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*— alapítva —*

Doctoral School of Linguistics

A research plan:

VALIDATION OF THE PÁZMÁNY BASIC ENGLISH  
LANGUAGE EXAMINATION  
SYNTACTIC COMPLEXITY ANALYSIS OF THE  
WRITTEN TEXT PRODUCTION

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  - 2.2. Syntactic complexity
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# INTRODUCTION OF THE RESEARCH TOPIC

# Background

- **Syntactic complexity (SC)** is a crucial constraint of L2 performance and one of the most frequently used measures to analyze **L2 proficiency** (e.g. by Ai&Lu, 2013; Biber et al., 2016; Hunt, 1965; Taguchi et al., 2013).
- **SC is a highly complex concept (different dimensions of the construct at three levels: sentence, phrase and clause)**
- **SC of a written text** plays a vital role in the **language assessment area**
- **The validity of a language test** – one of the fundamental qualities of any assessment process (Bachman & Palmer, 1996, p. 21) encompasses the capacity of a test that is **valid** and thus, which **evaluates what it is proposed to evaluate** (Hughes, 1998, p. 26).

# Significance of the research

- Taking into account that grammatical knowledge is one of the fundamental aspects of L2 performance at the examination, this prospective study was designed to examine the validity of the Pázmány Basic Language exam (BLE) contributing through the investigation of syntactic complexity features of the written texts.
- To fill the gap, the present study seeks to examine the relationship between syntactic complexity of English L2 learner texts and writing quality as determined by human raters.



to determine whether the written text production part of the Pázmány Basic Language exam can be validated with the help of syntactic variables and thus, identify the extent to which syntactic complexity measures can predict L2 writing proficiency at the B2+ level also compared to writing quality judged by human ratings.

# Research objectives

Investigate the patterns of syntactic complexity predicting high-quality writing as measured by the syntactic complexity variables:

Investigate the syntactic complexity of a written text at the B2+ level of language proficiency

Identify the role of syntactic complexity in the decision-making process as judged and interpreted by the raters

Examine the role of syntactic complexity of written texts in the context of the L2 assessment validation process

# Research questions

- (1) What are the predictive patterns of syntactic complexity for writing quality characterized by the syntactic complexity variables?
- (2) What are the syntactic complexity measures that can serve as indices of the B2+ level of English?
- (3) What are the predictive patterns of syntactic complexity for writing quality characterized by score levels assessed by human ratings?
- (4) Which syntactic complexity features are interpreted by raters as the best predictive elements of high quality writing in raters' decision-making process?
- (5) How can the validity of the Pázmány Basic English Language Examination be investigated by the syntactic complexity analysis of students' written text production, as measured with the help of the selected syntactic variables?

# Overview of the literature review

## 1. Basic concepts of L2 writing proficiency

1.1. Views of language knowledge and ability

1.2. Models of the writing process

1.3. Complexity in writing

## 2. Syntactic complexity

2.1. Syntactic complexity in L2 research

2.2. Approaches to measure syntactic complexity

2.3. Syntactic complexity analyzers

## 3. The assessment of L2 written text production

3.1. Basic considerations of writing test design and usefulness

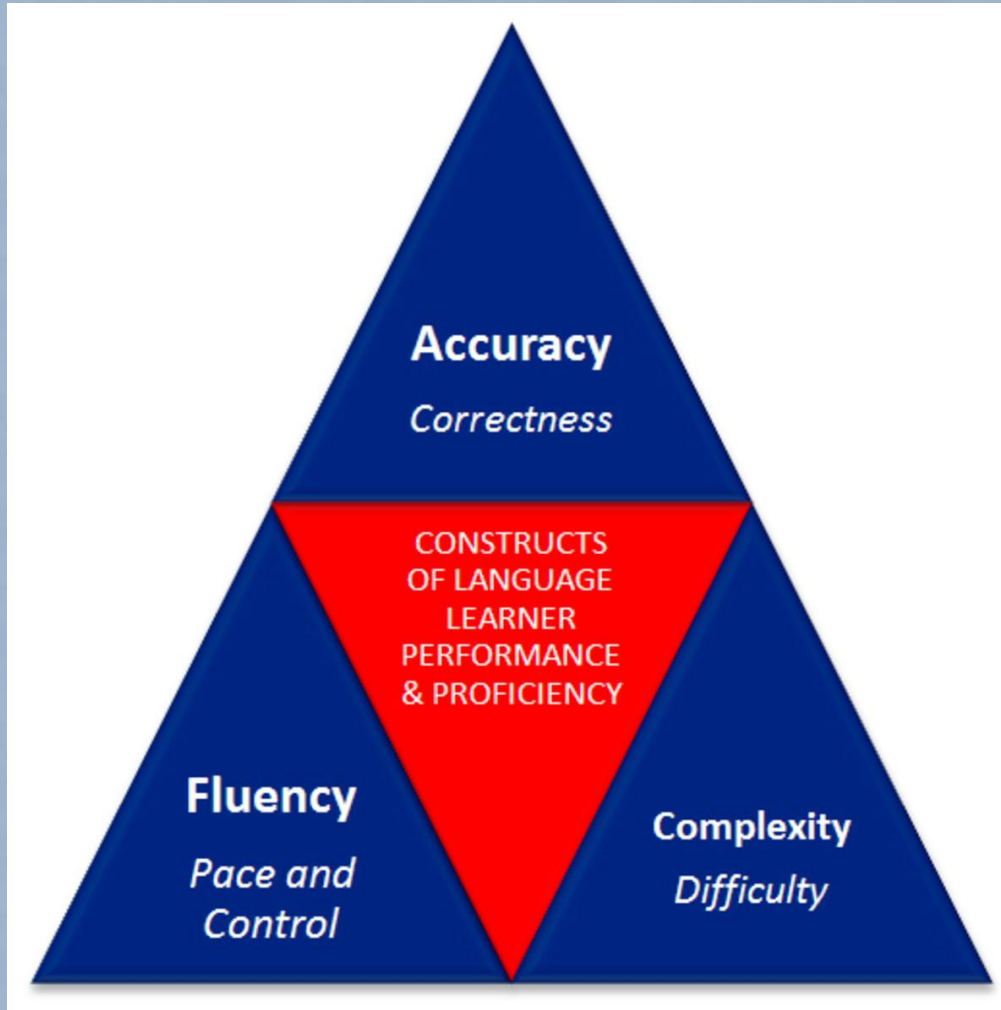
3.2. Evaluation of writing (scoring procedures, rating scale types, scoring rubrics, the CEFR)

3.3. Rater decisions and syntactic complexity of a written text (rater variables, decisions)



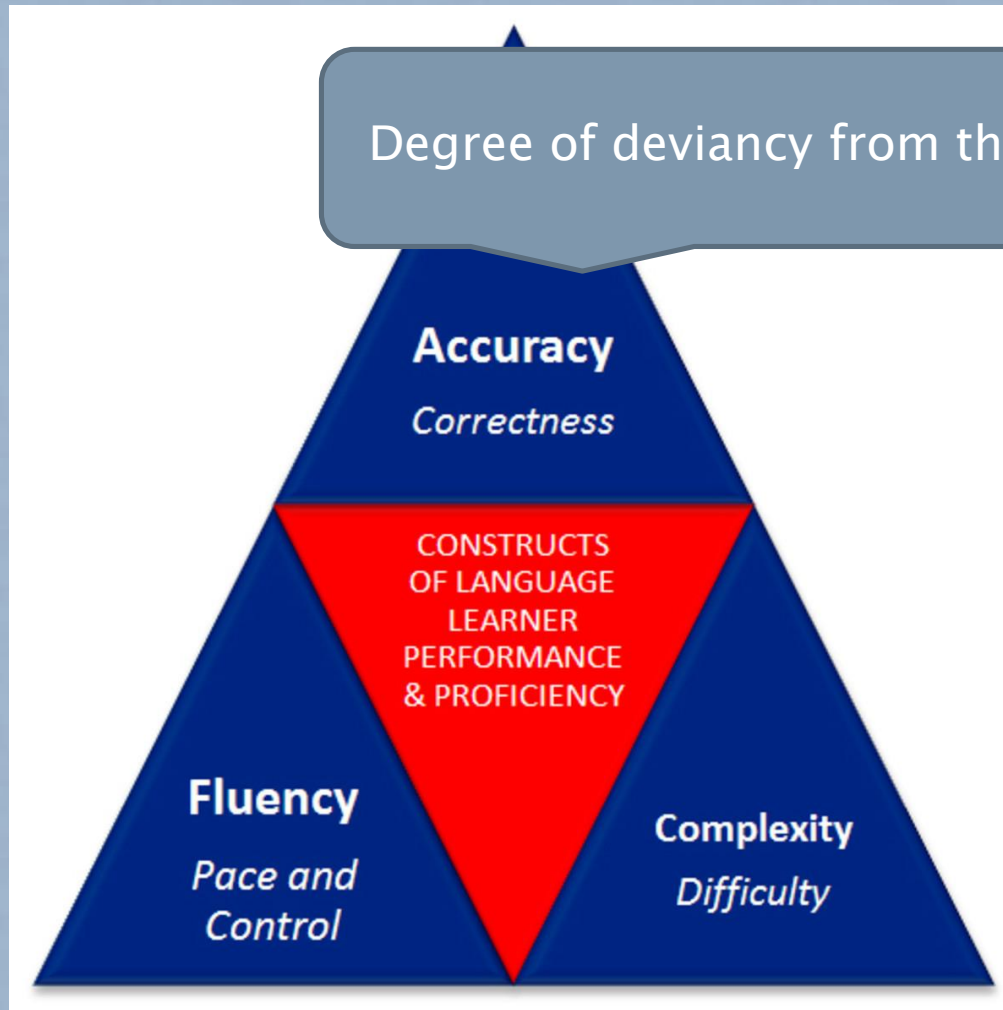
# The CAF triad: complexity

A fundamental framework characterizing L2 proficiency, performance, and development (Bulté & Housen, 2014).



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A fundamental framework characterizing L2 proficiency, performance, and development (Bulté & Housen, 2014).

Degree of deviancy from the norm

multi-componential construct :

- rate and density of delivery,
  - number, length and distribution of pauses in speech
  - number of false starts and repetitions)
- (Tavakoli and Skehan 2005).



# A TAXONOMY OF COMPLEXITY CONSTRUCTS

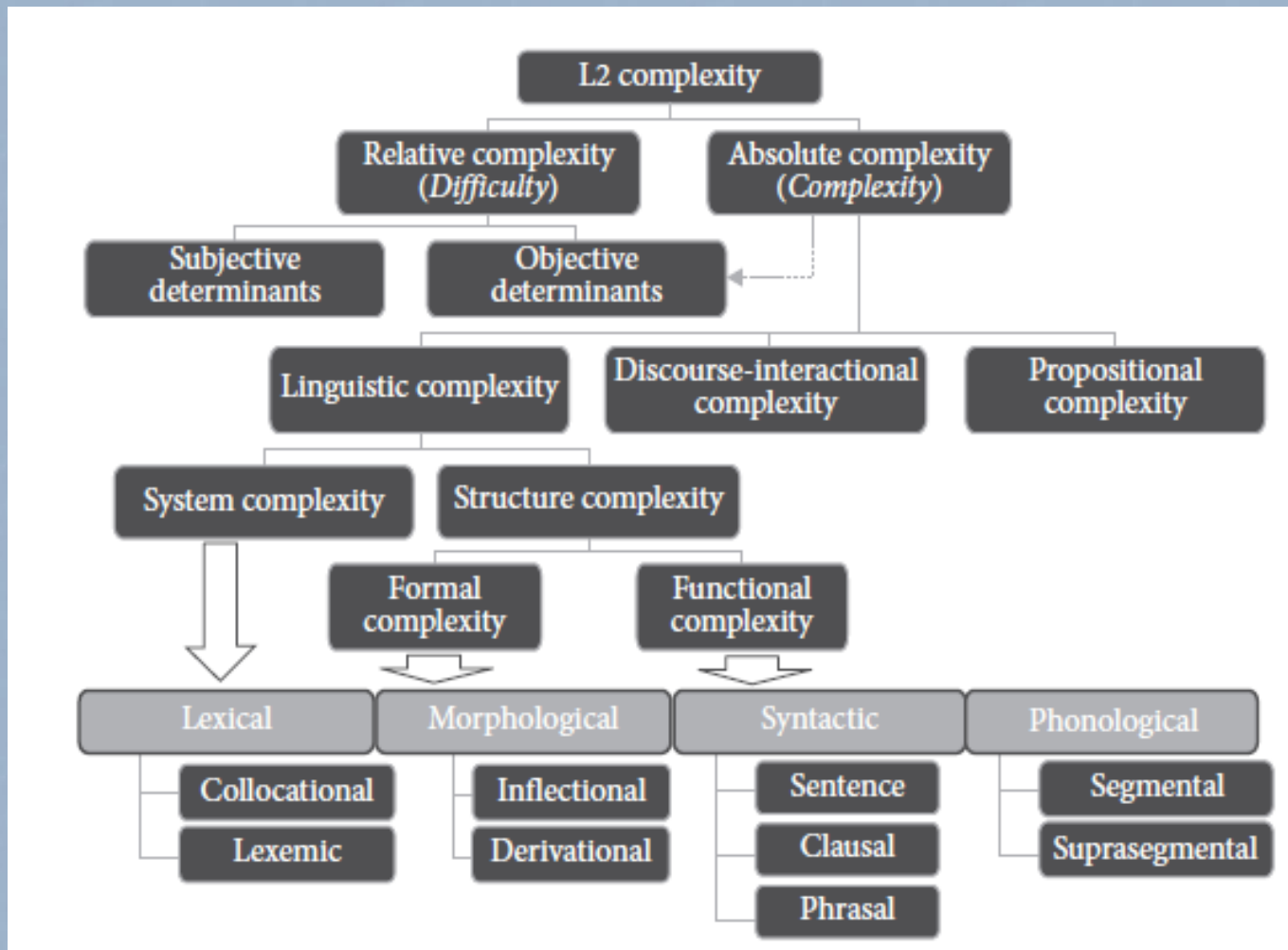


Figure 1. A taxonomy of complexity constructs (Bulté, B., & Housen, A., 2012).

# SYNTACTIC COMPLEXITY

Author	Definition
Foster & Skehan (1996)	“progressively more elaborate language that is used”, “a greater variety of syntactic patterning” + assign SC to the learners’ willingness to produce structures and units “closer to the cutting edge of interlanguage development”
Hunt (1965)	length and frequency of the formal text–internal structures (i.e. sentence length, clause length, subordination ratio, and others).
Ortega (2003)	syntactic maturity and defined it as “the range of forms that surface in language production and the degree of the sophistication of such forms”
Lu (2017)	“a multidimensional construct, with each dimension requiring different, appropriate measures” (p. 497). Lu (2017) illustrated 2 views on syntactic complexity: quality – from the perspective of L2 testing and assessment area, and variability – L2 writing across different aspects (genre, task, topic).

# KEY QUALITIES OF TEST USEFULNESS (BACHMAN & PALMER, 2010)



Reliability

Construct  
validity



Authenticity

Interactiveness



Impact  
(backwash)

Practicality

**Construct validity** = “the meaningfulness and appropriateness of the interpretations that we make based on the test scores” (Bachman & Palmer, 1996, p. 44).

**Construct validation** of a test is related to establishing the extent a test is measuring what it is supposed to measure and how closely the intended measures are interpreted in the scores. Thus, the exam validation process involves the collection of relevant evidence to support the validity of the assessment. Since grammar is one of the areas of language ability to be assessed at the BLE, the present study is aimed to investigate the validation process with the help of the syntactic complexity of the written texts. Particularly, the evidence will be collected from both the analysis of the construct to be evaluated and the degree of correspondence of the measures to the scores.

Construct  
validity

Interactiveness

Practicality

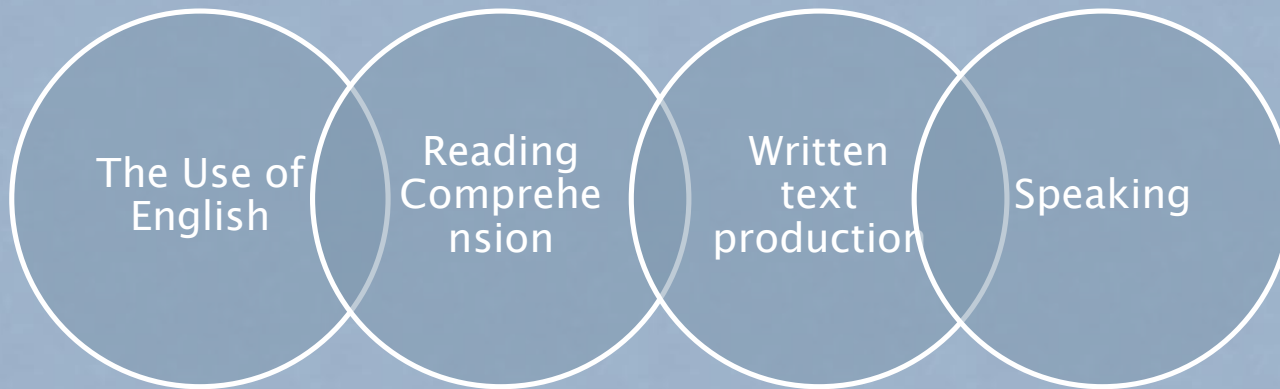


# RESEARCH METHODS



# RESEARCH SETTINGS

**The Basic Language Examination** – an obligatory language assessment for English majors at the end of the 2nd semester of their studies (the B2+ level according to the CEFR)



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**The Basic Language Examination** – an obligatory language assessment for English majors at the end of the 2nd semester of their studies (the B2+ level according to the CEFR)



**Task** : choose the topic and write a 180–200 word text body

**Points (1–5)**: based on four basic characteristics:

- \* task achievement;
- \* coherence and cohesion;
  - \* grammar;
  - \* vocabulary

# PARTICIPANTS OF THE STUDY

The students of Pázmány Peter Catholic University majoring in English (over 70 non-native speakers of English and the test takers of the Pázmány BLE).

The raters at the Pázmány Peter Catholic University, who assess the students' exam papers at the BLE.

# DATA COLLECTION

Corpus  
creation

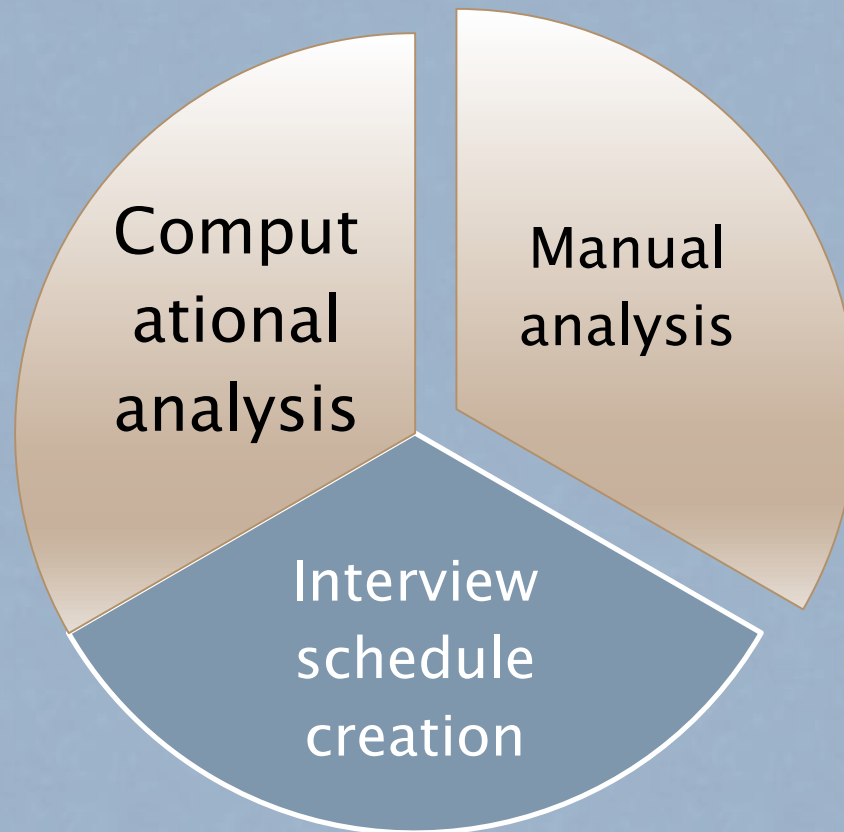
- Corpus of over 70 written texts
- Transcription, correction

Interview

- Long qualitative interviews

# Data analysis

- Mixed-method study (qualitative & quantitative)



# Data analysis

- Mixed-method study (qualitative & quantitative)

“A detailed set of the questions and probes” (p. 78)) covering all the topics to be addressed in the interview (Maykut–Morehouse, 1994).

Interview  
schedule  
creation



# CONCLUSION & DISCUSSION

# PRELIMINARY WORK

## Doctoral workshop at Pazmany Peter Catholic University (2021)

- Project: "Validation of the written text production part of the Basic Language Examination: testing the variables for syntactic complexity analysis of the written texts "

## The 4th Össznyelvész Conference [ Budapest Research Centre for Linguistic Theory]

- Project: "Washback of the Basic English Language Examination on teaching writing: creation and validation of the interview schedule"

## The ALTAANZ online Zoom meeting for PhD students [ The University of Auckland, New Zealand (online)] Project: "Validation of the Basic Language Examination (a work in progress)"

## Doctoral workshop at Pazmany Peter Catholic University (2020 – 2)

- Project: "Learner corpora and language assessment"

## International Diversity in Teacher and Higher Education Research in the 21st Century: Insights from Doctoral Students, Supervisors, and Doctoral School Leaders (2020)), ELTE

- Project: "Validation of the writing exam: syntactic complexity analysis of the university students' written text production"

## Doctoral workshop at Pazmany Peter Catholic University (2020)

- Project: "Testing as the main device of the evaluation process"

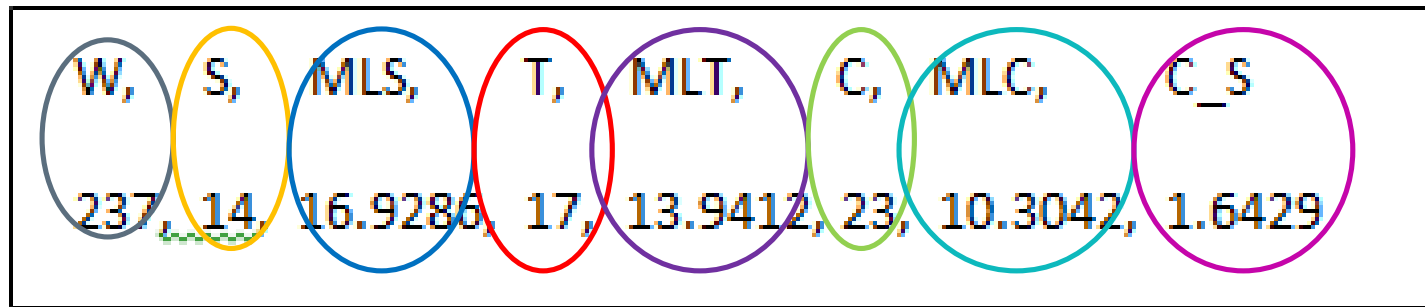




# SOME ASPECTS OF THE PILOTING STUDY

# Computational analysis

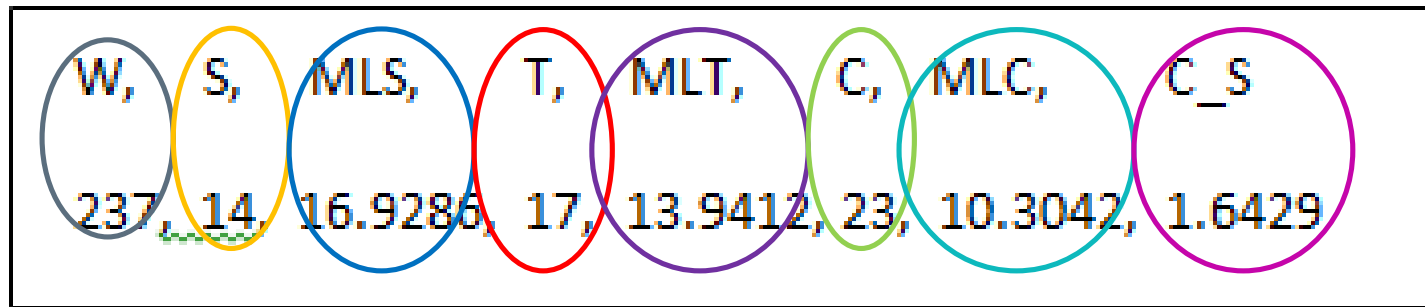
Text #1



Length of  
the text  
(Number  
of words –  
W)

# computational analysis

Text #1



# Computational analysis

Length of  
the text  
(Number  
of words  
W)

Number of  
Sentences  
(S)

W,	S,	MLS,	T,	MLT,	C,	MLC,	C_S
237,	14,	16.9286,	17,	13.9412,	23,	10.3042,	1.6429

“A group of words which express a thought and delimited with one of the following punctuation marks that signal the end of a sentence: period, question mark, exclamation mark, quotation mark, or ellipsis” (Lu, 2010: 481).

# computational analysis

Length of  
the text  
(Number  
of words  
W)

Number  
of Sentences  
(S)

Mean  
length of  
sentences  
(MLS)

W,	S,	MLS,	T,	MLT,	C,	MLC,	C_S
237,	14,	16.9286,	17,	13.9412,	23,	10.3042,	1.6429

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# Computational analysis

Length of the text  
(Number of words)

Number of Sentences (S)

Mean length of sentence (M)

Number of T-units (T)

W,	S,	MLS,	T,	MLT,	C,	MLC,	C_S
237,	14,	16.9286,	17,	13.9412,	23,	10.3042,	1.6429

A T-unit is “one main clause plus any subordinate clause or nonclausal structure that is attached to or embedded in it” (Hunt 1970:4)

“A group of words delimited with one of the following punctuation marks that signal the end of a sentence: period, question mark, exclamation mark, quotation mark, or ellipsis” (Lu, 2010: 481).

# Computational analysis

Length of the text  
(Number of words)

Number of Sentences (S)

Mean length of sentences (MLS)

Mean length of T-units (MLT)

W,	S,	MLS,	T,	MLT,	C,	MLC,	C_S
237,	14,	16.9286,	17,	13.9412,	23,	10.3042,	1.6429

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# Computational analysis

Length of the text  
(Number of words)

Number of Sentences (S)

Mean length of sentences (MLS)

Mean length of T-units (MLT)

Number of clauses (C)

W,	S,	MLS,	T,	MLT,	C,	MLC,	C_S
237,	14,	16.9286,	17,	13.9412,	23,	10.3042,	1.6429

A T-unit is "one main clause plus any subordinate clauses and subordinate structures embedded in it."

"A group of words delimited with one of the following punctuation marks: period, exclamation mark, quotation mark, or ellipsis (Halliday & Martin 2010: 481).

A clause is defined as a structure with a subject and a finite verb, and includes independent clauses, adjective clauses, adverbial clauses, and nominal clauses.



# Computational analysis

Length of the text  
(Number of words)

Number of Sentences (S)

Mean length of sentences (MLS)

Number of T-units (T)

Mean length of T-units (MLT)

Number of clauses (C)

Mean length of clauses (MLC)

W,	S,	MLS,	T,	MLT,	C,	MLC,	C_S
237,	14,	16.9286,	17,	13.9412,	23,	10.3042,	1.6429

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# Computational analysis

Length of the text  
(Number of words)

Number of Sentences (S)

Mean length of sentence (MLS)

Mean length of T-units (MLT)

Number of clauses (C)

Mean length of clauses (MLC)

Mean of clauses per sentence (C\_S)

W,	S,	MLS,	T,	MLT,	C,	MLC,	C_S
237,	14,	16.9286,	17,	13.9412,	23,	10.3042,	1.6429

A T-unit is "one main clause plus any subordinate clauses and embedded structures."

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# Manual analysis

Finite Verb  
Phrase (Finite VP)

Progressive

**am** (finite VP)

**writing**

**have** (finite VP)

**read**

to inquire in connection summer camp jobs.

I **am** (finite VP) really interested in spending a month in the summer.

**am** (finite VP)

really interested in spending a month in the summer.

**would** (finite VP)

**like**

to get some opportunity...

Passive

Perfect  
Passive

...Furthermore, **are** (finite VP) there any options which **are** (finite VP) specialized in...?

Conditional

Subordination

...I **wonder** (finite VP) if I **could** (finite VP) help in dealing with children **as** I **have** (finite VP) a degree in teaching and I **have** (finite VP) **been** in several summer camps as a trainee teacher...

**could** (finite VP)

**as**

**have** (finite VP)

**been**

# Correlation between textual and grammatical variables

#	Variable 1	Variable 2	r-coefficient
13.	Finite VP	Clauses	.945
12.	Finite VP	Words	.781
11.	Finite VP	T-units	.741
10.	Subordination	Clauses	.626
9.	Finite VP	Sentences	.611
8.	Subordination	The mean length of clauses	-.583
7.	Subordination	Clauses per sentence	.564
6.	Finite VP	The mean length of clauses	-.544
5.	Coordination	T-units	.441
4.	Coordination	Clauses	.397
3.	Coordination	Words	.374
2.	Coordination	Clauses per sentence	.347
1.	Subordination	Words	.334

# Correlation between grammatical variables and the grammar points

#	Variable 1	Variable 2	r-coefficient
1.	Grammar points	Passive	.313

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