

SEAMEO RETRAC 7th International
TESOL Conference

An investigation into the lexical
density and readability of non-
English majored first-year
students' writings at a
pedagogical university in
Vietnamese context

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Outline

I. Introduction

II. Literature Review

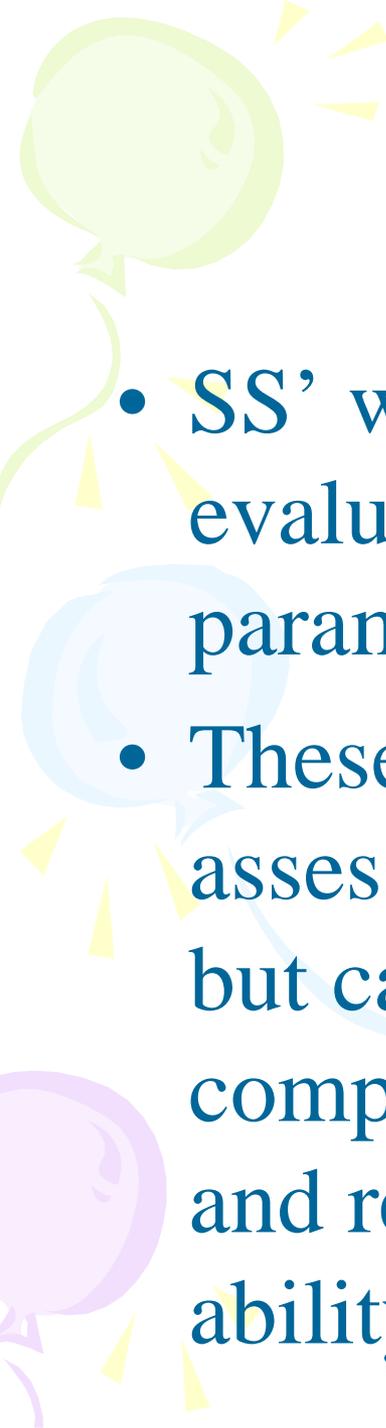
III. Methodology

IV. Conclusion



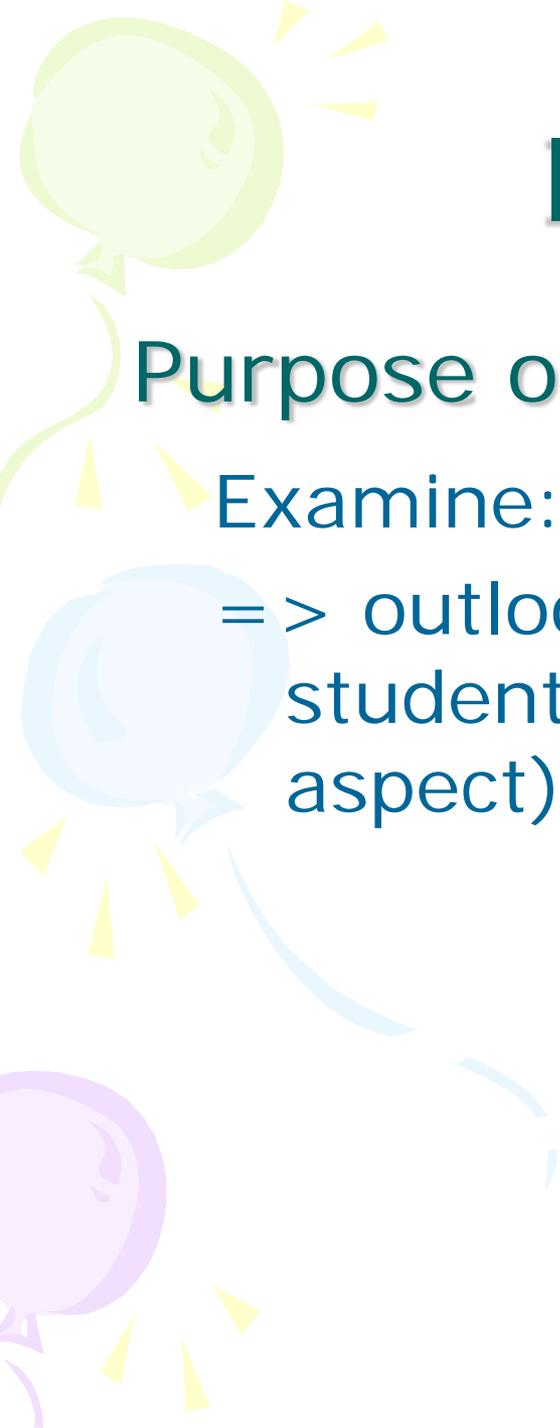
I. Introduction

- Background: SS study English at the very first semester to serve the purpose of study, research and teaching in the future
- Purpose: integrated English into the curriculum for Mathematic majored students to equip them with English language skills for their teaching Mathematics in English in the future

A decorative graphic on the left side of the slide features a light green lightbulb at the top, a blue speech bubble in the middle, and a purple speech bubble at the bottom. Yellow triangular rays emanate from each of these shapes. The background is white.

I. Introduction

- SS' written works are analyzed and evaluated through two descriptive parameters: lexical density and readability
- These two indices are not comprehensive assessment of one's language competence, but can show the quantified notion of text complexity, which can provide a very first and relative look at their productive ability.

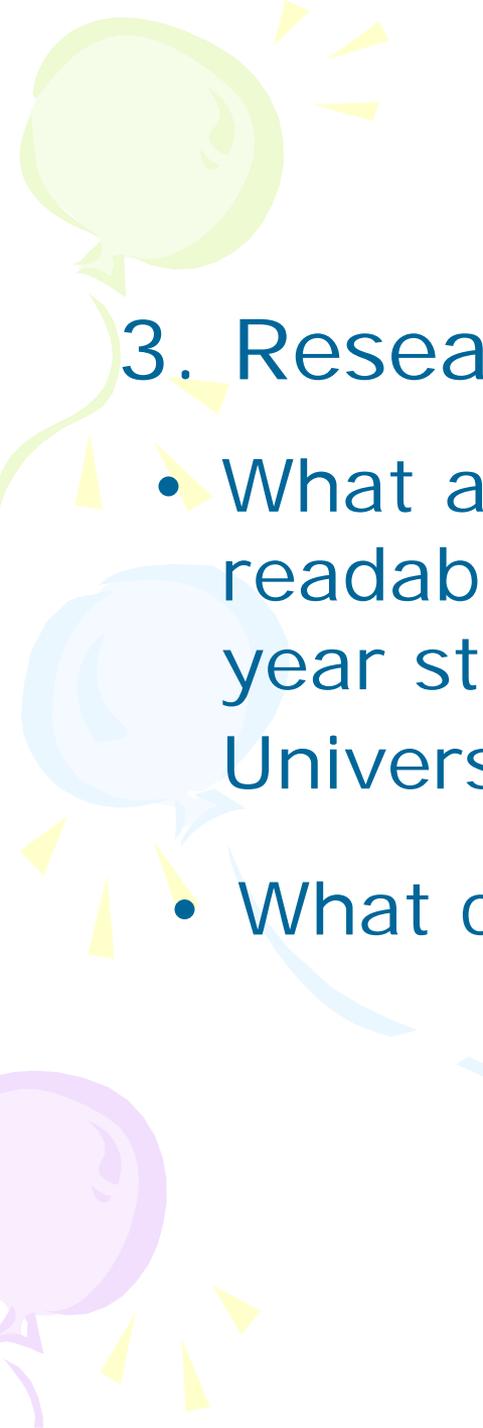


I. Introduction

Purpose of the study

Examine: lexical density + readability

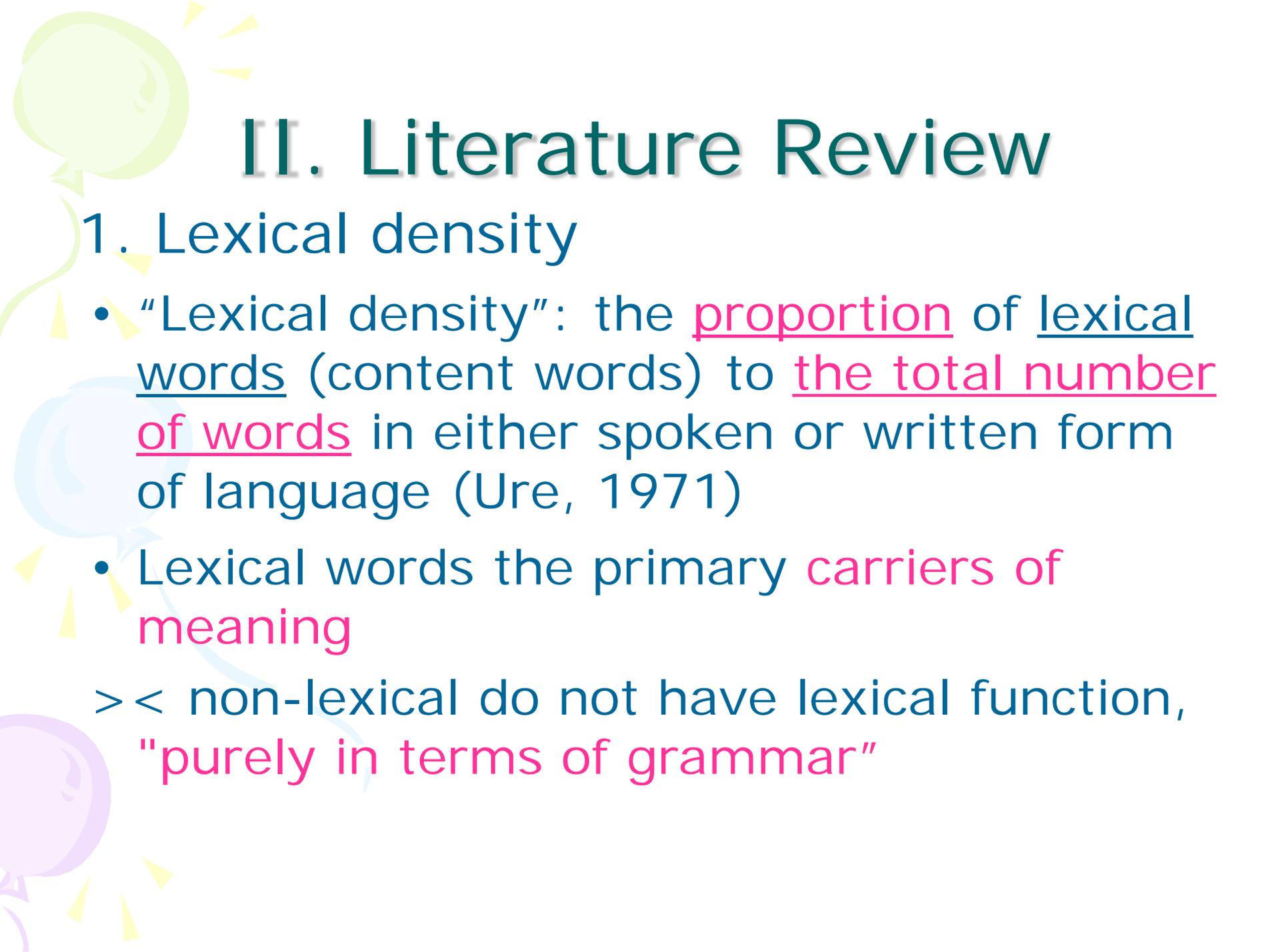
=> outlook of non-English majored students' writing competence (quantitative aspect)



I. Introduction

3. Research questions

- What are the lexical density and readability of non-English majored first-year students' writings at Hanoi National University of Education
- What can be inferred from those factors?



II. Literature Review

1. Lexical density

- “Lexical density”: the proportion of lexical words (content words) to the total number of words in either spoken or written form of language (Ure, 1971)
- Lexical words the primary **carriers of meaning**
- > < non-lexical do not have lexical function, **“purely in terms of grammar”**

II. Literature Review

- Halliday (1985) referred to the term “items” rather than “words”
- More than a word to represent a sense

“Turn out”

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graph LR; A(["Turn out"]) --> B["Ure (1971) 'turn': lexical word  
'out': non-lexical word"]; A --> C["Halliday (1985) 'turn out': lexical item"];
```

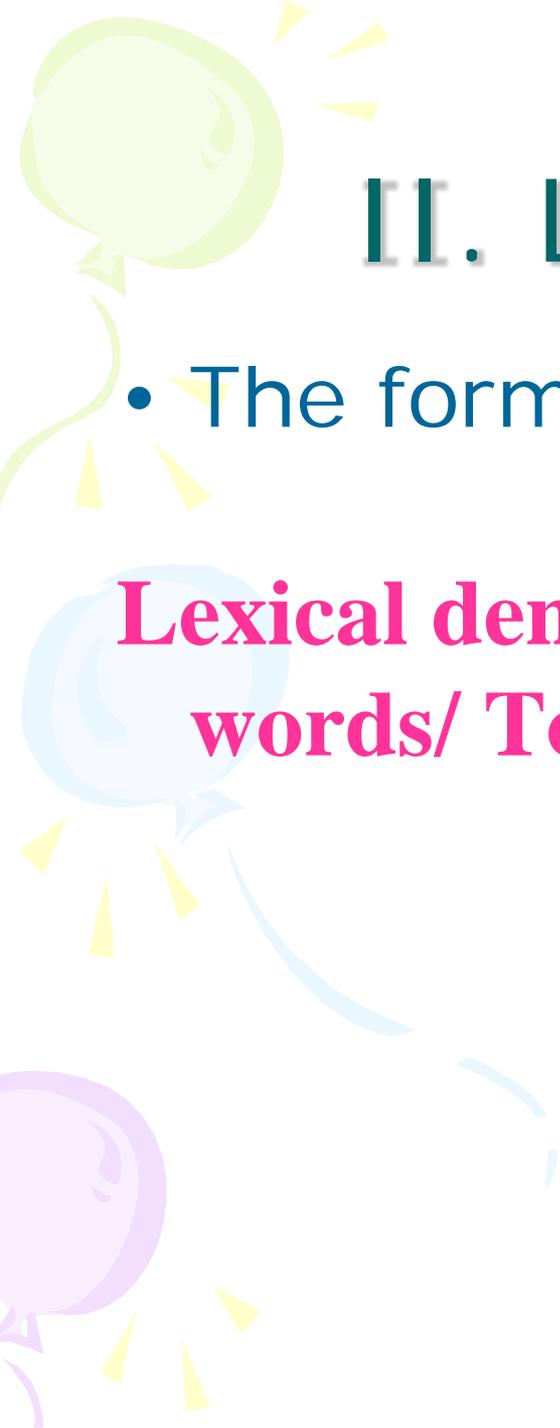
Ure (1971) “turn”: lexical word
“out”: non-lexical word

Halliday (1985) “turn out”: lexical item



II. Literature Review

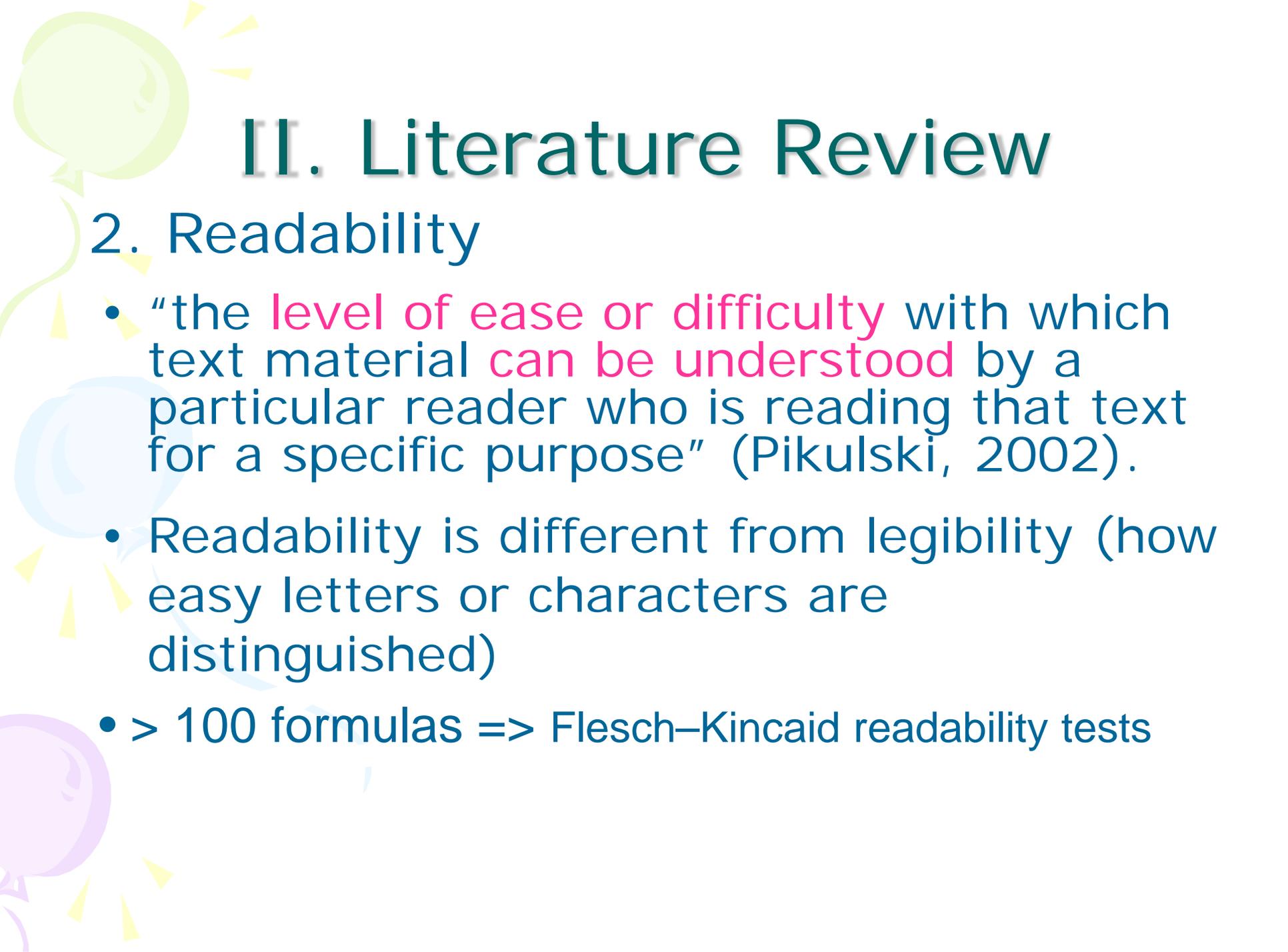
- M. Linnarund. 1973. Lexical density and lexical variation – An analysis of the lexical texture of Swishes students' written work.
 - Johansson, Victoria. 2008. Lexical diversity and lexical density in speech and writing: a developmental perspective
 - Vinh To, Si Fan, & D.Thomas. 2013. Lexical Density and Readability: A Case Study of English Textbooks. Internet Journal of Language, Culture and Society
 - Šárka Timarová. Corpus linguistic methods in interpreting research: A case study. Charles University, Prague
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II. Literature Review

- The formula proposed by Ure (1985)

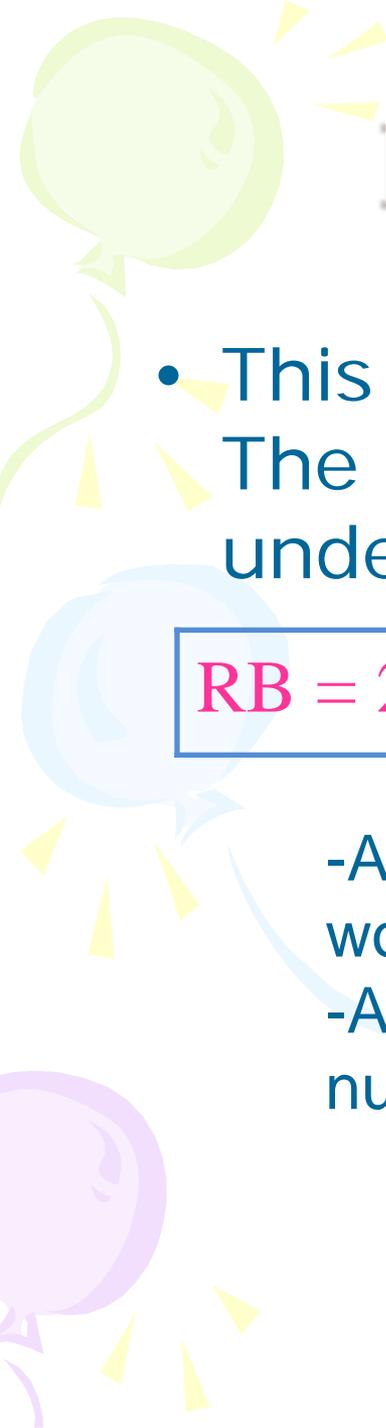
Lexical density (%) = (Number of lexical words / Total number of words) x 100



II. Literature Review

2. Readability

- “the **level of ease or difficulty** with which text material **can be understood** by a particular reader who is reading that text for a specific purpose” (Pikulski, 2002).
- Readability is different from legibility (how easy letters or characters are distinguished)
- > 100 formulas => Flesch–Kincaid readability tests



II. Literature Review

- This test rates text on a 100-point scale.
• The higher the score, the easier it is to understand the document

$$RB = 206.835 - (1.015 \times ASL) - (84.6 \times ASW)$$

- ASL = average sentence length (the number of words divided by the number of sentences)
- ASW = average number of syllables per word (the number of syllables divided by the number of words)



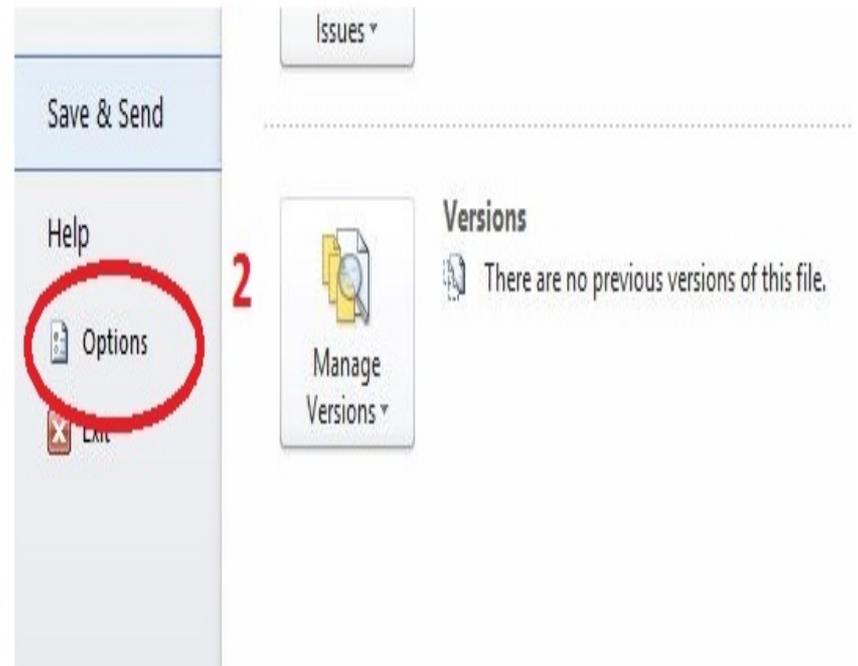
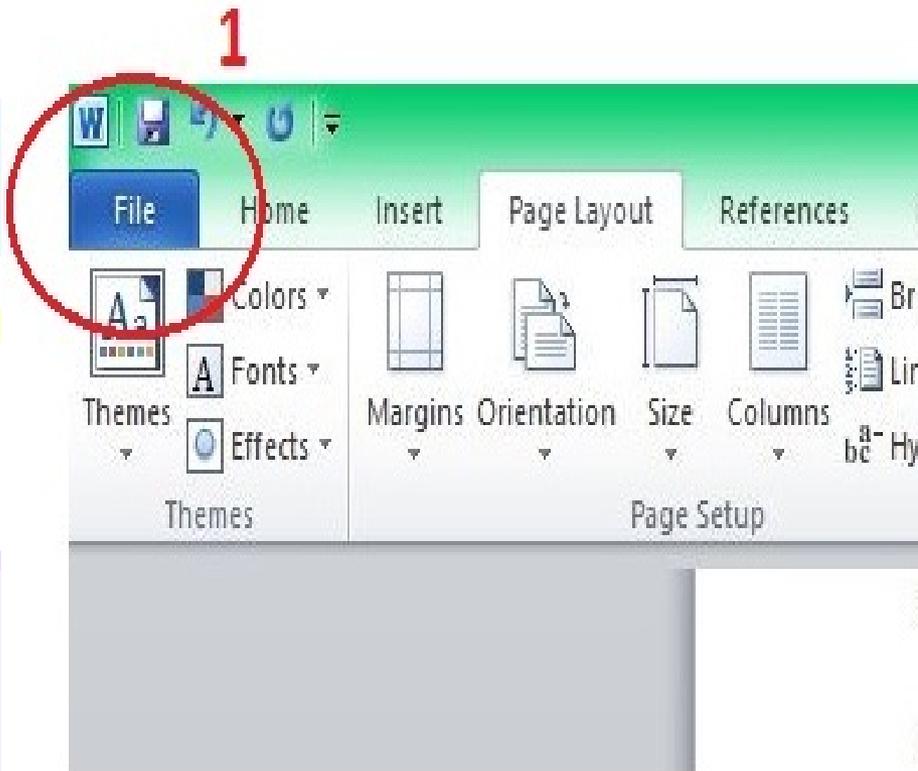
III. METHODOLOGY

1. Participants

- 2 males, 21 females
- first-year non-English majored students, class 63K, Faculty of Mathematics, at a pedagogical university in HN
- studied English in high school and had to take an English exam to get into university
- study English with the purpose of being able to teach Mathematics in English
- Right after entering university, learnt and practiced all four English skills
- Focus: writing paragraphs

III. METHODOLOGY

1. Calculating readability



II. METHODOLOGY



When correcting spelling and grammar in Word

- Check spelling as you type
- Use contextual spelling
- Mark grammar errors as you type
- Check grammar with spelling
- Show readability statistics

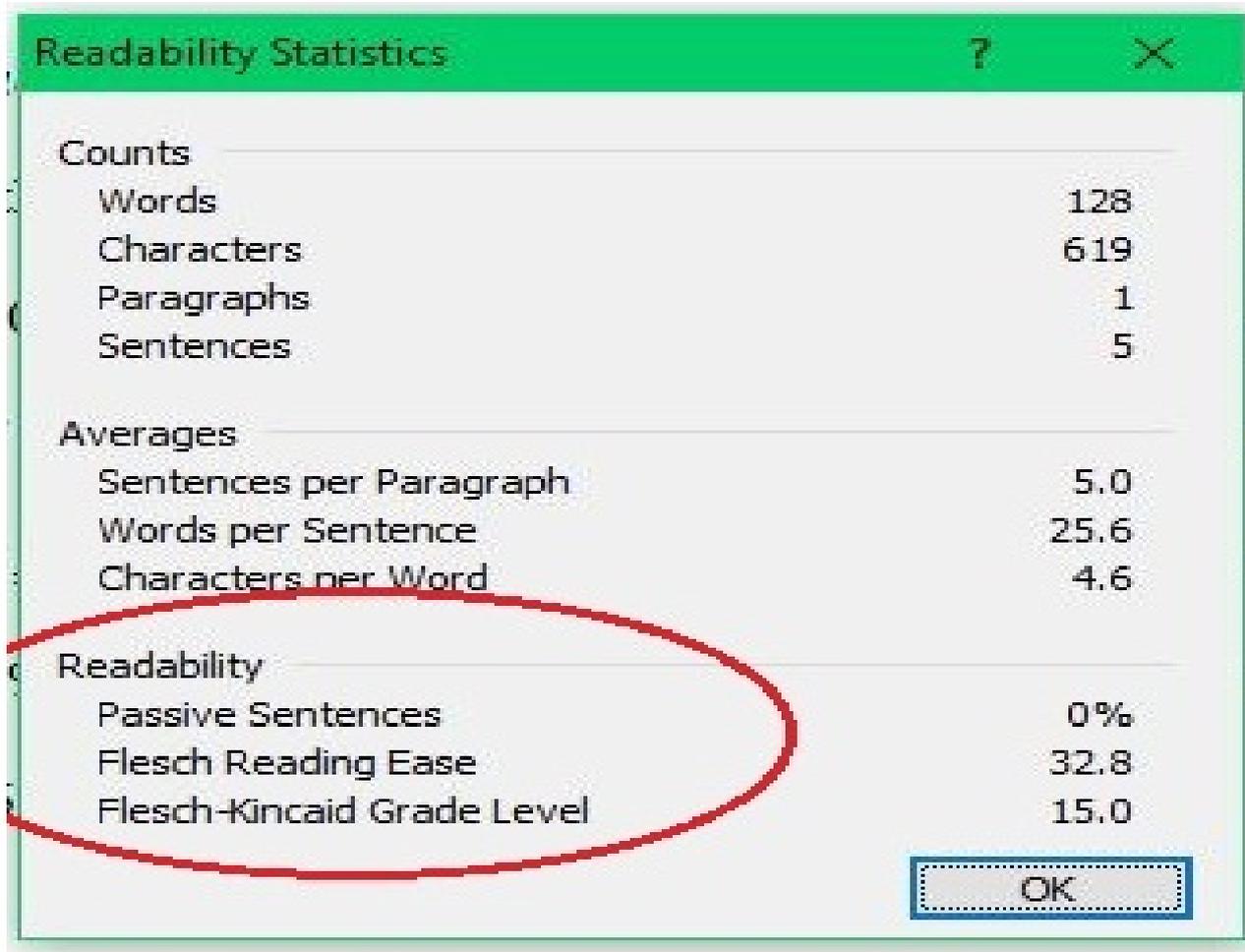
Writing Style: Grammar Only

Settings...

Recheck Document



II. METHODOLOGY



The image shows a screenshot of a software dialog box titled "Readability Statistics". The dialog box has a green title bar with a question mark and a close button. It contains three sections: "Counts", "Averages", and "Readability". The "Readability" section is circled in red. An "OK" button is located at the bottom right of the dialog box.

Counts	
Words	128
Characters	619
Paragraphs	1
Sentences	5

Averages	
Sentences per Paragraph	5.0
Words per Sentence	25.6
Characters per Word	4.6

Readability	
Passive Sentences	0%
Flesch Reading Ease	32.8
Flesch-Kincaid Grade Level	15.0

OK

III. METHODOLOGY

0-30	Very difficult	Postgraduate
30-50	Difficult	Undergraduate
50-60	Fairly difficult	Grade 10-12
60-70	Standard	Grade 8-9
70-80	Fairly easy	Grade 7
80-90	Easy	Grade 6
90-100	Very easy	Grade 5

Table 1. Original Flesch reading eases description of style Educational Attainment Level (US) (Courtis & Hassan, 2002, p. 406) (Vinh To, Sifan, & Thomas, 201)

III. METHODOLOGY

2. Calculating lexical density

Google Dich x build - Definition x text mining x LE Text Content Anal x LE Text Content Anal x RS Readability-Score x

← → ↻ 🏠 www.usingenglish.com/resources/text-statistics.php

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Home Members Testing Reference Articles Forums **Resources** For Teachers eBooks

Home > Resources > Text Analyser

Text Content Analysis Tool

Text Analyser Word Analyser

Analyse text content using our free text analysis tool which gives you word count; average words per sentence; average words per sentence; lexical density; and the Gunning Fog Index. More detailed statistics are available to [members](#).

Please write or paste the text you would like to analyse in the box below. This analyser will accept text up to 10,000 characters ([members](#) can analyse longer texts using our [advanced text analyser](#)):

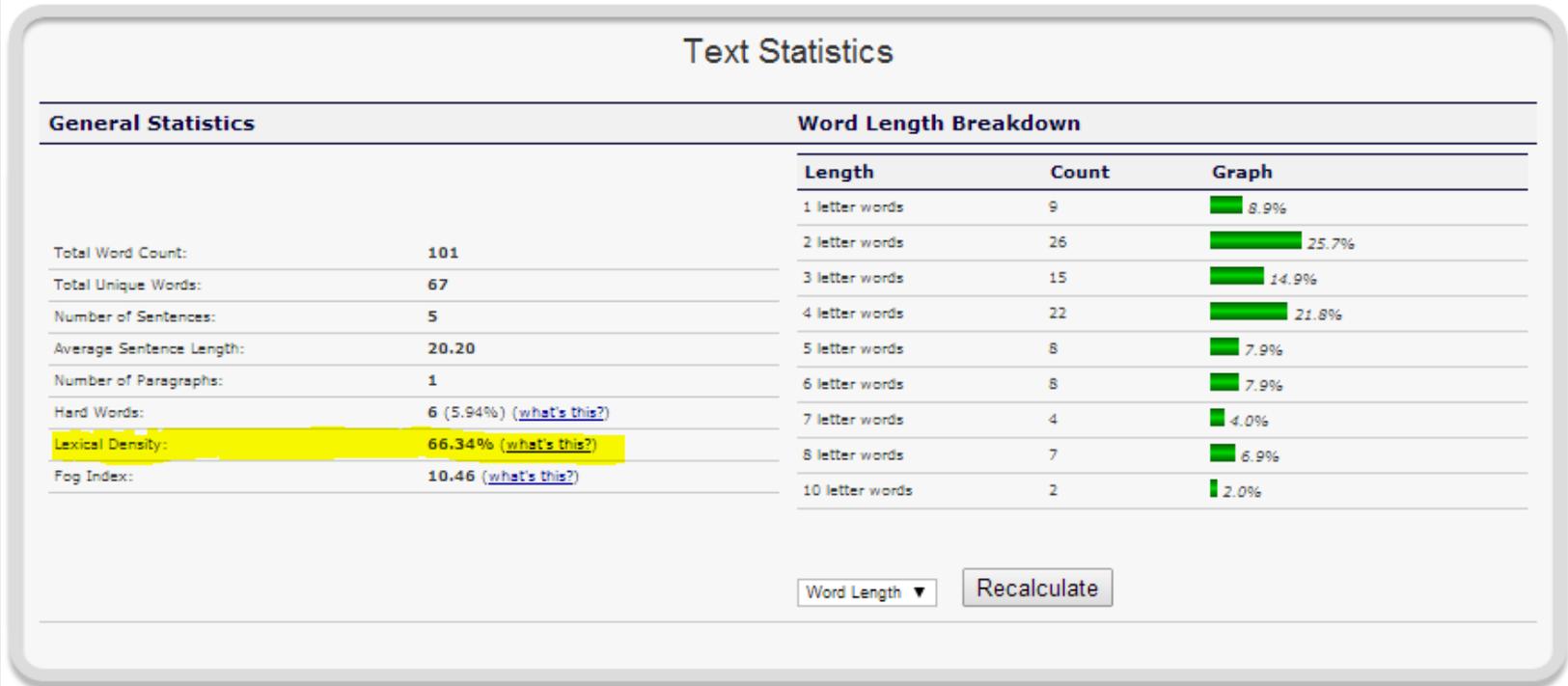
I never know how homesick is until I leave far away from my home town for studying in university. I used to depend on my parents, so when I have to do everything by myself, I am tired and stress. Besides that, when I had bad days or felt down, my family and my friends would make me feel better, but now, no one supports me. Moreover, sometime I am sick or allergic, no one tacks care for me, and then I really miss my family and my friends. Homesick is the reason why I never want to leave my home town.

Calculate Now!

www.usingenglish.com/resources/text-statistics.php

Windows Taskbar: Text Content Anal... 37 - 07 (1).pdf * - ... nckh_61A [Comp... Chau Thi Huong ... Downloads analys

III. METHODOLOGY



Lexical density (%) = (Number of lexical words/ Total number of words) x 100

IV. FINDINGS AND DISCUSSIONS

1. Findings

STT	Student	Total words	Readability	Lexical density (%)
1	No.1	157	59,2	52,9
2	No.2	92	57,5	59,8
3	No.3	98	58,5	56,7
4	No.4	135	51,11	57,8
5	No.5	115	68.2	66,1
...
19	No.19	170	60,7	57,3
20	No.20	81	51,4	58,5
21	No.21	90	66,5	66,7
22	No.22	144	67,7	59,03
23	No.23	192	51	66,84
24	No.24	167	63,8	53,89
25	No.25	101	52,7	63,11

Table 2: Total words, readability scores and lexical density of each student



IV. FINDINGS AND DISCUSSIONS

▶ The totals of words: 81-192 words, 3 works: under 100 words.

▶ Readability scores: 51 to 79,1

▶ The largest number of words (192 words) - lowest score of readability (51).

▶ 5/25 works (20%): readability score 70-80 => Fairly easy

▶ 10/25 works (40%): readability score 60-70 => Standard

▶ 5/25 works (20%): readability score 50-60 => Fairly hard

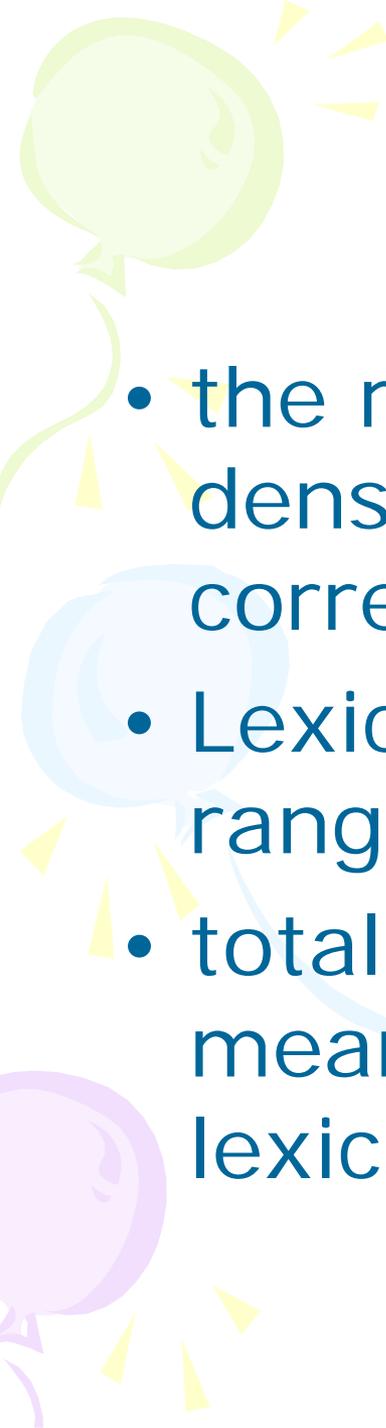


IV. FINDINGS AND DISCUSSIONS

2. Discussion

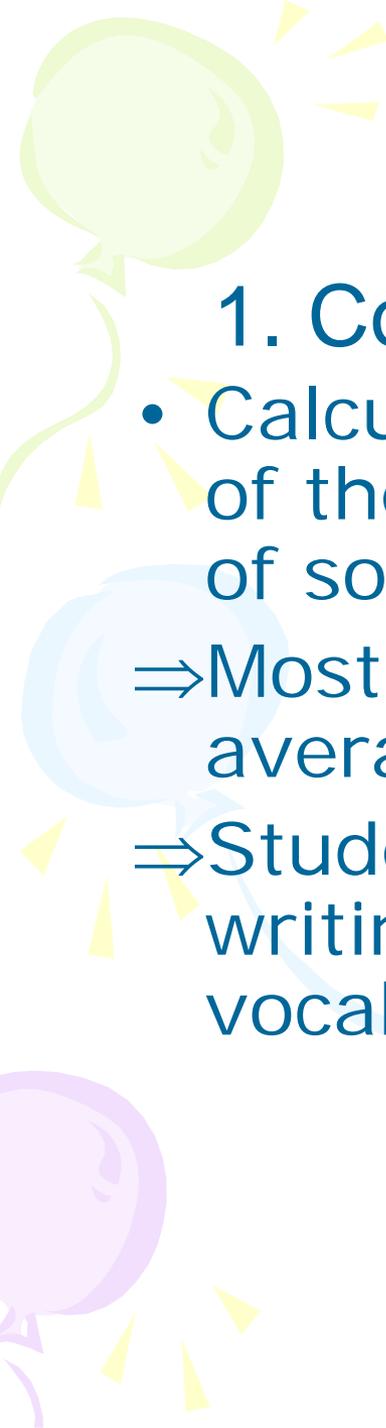
Groups	Readability	Lexical density
1	51-59,2	52,9-66,84
2	60,7-68,2	56-66,7
3	70,7-79,1	53,6-68,5

Table 3. Lexical density range of each student group divided according to readability scores

A decorative graphic on the left side of the slide features three balloons: a light green one at the top, a light blue one in the middle, and a light purple one at the bottom. Each balloon is connected to a thin, wavy streamer that extends downwards. Small yellow triangular shapes are scattered around the balloons, resembling confetti or streamer details.

IV. FINDINGS AND DISCUSSIONS

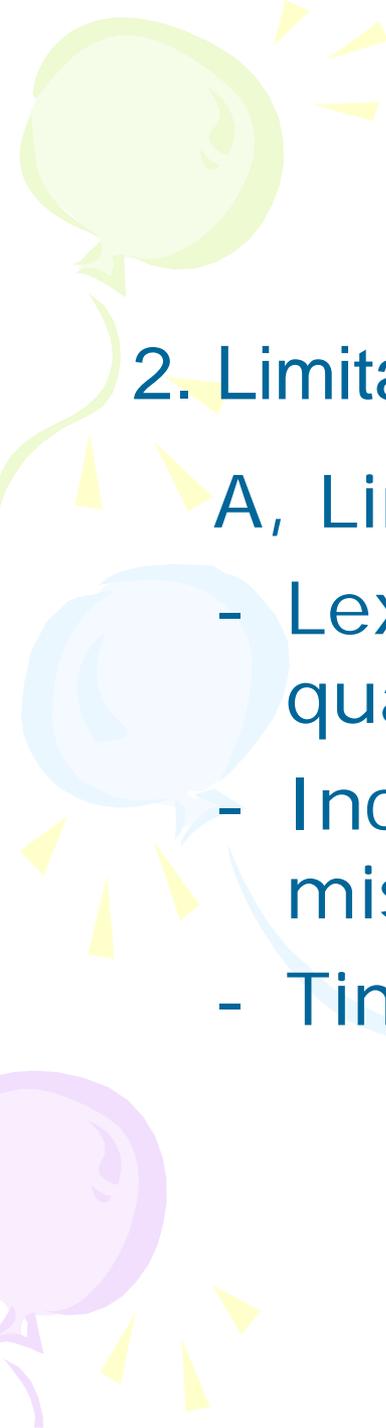
- the readability score and the lexical density are not really in a corresponding relationship
- Lexical density can be varied in each range of readability score
- total number of words, it does not means an article can get higher lexical density and readability scores



V. CONCLUSION

1. Conclusion

- Calculated lexical density and readability of the subject's written tasks with the help of some available computing programs
 - ⇒ Most of the students only reach an average level.
 - ⇒ Students need more training to enhance writing competence as well as using vocabulary.



V. CONCLUSION

2. Limitation and recommendation for further study

A, Limitation

- Lexical density and readability: only about quantity
- Incorrectly spelled words and grammar mistakes are not concerned
- Time, participants, and materials



V. CONCLUSION

B, Recommendation for further study

- two parameters of written tasks and spoken tasks
- Compare with other groups of participants
- Increase in size of the study

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