
Lexical Complexity of Students' Oral Performance on PechaKucha

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ABSTRACT

This study examines the lexical complexity of undergraduate students' speaking performance, taking from their performance in Pechakucha. Pechakucha is an internet-based platform that enables people to do their presentations at a specific time and share it worldwide. The researcher uses PechaKucha since it enhances the students' actual speaking competence by giving them limited time to discuss an image. The lexical complexity of the students' speaking performance is measured using Lexical Complexity Analyzer. This present study finds a significant difference between students' lexical frequency when performing descriptive and narrative oral presentations, shown by the sig.2-tailed of that variable is less than 0.05. On the other hands, students' lexical variation, lexical density and lexical sophistication showed that the sig-2 tailed value is higher than 0.05, which means there is no significant difference between those two oral presentations. This study concludes that students' descriptive lexical frequency is higher than their narrative lexical frequency. Furthermore, the lexical frequency of students in both presentations is different. Second, students' lexical variation, density, and sophistication do not differ significantly. Language variation provides opposite scores to oral presentations in that it differs from lexical frequency. Students' descriptive and narrative oral presentations were not significantly different. As implication of this study, it suggests Pechakucha as one of the speaking activities which can be an alternative activity during online classes which prevent students from having face-to-face speaking activity.

ARTICLE INFO

Paper type:

Research Article

Article history:

Received: 27/06/2021

Revised: 07/08/2021

Accepted: 09/08/2021

Keywords:

- Pechakucha,
- Lexical Complexity,
- Oral Presentation.

1. Introduction

Second Language Acquisition (SLA) has been the focus of psycholinguistic research for decades. Its broad and vital implementation during globalization is likely to be the reason for this trend. Also, there are many unrevealed answers of specific processes in SLA where it grows day by day following the development of language learners around the globe, making SLA is still worth investigating. As a part of psycholinguistics, SLA will not be separated from the basic terms of psycholinguistics such as comprehension, acquisition and production.

Language production is one way to see the development of second language acquisition of language learners since a receptive skill is not representative enough. Learners' skill in producing language depicts a lot of their knowledge and comprehension of the target language. Therefore, measuring language productivity in objective ways can help educators see the students' actual ability while determining the success of their teaching learning process.

The term "lexical complexity" refers to the study of how students choose words in spoken and written language. It is the study of how students choose words in spoken and written language. The lexical complexity of writing indicates a writer's ability to communicate effectively (Lu, 2012). Lexical complexity is divided into three parts: density, sophistication, and variation. The number of lexical words (nouns, verbs, adjectives, and adverbs) in each essay is used to compute lexical density.

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Lexical variation, on the other hand, concerns how the essay's words differ from one another. It is calculated by dividing the total word types by the total word tokens (TTR). In addition, lexical sophistication assessed the proportion of advanced or unusual words in the essay relative to total lexical words.

Recent lexical complexity models suggest it is multi-dimensional. As a result, it should be measured using a variety of lexical measures that complement one another. This study examines lexical richness using (Read, 2000) framework and concepts from Skehan & Foster (2012) and Bulté & Housen (2012). Bulté & Housen (2012) suggest considering language complexity from three angles. Read (2000) stated that lexical complexity had three subcomponents: lexical diversity, lexical sophistication, and lexical density (as opposed to lexical density and sophistication). As the recommendations of previous researchers to measure at least three subcomponents of lexical complexity (Bulté & Housen, 2012; Read, 2000). Therefore, the present researcher employs lexical complexity measurements as follows: lexical diversity can be measured by TTR, lexical density—by the ratio of content words to functional words or total word counts—, and lexical sophistication—by the ratio of less frequent words.

Linguistically speaking, measuring lexical complexity of learners' productive skills are claimed to give an objective measurement of how learners produce the target language. Lexical complexity can give a broader description of how the learners speak and write in their target language. Lexical complexity itself can talk of how learners are varied in using words, which is determined from lexical diversity, lexical density and lexical sophistication. Several recent studies have demonstrated a strong interest in investigating lexical complexity in the L2 context in which most of them gathered information from written text by investigating how English for Academic Purposes programme (Mazgutova & Kormos, 2015) and intensive english course (Therriault, 2015) improve lexical complexity. Studies investigating lexical complexity to learner's comprehension showed a significant influence of lexical complexity to learners' comprehension (Arya, Hiebert, & Pearson, 2011; Douglas & Miller, 2016). Many comparative studies of lexical complexity were also conducted to see its comparison between gender (Ginting, 2018), learners' characteristics (Vaezi & Kafshgar, 2012), writers' interest on topics (Yoon, 2017), and the effects of lexical complexity to EFL writing proficiency (Wang & Wang, 2014). One previous study investigated lexical complexity in spontaneous speech compared to long-term L2 speakers of English and L1 attriters of German (Lahmann, Steinkrauss, & Schmid, 2019). To fill the gap created by previous studies, the present research conducted a study which compared learners' speaking performance in descriptive and narrative presentations as no similar studies have investigated them yet.

In response to current conditions during COVID 19 pandemic which force schools and universities to employ an online teaching class, the present study attempted to gather the data from learners' speaking performance in Pechakucha. PechaKucha, whose name comes from Japanese means "chit-chat", is claimed to be the world's fastest-growing platform for storytelling and presentation. Millions of people around the globe have used it. It is a dream-come-true of what show and tell should be in the digital era PechaKucha's principle is like a social media that can connect people worldwide by sharing their ideas about varied topics. The users can upload their slides and commentary up to 20 slides and share it (Widyaningrum, 2016). Research on how PechaKucha influences EFL learners' speaking ability has been done by several previous researchers (Murugaiah, 2016; Robinson, 2015; Solusia et al., 2020; Widyaningrum, 2016). These previous researchers introduced how Pechakucha can be an alternative and innovative activity in a speaking course. Based on these previous researches, the present research investigates EFL learners' speaking performance uploaded through Pechakucha.

The study about lexical complexity of EFL learners' presentation in an online platform like Pechakucha has not been investigated yet. Therefore, this study investigates the lexical complexity of undergraduate students' presentation in Pechakucha from a variety of perspectives. Both the research design and the source of data used in this study are different from those used in the previous studies.

2. Methods

The current study employed a quantitative approach based on corpus analysis of 60 oral presentations transcripts performed by undergraduate students at the University of Mulawarman's English Literature department. It is in response to the research's gap mention by Rahayu, Utomo, & Setyowati, (2021) that it is necessary to investigate oral presentations to get a broader evidence on how lexical complexity is distinctive between narrative and descriptive since the argumentative writings has already been investigated. Therefore, this study compares the two kinds of oral presentation to find out if there any difference in the lexical complexity of undergraduate students' descriptive presentations and narrative ones.

The research examined 30 first-semester undergraduate students enrolled in the University of Mulawarman's English Literature study program. The participants are recruited through purposive samplings whose criteria are having a Pechakucha accounts and sharing their consents to be the participants in this study. They were requested to perform two oral presentations, which they uploaded to Pechakucha. The first presentation is a descriptive oral presentation about introducing tourism objects. In comparison, another one is a narrative oral presentation in which they were provided seven images to make a story.

The researcher used the Web-Based Lexical Complexity Analyzer proposed by (Lu, 2010) for analyzing oral performance transcripts. This web-based application provides varieties of lexical complexity measurements, however, the research focuses the study on four measurements: lexical frequency, lexical variation, lexical density and lexical sophistication.

The lexical complexity of 60 oral performance transcripts of English Literature students were measured by using the Web-Based Lexical Complexity Analyzer (Lu, 2010). After analyzing the data, the researchers used the Paired Sample T-Test to compare students' lexical complexity in doing descriptive and narrative performance. The value is calculated using the Paired Sample T-Test, displayed in a table, and then subjected to a conclusion drawing process.

3. Results and Discussion

3.1 Lexical Complexity of Students' Oral Presentation

In this finding section, the researcher provides descriptive information about students' lexical complexity score, which scoped four measurements: lexical frequency, lexical variation, lexical density and lexical sophistication. (see Table 1).

Table 1. Lexical Complexity of Students' Oral Presentation

	N	Minimum	Maximum	Mean
Descriptive's Lexical Frequency	30	4848	6100	5634,90
Narrative's Lexical Frequency	30	4310	4894	4525,33
Descriptive's Lexical Variation	30	,64	,90	,7713
Narrative's Lexical Variation	30	,61	,94	,8107
Descriptive's Lexical Sophistication	30	,94	,96	,9530
Narrative's Lexical Sophistication	30	,94	,96	,9503
Descriptive's Lexical Density	30	,55	,57	,5640
Narrative's Lexical Density	30	,55	,57	,5620

From the table above, the data presented are distinguished between students' lexical complexity when performing descriptive and narrative oral presentations. The data shows that the students' lexical frequency when performing descriptive oral presentation is higher than when they performed narrative presentation. The data also displays that the students' lexical density and lexical sophistication are not varied in value. This finding can indicate that the students' knowledge about advanced words and word choices are similar. It then can lead to an assumption that their ability in speaking is at the same level or they are barely different. However, the lexical variation's score is slightly varied, which we can find that the more students with high lexical variation when performing descriptive oral presentation, although students with high lexical variation in performing narrative oral presentation are still found.

3.2 The Comparison of Students' Lexical Complexity

The participants (students) in this study performed two kinds of oral presentation which are compared in terms of their lexical complexity. The comparison of students' descriptive oral presentation means scores and their narrative ones are presented in the following table:

Table 2. The Comparison of Students Lexical Complexity

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Lexical Frequency (DP)	5634,9	30	273,63370	49,95845
	Lexical Frequency (NP)	4525,33	30	176,556	32,235
Pair 2	Lexical Variation (DP)	,7713	30	,06135	,01120
	Lexical Variation (NP)	,8107	30	,07579	,01384
Pair 3	Lexical Density (DP)	,5640	30	,00563	,00103
	Lexical Density (NP)	,5620	30	,00610	,00111
Pair 4	Lexical Sophistication (DP)	,9530	30	,00535	,00098
	Lexical Sophistication (NP)	,9503	30	,00320	,00058

From the table above, the comparison of mean score clearly shows which presentation has a higher score than another. The table shows us that the students' lexical frequency in performing descriptive oral presentations is higher than their narrative ones. The mean score shows how many words that the students produce on average for each oral presentation. They averagely produce 5,634 words when performing oral presentation and only produce 4,523.33 words when doing narrative presentations. This comparison can indicate that the students feel more fun or have more to say when doing descriptive presentations. It possibly happens because they prepared the materials (images) of the topic to feel more confident in telling things about their presentations.

Nevertheless, the students' lexical variation depicts the opposite result with students' lexical frequency, which students' narrative oral presentation has higher lexical variation than the descriptive ones. The lexical variation measurement shows how varied the words that the students use in their presentations. The lexical variation can be the opposite of the lexical frequency if the students used repetitive and redundant words or un-varieties words since the lexical variation is counted from words token (lexical frequency) divided by the word types. Therefore, the use of repetitive and unvaried words can cause a lower lexical variation score in performances with high lexical frequency.

As previously mentioned in descriptive data about students' lexical complexity in Table 4.1, it is seen that lexical density and lexical sophistication from both oral presentations are barely different. Table 4.2.1 shows that students' lexical density in performing descriptive presentation is .5640 and .5620 when doing narrative presentations. From these numbers, we can see that there is not much difference between them, concluding that students produce similar lexical density in their descriptive and narrative performance. A similar result obtained from students' lexical sophisticated both in a descriptive and narrative presentation which does not depict much difference between them. Students' lexical sophistication when performing descriptive oral presentation is .9530, while theirs in narrative presentation is .9503. This number indicates that they use similar levels or numbers of advanced or sophisticated words in both presentations. These data are calculated further to see the correlation and differences between two oral presentations, which are shown as follows:

Table 3. Paired Samples Test

		N	Correlation	Sig.
Pair 1	Descriptive Lexical Frequency & Narrative's Lexical Frequency	30	,398	,029
Pair 2	Descriptive Lexical Variation & Narrative's Lexical Variation	30	-,339	,067
Pair 3	Descriptive Lexical Sophistication & Narrative's Lexical Sophistication	30	,141	,457
Pair 4	Descriptive Lexical Density & Narrative's Lexical Density	30	-,040	,833

Table 3 shows how the lexical frequency of students' descriptive oral presentation differs from their narratives. The sig. (2-tailed) column shows a significant difference between two item measurements if the value is lower than 0.05. Therefore, from the table above, it can be concluded that students' lexical frequency in performing descriptive oral presentation is significantly different

from theirs when doing narrative presentations. While other measurements such as lexical variation, lexical density and lexical frequency show that their sig. (2-tailed) is higher than 0.05, there is no significant difference between students' descriptive oral presentation and their narrative ones.

3.3 Discussion

The study obtains several findings which are valuable to discuss further. The first finding shows a significant difference between students' lexical frequency in performing descriptive oral presentation and the narrative one. Students tend to produce more word tokens when they perform a descriptive oral presentation. It is strongly related to the topic which students need to describe. The similar finding was reported by Yoon (2017) who reported that EFL learners tend to produce more complex language in a topic more relevant to their experiences. In the present study, the students are given a topic to describe tourism objects based on their preference. This requirement encourages the students' willingness which influences their speaking material in the descriptive oral presentation. The opposite things happen to the narrative ones. The researcher provided them several images to be selected, and they should make a story about it. Due to the lack of students' contribution in choosing the images, they tend to feel limited to express or tell a story that can suit the pictures. It is a strong assumption to explain why they produce more token words when doing a descriptive than narrative presentation.

The second finding shows no significant difference between students' lexical variation, density, and sophistication when performing descriptive oral presentation and the narrative one. The results of this finding is in line with what (Wang & Wang, 2014) found in their study which showed that the lexical diversity (or in this study labelled as lexical variation) of email texts graded at higher proficiency levels was not significantly different from the lexical diversity of email texts graded at lower proficiency levels. These findings suggest that lexical diversity measures do not always offer a reliable basis for distinguishing between writing proficiency levels. In the present study, however, there is a varied value of lexical variation taken from descriptive and narrative presentation in lexical variation case, though it is not significant. Lexical variation measurement is strongly related to the lexical frequency taken from the number of word types divided by the number of word tokens (lexical frequency) (Lu, 2012). Therefore, the value of these two measurements is sometimes contradictory. Students who produce more lexical frequency but use more repetitive words can produce a lower lexical variation. It means that lexical variation is influenced by repetitive words and word choices used by students.

On the other hand, the students' lexical density and lexical sophistication is not significantly different nor obtain varied scores. It indicates that the students' lexical density and lexical variation in both presentations are almost similar. Lexical density shows the number of lexical words divided by lexical frequency. Therefore, the similar result of lexical density from both presentations can give information that students use a similar proportion of lexical words compared with the lexical frequency. A similar result also obtains from students' lexical sophistication, which depicts that students' lexical sophistication in performing both presentations are not significantly different nor varied in value. The finding also reported that the students' lexical sophistication is on average level. The finding was supported by Dewi's (2018) finding which studied students' lexical sophistication is on average level in writing introduction research article. This finding indicates that students similarly produce advanced or sophisticated words for their descriptive and narrative oral presentation.

Talking about the use of Pechakucha, it is a valuable and innovative platform to be an alternative in doing a speaking activity during online classes (Murugaiah, 2016; Robinson, 2015; Sulusia et al., 2020; Widyaningrum, 2016). The usefulness of Pechakucha can be seen from the words produced by students, which lies around 4,000-6,000 words in each presentation which means it promotes the students' willingness to express their idea through oral presentations. The students' word production can indicate that they enjoy using Pechakucha as a speaking activity, although it is new for them.

4. Conclusions

This present study concludes several points as already mentioned in the aims of the study. The first point is that students' lexical frequency when presenting a descriptive presentation is higher than their narrative ones. It also concludes that students' lexical frequency in both presentations is significantly different. The second point is that students' lexical variation, lexical density and lexical sophistication are not significantly different. Students' lexical variation is merely different from the lexical frequency in which students' lexical variation provides opposite scores from students' oral presentations. Though, the difference between students' descriptive and narrative oral presentation is not significant. A similar result also obtains from students' lexical density and lexical sophistication, which shows no significant difference between those two presentations.

Though this study is expected to vividly describe students' lexical complexity in performing speaking activities through an online platform like PechaKucha, the researcher inevitably found several limitations during the present study. First, since the students are requested to make the video at home, the researcher cannot guarantee how many times they performed the presentations which influenced the quality of their performances. As a consequence, the present researcher suggests that future researchers collect the data at once with specific time given to the students to avoid the students practicing many times to get a perfect video presentation, leading to a misleading finding. Second, both presentations are administered differently, with one presentation freely encouraging them to be creative in selecting the images and what to talk about through *PechaKucha* while another limits their preferences which strongly influenced their performances. Therefore, the present research suggests administering different types of presentations but with similar requirements.

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