



## The Influence of Digital and Technology Equipment in Learning Activities on Students' Written Skills

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### Abstract

This research aims to observe how students develop their written narrative skills. This research uses survey instruments and questionnaires as data collection methods. Statistical methods are used in data analysis. One hundred students were involved in this research, except those who only wrote less than seven texts from the research sample. The study results show that students experience significant development in their linguistic expression in written communication situations. Their ability to produce texts becomes richer at the linguistic level, with increased lexical diversity in nominal and verbal areas. They also showed a better ability to use sentence-connecting devices. However, there are differences between students who use their mother tongue and those who use their second language in terms of lexis and syntax. Students who use their mother tongue tend to use less and less varied lexis than their second language. In addition, students also showed higher linguistic uncertainty, especially in terms of case inflection and syntax. Nevertheless, there are no significant differences between the two language groups regarding the global structure of the texts. The results of this study provide important insights for language education at the primary school level, showing that students who use their mother tongue have sufficient ability to carry out narrative tasks in a manner comparable to students who use a second language of the same age. However, it should be noted that the development of language skills in students who use their mother tongue may take longer and require special attention in language learning.

**Keywords:** Ability, Student, Language, Written.

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### 1. Introduction

For students with migration backgrounds and children who speak a language other than their mother tongue in their personal lives, language acquisition often begins through socialization at school. However, they may quickly become adept at everyday communication within a few years. However, fluent communication skills in everyday life do not always reflect sufficient language mastery for success in a school context. In the face of formal communication tasks in schools, new challenges arise [1]. In this complex context, building linguistic skills for students, both as a first and second language is crucial. A comparison of the development and expansion of linguistic skills between these two groups provides valuable insight into possible differences. A balanced promotion of both language groups can produce positive results, with a focus on describing linguistic abilities at different levels. Text production serves as a basis for reflecting on text quality criteria and relating them to students' abilities. However, there is still little knowledge about how students use foreign language as a second language after school [2]. Therefore, we need to conduct further research to comprehend the gaps in language acquisition among students from diverse backgrounds. Differences in language acquisition, especially in morpho-syntactic and lexical aspects, remain a focus of attention. Thus, efforts persist in understanding the dynamics of language acquisition for migrant students and children learning a second language, with the aim of providing appropriate and equitable support for the development of their linguistic skills [3].

Mother tongue refers to the first language a child learns, is often considered the most dominant language, and is associated with great confidence and linguistic competence. However, in Indonesia, problems arise because the mother tongue is not always the dominant language in family communication. Situations can vary, for example, when a child is born to parents or siblings who speak different languages [4]. Your mother tongue also doesn't have to be the safest or most frequently used language. We use the term first language to compare the emotional dimensions and inter-cognitive relationships in language development. A person learns their first language early in their family environment. On the other hand, the term second language is used for situations where a person learns a language after his first language. People often acquire a second language in structured settings, like a classroom, rather than in uncontrolled situations [5]. The main difference between second and first acquisition

lies in the stage at which the acquisition begins, where second language acquisition begins before the cognitive maturation process associated with the first language is complete. This shows the importance of understanding context and individual experiences in understanding language use and language development. By understanding the differences between a mother tongue and a second language, we can better accommodate the needs of second language learners in their learning process [6]. In the context of foreign language learning, students' language is usually the dominant language. Foreign language learning usually occurs after the acquisition of a second language. Most students can rely on their first language proficiency when learning a language, and this process can often occur simultaneously with first language acquisition. The distinction between a second language and a foreign language is not always clear [7].

Writing experts are characterized by their ability to utilize individual skills appropriate to the writing task at hand, as well as their ability to coordinate various sub-actions. Compared to experienced writers, novice writers cannot use all their skills simultaneously [8]. They develop their writing skills hierarchically, with some skills becoming automatic at each stage of acquisition, freeing up cognitive resources for new skills. There are five stages in the journey from beginner writer to writing expert. In the first stage, the focus is on generating and writing down ideas fluently. At this stage, the subjective need for expression comes to the fore. Next, the writer begins to orient himself to the content and organization of the text. Next, the writer begins to consider the structure of the content, a process that ultimately results in the recipient's onboarding. At the highest stage of development, the focus is no longer on the readers themselves but on the effectiveness of the product produced [9].

It appears that cognitive, linguistic, and text organization skills develop equally early on, with no particular aspect showing preference over time [10]. Biological age appears to have a significant influence on the acquisition of writing skills, but other factors such as learning age and writing experience also play a role [11]. Empirical data and specific types of text have led to the development of several models of writing skill development. These models, despite their differences in approaches, suggest that the communicative function of the produced text influences writing development [12]. In this context, the question that arises is to what extent socialization factors influence the acquisition of written language skills, especially in the context of certain types of texts such as narratives [13]. In the context of literacy socialization, narrative text types have a key role in developing children's writing skills. Children often have extensive experience with narrative texts from a preschool age, which makes them very familiar with these types of texts as they learn to write [14]. The questions that arise are whether universal methods of text production can be developed based on knowledge of this type of narrative text and to what extent the influence of socialization can influence the development of writing skills in this context.

## **2. Research Methods**

This research uses survey instruments and questionnaires as data collection methods. The research variables are detailed, including how to analyze narrative text, which is related to various research variables. We also employed statistical methods to analyze the data. The empirical part emphasizes the results and interpretation of linguistic skills, especially on lexical and syntactic aspects, as well as an assessment of the cohesion and macrostructure of the narrative text compiled. Three different age groups provided the research data. In total, 100 students were involved in this research, with the exception of students who only wrote less than seven texts from the research sample.

## **3. Results and Discussion**

The results of this study overall support previous findings regarding text length in oral production. Reproductive narratives tend to produce more detailed texts than independent constructions of the story. These findings apply to both oral and written narratives, indicating consistency in this phenomenon. However, it appears that narrative media plays an important role in age-related development. Additionally, research data supports the trend of students writing increasingly longer texts over time. Furthermore, the research results confirm that the writing assignments students receive greatly influence the breadth of the text. Contrary to previous research, a surprising finding revealed no significant differences in text length regarding first language. However, this does not mean that writing in a second language does not require higher cognitive effort compared to the process of writing in a first language. Linguistic differences in texts of the same length must also be considered, because the length of the text can, within certain limits, be an indicator of language ability.

This analysis shows that the effect of the time factor on text length is only partially acceptable, with an increase in text length seen in film reproduction narratives but not in fantasy and experiential narratives. Observations regarding text length are not necessarily interpreted but are understood as an indication of overall writing skill. Theoretically, we emphasize the crucial role of lexical skills in text production. The diversity of a person's resources determines lexical competence, in addition to their ability to choose appropriate words for communication situations. Empirical results suggest that a late start to second language learning can result in a

lack of diverse linguistic resources and productive vocabulary. In the first years of school, everyday language often influences second language learners, making it challenging for them to select contextually appropriate and semantically diverse words. It was found that regular attendance in class had a positive effect on influencing second language learners' vocabulary development. Productive vocabulary analysis aims to capture the lexical spectrum and qualitative dimensions of students' lexis. The results must also take into account differences between students who started learning when they first entered school.

The results of this study largely support previous findings that text length in oral production leads to more detailed texts rather than independent construction of those texts. This phenomenon appears to be consistent in both oral and written narratives. However, narrative media appears to have a role in age-related development. Previous research shows that in the context of oral storytelling, texts produced by children from kindergarten to grade 1 of elementary school are twice as long as written text production, with a particularly noticeable jump in development in grade 3. Research data supports the trend of students writing increasingly longer texts. Furthermore, the given writing assignment appears to strongly influence the breadth of the text. Although there are differences contrary to expectations from previous studies, where there were no significant differences regarding the first language in terms of text length, this does not mean that writing in a second language does not require higher cognitive effort compared to the process of writing in a first language. Linguistic differences in texts of the same length should also be taken into consideration, as text length can, to some extent, be an indicator of language proficiency.

Despite students' tendency to write longer film retellings, it is impossible to generalize about the increase in text length in fantasy and experience narratives. There is no deliberate forced interpretation when analyzing the length of the text. We primarily understand them as indicators of global writing skills. In the theoretical aspect, this research shows that lexical skills are very important in forming the basis of text production. The diversity of available resources fundamentally determines lexical competence, in addition to the ability to choose appropriate expressions for a particular communication situation. Empirical results on language learners' lexical skills highlight that a late start to language learning sometimes leads to a reduced diversity of linguistic resources and productive vocabulary as a foreign language. Everyday language, especially in the first years of school, influences learners, sometimes causing difficulties in selecting words that are appropriate to the context and semantically differentiated. The results also show that regular class attendance has a positive effect on influencing vocabulary development. Productive written vocabulary analysis aims to capture both the lexical spectrum and the qualitative dimensions of students' lexis. In addition to developments related to school age, the results must also take into account differences between learners that occur from the moment they enter school.

The first hypothesis, which states that vocabulary development is related to age, shows an increase in lexical diversity, which can be confirmed. The evaluation showed that the range of vocabulary associated with all texts in the data collection increased significantly at each grade level. Although growth in lexical diversity increases more slowly. In addition to the statement that the use of verbs and nouns varies across grade levels, qualitative developments are also visible, showing an increase in the relative proportion of those who are more structurally and semantically complex. The use of more structurally complex word forms, as well as the use of more words in synonymous lexemes, indicates a change in language style by avoiding repetition of words through the use of synonyms. Students not only use different word forms in the word area but also in the verbal area. Diversity through the combination of different particles with the same basic shape increases significantly. Younger students rarely use more structurally complex word forms in their written expressions, indicating a more common use of simple lexical means for conceptual fact description. This can also be seen in the use of abstract and concrete terms, where students use more abstract terms. Sometimes, students accompany the use of abstract nouns with an emotional qualification of the story, incorporating the actors' thoughts and feelings into the course of events. In this sense, abstract concepts play an important role in the realization of specific narrative tasks.

At primary school age, the development of written lexis progresses through the growth of different word forms, initially in quantitative terms. As students gain more writing experience, they enhance their lexical skills qualitatively by employing specific expressions in specific contexts, leading to a growing focus on the written language register. This analysis shows that vocabulary development is largely similar for students using their mother tongue and second language at the school level. We can only partially confirm the assumed differences in lexical diversity depending on the learner's first language. The evaluation showed that, in general, the vocabulary range was lower among the students. Observation of lexical differences between learners shows that, regarding the semantic differentiation of verbs, learners use fewer synonyms and situation-specific word forms than students who use a second language. With regard to lexical morphological complexity, the proportion of complex forms tends to be lower. The acquisition of thematically specific lexical means also requires learning opportunities that enable students to use means of expression related to factual knowledge and, in this way, connect concepts that are likely to be lexicalized in the first language.

Interpretation of the data shows that it takes more time to learn productive vocabulary, and the qualitative expansion of lexical means tends to start later than in second language students. This is also seen in the

difference in the use of simple verbs and particle verbs, where students experienced a significant decrease in simple verbs with a simultaneous increase in particle verbs. However, a significant change in the diversity of lexis used shows that lexical meanings are also more semantically differentiated. Students develop their lexical skills over a period of time, after about six months, but remain at a plateau of development in the grade. This shows that vocabulary development in the first years of elementary school occurs quantitatively and qualitatively, especially in terms of increasing writing skills and writing experience. The increase in vocabulary in written text production in elementary school students changes qualitatively as writing experience increases, with differences in the use of verbs and nouns as well as in the semantic differentiation of verbs.

The research results show that there are differences in vocabulary development between students with a mother tongue and students with a second language. Although most vocabulary development is similar, there are some significant differences. First, students have a lower vocabulary range. Second, there is a significant vocabulary gap in second languages among school starters. Third, the analysis shows that students use fewer synonyms and situation-specific word forms than students who use a second language, especially in the verb and noun categories. Fourth, students continue to use fewer narrative formulas, a trend typically associated with more established expressions and general language skills. Fifth, the use of collocations tends to increase with school age, indicating the development of writing skills. Observing changes in language style in the text suggests that students should concentrate more on basic text production tasks. Seventh, the development of fixed phrases increases most sharply in the youngest students within a school year, and development slows as school age increases. Eighth, the use of fixed formulations in the categories examined is not a student production strategy but is more related to communication and acquisition strategies. Ninth, students' lexical resources become clear through the social environment and teacher support. Thus, the development of vocabulary and language use in students can be influenced by the influence of the first language, the social environment, and teacher support.

Only partial confirmation exists for the hypothesis about the age-related development of syntactic complexity. Research shows that by early elementary school, the average number of words in a sentence remains largely constant, but there is an increase in syntactic complexity in the use of subordinate clauses. The absolute proportion of subordinate clauses increased with text length over three consecutive academic years. Additionally, we observed a shift from producing simple sentences to longer ones, particularly when employing more intricate noun phrases, particularly in nominal groups that possess adjective attributes. However, the use of adjective attributes does not always lead to a lengthening of syntactic units on average. This development shows that students are starting to develop their linguistic skills in terms of expanding conceptual structures in writing. Although syntactic complexity is not a sufficient condition for text quality, the use of complex syntactic structures can also change the narrative qualitatively, for example, by enriching the story with descriptive elements that support the creation of mental images for the reader. While we cannot fully confirm the hypothesis that syntactic complexity depends on the learner's first language, we did observe an increase in the use of subordinate clauses in text production, albeit not across all learners. Research also shows that text length is a relevant factor in assessing students' syntactic skills, although there is no significant difference between native and second language learners.

The assumption that coherence generation does not depend on the learner's first language can be confirmed by explicit cohesion evaluation. The relative proportions of sentence linking and referential devices varied by individual grade level, but not significantly. At all grade levels, maintenance of reference is largely accomplished through the use of pronouns. A resume is generated. Therefore, clear reference requires agreement between person, number, and grammatical gender to be continued and the expression to be continued. Since learners in a second language sometimes have difficulty determining gender, even at advanced stages of mastery, it seems reasonable that pronominal resumption increasingly experiences incoherence. With regard to the use of connectors, it is assumed that a smaller spectrum of sentence-connecting devices can be observed in the text. This assumption cannot be confirmed based on an evaluation of the types of one-part conjunctions. When producing written narratives, use only a few different conjunctions. The proportion of subordinating conjunctions is increasing, and their spectrum is expanding, especially in terms of temporal, causal, and adversarial relations. Usage Therefore, conjunctions are determined by the age-related structuring of the narrative and not by the learner's first language.

Across grade levels, we can observe the development of skills to realize the global structure of narrative. Regarding those examined, no significant differences could be identified between first- and second-language learners. The learner's first language does not appear to determine this aspect of narrative development. Evaluations show that students have a common text schema, regardless of their first language. Knowledge of text patterns clearly develops through the reception of literary texts. For instance, the use of words specific to the text type, like highlighted words in narrative introductions or linguistic markers at turning points, demonstrates this. Knowledge of text patterns through the reception of literary texts at school and/or acquired in extracurricular contexts or through explicit instruction in class cannot be determined. However, we assume that learners not only confront stories but also encounter literacy socialization in their first language, along with resources for

storytelling. If first language learners have developed a narrative style that goes with their interest in other types of text, the results show that multilingual kids are aware of cultural differences and include them when they tell stories. This makes the school setting more relevant to narrative styles that can be used in the classroom. Bound narratives are considered exemplary. However, understanding text types alone does not fully account for the lack of relevant differences between language groups. The lexical and syntactic repertoire, for example, influences the ability to produce an independent and complete narrative. Previous research in this context has demonstrated that a lack of knowledge in the target language impairs the creation of a global narrative structure, and traces of cognitive effort when writing in a second language can lead to difficulties, such as text interruptions.

#### 4. Conclusion

The results of the analysis show that students experience significant development in their linguistic expression in written communication situations. Their ability to produce texts becomes richer at the lexical level, with increased lexical diversity in both nominal and verbal areas. They also showed better ability to use sentence-connecting devices. However, there are differences between students who use their mother tongue and second language in the use of lexis and syntax. Students who use their mother tongue tend to use less and less varied lexis compared to students who use their second language. In addition, students also showed higher linguistic uncertainty, especially in terms of case inflection and syntax. Nevertheless, there are no significant differences between the two language groups in terms of the global structure of the texts. The results of this study provide important insights for language education at the primary school level, showing that students who use their mother tongue have sufficient ability to carry out narrative tasks in a manner comparable to students who use a second language of the same age. However, it should be noted that the development of language skills in students who use their mother tongue may take longer and require special attention in language learning.

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