Arab World English Journal
INTERNATIONAL PEER REVIEWED JOURNAL ISSN: 2229-9327

Arab World English Journal (AWEJ) Volume 15. Number 2, June 2024 Pp.19-39
DOI: https://dx.doi.org/10.24093/awej/vol15no2.2

The Impact of Reading on the Development of Language Production of Young Learners at Slovak Primary Schools

Rita Rafajlovičová
Department of English Language and Literature, Faculty of Humanities,
University of Žilina in Žilina, Slovakia
Corresponding author: rita.rafajlovicova@fhv.uniza.sk

Ivana Cimermanová
Institute of English and American Studies, Faculty of Arts,
University of Prešov in Prešov, Slovakia
ivana.cimermanova@unipo.sk

Received:03/11/2024 Accepted: 05/12/2024 Published:06/28/2024

Abstract
Early foreign language learning in Slovakia is still inadequate, especially at the lower secondary level. Therefore, it is essential to gather data that can help improve the educational process. This study aims to determine the impact of systematic extensive reading and production-based training on the language production of young learners in two primary schools in Prešov, Slovakia. The language performance of the groups under investigation was evaluated through written and oral assessments. This was done to determine the effect of reading classes on the language production of young learners, as well as to explore the effects of enhanced text comprehension on the productive language skills of young EFL learners. Computer programs were used for experiment evaluation and statistical analysis to verify the impact of reading programs and teaching modules on pupils' performance. Additionally, the individual productive skills of the learners were analyzed. The study results revealed that the experimental group, which was involved in an extensive reading program, performed significantly better in both written and oral production than the control group. This indicates that the application of reading programs and teaching modules in the selected schools had a considerable impact on the learners' performance.

Keywords: accuracy, extensive reading, oral language production, fluency, written language production, young learners

Cite as: Rafajlovičová, R., & Cimermanová, I. (2024). The Impact of Reading on the Development of Language Production of Young Learners at Slovak Primary Schools. *Arab World English Journal, 15*(2): 19-39. DOI: https://dx.doi.org/10.24093/awej/vol15no2.2

Introduction

The importance of reading competence development in a foreign language within language learning is greatly underestimated. Reading programs in schools in Slovakia do not form part of the educational curriculum. Yet, their consistent implementation can significantly impact students' vocabulary skills (both active and passive) and their overall comprehension of a second language. By augmenting the level of exposure to a foreign language, which is presently constrained by the allocated hours in educational institutions, there exists the potential to impact the linguistic aptitude of students not solely in terms of comprehension, but also in terms of expression (Straková et al., 2017). One crucial element in capturing the attention of students in the practice of reading lies in the significance and enjoyment derived from the act of reading. Amidst the COVID-19 pandemic, numerous establishments and academic bodies modified their literacy initiatives to aid young learners via digital mediums, consequently elevating the reading pleasure of certain children (Hundarenko & Leláková, 2022).

Our research study is aimed at young learners (For this issue, young language learners are children aged approximately 5 to 12.). To "measure" young learners' progress correctly; it is crucial to consider that there are substantial differences between the assessment of young learners and other foreign language learners. One critical factor in this regard is age. Besides, it is essential to appreciate learners' cognitive development (Sreena & Ilankumaran, 2018). Teachers need a clear understanding of language learning, which implies the idea of an ongoing organic process. Lynne Cameron (2001) compared language learning metaphorically to the growing of a plant. The plant develops through the nutrients it absorbs from its environment; different types of growth occur at various stages of development. Assessment, thus, asks how well the "plant" language is growing. At this point, it is essential to mention that progress in language learning - and not achievements - should be assessed and later graded (Rea-Dickins 1997, 2000).

We should assess children based on what they have learned and how they have been taught. Assessment activities should reflect classroom activities. As a tool for assessing young learners' progress in language production, we use different kinds of language tests and various types of alternative assessments, especially non-threatening informal techniques. Though young learners should be evaluated in an anxiety-reduced, if not anxiety-free, environment, it is necessary to test students, sometimes even young ones, in the traditional way with paper-and-pencil tests (e.g., true-false, matching, multiple choice, and cloze).

This research aims to determine the significance of the impact of extensive reading on the development of language production in young learners. The main objective was to investigate the extent to which reading classes influence their language production. Several issues motivated the research design. They are as follows:

The beginning of lower secondary education is very important for setting the development of language production regarding the developmental specifics of young EFL learners. Lower secondary students are still interested in communication, active work, and self-presentation, but these characteristics are later repressed based on developmental specificities. This significantly influences foreign language production, which loses its dynamics.

Another factor affecting the lower level of oral and written performance of students is the fact that traditional teaching methods, which have been oriented on textbooks and focused on rules of language use, are still present in our educational context and do not allow students to create an appropriate environment for real, internally motivated use of language. The introduction of Content and Language Integrated Learning in Slovak schools, as some kind of innovation, may

increase the authenticity and efficiency of language learning. However, the extent of this impact in lower secondary education is relatively low and sporadic rather than systematic. Therefore, it is necessary to consider other possibilities that would lead to an enhanced learning environment and stimulate language production.

Based on previous experience with creating a virtual reading environment, we investigated the extent to which reading classes influence the language production of young learners. Considering the issues that motivated the research, the following hypotheses were formed:

- applying reading programs and specifically designed teaching in addition to receptive skills development, and thus improving text understanding, will also affect young EFL learners' productive language skills within oral and written communication.

Quantitative analysis of the learner's performance revealed that extensive reading has a positive impact on both fluency and accuracy of their language production.

Literature Review

It is a well-known fact that the four language skills interact with each other. Aydın & Ayrancı (2018) claim that „Developing reading skills will also develop listening, speaking, and writing skills, and that reading comprehension, using what is understood on new subjects and learning new words during reading, can influence listening comprehension as well as oral and written self-expression"(p. 127). Thus, it is crucial that not only teachers but also parents encourage and guide young learners towards this skill.

Approaches to reading as a process and similarly, approaches to instructing reading within a foreign language educational setting have transformed in recent decades. This evolution has shifted the perspective from perceiving reading as a passive act of information absorption to recognizing reading as an active and potentially interactive process (Grabe, 1991). There exist numerous interpretations regarding the nature of reading; however, broadly speaking, it is characterized as a form of language reception. Brumfit (1982) stated that "reading is an extremely complex activity involving a combination of perceptual, linguistic and cognitive abilities"(p.3). In the year 2000, Hedge delineated the essential components required by the reader to comprehend the text: syntactic knowledge and morphological knowledge. As to the cognitive processes, Krashen and Terrell (1983) noted that the child can name, recall, draw, record, point out, underline, categorize, and list. The evolution of language acquisition in a foreign language setting is not directly aligned with this progression, primarily attributed to the restricted timeframe and level of immersion in the new language, a common occurrence. Nonetheless, the phases of linguistic advancement bear resemblance to those observed in second language acquisition. (Lightbown & Spada, 1999).

While there has been extensive research on the relationship between reading and language comprehension, fewer studies have specifically explored how reading impacts language production.

One such example is a case study that was conducted in the Slovak educational context at a primary school to involve young learners in leveled reading programs (Straková & Cimermanová, 2012). The study involved young learners at a primary school. At level 1 (ages 7-8), learners focused on distinctions between their native language and English, including phonics, word recognition, and matching exercises. Level 2 (age 8-9) learners were engaged in reading books, progressing from individual words to full sentences, emphasizing pronunciation, comprehension, and effective reading strategies. The reading curriculum tailored for level 3 (age 9-10) explored narrative books,

with students reading segments and writing journal entries. The findings of this research supported our initial assumption that immersing students in the target language through structured reading schemes would enhance vocabulary usage and overall language comprehension.

In the recent past, there has been a decline in the number of research investigations that have focused on the specific examination of the influence of reading on language production. Among the limited number of research publications published in 2020 and 2021, no scientific investigations delving into the effects of reading on language generation were carried out, nor were any academic papers disseminated in Slovakia. The only one concerning young learners was Babiaková (2020), who investigated the reading preferences of younger learners in Slovakia, the Czech Republic, and Poland. Furthermore, the research papers exploring the impact of reading on language production released in the last decade (Aydin & Bagci, 2018; Kumar et al., 2020; Omidbakhsh, 2021; Francis et al., 2021) focus on adult learners and college students rather than young EFL learners. Kumar et al. (2020) analyzed the impact of multiple readings on the academic achievement of students, focusing on oral fluency, lexical diversity, syntactic complexity, and overall performance. Meanwhile, Omidbakhsh (2021) endeavoured to explore the potential influence of storytelling and story reading on the oral language skills and comprehension of pre-intermediate language learners in Iran. He concluded that telling and reading stories are effective techniques for improving EFL learners' oral language production and recognition.

To fill the gap in investigating the influence of reading on language production, there should be conducted more studies to investigate whether that varies across different age groups (e.g., children, adolescents, adults) and proficiency levels (e.g., native speakers, second language learners), or whether exposure to specific genres or topics enhance or hinder language production skills? It would also be interesting and consider contextual factors (e.g., social context, task demands) that mediate the relationship between reading and language production and find out whether the context influences the effectiveness of reading as a language-enhancing activity.

There has been a lot of research focusing on the relationships of the first and second or foreign language conducted in the area of reading. A strong relationship between L2 reading and L2 speaking has been reported in the literature, and some authors claim that the way we read in our first language is reflected in the way we read in a foreign language (Clark, 2022; Coady, 1979; Jolly, 1978). Other research results (e.g. Clarke, 1980) have provided additional evidence for the phenomenon of native language interference. However, these studies indicate that the primary obstacle to effectively utilizing the tools from one's first language lies in a deficiency of foreign language proficiency(Straková et al., 2017).

The research that is presented aims to ascertain the impact of reading programs on the production of written and oral language. It seems that despite early language learning introduction, "language production of pupils, especially in lower secondary education, is still inadequate and does not reach the output level A2 of CEFR" (Straková et al., 2017, p.7). For this reason, it appears essential to verify possible interventions in foreign language education and to obtain data that would provide insight into the options for improving the efficiency of the educational process itself. One potential approach to enhancing language output levels, as suggested by the findings of a prior study conducted by Straková and Cimermanová (2012), involves modifying the quality and size of input provided to learners at this stage. Longitudinal studies that track language development over time and investigate whether consistent reading habits lead to improvements in language production skills have continually consistently confirmed a significant increase in reading comprehension, vocabulary, and motivation in the reproductive-productive activity of

students in the systematic use of reading programs. (Larsen-Freeman, 2006; Hughes, 2011; Guo & Wang, 2013; Geva & Ramírez, 2015; Unsworth, 2016; Gowri, 2018).

Celce-Murcia (2001) analyzed the relationship between reading and accuracy. In her analysis, she found evidence that showed that listening and reading could improve speaking skills because reading could affect both fluency and accuracy in learners' oral performance. Higgs and Clifford (1982) implied that various factors contribute differently to overall language proficiency at different levels and defined them as follows: vocabulary, grammar, pronunciation, fluency, and sociolinguistics. In their hypothesized model, vocabulary and grammar were considered the most important across all levels. However, the results indicated that vocabulary and pronunciation are most important at lower levels, while fluency and grammar factors contribute less.

In her research, Larsen-Freeman (2006) explored the dimensions of Complexity**,** Accuracy**,** and Fluency (CAF) in the oral and written production of five Chinese learners of English. Qualitative and quantitative findings revealed that learners became more fluent, accurate, and complex over four months. However, each learner followed a unique path in terms of the rate of improvement. There have been a number of studies involving the overall effectiveness of extensive reading (e.g. Lukáč, 2005; Nakanishi, 2014; Mangen, 2015; Chang, 2016; Straková, 2017). The research has indeed contributed to our understanding of how extensive reading programs impact learners' language production. By examining the effects of such programs, we gain insights into how learners develop their language skills over time. These findings can inform educational practices and help create more effective language learning strategies.

Methods

To find out whether the above-stated hypothesis is proved or not, we measured the performance of two groups of pupils (control and experimental groups) in specific tasks aimed at the production of the foreign language by the medium of a written and oral test. Both groups were given a written test as well as they underwent an oral test (see the characteristics of the tests below). By comparing the performance of the control group with that of the experimental group, we aimed to evaluate the effectiveness of the experimental method. The results obtained were analysed using statistical computer programs to verify the impact of reading programs and teaching modules. Additionally, the statistical significance of pupils' performance was evaluated, focusing on individual productive skills. To reach our goals, the following methods were used:

1. experiment evaluation: testing productive skills of pupils to investigate the effect of systematic development of reading competence on language production and comparison of progress within control and experimental groups.
2. statistical evaluation of data obtained from the testing of pupils and finding the statistical significance of the impact of reading competence development on language production.

Participants

The tests were administered to sixth-grade lower secondary learners between the ages of 10 and 12 in two different elementary schools. The learners for the study were selected using non-probability sampling, namely Quota sampling (age groups and language level). In total, there were 95 participants engaged in the study. The students within every educational institution were segregated into two distinct categories: control and experimental. At the moment of examination, both sets had acquired knowledge of the English language for a duration of five years. The learners

were taught by different teachers, and during their lessons, they used different course books (English Plus 2 by Ben Wetz, James Styring, Nicholas Tims, OUP 2010 and Project 2, OUP 2013 by Tom Hutchinson) and practice materials which are related to the national teaching curriculum. Table One below shows the numbers of learners tested and their division in the two above-mentioned groups. The participants engaged in the study were all sixth graders; therefore, according to the Common European Framework, they were supposed to be Level A1 – Movers.

Table 1. *Number of learners involved in the research*

School	*Control group*	*Experimental group*	*Total number*
School 1	18	15	33
School 2	32	30	62
Total number	50	45	95

As the aim of our research was to examine the influence of reading on language production, we tested the learners involved in the study on their productive skills. At the Breakthrough stage, linguistic output is significantly constrained, as learners are expected to respond solely to uncomplicated inquiries pertaining to urgent matters and well-known subjects. They should employ basic expressions to delineate their place of residence and acquaintances, as well as to finalize sentences regarding narratives or brief passages through the accurate selection of words. Therefore, the selection of a suitable standardized test tailored for pupils aged 10 to 12 is crucial, aligning with both the national educational framework and the CEFR criteria. This test should encompass various skills, language structure, and usage knowledge.

Characteristics of the Tests

For the aim of our research, which focused on assessing the productive language abilities of young English as a Foreign Language (EFL) students, it was imperative to establish and enhance the standards for evaluating the student's performance, which would be assessed upon the culmination of the reading curriculum. The decision was made to use a test for evaluating the learners' performance that assesses skills directly relevant to the range of language uses they would need. Considering the level and age of the learners involved in the research, we were looking for tests that would elicit and subsequently measure the response types on the learners' appropriate level. As for tests for testing reading and writing skills, we decided to use tests for young learners aligned with the Council of Europe's Common European Framework for Languages, namely Cambridge Young Learners English Tests for Movers (Cliff, 2005). Concerning testing the learners' oral production, the research team followed Shaaban's (2005) suggestion about using visual cues in oral interviews at the early stages of acquisition. Therefore, a student might be tasked with selecting images for discussion, while the teacher's responsibility lies in directing the student through inquiries that prompt the application of associated terminology. This technique works well during the early speech and speech emergence stages. To enhance reliability, the learners from each group (experimental and control groups) were recorded twice (before and after the experiment).

Testing Reading and Written Language Production

The Cambridge Young Learners English Test (2007), which was chosen for the research, consists of six parts. Each part begins with at least one example. The examination primarily emphasizes the recognition of vocabulary, orthography, and composing single-word responses. Furthermore, it includes the composition of answers consisting of one, two, or three words, the completion of sentences, as well as the identification of suitable words to fill in the blanks. The assessment is contextualized, and incorporates reading materials such as dialogues and brief narratives, requiring candidates to generate accurate responses grounded in contextual comprehension.

Part 1: there are six definitions and eight illustrations labeled with words. Candidates are to read the short definitions and match/copy the correct words next to them. (6 items)

Part 2: requires candidates to look at a picture and read six statements about the picture. Some of the statements correctly describe the picture, some do not. Candidates label the responses by writing *yes* or *no* as appropriate. (6 items)

Part 3: tests understanding of the context and choosing appropriate responses to the given questions. Candidates read six short dialogues, for which three different responses are given, and they choose the correct response by circling letters. (6 items)

Part 4: candidates read a text to get a general idea of what it is about and look at the pictures above the gaps in the text. Then they write the correct words in each of the six gaps. The missing words are illustrated by the pictures. They are nouns, adjectives, and verbs in the present or past tense. The last task in this part is to choose the best title for the story they have read from three options. (7 items)

Part 5: in this task, candidates read a short story divided into three sections each with an illustration. Then, they answer six questions about the story using no more than three words. The production of correct answers depends on the understanding of the text. (10 items)

Part 6: candidates read a gapped text and complete it by selecting the correct words from a choice of three and restoring them into the corresponding gaps. (5 items)

Testing Oral Language Production

At the primary level**,** assessment should begin with personal-response techniques. As students' proficiency levels increase, teachers can move gradually into constructed response assessment and later into selected-response assessment. For effective and practical measurements of young learners' abilities, progress, and achievement at the early stages of acquisition, an oral interview assessment technique with visual clues was used. This technique works well during the early speech and speech emergence stages. The learners are asked to talk about pictures, and the teacher's role is to guide them by asking questions that require the using related vocabulary.

The speaking test was also taken from The Cambridge Young Learners English Test (2005) and modified for the study. The oral test is a face-to-face interview with one examiner and one candidate. The test lasts approximately four minutes. The examiner's language is scripted to ensure fairness to all candidates. The assessment consists of two distinct sections, wherein individuals must respond to straightforward inquiries regarding an image as well as their personal information. The learners were given various types of open-ended questions which were divided into two categories: general questions and personal questions.

In the initial section, participants were tasked with identifying individuals, animals, objects, and colors, among other elements, depicted in a given image and providing concise responses,

primarily in the form of phrases. This segment of the examination is centered on the comprehension and articulation of responses to oral inquiries. The subsequent section did not involve any visual stimuli; nevertheless, the assessor presented the examinee with personal inquiries relating to family, interests, recreation, education, and acquaintances. To address these inquiries, participants utilized basic phrases and sentences.

The experimental groups received identical instruction and engaged in practice with the same readings, topics, and structures. These activities occurred under comparable conditions, including similar age ranges, speaking skill levels**,** allotted time, and discussion topics. During interviews, the focus was primarily on measuring performance in specific tasks that emphasized language production (fluency**)** rather than mere recognition of correct forms (accuracy)**.**

Findings

After administering the tests and collecting the data, we cleaned and organized it for analysis and subsequent verification of the hypothesis mentioned above**.** Quantitative analysis was used to describe the basic features of the data and provide summaries of the samples and measurements. To determine whether the differences between the experimental groups' results before extensive reading and after reflecting a significant difference from the control groups' results, we used a paired sample t-test of statistical significance.

Statistical significance is determined by the size of the difference between the group averages, the sample size, and the standard deviations of the groups. For practical purposes, statistical significance suggests that two independent groups have different mean values on the same measure, e.g., the results of the two investigated groups are "truly" different (Corbin & Straus, 2014).

Written Language Production

In research, the focus is often on evaluating the performance of a group rather than just the score of an individual learner. To obtain a clear understanding of the effectiveness of different learning strategies, it's important to collect statistical data on the mean score of each group before and after the experiment. This analysis provided insights into the relative success of the different learner groups.

To get an overall picture of the performance of different control and experimental groups of students and thus to be able to compare their performance before and after the experiment, we computed the descriptive statistics of the total scores of each group within the three different schools, which is displayed in Figure One below. Then, we focused on the results of the sample groups on individual tasks.

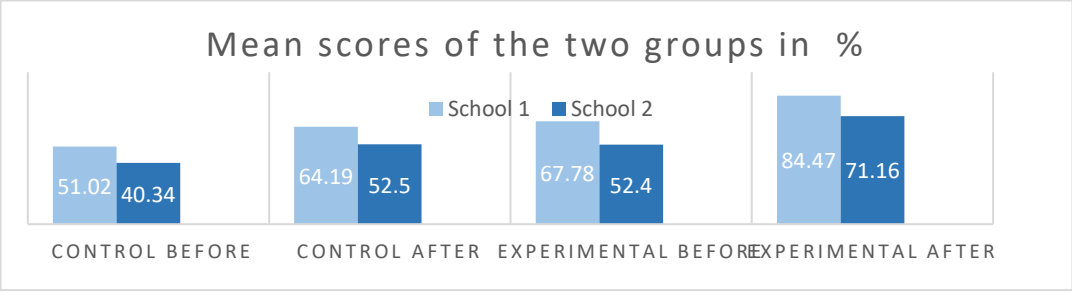


Figure 1. Overall results of each group before and after the experiment

The statistics presented in Figure One provide an overview of the performance of the observed learners. The figures depict the results of each school in both groups - before the experiment at the beginning of the academic year, and after the experimental group completed the reading program at the end of the school year.

Based on the descriptive statistics of the total mean scores of the two schools (control groups 52,19% and experimental groups 63,07%) at pre-testing at the beginning of the experiment and their mean scores (65,4% and 82,69%, respectively) at post-testing after completing the reading program, we can see that performance in the test after the experiment is better in both groups (see also Figure Two). It is not surprising since it becomes clear that learners make some progress within a school year regardless of whether they complete additional learning programs or not. As part of our investigation, it was important to determine the extent of difference in results between the control and experimental groups before and after the experiment. Prior to the experiment, the difference between the control and experimental groups was 10.88%. However, after the experiment, this difference increased to 17.29% (refer to Figure Two for details).

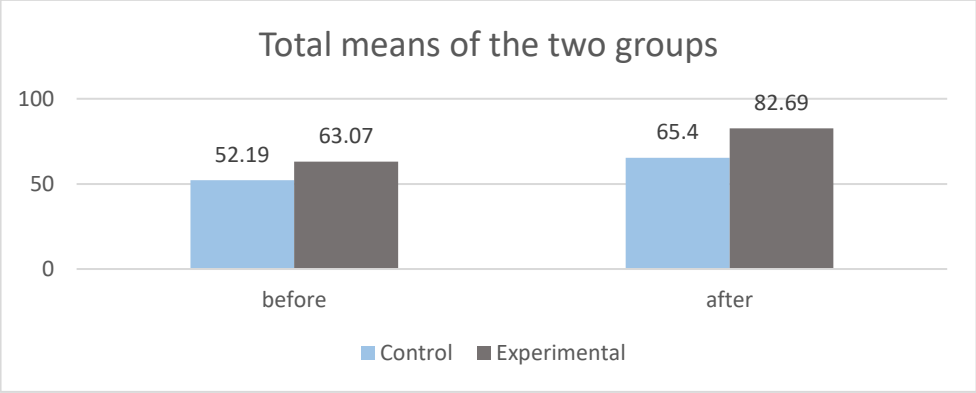


*Figure 2***.** Overall results of the control and experimental groups

To compare the performance of the control and experimental groups and to find out whether the difference in their progress before the experiment and after it was statistically significant, we applied *t-tests*, namely: *Two-Sample Assuming Equal Variances*, *and Two-Sample Assuming Unequal Variances*, which computed the results of the two groups at pre- and post-testing and provided us with statistical evaluation of data obtained from the testing of pupils.

The statistical analysis based on *t-tests* (see Appendix A) revealed that the observed level of *t* is greater than *t Critical one/two-tail*, which means that in each case, we reject the null hypothesis. It can be stated that the observed differences between the sample total means are convincing enough to say that the results of the tests at post-testing after the experiment in both the control and experimental groups are significantly better.

The results of the t-test with equal variances indicate that significant progress was made in both the control and experimental groups. At the ages of ten and eleven, pupils in both groups showed the ability to acquire new vocabulary, logically organize information, classify objects based on perceptible attributes, and analyze the causes of events. Moreover, young learners' foreign language learning curriculum focuses on vocabulary, language use, and oral skills, so the results are not surprising. The greater differences in the t-test values within the experimental group indeed suggest that the program emphasizing reading competence development had a positive

impact on their language production. This finding aligns with the hypothesis that targeted interventions can enhance language production.

The results of the t-test, which compared the performance of the control and experimental groups after the experiment indicate a significant difference in the results of the two groups, with the experimental group performing better (see Appendix B). This finding supports the research team's assumption that an extensive reading program would have a positive impact on the learners' performance.

As the aim of the research was to investigate the development of the learners' productive skills, evaluate the statistical significance of their performance, and analyze the results for individual productive skills, it was necessary to analyse not only the overall results of the tests but especially those tasks that focused more on production than on recognition. Therefore, an in-depth analysis was conducted on sections Four, Five, and Six, focusing on the attributes of the assessments (refer to the characteristics of the tasks above). An examination of the average scores for each segment of the assessments revealed a noticeable enhancement in these specific sections.

To assess the difference in performance across the aforementioned three sections of the assessment, a comparison was conducted utilizing the descriptive statistical data for each section. The outcomes are exhibited in Figure Three.

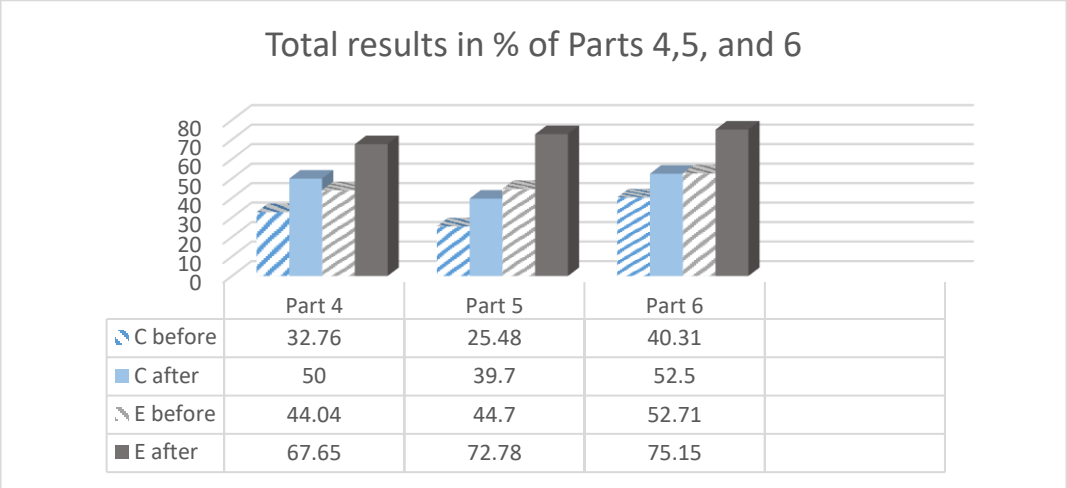


Figure 3. Mean P of Parts 4, 5, and 6 before and after the experiment

The data acquired regarding the performance of learners in specific tasks of the assessments demonstrated that the experimental groups exhibited significantly higher average scores post-experiment compared to the control group, which did not show such notable advancements over a nine-month period in which the experiment transpired. The discrepancy in performance between the control group in sections Four, Five, and Six before and after the experiment is 17.24%, 14.22%, and 12.19%, respectively, whereas the experimental group's performance is evidently superior.

The experimental group achieved improvements of 23.6%**,** 28%**,** and 22.4%**.**

Table Two shows the performance of separate groups expressed as mean scores of the three most productive tasks in the test. Examining the data reveals that the experimental group exhibited superior performance on all components compared to the control group; therefore, we can state that the reading programs and teaching modules had a considerable influence on the development of the learners' productive skills.

Table 2. *Mean scores of Parts 4, 5, and 6 before and after the experiment*

		Mean scores		
		Part 4	Part 5	Part 6
CONTROL	pre-test	2,36	2,67	2,04
	post-test	3,58	4,21	2,65
EXPERIMENTAL	pre-test	3,19	4,69	2,77
	post-test	4,95	7,35	3,85

To acquire the essential statistical data required for comparing the performance of test takers on specific items, item analysis was utilized, offering insights into each item within a test. Through the findings pertaining to individual items, an assessment can be made regarding their level of difficulty, effectiveness, and performance. Our study focused specifically on the facility value (FV), which measures the difficulty of individual items.

The item analysis of Part Four, in which the learners were to read a text and get the general idea of what it is about, and then, based on understanding, fill in the gaps with appropriate words in their proper form (plural/singular nouns, adjectives, verbs) shows significant improvement of the learners' performance in several items. For example, whereas at pre-testing in September at the beginning of the school year, there were only three (3,4%, FV .03) correct answers on item One, at post-testing in June, the number of right answers was seventeen (19,5%, FV .19). Even more significant improvement is evident in another item, which required the learners to fill in the gap with the simple form of the verb *write* (*Today at school our teacher told us to _____ stories about our day on the farm*). This item recorded an increase in its FV from .22 to .60, which means that after the experiment, test takers performed better, getting more answers right than they did before the experiment.

Part Five of the test required learners to read a story and answer questions using up to three-word phrases or even short sentences. This task was more challenging than the previous ones because it required learners to reorganize information and relate form and meaning to produce appropriate responses. Although grammatical accuracy was still important, it was not the only thing that mattered. This part of the test was the most productive and the results showed an improvement in both the control and experimental groups. However, the experimental group had significantly higher scores (7.35) compared to the control group (4.21).

In the final part of the test (Part Six), candidates were given a multiple-choice task. They had to read a text with gaps in it and choose the correct words from a choice of three to fill in the gaps. This task aimed to test their grammatical knowledge and only a small percentage of the task required them to produce language. Despite this, the items were contextualized and meaning-dependent; therefore, candidates needed to understand the context to complete the task. The results showed that both groups had improved, but the experimental group had a more significant improvement. The mean score of the control group increased by 0.61 points (from 2.04 to 2.65) from the pre-test to the post-test, while the experimental group had an increase of more than one point (from 2.77 to 3.85).

Based on the item analysis results, it is evident that the experimental group has made significant progress in producing correct answers by understanding the context. This proves that

the development of the learners' reading competence has impacted their comprehension of the text, leading to the appropriate selection of grammatical forms and structures.

Oral Language Production

The oral performance of the learner was assessed based on their fluency and accuracy. The process of data categorization involved three specific steps which included data coding, data storing, and data reduction. Similarly, like some experts (Corbin and Strauss, 2012; Lodico, Splauding, and Voegtle, 2006), the recordings' transcripts were coded. The accuracy of the learner's performance was evaluated by using a modified Brophy and Good (1970) standard coding system through thematic data analysis. In this step, the coded data was grouped into categories that became the central focus of this study, including "correct response," "partially correct response," and "incorrect or no response." These categories were primarily related to the accuracy of the learner's answers and combined two levels of description, i.e., grammar and comprehension.

To evaluate the fluency of speech, researchers often use Praat software as it allows for a thorough phonetic analysis. However, despite filtering out noise, most of the work still had to be done manually. For this reason, the 4-minute recordings were easier to process using Cool Edit. The researchers analyzed the following measures: 1) the amount of time the student spoke, 2) the number of silent pauses, and 3) the average duration of pauses.

To validate the hypothesis, statistical evaluation of the obtained data from the picture descriptions and face-to-face interviews was applied. The Mann-Whitney U test and independent sample t-test were used to determine if there was a significant difference between the scores of the two groups. To evaluate the success of the intervention, the mean scores of the experimental and control groups (in pre-tests and post-tests) were also compared.

To present the obtained data simply and concisely, descriptive statistics were used. Tables Three and Four display the accuracy scores of learners.

Table 3. *Descriptive statistics of accuracy for variables in the control group*

Control group	Mean	Minimum	Maximum	Std.Dev.
Pre-test				
correct	30.84	17.14	48.65	7.42
part. correct	44.62	23.53	58.33	9.85
incorrect	24.54	12.82	43.24	8.19
Post-test				
correct	40.04	23.68	54.05	7.91
part. correct	34.75	16.22	52.63	11.14
incorrect	25.21	7.69	45.95	8.17

Table 4. *Descriptive statistics of accuracy for variables in the experimental group*

Experimental group	Mean	Minimum	Maximum	Std.Dev.
Post-test				
Correct	33.20	22.22	50.00	7.67
part. correct	43.01	25.64	55.26	9.20
incorrect	23.79	12.20	43.24	7.44
Correct	43.97	25.64	57.89	9.06
part. correct	35.93	21.62	54.05	8.08
incorrect	21.10	5.26	35.14	6.36

The Mann-Whitney U test was used to determine the significance level ($p>0.05$) of correct, partially correct, and incorrect or no responses in the post-test. The results showed that the significance level was 0.04 for correct responses, 0.01 for partially correct, and 0.02 for incorrect or no responses, all of which were less than 0.05. Therefore, the null hypothesis was rejected, meaning that there is a significant difference between the two groups in terms of correct and incorrect responses in the post-test.

To compare the accuracy of pre-test and post-test scores of both groups, an independent sample t-test was performed. The results indicated that the control group had a difference of almost 10 points between their two test scores, while the experimental group had a difference of around 8 points. Both groups showed significant improvement in their scores in the post-test. Additionally, the control group's score for "partially correct" responses increased by almost 1 point from the pre-test, while the experimental group's score decreased by almost 4 points. Based on these findings, it can be concluded that the experimental group outperformed the control group, indicating that extensive reading has a positive effect on the accuracy of speaking.

To assess fluency and compare the phonation time, unfilled pauses, and hesitation time before and after an intervention, a t-test, and the Mann-Whitney tests were used. In the pre-test, there was no significant difference between the two groups. However, the results indicate that the subjects in the experimental group achieved significantly better results in terms of the length of unfilled silences and the time/duration of hesitations in the post-test. Although progress was observed in both groups, especially in the experimental group, it was not statistically significant. Descriptive statistics for variables measuring fluency in both groups are presented in Appendices C and D.

According to the results, in the post-test, the mean length of unfilled pauses was lower in the experimental group (6.8s) than in the control group (7.62s). Both pre-test and post-test results for the control and experimental groups indicate that the experimental group achieved better results (-0.91 compared to -0.47) in terms of the number and length of pauses. Even though the number of pauses did not change significantly in either of the groups, the duration of the pauses was reduced, which indicates that the students responded more quickly.

Although the difference was not statistically significant, both groups showed a considerable improvement in their phonation time scores (3.4 compared to 4.2), with a better result for the experimental group. While the time of unfilled pauses decreased in both groups (-3.41 in the control group and -5.22 in the experimental group), the time of hesitation pauses increased due to

the use of fillers such as "ok" or repetition of words from the questions. Figures four and five below show the percentage ratio of the three variables (student phonation time, hesitation time, and unfilled pause time) in both control and experimental groups before and after the tests.

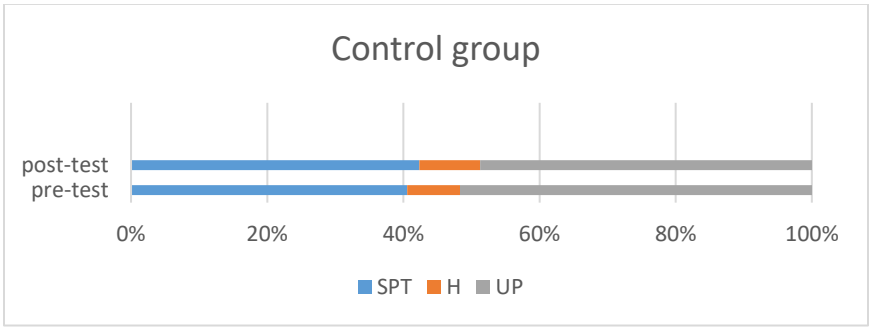


Figure 4. The ratio of variables in the control group in pre-and post-tests

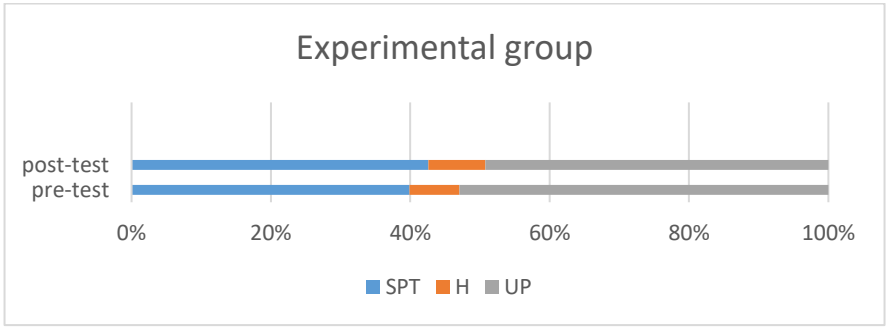


Figure 5. The ratio of variables in the experimental group in pre-and post-tests

Discussion

The objective of this study was to examine the impact of extensive reading on the development of language production in young learners. The study sought to investigate how reading classes influence the ability of young learners to produce language, evaluate the statistical significance of their performance, and analyze the results for individual productive skills.

We have completed our investigation, and the results confirm that the experimental group, which participated in an extensive reading program, outperformed the control group. A detailed quantitative analysis of the learners' performance showed that extensive reading significantly improves both fluency and accuracy in language production. Extensive reading, which involves engaging with a large volume of texts, has been proven to positively impact learners' productive language skills by exposing them to a diverse range of vocabulary and sentence structures, similar to the findings of Lukáč (2005) and Straková (2017). Furthermore, learners who regularly participate in extensive reading activities tend to improve their fluency, while repeated exposure to well-constructed sentences contributes to greater accuracy in their language production, as found by Nakanishi (2014).

Focusing on the writing skills of learners, we found that they were able to produce correct answers by understanding the context provided. We experimented to determine the difference in results between the control and experimental groups before and after the experiment. The results of the t-tests showed that there was a significant improvement in the post-testing results of both groups after the experiment. This provides compelling evidence of the effectiveness of the experiment in improving writing skills. The t-test values showed more significant differences in the experimental group, which supports the idea that the program which emphasized reading competence development had a positive impact on their language production.

The study found that when it comes to speaking, participants who engaged in extensive reading performed better in terms of using correct grammar and demonstrating comprehension. On the other hand, those who did not engage in extensive reading struggled with using proper grammar and demonstrating comprehension. The data in Table Three shows that both the control and experimental groups made significant progress in their test scores during the post-test. The study found that the experimental group, which engaged in extensive reading, showed a significant improvement of nearly 4 points in "partially correct" responses in speaking accuracy, while the control group only saw a slight increase of approximately 1 point. These results indicate that extensive reading has a positive impact on speaking accuracy, with the experimental group performing better than the control group. It is worth noting that while extensive reading appears to have improved language skills, other activities that require active language use may also lead to similar gains (Straková, Cimermanová, 2012; Straková et al., 2017). These findings support Akbar's (2014) suggestion that integrating speaking and reading skills helps learners apply what they have read in authentic speaking practice, thus improving their fluency. Additionally, extensive reading can enhance learners' ability to comprehend implied meaning and express their ideas, feelings, and emotions (Akbar, 2014). Studies have also shown that extensive reading can improve learners' attitudes towards reading, making it more comfortable and valuable while reducing anxiety (Sreena & Ilankumaran, 2018).

The present study aligns with previous research (Hughes, 2011; Garner, 2000) which suggests that reading programs have a positive impact on oral fluency. Our research findings show that the duration of pauses decreased and the length of phonation time increased, indicating improved fluency. The average length of unfilled pauses was also reduced, while the number of hesitation pauses increased due to the use of gap fillers. The various phases of reading programs create opportunities not only for vocabulary development but also for creativity and expressing opinions.

Throughout the study, it has become evident that the implementation of reading programs and teaching modules in the chosen schools has had a significant impact on the performance of the learners. This is further supported by the statistical analysis of both written and oral performance of the investigated groups.

Conclusion

This study aimed to examine the effect of extensive reading on the language production skills of young learners. We focused on evaluating the impact of reading courses on their language production abilities, analyzing the statistical significance of their achievements, and scrutinizing the outcomes of individual productive skills. The study's results were promising. We confirmed our hypothesis by analyzing the data quantitatively with descriptive statistics.

The study evaluated group performance instead of individual test scores. Mean scores were calculated before and after intervention and compared between control and experimental groups. A paired sample t-test was used to determine actual differences between groups. Both groups showed improvement throughout the study. Notable differences were observed in successful task completion between groups. The experimental group showed significant improvements in grammatical and contextual responses. The post-test showed improvements in speech duration and pauses.(Straková et al., 2017)

It has become evident from the investigation and detailed analysis of performance statistics that the implementation of reading programs and teaching modules in the chosen schools has had a significant impact on the written and oral proficiency of the learners, in terms of both accuracy and fluency. Verification of the effect of systematic development of reading competence on language production and comparison of progress within control and experimental groups yielded valuable results.

Suggestions

The results of this research have certain limitations that need to be considered. Firstly, the findings can only be applied to other groups that share the same demographic characteristics as the research participants. Secondly, the research needs to be expanded in such a way as to include a wider range of discourse features.

Extensive reading and its impact on the English language skills of lower secondary school students in Slovakia have not been thoroughly researched. However, a recent study has revealed findings that can serve as a solid foundation for further research on input-based learning, which can improve language production. This study is significant in improving the quality of teaching and learning environments. The results can have a significant impact on foreign language teaching in lower secondary education and can be useful for EFL professionals who want to implement extensive reading programs to enhance the efficiency of language production in their practice (Straková et al., 2017).

Acknowledgment: This paper has been published with the support of the Cultural and Educational Grant Agency of the Slovak Ministry of Education, project No.: 005ŽU-4/2023

Conflicts of Interest: The authors declare no conflict of interest.

Authenticity: This manuscript is an original work

Artificial Intelligence Statement: AI and AI-assisted technologies were not used.

About the authors

Prof. Ivana Cimermanová, PhD. is the Vice-Rector for Educational Affairs of the University of Prešov, Slovakia. She teaches at the Faculty of Arts at this university. Her research interests include the methodology of teaching English as a foreign language, especially in using technologies in language teaching. She is the author of many articles, studies, and textbooks.
ORCiD ID: https://orcid.org/0000-0002-8063-8949

Dr. Rita Rafajlovičová, PhD. is an Associate Professor at the Department of English Language and Literature, Faculty of Humanities, University of Žilina, Slovakia. She has authored multiple

university coursebooks and articles on English grammar, language testing, and assessment. Her research interests lie in applied linguistics across various research projects.
ORCiD ID: https://orcid.org/0000-0002-7575-3774

References

Aydın, G. & Bağcı Ayrancı, B.(2018). Reading Preferences of Middle School Students. In *World Journal of Education*, *8*(2),127-140. http://doi.org/10.5430/wje.v8n2p127

Akbar, F. (2014). The role of reading in improving speaking skills in the context of teaching English as a foreign language. *International Journal of English Language & Translation Studies, 2* (4), 92-98. https://eltsjournal.org/archive

Babiaková, S., & Kasáčová, B. (2020). *Reading preferences of younger learners in Slovak-Czech-Polish comparison*. In *The New Educational Review*, *61*, (3), 38-50

Brophy, J., & Good, T. (1970). Teacher-child dyadic interaction: A manual for coding classroom behavior. *Journal of School Psychology, 8*, 131-138. https://doi.org/10.1016/0022-4405(70)90032-4

Brumfit, Ch. (1982). *Problems in Principles in English Teaching.* Oxford: Pergamon Press.

Cameron, L. (2001). *Teaching languages to young children.* Cambridge University Press. https://archive.org/details/secondlanguageac00rode

Clark, S.L. (2022). *The Role of L1 Literacy in L2 Reading Development*, (Unpublished Doctoral dissertation). Minnesota State University, Moorhead. Available at https://red.mnstate.edu/thesis/709

Clarke, M.A. (1980). The short circuit hypothesis of ESL reading, or when language Competence interferes with reading performance. *Modern Language Journal*, *64* (2), 203-209. https://doi.org/10.1111/j.1540-4781.1980.tb05186.x

Celce-Murcia, M. (2001). *Teaching English as a Second or Foreign Language*. Heinle & Heinle.

Cliff, P. (2007). *Cambridge Young Learners English Tests.* Oxford University Press.

Coady, J. (1979). A psycholinguistic model of the ESL reader. In R. Mackay, B. Barkman & R. Jordan (Eds.), *Reading in a Second Language* (pp.5-12). Newbury House publisher.

Chang, C. Y. (2016). Two decades of research in L2 peer review. *Journal of writing research, 8* (1), 81-117. https://doi.org/10.17239/jowr-2016.08.01.03

Corbin, J., & Straus, A. (2014). *Basics of quantitative research: Techniques and procedures for developing grounded theory*. Sage Publications. https://doi.org/10.4135/9781452230153

Francis.WS., Gurolla, B., & Martínez, M. (2022). Comprehension exposure to words in sentence contexts impact spoken word production. *Memory and Cognition*, *50*, 192–215, DOI: 10.3758/s13421-021- 01214-w

Garner, B. (Ed). (2000). *Focus on Basics.* NCSALL Occasional Paper (Collected Works – Serials). 4/A. Boston https://files.eric.ed.gov/fulltext/ED451397.pdf

Geva, E., & Ramírez, G. (2015). *Focus on reading.* Oxford University Press.

Gowri, J., K. (2018). Application of Theories, Techniques, Methods, and Approaches to Develop Second Language Skills – A Study Based on Transition from Schooling to College. *International Journal of Engineering and Technology (IJET),7*(3), 210-215. http://doi.org/10.1449/ijet.v7i3.6.14972

Grabe, W.(1991). Current Developments in Second Language Reading Research. *TESOL Quarterly*, *25*(3), 375-406. https://doi.org./10.2307/3586977

Guo, M., & Wang, J. (2013). Affective factors in Oral English Teaching and Learning. *Higher Education in Social Science*, *5*(3), 57- 61. http://doi.org/10.3968/j.hess.1927024020130503.2956

Hedge T. (2000). *Teaching and Learning in the Language classroom*. Oxford University Press.

Higgs, T. V., & Clifford, R. (1982). The push towards communication. In: T. V. Higgs, (ed.) *Curriculum, competence, and the foreign language teacher* (pp.57-79). Lincolnwood National Textbook Company.

Hughes, R. (2011). *Teaching and Researching Speaking*. Pearson Education.

Hundarenko, O., Leláková, E., & Bačová, B. (2022). Sustainability of Foreign Language Education at a Slovak University during the COVID-19 Global Pandemic. *Arab World English Journal (AWEJ) 2nd Special Issue on Covid-19 Challenges* (2) 48 -63. https://dx.doi.org/10.24093/awej/covid2.4

Jolly, D. (1978). The establishment of a self-access scheme for intensive reading. Presented at British Council Colloquium on Reading, Paris, October 1978. In P.L. Carrell, J. Devine, & D.E. Eskey (Eds.), *Interactive approaches to second language reading* (pp.260-278). Cambridge University Press.

Krashen, S. D., & Terrell, T. (1983). *The natural approach: Language acquisition in the classroom.* Englewood Cliffs, NJ: Alemany Press. https://doi.org/10.1017/S0272263100005659

Kumar, S., Barnwal, S., Shanker, U., & Tiwary, S. (2020). Analyzing Effect of Repeated Reading on Oral Fluency and Narrative Production for Computer-Assisted Language Learning. *arXiv: Computation and Language*. https://doi.org/10.48550/arXiv.2006.14320

Larsen-Freeman, D. (2006). The emergence of complexity, fluency, and accuracy in the oral and written production of five Chinese learners of English. *Applied Linguistics, 27* (4), 590-619. https://doi.org.10.1093/applin/aml029

Lightbown, P. M., & Spada, N. (1999). *How Languages are Learned*. Oxford University Press.

Lodico, M.G., Spaulding, D.T., & Voegtle, K.H. (2006). Methods in education research: From theory to practice. John Wiley & Sons. Inc.

Lukáč, E. (2005). Prínos učiteľov z obdobia reformného pedagogického hnutia pre tvorbu slovenských učebníc. In F. Hýbl (Ed.), *Učitelé-autoři učebnic a dětské literatury* (pp.155-167). Muzeum Komenského, Přerov.

Mangen, A. et al. (2015). Handwriting versus keyboard writing: Effect on word recall. *Journal Of Writing Research, 7* (2), 227-247.https://doi.org/10.17239/jowr-2015.07.02.1

Nakanishi, T. (2014). A Meta-analysis of Extensive Reading Research. *TESOL Quarterly*, *49* (1), 6-37. https://doi.org/10.1002/tesq.157

Omidbakhsh, A. (2021). Storytelling and Story Reading Impacts on Pre-intermediate English Language Learners' Oral Language Production and Comprehension. *International Letters of Social and Humanistic Sciences, 74*, 1-9. doi: 10.22054/ILT.2021.61029.598

Pierce, L. V. & O'Malley, J.M. (1992). *Performance and portfolio assessment for language Minority students*. Washington, DC: National Clearinghouse for Bilingual Education.

Rea-Dickins, P., & Rixon, S. (1997). The assessment of young learners of English as a foreign

language. In C. Clapham & D. Carson (Eds.), *Encyclopaedia of language and education (7): Language testing and assessment* (pp. 58-76). Kluwer Academic Publishers.

Rea-Dickins, P. (2000). Assessment in early years of language learning contexts. *Language Testing 17* (2), 115–122. https://doi.org/10.1177/026553220001700201

Shaaban, K. (2005). Assessment of Young Learners. *English Teaching Forum online, 43* (1), 34-40.https://americanenglish.state.gov/forum

Sreena, S., & Ilankumaran, M. (2018). Developing Productive Skills Through Receptive Skills – A Cognitive Approach. *International Journal of Engineering & Technology 7*(4), 669-673. http://doi.org/10.14419/ijet.v7i4.36.24220

Straková, Z., & Cimermanová, I. (2012). Reading programs for young learners: from principles to practice. In T. Pattison (Ed.), *IATEFL 2011 Brighton Conference Selections* (pp.203-205). Canterbury, University of Kent.

Straková, Z., Cimermanová, I., Rafajlovičová, R., & Sepešiová, M. (2017). *Input based development of productive language Skills.* Tribun EU, s.r.o.

Unsworth, S. (2016). Quantity and quality of language input in bilingual language development. In E. Nicoladis & S. Montanari (Eds.), *Bilingualism across the lifespan: Factors moderating language proficiency* (pp. 103–121). American Psychological Association. https://doi.org/10.1037/14939-007

Appendices

Appendix A

Table 1. *Comparison of group performances as determined by t-test results*
t-Test: Two-Sample Assuming Equal Variances

CONTROL	*pre-test*	*post-test*
Mean	18,739130	23,847826
Variance	28,930434	33,965217
Hypothesized Mean Difference	0	
df	90	
t Stat	-4,368965	
P(T<=t) one-tail	1,67E-05	
t Critical one-tail	1,661961	
P(T<=t) two-tail	3,34E-05	
t Critical two-tail	1,986674	
EXPERIMENTAL	*pre-test*	*post-test*
Mean	24,865853	31,841463
Variance	30,475304	23,680487
Hypothesized Mean Difference	0	
df	80	
t Stat	-6,069482	
P(T<=t) one-tail	2,03E-08	

t Critical one-tail	1,664125
P(T<=t) two-tail	4,06E-08
t Critical two-tail	1,990063

Appendix B

Table 2. *Results of t-test comparing control and experimental group*
t-Test: Two-Sample Assuming Unequal Variances

post-test	CONTROL	EXPERIMENTAL
Mean	23,847826	31,841463
Variance	33,965217	23,680487
Hypothesized Mean Difference	0	
Df	85	
t Stat	- 6,968273	
P(T<=t) one-tail	3,204E-10	
t Critical one-tail	1,6629784	
P(T<=t) two-tail	6,409E-10	
t Critical two-tail	1,9882680	

Appendix C

Table 3. *Descriptive statistics of fluency for variables in the control group*

Control group	**Mean**	**Minimum**	**Maximum**	**Std.Dev.**
Pre-test				
phonation time	62.48	30.00	95.00	16.61
unfilled pauses	79.11	51.00	111.00	15.45
hesitation time	12.11	6.00	19.00	3.82
mean length of unfilled pauses	8.09	6.09	10.09	1.10
Post-test				
phonation time	65.89	33.00	98.00	16.38
unfilled pauses	75.37	50.00	104.00	14.52
hesitation time	13.85	8.00	18.00	2.36
mean length of unfilled pauses	7.62	5.36	10.67	1.37

Appendix D

Table 4. *Descriptive statistics of fluency for variables in the experimental group*

Experimental group	Mean	Minimum	Maximum	Std.Dev.
Pre-test				
phonation time	60.41	42.00	82.00	12.42
unfilled pauses	79.52	59.00	91.00	8.68
hesitation time	10.78	6.00	21.00	3.90
mean length of unfilled pauses	7.71	6.31	9.50	0.96
Post-test				
phonation time	64.63	48.00	91.00	11.81
unfilled pauses	74.30	48.00	86.00	9.16
hesitation time	12.33	9.00	20.00	2.77
mean length of unfilled pauses	6.80	5.42	9.33	1.13