the absence of the historical present in the instructional materials analyzed in the current study reinforces Sakata's (2019) observation regarding the lack of authentic language input in pedagogical resources, highlighting the pedagogical

importance of incorporating such features in material design. Lastly, Schiffrin (1981) also noted the rarity of entire narratives composed exclusively in the historical present—a rare case that was similarly observed in the present study, specifically in the production of Participant 41 as reported in the Findings chapter.

A final explanation for the early use of present morphology in learner interlanguage concerns the role of adverbials during initial stages of development. Bardovi-Harlig (1999) proposed that learners rely not only on unmarked verb forms but also on temporal adverbials due to their strong lexical salience and semantic primacy. In an earlier study, Bardovi-Harlig (1992a) observed a tendency for present-tense usage in connection with adverbs such as *usually*, suggesting that this may result from instructional influence, as such adverbs frequently accompany present simple forms in ESL materials. Supporting this account, Bardovi-Harlig and Reynolds (1995) further demonstrated that frequency adverbials can activate present-tense morphology, even in contexts where past reference is intended. Although the present study did not systematically analyze the role of adverbials, their potential influence on the selection of present forms remains a noteworthy consideration and merits further investigation in future research.

Regarding the use of present morphology for expressing present or future temporal reference, the learner data revealed 399 instances of present-tense and quoted sentences, whereas the instructional materials exhibited a comparatively lower frequency, with 308 occurrences. This pattern appears to diverge from the findings of Ayoun and Salaberry (2008), who reported a more frequent and consistent use of present forms in native-speaker data. They attributed this pattern to native speakers' effective control over contextual information, which allows them to employ present morphology more appropriately and flexibly. The apparent contradiction identified in the present study may stem from a disparity between authentic native usage and the way this usage is represented in instructional materials. In line with this interpretation, Sakata (2019) underscores the importance of incorporating authentic language examples into pedagogical resources to ensure accurate representation of natural discourse.

A complementary observation regarding present-tense use is found in Bardovi-Harlig (1992b), who reported that learner narratives frequently conclude with a shift back to present tense. This discourse pattern was likewise evident in the current datasets, both in

learner production and in instructional texts, as indicated by the increased presence of present-tense constructions in concluding segments of the narratives.

In conclusion, the additional findings of the study highlight the complex and multifunctional use of present-tense morphology in learner interlanguage, extending beyond the primary research questions. Learners employed present forms not only for temporally appropriate present and future contexts but also to express past-time reference through historical present, stative predicates, and backgrounded subordinate clauses—reflecting both developmental limitations and discourse-related strategies. These patterns align with previous research suggesting that present morphology initially dominates before the emergence of systematic past marking and that its use is influenced by lexical aspect, discourse structure, and input features. Notably, the historical present emerged as a salient narrative device absent from instructional materials, reinforcing the call for more authentic language representation in pedagogical input. Overall, the findings suggest that present-tense usage in learner narratives is shaped by a confluence of cognitive, developmental, and discourse-based factors.

5.3 Suggestions

This section presents the theoretical and pedagogical implications derived from the study, followed by a critical evaluation of its methodological constraints and recommendations for future research. The first subsection emphasizes the broader theoretical insights and instructional relevance of the findings, whereas the second delineates the study's limitations and proposes potential research trajectories to further advance our understanding of tense-aspect morphology within EFL contexts.

5.3.1 Theoretical implications

The findings of the present study offer substantial theoretical insights for contemporary models of second language acquisition, particularly with reference to the Aspect Hypothesis (AH), the Discourse Hypothesis (DH), and broader usage-based and cognitive perspectives on interlanguage development. While the results broadly confirm several developmental tendencies proposed by these frameworks, they also reveal areas of complexity that suggest the need for theoretical refinement.

A principal theoretical contribution of the study lies in its empirical support for the core assumptions of the Aspect Hypothesis. As originally proposed by Andersen (1991) and

further elaborated by Andersen and Shirai (1994), the AH posits that learners initially associate verbal morphology with the inherent lexical aspect of predicates. Specifically, perfective morphology—such as the simple past—is predicted to first emerge with telic predicates, notably achievements and accomplishments, before extending to atelic predicates, including activities and states. The results of the current investigation substantiate this prediction: past-tense forms were most frequently and systematically aligned with achievements and accomplishments, while activities and states were disproportionately associated with present and base forms, even in contexts requiring past-time reference. These findings confirm a strong aspectual bias in learners' interlanguage systems and are consistent with previous studies by Robison (1995), Bardovi-Harlig and Reynolds (1995), and Comajoan (2006), reinforcing the view that lexical aspect continues to play a central role in shaping the development of tense-aspect morphology, even at intermediate proficiency levels.

Nonetheless, the study also contributes to a more differentiated understanding of the Aspect Hypothesis by highlighting the continued use of non-past forms across all lexical categories, including telic verbs. Although past-tense morphology was predominant with achievements and accomplishments, the presence of present and base forms in these same categories—particularly in subordinate clauses and foregrounded segments—suggests that aspectual alignment alone does not fully determine morphological choice. This observation aligns with earlier arguments by Bardovi-Harlig (1998) and Fessi (2016), who contended that while lexical aspect is a strong initial determinant, its influence is moderated by other developmental and contextual factors over time. Furthermore, the frequent appearance of the historical present in foregrounded main clauses complicates the assumption of a fixed mapping between aspectual class and morphological form, suggesting that narrative discourse functions may, in some contexts, supersede aspectual constraints.

In this regard, the results also provide strong support for the Discourse Hypothesis, which argues that the acquisition of verbal morphology is shaped not only by lexical aspect but also by narrative discourse structure, particularly the foreground-background distinction (Flashner, 1989; Bardovi-Harlig, 1995, 2000). The observed distribution of verbal morphology in the current dataset substantiates this claim: present-tense forms occurred more frequently in backgrounded clauses, such as subordinate or descriptive segments,

while past-tense morphology was more common in foregrounded, event-advancing clauses. These findings parallel earlier results reported by Bardovi-Harlig (1995, 1999), Andersen (2002), and Comajoan et al. (2005), who emphasized the discourse-driven nature of morphological development in learner narratives. The recurrent use of the historical present in main clauses—often to highlight foregrounded events—further supports the interpretation advanced by Dry (1983) and Bardovi-Harlig (2000), who regarded this form not as a developmental error but as a narrative strategy. Such patterns indicate that learners are capable of deploying tense morphology in rhetorically strategic ways, evidencing a discourse awareness that remains underrepresented in models focusing solely on grammatical development.

From a theoretical standpoint, these findings suggest that discourse should be conceptualized not as a secondary or late-stage influence on interlanguage development, but as a foundational driver of morphological choices from early stages onward. The systematic use of present forms in backgrounding, the strategic employment of the historical present, and the variation observed across individual verb types collectively point to the necessity of incorporating discourse-level processing into models of L2 development. In this respect, the current study supports Bardovi-Harlig's (2000) call to integrate narrative structure into theories of tense-aspect acquisition and aligns with usage-based models that view grammar as emerging from form-function pairings within meaningful contexts of use.

A further theoretical implication concerns the divergence observed between learner productions and the patterns found in instructional materials. The study revealed that learners used certain high-frequency verbs (e.g. *have*, *go*, *come*, *take*) with a broader semantic and morphological range than those exemplified in textbooks and graded readers. This finding challenges models that emphasize input replication by suggesting that learners are not merely reproducing surface patterns from instructional input, but actively constructing interlanguage systems that extend and reorganize these patterns in accordance with internal developmental mechanisms. Although input frequency and salience undoubtedly play influential roles, the evidence indicates that learners also rely on cognitive principles—such as prototypicality effects, narrative schemas, and generalizations over form-function relationships—to guide morphological development. This observation aligns with Andersen and Shirai's (1996) model of cognitive operating

principles and supports constructivist views of grammar acquisition that emphasize the interaction of input with internal learner systems.

Finally, the study offers theoretical contributions to the understanding of narrative competence and the expression of temporality in learner discourse. The use of present-tense morphology for both past-time reference and thematically significant closures or evaluations indicates that learners possess an emergent sensitivity to the rhetorical demands of narrative structure, even in the absence of fully target-like morphological control. This observation lends support to frameworks that regard narrative as a privileged site for examining interlanguage development (Pavlenko & Lantolf, 2000; Weist, 2002), where morphosyntactic, lexical, and pragmatic competencies intersect. The findings underscore the need to conceptualize learner grammar as embedded within discourse, and to understand verbal morphology not as a system developing in isolation, but in conjunction with evolving narrative and communicative abilities.

In conclusion, the present study confirms the developmental trajectories posited by the Aspect Hypothesis and Discourse Hypothesis, while also demonstrating the limitations of these models when considered in isolation. The findings indicate that the development of verbal morphology is not exclusively determined by lexical aspect or sequential acquisition stages, but is also shaped by discourse functions, pragmatic objectives, and instructional input. These results point to the necessity of an integrated theoretical model in which verbal morphology emerges from the interaction of multiple systems—lexical semantics, discourse structure, cognitive constraints, and usage-based input. In doing so, the study contributes to an expanding body of research that advocates for multidimensional models of interlanguage capable of capturing the full complexity of second language development in authentic discourse contexts.

5.3.2 Pedagogical implications for language teachers

The findings of the present study carry important implications for language educators, particularly in relation to the instruction of tense-aspect morphology and its functional deployment within discourse. The frequent use of present-tense morphology by learners to convey past-time reference—manifested through instances of historical present, stative predicates in backgrounded contexts, and the use of present forms in subordinate clauses—underscores the necessity for a more functionally oriented pedagogical approach. This can be achieved through activities such as guided analysis of authentic or

learner-generated narratives, where students identify tense shifts and discuss their discourse functions, and contrasting narrative passages written with and without the historical present to evaluate the rhetorical effects.

By doing so, teachers can foster greater learner awareness of how morphological choices may stem from both developmental interlanguage constraints and intentional discourse strategies. For example, the historical present, frequently observed in learner narratives—particularly in foregrounded clauses—is often regarded as a learner error; however, it constitutes a legitimate rhetorical device that serves narrative progression. To highlight this, teachers may design retelling tasks in which learners experiment with both simple past and historical present forms to observe how the narrative focus changes.

Explicit attention to such discourse-sensitive uses of tense in instructional contexts may enhance learners' understanding of the pragmatic and structural functions of verbal morphology. Furthermore, high-frequency verbs such as *have*, *go*, and *come*—which demonstrated notable semantic and morphological variability in learner production—can be effectively integrated into instructional practices through story-completion exercises, role-play tasks, and contextualized writing activities that require multiple temporal references. These pedagogical strategies not only promote more accurate and contextually appropriate morphological usage, but also contribute to the development of learners' broader narrative competence.

A final pedagogical implication concerns the critical role of input in shaping learner production. The strong influence of input on learner production highlights the critical importance of providing rich, authentic, and varied exposure to the target language in classroom settings. If learners tend to reproduce the linguistic forms and discourse patterns they are most frequently exposed to, it becomes essential for teachers to maximize the use of L2 in instructional interactions rather than relying heavily on the learners' first language. Classroom discourse should model natural narrative structures, tense-aspect variation, and pragmatic uses of morphology, enabling learners to internalize form-function relationships in meaningful contexts. This can be achieved by integrating authentic texts, adapted native-speaker narratives, and interactive listening-speaking tasks that reflect the temporal and discourse features of natural communication. By ensuring that learners consistently hear and process well-structured L2 input—both from the teacher and through carefully selected materials—they are more likely to develop

productive systems that align with target-like usage. In this way, instructional practices can move beyond presenting isolated grammatical rules and instead immerse learners in an environment where narrative competence and accurate morphological encoding are naturally fostered.

5.3.3 Pedagogical implications for textbook and materials designers

The comparative analysis of learner productions and instructional materials revealed a pronounced divergence in the representation of tense-aspect variation, particularly in relation to narrative features such as the use of the historical present and present-tense morphology in backgrounded contexts. Instructional texts were found to predominantly offer structurally simplified and decontextualized input, which may restrict learners' exposure to the full range of tense-aspect realizations characteristic of authentic discourse. To bridge this representational gap, it is imperative that material designers incorporate narrative passages that more accurately reflect natural language use, including phenomena such as foreground-background differentiation, tense alternation, and aspectual diversity. For instance, materials could be enriched with carefully selected excerpts from learner corpora or adapted native-speaker narratives that illustrate the strategic use of present-tense forms within past-tense narration, particularly when employed for specific discourse or pragmatic functions. Furthermore, instructional design should move beyond isolated grammatical presentation and instead foreground the discourse functions of morphological forms. Activities that prompt learners to investigate the narrative distribution of verb forms or compare context-dependent uses of high-frequency verbs can offer input that aligns more closely with their interlanguage trajectories. Crucially, such materials should be informed by empirically validated developmental patterns—both in the existing literature and in the findings of the present study—thus supporting a more incremental and context-sensitive acquisition of tense-aspect morphology.

5.3.4 Pedagogical implications for curriculum developers

At the curricular level, the findings underscore the need for a sequenced and developmentally grounded approach to the teaching of tense and aspect. The recurrent use of present-tense morphology to convey past-time reference—particularly in combination with stative and activity predicates—reflects an acquisitional trajectory consistent with the predictions of the Aspect Hypothesis and the developmental sequence

proposed by Andersen (1991). In light of this pattern, curriculum designers are encouraged to structure instructional content in a manner that aligns with the natural progression of interlanguage development. Specifically, past-tense morphology should initially be introduced in conjunction with telic predicates, such as achievements and accomplishments, before being extended to atelic predicates, including activities and states.

In parallel, curricular frameworks should integrate discourse-oriented learning objectives that prioritize not only morphosyntactic accuracy but also functional and pragmatic competence. Intended outcomes might include learners' ability to distinguish between foregrounded and backgrounded events in narrative discourse or to employ tense-aspect combinations for strategic rhetorical purposes. Furthermore, curricular design should promote awareness of cross-linguistic variation in temporal encoding, particularly for learners whose L1 does not include tense-aspect morphology analogous to that of the target language. The inclusion of metalinguistic reflection tasks, along with performance-based assessments that evaluate narrative structuring and morphosyntactic deployment in discourse, may facilitate learners' advancement beyond early interlanguage stages and foster a more nuanced understanding of temporal reference in second language use.

5.3.5 Limitations and suggestions for further research

While the present study offers valuable insights into the relationship between inherent aspect, verbal morphology, and discourse grounding in the written narratives of Turkish EFL learners, several limitations warrant consideration. First, the findings are derived solely from intermediate-level learners and written narrative data, which constrains the generalizability of the results to other learner populations and discourse genres. The inclusion of spoken language samples, participants from a broader range of proficiency levels, and alternative textual genres (e.g. Robison, 1995) would potentially offer a more comprehensive account of tense-aspect development. Future research is encouraged to incorporate diverse modes of learner production, such as oral retellings and data from lower proficiency groups (e.g. Vraciu, 2013) —including complete beginners—where developmental patterns may emerge more clearly and transparently. Additionally, the cross-sectional nature of the present research limits the ability to trace developmental trajectories over time. Longitudinal investigations (e.g. Chan et al., 2012) are needed to

track the progression of tense-aspect and discourse patterns as predicted by the Aspect Hypothesis and Discourse Hypothesis.

Second, although the exclusive use of written narratives for both learner output and instructional input enhances comparability, this restriction may not fully reflect the multidimensional nature of classroom input. Broader sampling—including teacher talk (e.g. Daidone, 2019), peer interactions, and classroom discourse—would offer a more holistic view of the input learners receive. Furthermore, while the findings revealed a high degree of form-function congruence, the current design does not allow for the identification of possible discrepancies between learner performance and underlying competence. Similarly, the study does not address the implications of the observed patterns for communicative effectiveness or discourse-level cohesion. Future investigations could combine narrative production with elicited tasks, judgment tests (e.g. Shirai & Kurono, 1998), or comprehensibility ratings to examine these dimensions more thoroughly. Another methodological limitation concerns the study's narrow focus on Progressive morphology as the sole marker of imperfectivity. Other constructions, such as “used to” or additional imperfective expressions, were not included. A more extensive analysis incorporating such forms would contribute to a fuller understanding of the development of imperfectivity in learner interlanguage.

Lastly, the descriptive and non-interventional nature of the research design limits the ability to draw causal inferences regarding the impact of instructional input. Future studies may adopt interventional methodologies—such as input enhancement techniques—to experimentally investigate the role of instructional practices (e.g. Camps, 2005). Another productive line of inquiry would involve cross-linguistic comparisons between learners' English productions and their L1 Turkish (see Aksu-Koç, 1998) narrative performances, with the goal of exploring the influence of L1 aspectual distributions on interlanguage development. Overall, although the present study makes a significant contribution to the literature by incorporating underrepresented or naïve elements, further research may expand upon these findings by enriching the developmental, pragmatic, cross-linguistic, and pedagogical dimensions of tense-aspect acquisition.

REFERENCES

- Aksu-Koç, A. (1998). The role of input vs. universal predispositions in the emergence of tense-aspect morphology: Evidence from Turkish. *First language*, 18(54), 255-280.
- Aldeen, M., Luo, J., Lian, A., Zheng, V., Hong, A., Yetukuri, P., & Cheng, L. (2023, December). Chatgpt vs. human annotators: A comprehensive analysis of chatgpt for text annotation. In *2023 International Conference on Machine Learning and Applications (ICMLA)* (pp. 602-609). IEEE.
- Alruwaili, R. (2014). *Second language acquisition of aspect and tense by Saudi-Arabic learners of English*. PhD thesis. York: University of York.
- Andersen, R. W. (1984). The one to one principle of interlanguage construction. *Language learning*, 34(4), 77-95.
- Andersen, R. W. (1986). El desarrollo de la morfología verbal en el español como segundo idioma (The development of verbal morphology in Spanish as a second language). In J.M. Meisel (Ed.), *Adquisición de lenguaje/Adquisição da linguagem* (Acquisition of language) (pp. 115-138). Frankfurt: Vervuert.
- Andersen, R. W. (1989). *The acquisition of verb morphology*. Los Angeles: University of California, published in Spanish as: La adquisicion de la morfologia verbal. *Lingüística*, 1, (1989).
- Andersen, R. W. (1990). Papiamentu tense-aspect, with special attention to discourse. *Pidgin and creole tense-mood-aspect systems*, 59-96.
- Andersen, R. W. (1991). Developmental sequences: The emergence of aspect marking in second language acquisition. *Crosscurrents in second language acquisition and linguistic theories*, 305-324.
- Andersen, R. W. (1992, November). *The insider's advantage*. Paper presented at the annual meeting of the Linguistic Society of Italy, Siena.
- Andersen, R. W. (1993). Four operating principles and input distribution as explanations for underdeveloped and mature morphological systems. In K. Hyldenstam & A.Viborg (Eds.), *Progression and regression in language* (pp. 309-339). Cambridge, UK: Cambridge University Press.
- Andersen, R. (2002). The dimensions of pastness. *Language acquisition and language disorders*, 27, 79-106.
- Andersen, R. W., & Shirai, Y. (1994). Discourse motivations for some cognitive acquisition principles. *Studies in second language acquisition*, 16(2), 133-156.
- Andersen, R.W. and Shirai, Y. (1996). Primacy of aspect in first and second language acquisition: the pidgin/creole connection. In W.C. Ritchie, & T.K. Bhatia, (Eds.), *Handbook of second language acquisition*. San Diego, CA: Academic Press, 527–570.
- Antinucci, F., & Miller, R. (1976). How children talk about what happened. *Journal of child language*, 3(2), 167-189.
- Artstein, R., & Poesio, M. (2008). Inter-coder agreement for computational linguistics. *Computational linguistics*, 34(4), 555-596.

- Ateş, S. (2022). *Aspect, Tense and Discourse Relations in the Interlanguage Grammars of Instructed L2 Learners: An Analytical Study in the Turkish EFL Context* (Doctoral dissertation, Anadolu University (Turkey)).
- Atlas, S. (2023). ChatGPT for higher education and professional development: A guide to conversational AI.
- Ayoun, D., & Salaberry, M. R. (2008). Acquisition of English tense-aspect morphology by advanced French instructed learners. *Language Learning*, 58(3), 555-595.
- Bada, E., & Genc, B. (2007). An investigation into the tense/aspect preferences of Turkish speakers of English and native English speakers in their oral narration. *The Reading Matrix*, 7(1), 141-150.
- Bardovi-Harlig, K. (1992a). The relationship of form and meaning: A cross-sectional study of tense and aspect in the interlanguage of learners of English as a second language. *Applied Psycholinguistics*, 13(3), 253-278.
- Bardovi-Harlig, K. (1992b). The telling of a tale: Discourse structure and tense use in learners' narratives. *Pragmatics and Language Learning*, 3, 144-161.
- Bardovi-Harlig, K. (1994). Anecdote or evidence? Evaluating support for hypotheses concerning the development of tense and aspect. *Research methodology in second language acquisition*, 41-60.
- Bardovi-Harlig, K. (1995). A narrative perspective on the development of the tense/aspect system in second language acquisition. *Studies in Second Language Acquisition*, 17(2), 263-291.
- Bardovi-Harlig, K. (1998). Narrative structure and lexical aspect: Conspiring factors in second language acquisition of tense-aspect morphology. *Studies in second language acquisition*, 20(4), 471-508.
- Bardovi-Harlig, K. (1999). From morpheme studies to temporal semantics: Tense-aspect research in SLA. *Studies in Second Language Acquisition*, 21(3), 341-382.
- Bardovi-Harlig, K. (2000). Tense and aspect in second language acquisition: Form, meaning, and use. *Language Learning: A Journal of Research in Language Studies*, 50, 1.
- Bardovi-Harlig, K. (2012). After process, then what? A longitudinal investigation of the progressive prototype in L2 English. In *Tense, aspect and mood in First and Second Language Acquisition* (pp. 131-151). Brill.
- Bardovi-Harlig, K., & Bergström, A. (1996). Acquisition of tense and aspect in second language and foreign language learning: Learner narratives in ESL and FFL. *Canadian Modern Language Review*, 52(2), 308-330.
- Bardovi-Harlig, K., & Bofman, T. (1989). Attainment of syntactic and morphological accuracy by advanced language learners. *Studies in second language acquisition*, 11(1), 17-34.
- Bardovi-Harlig, K., & Comajoan-Colomé, L. (2020). The aspect hypothesis and the acquisition of L2 past morphology in the last 20 years: A state-of-the-scholarship review. *Studies in Second Language Acquisition*, 42(5), 1137-1167.

- Bardovi-Harlig, K., & Reynolds, D. W. (1995). The role of lexical aspect in the acquisition of tense and aspect. *TESOL quarterly*, 29(1), 107-131.
- Bayley, R. (2013). Data analysis: Quantitative approaches. *Research design and methodology in studies on L2 tense and aspect*, 357-390.
- Berretta, M. (1995). Morphological markedness in L2 acquisition. In R. Simone (Ed.), *Iconicity in language* (pp. 197–233). Amsterdam: Benjamins.
- Biber, D., Conrad, S., & Reppen, R. (1998). *Corpus linguistics: Investigating language structure and use*. Cambridge University Press.
- Biber, D. (2010). Corpus-based and corpus-driven analyses of language variation and use. In B. Heine & H. Narrog (Eds.), *The Oxford Handbook of Linguistic Analysis* (pp. 159–192). Oxford: Oxford University Press.
- Bickerton, D. (1981). *Roots of language*. Ann Arbor, MI: Karoma.
- Block, D. (2003). The Social Turn in Second Language Acquisition. *Edinburgh University Press*.
- Bloom, L., & Harner, L. (1989). On the developmental contour of child language: A reply to Smith & Weist. *Journal of child language*, 16(1), 207-216.
- Bloom, L., Lifter, K., & Hafitz, J. (1980). Semantics of verbs and the development of verb inflection in child language. *Language*, 56(2), 386-412.
- Boran, S. (2006). *An application of lexical aspect and discourse hypotheses: An analysis of the distribution of lexical aspect in narratives of Turkish learners of English*. Master's Thesis, Ankara: Hacettepe University, Graduate School Of Social Sciences.
- Brezina, V., & Meyerhoff, M. (2014). Significant or random. A critical review of sociolinguistic generalisations based on large corpora. *International Journal of Corpus Linguistics*, 19(1), 1-28.
- Bronckart, J. P., & Sinclair, H. (1973). Time, tense and aspect. *Cognition*, 2(1), 107-130.
- Brown, R. (1973). *A first language: The early stages*. Harvard University Press.
- Camps, J. (2005). The emergence of the Imperfect in Spanish as a foreign language: The association between imperfective morphology and state verbs. *International Review of Applied Linguistics in Language Teaching*, 43, 163– 192.
- Carroll, S. E. (1999). Putting 'input' in its proper place. *Second language research*, 15(4), 337-388.
- Chan, H. L., Finberg, I., Costello, W., & Shirai, Y. (2012). L2 acquisition of tense–aspect morphology Lexical aspect, morphological regularity. *Space and Time in Languages and Cultures: Linguistic Diversity*, 36, 181.
- Collins, L. (2002). The roles of L1 influence and lexical aspect in the acquisition of temporal morphology. *Language Learning*, 52(1), 43-94.
- Collins, L. (2004). The particulars on universals: A comparison of the acquisition of tense-aspect morphology among Japanese-and French-speaking learners of English. *Canadian Modern Language Review*, 61(2), 251-274.

- Collins, L., White, J., Trofimovich, P., Cardoso, W., & Horst, M. (2012). 4. When Comprehensible Input is not Comprehensive Input: A Multi-dimensional Analysis of Instructional Input in Intensive English as a Foreign Language. In *Intensive exposure experiences in second language learning* (pp. 66-87). Multilingual Matters
- Comajoan, L. (2005). The acquisition of perfective and imperfective morphology and the marking of discourse grounding in Catalan. In *Tense and Aspect in Romance Languages: Theoretical and applied perspectives* (pp. 35-77). John Benjamins Publishing Company.
- Comajoan, L. (2006). The aspect hypothesis: Development of morphology and appropriateness of use. *Language Learning*, 56(2), 201-268.
- Comajoan, L. (2013). Tense and aspect in second language Spanish. *The handbook of Spanish second language acquisition*, 235-252.
- Comajoan, L., Pérez Saldanya, M., & Eddington, D. (2005). Grammaticalization and language acquisition: Interaction of lexical aspect and discourse. In *Selected Proceedings of the 6th Conference on the Acquisition of Spanish and Portuguese as First and Second Languages* (pp. 44-55). Somerville, MA: Cascadilla Press.
- Comrie, B. (1976). *Aspect: An introduction to the study of verbal aspect and related problems* (Vol. 2). Cambridge university press.
- Comrie, B. (1985). *Tense* (Vol. 17). Cambridge university press.
- Corder, S. P. (1967). The significance of learner's errors. *IRAL: International Review of Applied Linguistics in Language Teaching*, 5(4), 161–170.
- Dahl, O. (1984). Temporal distance: Remoteness distinctions in tense-aspect systems. In B. Butterworth, B. Comrie, & Ö. Dahl (Eds.), *Explanations for language universals* (pp. 105–122). Berlin: Mouton.
- Dahl, O. (1985). *Tense and aspect systems*. Oxford: Basil Blackwell.
- Daidone, D. (2019). Preterite and imperfect in Spanish instructor oral input and Spanish language corpora. *Hispania*, 102(1), 45-58.
- De Lemos, C. (1981). Interactional processes in the child's construction of language. *The child's construction of language*, 57-76.
- De Swart, H. (1998). Aspect shift and coercion. *Natural language & linguistic theory*, 16(2), 347-385.
- De Villiers, J. G., & De Villiers, P. A. (1973). A cross-sectional study of the acquisition of grammatical morphemes in child speech. *Journal of psycholinguistic research*, 2(3), 267-278.
- Dietrich, R., Klein, W., & Noyau, C. (1995). *The acquisition of temporality in a second language*. Amsterdam: Benjamins.
- Dittmar, N. (1981). On the verbal organization of L2 tense marking in an elicited translation task by Spanish immigrants in Germany¹. *Studies in Second Language Acquisition*, 3(2), 136-164.

- Domínguez, L., Tracy-Ventura, N., Arche, M. J., Mitchell, R., & Myles, F. (2013). The role of dynamic contrasts in the L2 acquisition of Spanish past tense morphology. *Bilingualism: Language and Cognition*, 16(3), 558-577.
- Dowty, D. R. (1979). *Word meaning and Montague Grammar: The semantics of verbs and times in Generative Semantics and in Montague's PTQ*. Dordrecht: Reidel.
- Dry, H. A. (1983). The movement of narrative time. Durrant, P., & Schmitt, N. (2010). Adult learners' retention of collocations from exposure. *Second language research*, 26(2), 163-188.
- Dulay, H. C., & Burt, M. K. (1973). Should we teach children syntax?. *Language learning*, 23(2), 245-258.
- Durrant, P., & Schmitt, N. (2010). Adult learners' retention of collocations from exposure. *Second language research*, 26(2), 163-188.
- Economides, P. J. (1985). *The expression of tense and aspect in the English interlanguage of a Vietnamese child*. Unpublished master's thesis, University of California, Los Angeles.
- Eke, D. O. (2023). ChatGPT and the rise of generative AI: Threat to academic integrity? *Journal of Responsible Technology*, 13, 100060.
- Ellis, R. (1987). Interlanguage variability in narrative discourse: Style shifting in the use of the past tense. *Studies in second language acquisition*, 9(1), 1-19.
- Ellis, N. C., & Wulff, S. (2014). Usage-based approaches to SLA. In *Theories in second language acquisition* (pp. 87-105). Routledge.
- Fessi, I. (2016). Cross-linguistic influence in tense-aspect Spanish L3 acquisition: A study of Arabic Tunisian learners of L3 Spanish. *Revista Nebrija de Lingüística Aplicada a la Enseñanza de Lenguas*, (20), 82-99.
- Fillmore, L. W. (1976). *The second time around: Cognitive and social strategies in second language acquisition*. Stanford University.
- Flashner, V. E. (1982). *The English interlanguage of three native speakers of Russian: Two perspectives* (Doctoral dissertation, University of California, Los Angeles--Teaching English as a Second Language).
- Flashner, V. E. (1989). Transfer of aspect in the English oral narratives of native Russian speakers. *Transfer in Language Production*, 71, 97.
- Fuchs, R., & Werner, V. (2018). The use of stative progressives by school-age learners of English and the importance of the variable context: Myth vs.(corpus) reality. *International Journal of Learner Corpus Research*, 4(2), 195-224.
- Gablasova, D., Brezina, V., & McEnery, T. (2017). Exploring learner language through corpora: Comparing and interpreting corpus frequency information. *Language Learning*, 67(S1), 130-154.
- Gass, S. M., & Mackey, A. (2014). Input, interaction, and output in second language acquisition. In *Theories in second language acquisition* (pp. 194-220). Routledge.

- Giacalone Ramat, A. (1995). L'expression de l'aspect progressif en italien seconde langue et le rôle des propriétés sémantiques des verbes. *Acquisition et interaction en langue étrangère*, (5), 47-78.
- Giacalone-Ramat, A. (2002). How do learners acquire the classical three categories of temporality? Evidence from L2 Italian. In R. Salaberry & Y. Shirai (Eds.), *Tense-aspect morphology in L2 acquisition* (pp. 221-247). Amsterdam: John Benjamins.
- Gilardi, F., Alizadeh, M., & Kubli, M. (2023). ChatGPT outperforms crowd workers for text-annotation tasks. *Proceedings of the National Academy of Sciences*, 120(30), e2305016120.
- Gilquin, G., & Granger, S. (2015). From design to collection of learner corpora. *The Cambridge handbook of learner corpus research*, 3(1), 9-34.
- Givón, T. (1982). Tense-aspect-modality: The creole prototype and beyond. *Tense-aspect: Between semantics and pragmatics*, 115-163.
- Godfrey, D. L. (1980). A discourse analysis of tense in adult ESL monologues. *Discourse analysis in second language research*, 92-100.
- Goldschneider, J. M. & DeKeyser, R. M. (2001). Explaining the “natural order of L2 morpheme acquisition” in English: A meta-analysis of multiple determinants. *Language Learning*, 51, 1–50.
- González, P., & Quintana Hernández, L. (2018). Inherent aspect and L1 transfer in the L2 acquisition of Spanish grammatical aspect. *The Modern Language Journal*, 102(3), 611-625.
- Granger, S. (2008). A bird's-eye view of learner corpus research. In *Computer learner corpora, second language acquisition and foreign language teaching* (pp. 3-33). John Benjamins Publishing Company.
- Hakuta, K. (1974). Prefabricated patterns and the emergence of structure in second language acquisition 1. *Language learning*, 24(2), 287-297.
- Granger, S. (2015). Contrastive interlanguage analysis: A reappraisal. *International Journal of Learner Corpus Research*, 1, 7–24. doi: 10.1075/ijlcr.1.1.01gra
- Granger, S., Gilquin, G., & Meunier, F. (Eds.). (2015). *The Cambridge handbook of learner corpus research*. Cambridge University Press.
- Granger, S. (2017). Learner corpora in foreign language education. In *Language, education and technology* (pp. 1-14). Springer, Cham.
- Hopper, P. J. (1979). Aspect and foregrounding in discourse. In *Discourse and syntax* (pp. 211-241). Brill.
- Housen, A. (1993). L2 acquisition of verb morphology: A case study. In B. Kettemann & W. Wieden (Eds.), *Current issues in European second language acquisition research*. Tübingen: Narr.
- Housen, A. (1994). Tense and aspect in second language acquisition: The Dutch interlanguage of a native speaker of English. In C. Vet and C. Veters (Eds.), *Tense and Aspect in Discourse* (pp. 257-291). New York: Mouton.

- Housen, A. (2002). The development of tense-aspect in English as a second language and the variable influence of inherent aspect. In R. Salaberry & Y. Shirai (Eds.), *The L2 acquisition of tense-aspect morphology* (pp. 155–197). Amsterdam: John Benjamins.
- Howard, M. (2004). On the interactional effect of linguistic constraints on interlanguage variation: The case of past time marking. *IRAL*, 42, 319–334.
- Huang, C. (1993). *Distributional biases of verb morphology in native and non-native English discourse*. Unpublished M.A. thesis, University of California, Los Angeles.
- Huang, P. Y. (2008). The Aspect Hypothesis and L2 learners' awareness of lexical aspect. In *Poster presented in The Acquisition of Tense, Aspect and Mood in L1 and L2 Conference. Aston University, Birmingham*, (Vol. 8080).UK Retrieved from <http://spirit.tku.edu.tw> (October,19, 2019)
- Ishida, M. (2004). Effects of recasts on the acquisition of the aspectual form-te i-(ru) by learners of Japanese as a foreign language. *Language Learning*, 54(2), 311-394.
- Jackendoff, R. (1996). The proper treatment of measuring out, telicity, and perhaps even quantification in English. *Natural Language & Linguistic Theory*, 14(2), 305-354.
- Johansson, S. (2008). Contrastive analysis and learner language: A corpus-based approach. *University of Oslo*, 9.
- Kaplan, M. (1987). Developmental patterns of past tense acquisition among foreign language learners of French. In B. VanPatten (Ed.), *Foreign language learning: A research perspective* (pp. 52-60). Rowley, MA: Newbury House.
- Krashen, S. D. (1977). Some issues related to the monitor model. In H. Brown, C. Yorio, & R. Crymes (Eds.), *On TESOL '77* (pp. 144–158). Washington, DC: TESOL.
- Krashen, S. (1982). Principles and practice in second language acquisition. *Oxford: Pergamon Press*.
- Krashen, S. (1985). The input hypothesis: Issues and implications. *Laredo, Beverly Hills/longman*.
- Krieger, D. (2003). Corpus linguistics: What it is and how it can be applied to teaching. *The Internet TESL Journal*, 9(3), 123-141.
- Kumpf, L. (1982). *Tense, aspect, and modality in interlanguage: A discourse-functional approach*. Paper presented at the 1982 TESOL convention, Honolulu, Hawaii.
- Kumpf, L. (1984). Temporal systems and universality in interlanguage: A case study. *Universals of second language acquisition*, 132-143.
- Kuzman, T., Ljubešić, N., & Mozetič, I. (2023). Chatgpt: beginning of an end of manual annotation? Use case of automatic genre identification. arXiv preprint arXiv:2303.03953.
- Labeau, E. (2005). Beyond the Aspect Hypothesis: Tense–aspect development in advanced L2 French. *EUROSLA yearbook*, 5(1), 77-101.

- Landis, J. R., & Koch, G. G. (1977). An application of hierarchical kappa-type statistics in the assessment of majority agreement among multiple observers. *Biometrics*, 363-374.
- Larsen-Freeman, D. (1975). *The acquisition of grammatical morphemes by adult learners of English as a second language*. Unpublished doctoral dissertation, University of Michigan, Ann Arbor.
- Latham-Koenig, C., Oxenden, C., Chomacki, K., & Lambert, J. (2018). *English File 4E Intermediate Student Book*. Oxford University Press.
- Latham-Koenig, C., Oxenden, C., Chomacki, K., & Lambert, J. (2020). *English File 4E Pre-intermediate Workbook*. Oxford University Press.
- Li, P., (1989). *Aspect and Aktionsart in Child Mandarin*, unpublished Ph.D. Dissertation, University of Leiden, The Netherlands.
- Li, P., & Shirai, Y. (2000). *The acquisition of lexical and grammatical aspect (studies on language acquisition)*. New York: Mouton de Gruyter.
- Liskin-Gasparro, J. (2000). The use of tense-aspect morphology in Spanish oral narratives: Exploring the perceptions of advanced learners. *Hispania*, 830-844.
- Long, M., & Sato, C. (1984). Methodological issues in interlanguage studies: An interactionist perspective. *Interlanguage*, 253, 279.
- Longacre, R. E. (1981). A spectrum and profile approach to discourse analysis. *Text-Interdisciplinary Journal for the Study of Discourse*, 1(4), 337-360.
- Lund, B. D., & Wang, T. (2023). Chatting about ChatGPT: how may AI and GPT impact academia and libraries?. *Library Hi Tech News*, 40(3), 26-29.
- Lund, B. D., Wang, T., Mannuru, N. R., Nie, B., Shimray, S., & Wang, Z. (2023). ChatGPT and a new academic reality: Artificial Intelligence-written research papers and the ethics of the large language models in scholarly publishing. *Journal of the Association for Information Science and Technology*, 74(5), 570-581.
- M Alshater, M. (2022). Exploring the role of artificial intelligence in enhancing academic performance: A case study of ChatGPT. *Available at SSRN 4312358*.
- Mackey, A., Gass, S., & McDonough, K. (2000). How do learners perceive interactional feedback?. *Studies in second language acquisition*, 22(4), 471-497.
- McDonough, K., & Mackey, A. (2006). Responses to recasts: Repetitions, primed production, and linguistic development. *Language learning*, 56(4), 693-720.
- McEnery, T. (2019). *Corpus linguistics*. Edinburgh University Press.
- Michaelis, Laura. 2004. Type shifting in construction grammar: an integrated approach to aspectual coercion. *Cognitive Linguistics* 15. 1–67.
- Miesel, J. M. (1987). Reference to past events and actions in the development of natural language acquisition. *First and second language acquisition processes*, 206-224.
- Montrul, S., & Salaberry, R. (2003). The development of Spanish past tense morphology: Developing a research agenda. In B. Lafford & [M.] R. Salaberry (eds.), *Studies in Spanish second language acquisition: State of the science*, pp. 47–73. Washington, DC: Georgetown University Press.

- Mourelatos, A. P. (1978). Events, processes, and states. *Linguistics and philosophy*, 2(3), 415-434.
- Mourelatos, A. P. (1981). Events, processes, and states. In *Tense and aspect* (pp. 191-212). Brill.
- Muñoz, C., & Gilabert, R. (2011). More evidence concerning the aspect hypothesis: The acquisition of English progressive aspect by Catalan-Spanish instructed learners. *IRAL*, 49, 241-263.
- Myles, F. (2015). Second language acquisition theory and learner corpus research.
- Nasution, A. H., & Onan, A. (2024). Chatgpt label: Comparing the quality of human-generated and llm-generated annotations in low-resource language nlp tasks. *IEEE Access*, 12, 71876-71900.
- Nesselhauf, N. (2005). *Collocations in a learner corpus* (Vol. 14). John Benjamins Publishing.
- Paquot, M., & Plonsky, L. (2017). Quantitative research methods and study quality in learner corpus research. *International Journal of Learner Corpus Research*, 3(1), 61-94.
- Pavlenko, A., Lantolf, J., & Lantolf, J. P. (2000). Sociocultural theory and second language learning. *Second language learning as participation and (re) construction of selves*, 155-177.
- Plonsky, L. (2014). Study quality in quantitative L2 research (1990–2010): A methodological synthesis and call for reform. *The Modern Language Journal*, 98(1), 450-470.
- Rebuschat, P., & Williams, J. N. (Eds.). (2012). Statistical learning and language acquisition. *Berlin: Mouton de Gruyter*.
- Reinhart, T. (1984). Principles of gestalt perception in the temporal organization of narrative texts. *Linguistics*, 22, 779-809.
- Robison, R. E. (1990). The primacy of aspect: Aspectual marking in English interlanguage. *Studies in second language acquisition*, 12(3), 315-330.
- Robison, R. E. (1993). *Aspectual marking in English interlanguage. A cross-sectional study*. Unpublished doctoral dissertation, University of California, Los Angeles.
- Robison, R. E. (1995). The aspect hypothesis revisited: A cross-sectional study of tense and aspect marking in Interlanguage1. *Applied linguistics*, 16(3), 344-370.
- Rosansky, E. (1976). Methods and morphemes in second language acquisition. *Language Learning*, 26, 409–425.
- Rothstein, G. (1985). *The expression of temporality in the English interlanguage of a native Hebrew speaker*. Unpublished master's thesis, University of California, Los Angeles.
- Römer, U. (2004). Comparing real and ideal language learner input: The use of an EFL textbook corpus in corpus linguistics and language teaching. *Corpora and language learners*, 151-168.

- Ryu, J.-Y., Horie, K., & Shirai, Y. (2015). Acquisition of the Korean imperfective aspect markers –ko iss– and –a iss– by Japanese learners: A multiple-factor account. *Language Learning*, 65, 791–823.
- Sakata, N. (2019). Profiling vocabulary for proficiency development: Effects of input and general frequencies on L2 learning. *System*, 87, 102167.
- Salaberry, M. (1998). The development of aspectual distinctions in L2 French classroom learning. *Canadian Modern Language Review*, 54(4), 508–542.
- Salaberry, M. R. (1999). The development of past tense verbal morphology in classroom L2 Spanish. *Applied Linguistics*, 20(2), 151–178.
- Salaberry, R. (2000). The acquisition of English past tense in an instructional setting. *System*, 28, 135–152.
- Salaberry, M. R. (2002). Tense and aspect in the selection of Spanish verbal morphology. In R. Salaberry & Y. Shirai (Eds.), *Tense-aspect morphology in L2 acquisition* (pp. 371–415). John Benjamins.
- Salaberry, M. R. (2005). Evidence for transfer of knowledge of aspect from L2 Spanish to L3 Portuguese. In *Tense and aspect in Romance languages: Theoretical and applied perspectives* (pp. 179–210). John Benjamins Publishing Company.
- Salaberry, R. (2008). *Marking past tense in second language acquisition: A theoretical model*. Bloomsbury Publishing.
- Salaberry, M. R. (2011). Assessing the effect of lexical aspect and grounding on the acquisition of L2 Spanish past tense morphology among L1 English speakers. *Bilingualism: Language and Cognition*, 14(2), 184–202.
- Salaberry, M. R., & Comajoan, L. (Eds.). (2013). *Research design and methodology in studies on L2 tense and aspect*. Boston/Berlin: De Gruyter Mouton.
- Sato, C. (1986). Conversation and interlanguage development: Rethinking the connection. *Talking to learn: Conversation in second language acquisition*, 23–45.
- Schiffrin, D. (1981). Tense variation in narrative. *Language*, 57(1), 45–62.
- Schumann, J. H. (1978). *The pidginization process: A model for second language acquisition* (pp. 1–113). Rowley, Mass: Newbury House Publishers.
- Schumann, J. H. (1987). The expression of temporality in basilectal speech. *Studies in Second Language Acquisition*, 9(1), 21–41.
- Seliger, H. W., Shohamy, E. G., & Shohamy, E. (1989). *Second language research methods*. Oxford University Press.
- Shirai, Y. (1990). The defective tense hypothesis: Is there a distributional bias in the input. *Unpublished manuscript, Applied Linguistics, University of California, Los Angeles*.
- Shirai, Y. (1991). *Primacy of aspect in language acquisition: Simplified input and prototype*. Unpublished doctoral dissertation, University of California, Los Angeles.

- Shirai, Y. (1997). Discussion, Colloquium on the Acquisition of Tense and Aspect among Natural and Academic Learners of Spanish. 17th SLRF Meeting. Michigan State University, MI.
- Shirai, Y. (2002). The aspect hypothesis in SLA and the acquisition of Japanese. *Acquisition of Japanese as a Second Language*, 5, 42–61.
- Shirai, Y. (2004). A multiple-factor account for the form-meaning connections in the acquisition of tense-aspect morphology. In J. Williams, B. Van Patten, S. Rott, S., and Overstreet, M. (eds). *Form-meaning connections in second language acquisition* (pp. 91-112). New York: Routledge.
- Shirai, Y. (2007). The Aspect Hypothesis, the comparative fallacy and the validity of obligatory context analysis: a reply to Lardiere, 2003. *Second language research*, 23(1), 51-64.
- Shirai, Y. (2013). Defining and coding data: Lexical aspect in L2 studies. *Research design and methodology in studies on L2 tense and aspect*, 2, 271.
- Shirai, Y., & Andersen, R. W. (1995). The acquisition of tense-aspect morphology: A prototype account. *Language*, 743-762.
- Shirai, Y. & Kurono, A. (1998). The acquisition of tense-aspect marking in Japanese as a second language. *Language Learning*, 48, 245-279.
- Silver, M. (2003). The stance of stance: a critical look at ways stance is expressed and modeled in academic discourse. *Journal of English for Academic Purposes*, 2(4), 359-374.
- Smith, C. S. (1983). A theory of aspectual choice. *Language*, 59, 479-501.
- Stemler, S. E. (2004). A comparison of consensus, consistency, and measurement approaches to estimating interrater reliability. *Practical Assessment, Research, and Evaluation*, 9(1).
- Stephany, U. (1981). Verbal grammar in modern Greek early child language. *Child language: An international perspective*.
- Stubbs, M., & Halbe, D. (2012). Corpus linguistics: Overview. *The encyclopedia of applied linguistics*.
- Sugaya, N., & Shirai, Y. (2007). The acquisition of resultative and progressive meanings of the imperfective aspect marker by L2 learners of Japanese: Transfer, universals, or multiple factors. *Studies in Second Language Acquisition*, 29, 1–38.
- Swift, J. (1726). *Gulliver's Travels*. Published in 2008 by Oxford University Press.
- Törnberg, P. (2023). Chatgpt-4 outperforms experts and crowd workers in annotating political twitter messages with zero-shot learning. *arXiv preprint arXiv:2304.06588*.
- Tracy-Ventura, N., & Cuesta Medina, J. A. (2018). Can native-speaker corpora help explain L2 acquisition of tense and aspect? A study of the “input”. *International Journal of Learner Corpus Research*, 4(2), 277-300.
- Vendler, Z. (1957). Verbs and times. *The philosophical review*, 66(2), 143-160.
- Vendler, Z. (1967). *Linguistics in philosophy*. Ithaca, NY: Cornell University Press.

- Von Stutterheim, C., & Klein, W. (1987). A concept-oriented approach to second language studies. *First and second language acquisition processes*, 191-205.
- Vraciu, A. (2013). Exploring the upper limits of the Aspect Hypothesis: Tense-aspect morphology in the advanced English L2 variety. *Language, Interaction and Acquisition*, 4(2), 256-290.
- Weist, R. M. (2002). The first language acquisition of tense and aspect. *The L2 acquisition of tenseaspect morphology*. Amsterdam: Benjamin.
- Weist, R. M., Wysocka, H., Witkowska-Stadnik, K., Buczowska, E., & Konieczna, E. (1984). The defective tense hypothesis: On the emergence of tense and aspect in child Polish. *Journal of child language*, 11(2), 347-374.
- Wolfram, W. (1984). Unmarked tense in American Indian English. *American Speech*, 59(1), 31-50.
- Wolfram, W. (1985). Variability in tense marking: A case for the obvious. *Language Learning*, 35(2), 229-253.
- Wolfram, W. (1989). Systematic variability in second-language tense marking. In *The dynamic interlanguage: Empirical studies in second language variation* (pp. 187-197). Boston, MA: Springer US.
- Wulff, S., Ellis, N. C., Römer, U., Bardovi-harlig, K., & Leblanc, C. J. (2009). The acquisition of tense-aspect: Converging evidence from corpora and telicity ratings. *The Modern Language Journal*, 93(3), 354-369.
- Zhao, H., & Shirai, Y. (2018). Arabic learners' acquisition of English past tense morphology: Lexical aspect and phonological saliency. *International Journal of Learner Corpus Research*, 4(2), 253-276
- Zıngır, A. G. (1999). *The Effects of lexical aspect in interlanguage tense use of Turkish EFL learners*. Master's Thesis. Eskişehir: Anadolu University, Graduate School Of Social Sciences.

APPENDICES

APPENDIX – 1: Operational Tests for Lexical Aspect (Dowty, 1979 & Shirai, 2013)

APPENDIX – 2: Research Approval from School of Foreign Languages

APPENDIX – 3: Research Approval from Instructors

APPENDIX – 4: Research Consent Form

APPENDIX – 5: Research Approval from Publishing Institution

APPENDIX – 6: Research Ethics Approval



APPENDIX

Operational tests for lexical aspect

A Tests for Stative/Dynamic

- 1 Non-states are regularly used in the present progressive, states normally are not
 - a *Carla is knowing the answer
 - b Carla is working
- 2 Non-states can insert in *do*-clefts, states cannot Equivalently, only non-stative predicates can answer the question *What did he do?*
 - a *What Carla did was know the answer
 - b What Carla did was work
- 3 With the verb in the simple present form and in a non-narrative context, the predicate is stative if it can be assigned a clearly non-habitual meaning
 - a Carla knows the answer (non-habitual implies state)
 - b Carla works (habitual implies non-state)
 - c Carla builds a house (? implies non-state)

B Tests for Telic/Atelic

1 Imperfective paradox Assume that SUBJECT is (in the process of) PREDICATE [verb in present progressive form] If SUBJECT stops in the middle, is it true that SUBJECT PREDICATE [verb in present perfect form]? If the answer is 'yes', the predicate is atelic, otherwise it is telic

- a Assume that Ana is (in the process of) studying If she stops in the middle, is it true that she has studied? [yes]
- b Assume that Victor is (in the process of) walking home If he stops in the middle, is it true that he has walked home? [no]

2 Which of the following frames is more natural, assuming the interpretation that the entire situation occurs throughout the duration of the time period?

Atelic He/she can _____ FOR two minutes (hours, days, etc)

Telic He/she can _____ IN two minutes (hours, days, etc)

- a ?Victor can walk home for ten minutes (or 2 hours, etc)
Victor can walk home in ten minutes (or 2 hours, etc)
- b Ana can study for ten minutes (or 2 hours, etc)
?Ana can study in ten minutes (or 2 hours, etc)

3 Which of the following frames is more natural, assuming the interpretation that the entire situation occurs within the time period?

Atelic He/she spent two minutes (hours, days, etc) _____
(Verb in present participle form)

Telic It took (him/it/me) two minutes (hours, etc) to _____

- a ?Victor spent ten minutes (or 2 hours, etc) walking home
It took Victor ten minutes (or 2 hours, etc) to walk home
- b Ana spent ten minutes (or 2 hours, etc) studying
?It took Ana ten minutes (or 2 hours, etc) to study

C Tests for Punctual/Durative

1 With the verb in the simple past or past progressive, does the predicate accept a unitary, non-anticipatory meaning when it co-occurs with an adverbial of duration? The time adverbial must modify the verb not the resulting state or preceding activity

- a Aaron worked all night
- b Elizabeth walked home in twenty minutes
- c *Rebekah jumped for twenty minutes
- d *The policeman caught the thief in three days

2 With the verb in the present participle form, does the predicate have a non-iterative, non-anticipatory meaning? (Reference must be to the verb itself not the resulting state or preceding activity)

- a Aaron is no longer working
- b Elizabeth is no longer walking home
- c *Rebekah is no longer jumping
- d ?The policeman is no longer catching the thief

3 When modified by an *at* time phrase, does the predicate have a perfective meaning, not inchoative or inceptive? That is, is the entire event conceived as having happened at the given time?

- a *At 9 00 a m , Aaron worked
- b *At 9 00 a m , Elizabeth walked home
- c At 9 00 a m , Rebekah jumped
- d At 9 00 a m the policeman caught the thief

Operational tests for lexical aspect (Each test is used only in the clauses remaining after the preceding test):

Step 1: State or non-state? Does it have a habitual interpretation in simple present tense?

If no → State (e.g., *I love you.*)

If yes → Non-state (e.g., *I eat bread.*) → Go to Step 2

Step 2: Activity or non-activity? Does “X is Ving” entail “X has Ved” without an iterative/habitual meaning? In other words, if you stop in the middle of Ving, have you done the act of V?

If yes → Activity (e.g., *run*)

If no → Non-activity (e.g., *run a mile*) → Go to Step 3

Step 3: Accomplishment or achievement? If test (a) does not work, apply test (b), and possibly (c).

a) If “X Ved in (Y time; e.g., 10 minutes)”, then “X was Ving during that time”.

If yes → Accomplishment (e.g., *He painted a picture*)

If no → Achievement (e.g., *He noticed the picture*)

It needs to be noted that it is possible to say X was Ving even right after X began the action that led to the goal.

b) Is there ambiguity with “almost”?

If yes → Accomplishment (e.g., *He almost painted a picture* has two readings; i.e., *He almost started to paint a picture* and *He almost finished painting a picture*)

If no → Achievement (e.g., *He almost noticed the picture* has only one reading.)

c) “X will VP in (Y time; e.g., 10 minutes)” = “X will VP after (Y time)”.

If no → Accomplishment (e.g., *He will paint a picture in an hour* is different from *He will paint a picture after an hour*, because the former can mean *He will spend an hour painting a picture*, but the latter does not.)

If yes → Achievement (e.g., *He will start singing in two minutes* can have only one reading, which is the same as in *He will start singing after two minutes*, with no other reading possible.)

APPENDIX – 2: Research Approval from School of Foreign Languages

Sayı : E-39345886-100-187701
Konu : Akademik Çalışma İzni

03.06.2022

DAĞITIM YERLERİNE

Yüksekokulumuz öğretim elemanı Öğr. Gör. Yavuzcan DERE'nin 02.06.2022 tarihli dilekçesinde talep ettiği akademik çalışma için kullanılacak olan veri toplama izni Müdürlüğümüzce uygun görülmüştür.

Bilgilerinizi rica ederim.

Prof. Dr. İhsan DAĞTEKİN
Yabancı Diller Yüksekokulu Müdürü

Ek: 1 sayfa Dilekçe

Dağıtım:
Gereği:
Yabancı Diller Bölümüne

Bilgi:
Personel Daire Başkanlığına
Öğr.Gör. Yavuzcan DERE

APPENDIX – 3: Research Approval from Instructors

CEM GÜRBÜZ

6 Haziran 2022 23:53

Alıcı: YAVUZCAN DERE

Yavuz Hocam merhaba,

Çalışmanız için sınıftan veri toplamanız ve onları analiz etmenizde herhangi bir sakınca yoktur.

Kolaylıklar dilerim.

Öğr. Gör. Cem Gürbüz

YAVUZCAN DERE, 6 Haz 2022 Pzt, 23:24 tarihinde şunu yazdı:

[Alıntılanan metin gizlendi]

Ezgi Derya Tertemiz

7 Haziran 2022 00:05

Alıcı: YAVUZCAN DERE

Yavuz Hocam merhaba,

Bilgilendirme için teşekkür ederim, çalışmanız için sınıftan veri toplamanız ve analizini yapmanızda herhangi bir sakınca yoktur

İyi çalışmalar

Öğr.Gör.Ezgi Derya Tertemiz

7 Haz 2022 Sal 00:03 tarihinde YAVUZCAN DERE şunu yazdı:

[Alıntılanan metin gizlendi]

SİBEL TOSUN

7 Haziran 2022 00:13

Alıcı: YAVUZCAN DERE

Yavuz Hocam merhaba,

Tez çalışmanız kapsamında öğrencilerimden veri toplayıp analiz etmenizde herhangi bir sakınca yoktur

İyi çalışmalar diliyorum.

Öğr.Gör.Sibel Tosun

YAVUZCAN DERE, 6 Haz 2022 Pzt, 23:24 tarihinde şunu yazdı:

Hocalarım merhaba,

[Alıntılanan metin gizlendi]

APPENDIX – 4: Research Consent Form

Merhaba,

Bu çalışma, ***Kılınış Ve Söylem Hipotezlerindeki Önergelerin Test Edilmesi: Orta Seviye İngilizce Öğrenen Türk Öğrencilerin Yazılı Öykülerinden Bulgular*** başlıklı bir doktora tezi çalışmasıdır. Çalışma, Yavuzcan DERE tarafından yürütülmektedir. Çalışma kapsamında İngilizce öğrenen alt orta seviyedeki Türk öğrencilerin yazılı öykülerindeki kılınış yüklem türleri ve söylem yapısı ile fiillere getirilen eklerin ilişkisi incelenecek ve bulgular ders kitaplarındaki/öğrenme materyallerindeki dil ile karşılaştırılacaktır. Çalışma sonuçları ile hem Türk öğrencilerin hedef dildeki kılınış ve söylem yapıları daha iyi anlaşılacak hem de ders materyallerinin öğrencilerin ara dilini şekillendirmesi ile ilgili sonuçlar elde edilecektir.

- Bu çalışmaya katılımınız gönüllülük esasına dayanmaktadır.
- Çalışmanın amacı doğrultusunda, hazırlık sınıfı eğitiminizin (Fırat Üniversitesi-Yabancı Diller Yüksekokulu) yazma derslerinin gereği olarak hazırlayıp teslim edeceğiniz yazılı öyküler toplanacak ve analiz edilecektir.
- Araştırmada katılımcıların isimleri gizli tutulacaktır.
- Araştırma kapsamında toplanan veriler, sadece bilimsel amaçlar doğrultusunda kullanılacak, araştırmanın amacı dışında ya da bir başka araştırmada kullanılmayacak ve gerekmesi halinde, sizin (yazılı) izniniz olmadan başkalarıyla paylaşılmayacaktır.
- İstemeniz halinde sizden toplanan verileri inceleme hakkınız bulunmaktadır.
- Veri toplama sürecinde/süreçlerinde size rahatsızlık verebilecek herhangi bir soru/talep olmayacaktır. Yine de katılımınız sırasında herhangi bir sebepten rahatsızlık hissederseniz çalışmadan istediğiniz zamanda ayrılabilirsiniz. Çalışmadan ayrılmanız durumunda sizden toplanan veriler çalışmadan çıkarılacak ve imha edilecektir.

Gönüllü katılım formunu okumak ve değerlendirmek üzere ayırdığınız zaman için teşekkür ederim. Çalışma hakkındaki sorularınızı araştırmacıya yöneltebilirsiniz.

Araştırmacı Adı : Yavuzcan DERE
Adres : ***
Tel : ****

(Lütfen aşağıdaki bilgileri doldurup, size uygun olan seçeneği belirterek, bu formu araştırmacıya geri gönderiniz)

Bu çalışmaya tamamen kendi rızamla, istediğim takdirde çalışmadan ayrılabileceğimi bilerek verdiğim bilgilerin bilimsel amaçlarla kullanılmasını kabul ediyorum.

EVET - HAYIR

Katılımcı Ad-Soyadı ve İmza:

Tarih:

APPENDIX – 5: Research Approval from Publishing Institution

Sayın Dere,

Doktora çalışmanızda yayınevimize dair ders materyallerinden öykülerin ve/veya öyküleyici anlatım örneklerinin veri olarak kullanılıp analizlerinin yapılması bizce de uygundur. İlgili materyalleri 'Kaynakça' kısmında belirtmeniz yeterli olacaktır.

Yapabileceğimiz bir şey olursa lütfen bizlere yine ulaşınız. İyi çalışmalar,

Atınç Yılmaz

Marketing Manager – Turkey & Central Asia | ELT

Oxford University Press



APPENDIX – 6: Research Ethics Approval

Evrak Kayıt Tarihi: 15.11.2022	Protokol No: 442510	Tarih: 22.11.2022
--------------------------------	---------------------	-------------------



ANADOLU ÜNİVERSİTESİ
SOSYAL VE BEŞERÎ BİLİMLER BİLİMSEL ARAŞTIRMA VE YAYIN ETİĞİ KURULU
KARAR BELGESİ

ÇALIŞMANIN TÜRÜ:	Doktora Tez Çalışması
KONU:	Eğitim Bilimleri
BAŞLIK:	Kılnış ve Söylem Hipotezlerindeki Önermelerin Test Edilmesi: Alt Orta Seviye İngilizce Öğrenen Türk Öğrencilerin Yazılı Öykülerinden Bulgular
PROJE/TEZ YÜRÜTÜCÜSÜ:	Dr. Öğr. Üyesi Gonca SUBAŞI
TEZ YAZARI:	Yavuzcan DERE
ALT KOMİSYON GÖRÜŞÜ:	-
KARAR:	Olumlu

CURRICULUM VITAE

Name & Surname: Yavuzcan DERE

Foreign Language(s): English

Education:

2012, Marmara University, Faculty of Education, Department of Foreign Languages

Education, English Language Teaching

2018, Cukurova University, Institute of Social Sciences, Department of Foreign

Languages Education, English Language Teaching

Professional Experience:

2013- , Fırat University, School of Foreign Languages

Publications:

Dere, Y. (2017). *An investigation of the relationship between epistemological and language learning beliefs* (Master's thesis, Sosyal Bilimler Enstitüsü).