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Features of Grammatical Writing Competence among Early Writers in a Norwegian School Context

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Abstract: In this article, we investigate how grammatical competence is manifested in young students' written texts and how this contributes to the students' overall writing competence. We pose the following two research questions: (i) Which grammatical features appear in a selection of young students' texts? and (ii) What do these features reveal about different aspects of the students' grammatical writing competence? The empirical fundament for this study is a representative sample of texts gathered through the project FUS—Functional Writing in the First School Years. Our primary material amounts to a total of 534 texts written by first- and second-grade students (ages 6–7). The students have completed two writing tasks, in which they were asked to write one descriptive and one narrative text. In our analyses, we see grammatical writing competence as consisting of several sub-competencies—namely, grammatical repertoire, grammatical complexity, grammatical variation, and grammatical choice. Our analyses show that the grammatical repertoire of beginner students is well-developed. The frequency of specific grammatical features differs between the two writing tasks, underpinning the argument that certain text types trigger certain grammatical choices.

Keywords: grammatical competence; grammatical complexity; grammar as choice; early writing

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1. Introduction

An established assumption in theories of language acquisition and grammar is that the general grammatical patterns of a child's first language are fully developed by the age of six years (Chomsky 1980; Crain and Lillo-Martin 1999). This would imply that, by this age, the language-specific parameters have been set so that the child would produce grammatically well-formed sentences in the acquired first language and would be able to distinguish between grammatical and ungrammatical sentences in this language. In this sense, grammar is not something that children need to learn when learning to write, as they can find support in their oral language.

However, these statements concern the mental cognitive grammar, or the I-language (Chomsky 1986), of the child, which is primarily linked to their oral language. Our focus in this article is the initial stages of children's writing, not their spoken language, and more specifically, we investigate the grammar of children's early writing and how this grammar is a sign of a developed competence in the young writer. A general pattern is that once children start to produce written sentences, they will not—just as in the spoken register—produce many grammatical errors, such as word-order violations.

Still, this does not give the full picture of grammatical writing competence. Clearly, children master written syntax to different degrees—from the stage of writing only single words to managing the combination of words into phrases and sentences. They eventually need to learn to make use of varying degrees of complex grammatical structures, how to vary their sentence constructions, how to expand their constituents, and how to make active grammatical choices depending on what they want to emphasise and communicate.

Carter and McCarthy (2006) and Myhill et al. (2012) refer to this as "grammar as choice", as opposed to "grammar of structure". Grammar in writing is not only a skill to be controlled; it is also a resource to be used for variation and rhetorical effect. Lefstein (2009, p. 380) expresses it as follows:

> So, whereas rule-based grammar divides language into two absolute categories—correct and incorrect—rhetorical grammar treats grammatical choice as, well, precisely that: a choice from among possibilities. These possibilities are judged as more or less effective, depending upon factors such as audience, purpose and context.

We have chosen the term "competence" rather than, e.g., grammatical "skills" or "control", as we define grammar writing competence as comprising these subdomains. We discuss this issue in more detail in Section 4.

Quite often, students in early writing tend to apply a simplified syntax. It may appear that they need time to translate their spoken language grammar to writing, almost as if the two registers represented two linguistic varieties (cf. Wagner et al. 2008) and as if they apply some sort of interlanguage between speech and writing. According to Hognestad (2021, p. 182), when children start writing, it is almost as if the grammar learning process is restarted, as early texts display quite simplified phrase structure.

Our goal is to investigate this intermediate grammatical stage. Our focus is the grammatical development in the early stages of children's writing. It is well-known that the gap between oral and written language represents a challenge for young students when it comes to phonology (Hannibal et al. 2011). Less is known about this transfer regarding grammatical development, as fewer studies investigate grammatical competence and development in early writing. Relevant in this case is both whether the child manages to construct grammatical sentences and whether they are eventually able to adjust their syntax to the communicative context.

Some information about the Norwegian school system may be in order. Since 1997, Norwegian children have been starting school in the year they turn six and going through ten years of mandatory education, which is common and identical for all. Importantly, the students are taught in Norwegian throughout all school years as the language of schooling and also receive specific lessons in L1 Norwegian. In 2006, the Knowledge Promotion Curriculum was introduced. In contrast to the previous content-oriented curriculum, this one is competence-oriented, with defined competence goals for different age groups. Furthermore, writing is one of five basic literacy skills (reading, writing, oracy, numeracy, and digital competence) that are pervasive in the curriculum for all subjects and for all school years. These skills are integrated across disciplines. The curriculum specific to the subject of Norwegian also features "a particular responsibility for developing the pupils" ability to plan, create and refine increasingly complex texts adapted for a given purpose and recipient' (Ministry of Education and Research 2020, p. 4).

In this article, we set out to investigate how grammatical competence is manifested in young students' written texts in a Norwegian school context and how this contributes to the students' overall writing competence. The focus, thus, lies on grammatical writing competence as part of more general writing competence, on the one hand, and as part of general grammatical competence, on the other. Our research questions are the following: (i) Which grammatical features appear in a selection of young students' texts? and (ii) What do these features reveal about different aspects of the students' grammatical writing competence?

The empirical fundament for this study is a representative sample of texts gathered through the project *FUS—Functional Writing in the First School Years* (Skar et al. 2020a, 2023). FUS is a large-scale, mixed-methods research study that investigates the effects of an early start with functional writing and focuses on young students' development as writers and their ability to use writing as a tool for learning and communication (Skar et al. 2020a). The overall goal of this project is to increase the quality of the teaching of writing in early school years, as well as to map out how young writers develop throughout their first years in school. The FUS project investigates students as writers, text qualities, and professional

development among teachers. The current article is a subproject that investigates text qualities among early writers, with a specific focus on grammar.

2. Writing Competence

It is often stated that writing competence consists of both *code competence*—the technical aspect of writing, such as spelling, orthography, punctuation, and grammatical correctness—and *function competence*—the ability to create meaning by means of written artefacts (Juel 1988; Skar et al. 2017). Puranik and Lonigan (2014) describe three different but related domains in early writing development—namely, conceptual knowledge (about the function of writing), procedural knowledge (transcription competence) and generative knowledge (the ability to compose texts above the level of individual words). There are many aspects that affect the speed when a child learns to write, but weak transcription competence seems to be the most limiting factor (Berninger 1999; Skar and Myhill 2021). Moreover, young writers tend to have a limited work memory (McCutchen 2000). As a consequence, they will, to a large degree, make use of a "knowledge-telling" strategy (Scardamalia and Bereiter 1987) or an associative writing strategy (Evensen 1997). One may assume that both transcription competence and general cognitive development will influence the writing abilities of young students.

The development of grammatical competence has often been considered to be a code competence only, yet we assume from the outset that grammatical competence is related to both code and function competence.

3. Previous Studies about Grammatical Writing Competence

Earlier studies of linguistic development within writing have contributed different insights about what characterises grammatical writing development and how such development is typically manifested through specific linguistic features. Arguments in the literature range from claiming that linguistic features are not signs of increased writing skills (Hunt 1965) to the opposing view that specific linguistic features are indeed markers of development (Perera 1987). Another theoretical branch emphasises that grammatical features may be employed rhetorically (Myhill 2008, 2009).

Firstly, in an early study, Hunt (1965) studied sentence features in three age levels and concluded that all of the structures were mastered by the youngest students, although they were often more frequent among older writers:

> Although the average child in the fourth grade produces virtually all the grammatical structures ever described in a course in school grammar, he does not produce as many at the same time—as many inside each other, or on top of each other—as older students do. (Hunt 1965, p. 172)

Based on this, Hunt argues that no linguistic features can be taken to be markers of writing development. By this, he means that the occurrence of grammatical features does not give clues about the writing competence of children—in other words, syntax is not relevant to describing writing competence. However, this view has been challenged by several researchers, who—on the contrary—claim that certain grammatical features seem to increase with age (see, for example, Harpin 1976; Loban 1976; Perera 1984, 1987). Examples of such features include clause length, length of nominal phrases, the occurrence of passive constructions, modal auxiliaries, and subordinate clauses.

Massey et al. (2005) postulate that an attested difference between less and more developed writers is seen in the degree of subordination. More specifically, they claim that there is more coordination (or parataxis) and less subordination (or hypotaxis) among young writers (Massey et al. 2005). This would lead us to the expectation that subordinate clauses are probably not frequent in our data set, at least not in the early stages.

In two articles, Myhill (2008, 2009) confirms the general findings of the aforementioned previous studies but also seeks to introduce certain nuances to the field. More specifically, she points out that older and more able writers would sometimes use grammatical features for rhetorical effect—for example, short, single-clause sentences to create a change in

rhythm, long noun phrases to provide more detail in descriptions, and generally introduce more grammatical variation to obtain a certain effect. Myhill's work is, therefore, anchored in a functional perspective of grammar, building on insights in Halliday's theory of functional grammar, whereby language is primarily regarded as a system for creating meaning (Halliday 1975; Halliday and Matthiessen 2014).

Myhill (2008) further points out that, among weak early writers, sentences are mainly subject-initial, as in (1) below, which means that grammatical topics are mostly subjects and rarely other constituent types. Early writers, therefore, tend not to vary the word order to a large degree. The following subjects as topics in frequency are adverbials as sentence topics, as illustrated in (2) and (3):

(1) We often run around in the schoolyard.
(2) In the schoolyard, we often run around.
(3) Often, we run around in the schoolyard.

Note, however, that this pattern mirrors natural speech in general, in which sentences are also most frequently subject-initial, followed by topicalised adverbials.

Moreover, Myhill (2009) states that the frequency of finite verbs per sentence seems to decline with text quality, implying that higher quality texts will include more infinite adverbials and expanded phrases, leading to what we can label "higher density" of the sentences. Also, according to Myhill (2008), more able writers tend to use fewer subordinate clauses and coordinate clauses than weak writers, which also points in the direction of increased clause density. As for the types of subordinate clauses, Høigård (2019) states that, in children's language, relative clauses and nominal clauses (*that*-clauses) tend to occur earlier than adverbial clauses.

A related observation is found in Nygård (2023), who studied the use of sentence fragments in students' texts from different age groups, where it is found that, although fragments are normally seen in the early stages of writing development and are then considered to be incomplete sentences in a stage where writers have not yet mastered full sentences, such fragments are also used by older writers in order to obtain a stylistic effect.[1]

Based on these studies, as well as theoretical assumptions about which types of grammatical constructions and features are often considered to be more marked or complex than others, we brought with us certain presumptions about which empirical patterns the data set would reveal. The most important of these was that single words were expected to appear before phrases and sentences, and simple, single-word phrases were expected to appear before complex phrases. We also expected main clauses to appear before subordinate clauses and *that*-clauses and relative clauses to appear before adverbial clauses. Unmarked subject-initial SVO (subject–verb–object) word order was expected to appear before marked word order with topicalised non-subject constituents. Also, more complex topics were expected to appear later than simple, single-word topicalised constituents (Hasselgård 2004). Finally, modal verbs and passive constructions were expected to appear later than other construction types in the students' linguistic development.

4. Untangling Subparts of Grammatical Writing Competence

As our research questions target both a description of grammatical features and a discussion about what these features can reveal about grammatical writing competence, it is worthwhile to explore the concept of grammatical competence in more detail. We have already seen in Section 3 that Myhill (2008) and Lefstein (2009) have pointed out functional aspects, or more specifically, rhetorical and grammatical choices, as opposed to or in addition to a purely descriptive focus on the presence of different grammatical constructions.

The theoretical fundament of this study is that grammatical writing competence can be perceived as consisting of several intertangled sub-competencies, which manifest themselves in different ways in the students' writing and which, together and separately, display distinct qualities in the texts. More specifically, we propose an understanding of grammatical competence as being composed of four intertwined components—namely, grammatical repertoire, grammatical complexity, grammatical variation, and grammar as

choice, as illustrated in Figure 1 below. In the following, we will outline the details of each of these, and we will argue that all aspects are necessary in order to account for the relevant aspects of grammatical competence that are seen in the students' writing. Our rationale for this deconstructed notion of competence comes both from theory, as different sources describe grammatical competence in unique and interrelated ways, and from empirical data, in that we observe that a multilayered understanding of grammatical competence is necessary in order to describe the grammar in students' texts. Also, we define competence as covering both grammatical knowledge and skills, which means that it covers both the abilities that are acquired through maturation and through explicit language learning (Hertzberg 2001).[2]

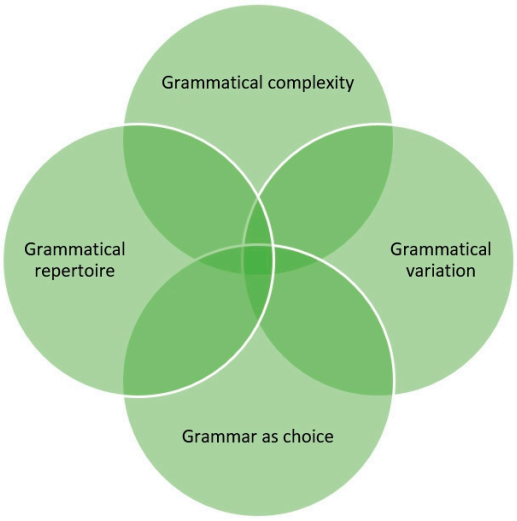

Figure 1. Grammatical competence.

We have labelled the first sub-competence *grammatical repertoire*, which is defined as the list or collection of grammatical constructions or features that one individual masters and which is, thus, part of this individual's cognitive–linguistic competence. Note, however, that the repertoire refers to the attested, visible language, which is observed in oral or written text, whereas the notion of competence is more abstract. This definition, thus, resembles the definition of competence found in generative grammar (Chomsky 1957; Giere 1997; Schütze 1996), parallel to the term I-language mentioned earlier (Chomsky 1986). This also means that one occurrence of a certain grammatical feature would be enough to state that this feature or construction is part of the repertoire of a language user.

Note also that the generative I-linguistic competence is a term to describe grammar in the mind, whilst our object of study is grammar seen in texts. Yet, given that one occurrence of a construction in the student's linguistic production suffices as evidence for grammatical repertoire, the goal of the argument would not then be to measure the frequency or relevance of the student's use of the construction but merely to pin down whether it is acquired. Also, and crucially, the opposite argument does not hold. If a student does not make use of a certain grammatical feature in his or her text, it cannot be assumed that this feature is not part of the student's grammatical repertoire. This point is parallel to methodological points that are often made about corpus linguistics, which contend that grammatical phenomena may very well exist as part of a person's I-language, even though the language production of this person does not display that phenomenon in the data collected (Schütze 1996).

Importantly, when studies of grammar within language acquisition point out that children's grammatical competence is fully developed by around the age of six, they would then be basing this statement on a definition of grammatical competence as repertoire, meaning that six-year-olds have learned the full list of possible grammatical constructions in that language. However, that would not imply that their grammatical development has

fully matured, as stated by Applebee (2000, p. 97), who points to the difference between repertoire and complexity:

> Children appear to have access to the core grammatical structures of English by the time they start school. Instead, a key change concerns their "ability to manage an increasing degree of structural complexity".

Ortega (2003, p. 492) describes grammatical complexity as "the range of forms that surface in language production and the degree of sophistication of such forms". Early studies in this field measured grammatical complexity through measures of sentence length (Bormuth 1969; Chall and Dale 1995), which implied that longer sentences were more complex than shorter ones. However, this is no longer considered to be a valid measure (McNamara et al. 2010) as it does not take structural relations and grammatical density into account. Bulté and Housen (2012, p. 22) propose a more nuanced definition, making these measures—density and relations—central:

> (. . .) complexity refers to a property or quality of a phenomenon or entity in terms of (1) the number and the nature of the discrete components that the entity consists of, and (2) the number and the nature of the relationships between the constituent components.

In the literature, a range of specific grammatical constructions have been identified as being particularly complex. Central examples are subordinate clauses, including relative clauses, complex phrases and complex sentence topics. A common feature among most of these phenomena is the increasing degree of grammatical hierarchy and subordination. Phrases with modifiers involve more structural hierarchy than single-word phrases, and subordinate clauses imply an additional structural sentence level within another sentence. This can be summed up in the measure proposed by Hunt (1965, p. 20), among others—namely, the number of words within one T-unit, which is defined as a complete sentence with attached constituents and subordinated clauses. Note that some scholars are more critical toward the application of T-units as an analytical tool and argue that, by using this measure, information about the ability to combine different units, as in coordination, will be lost (Bardovi-Harlig 1992). In our study, it still provides an accurate measure, especially as punctuation is often not present in our text sample.

Complex sentence topics also involve more structural hierarchy, as– at least in Germanic languages—the topic position only leaves room for one constituent, so this constituent must consist of several structural layers. Moreover, other studies point to the use of passive and sentence coordination as measures of complexity, as well as clause length, phrase length, modal auxiliaries, and subordinate clauses, as aforementioned (see, for example, Ortega 2003; Norris and Ortega 2009; McNamara et al. 2010; Biber et al. 2011; Høigård 2019; Crossley 2020; Durrant et al. 2021).

In many ways, grammatical complexity is related to the grammatical repertoire, as both these measures consider the selection of constructions manifested in the students' text and what characterises these. One could even claim that these are, in fact, not different concepts, or rather that complexity is a part of the full repertoire, given that some of the features in the repertoire are more complex than others.

The third aspect of grammatical writing competence we look at concerns the ability to vary the types of constructions that are used. *Grammatical variation*, or lack of such, will, of course, occur at different linguistic levels—for example, in the choice of words or morphological features such as verb tenses. In a Nordic context, Hasselgård (2004, 2005), Iversen and Otnes (2013), and Hundal (2017) have studied variation in the use of the sentence-initial topic position. In students' texts, variation is often most noticeable when it is not present in the text—i.e., when the text comprises a range of similar or identical constructions. Two relevant examples from our data material are displayed below. Note that the texts were originally written in Norwegian and that the translation is ours. In the first text, all sentences start alike, with "I like"—hence, no word order variation. All the sentences also include identical infinitive subordinate clauses. The second text includes

seven adverbial subordinate clauses on the same page. This latter example displays a text that would arguably score high on complexity, as it has many subordinate clauses, but would score low on variation, as the same construction is repeated many times.[3] Arguably, such repetition is typical for oral language and also typical in early writing (Myhill 2008).

I like to play tag.

I like to just relax.

I like to be alone.

I like to be with friends.

I like to be on the carousel.

I like to be on the climbing frame.

I like to play on the swing.

I like to play Simon says.

Text 253035, MP2 Outdoor activities (see original Norwegian text in Appendix A)

I like to play football, dodgeball, kick the can and
to Minecraft. Football is fun
because it is exciting and because it is sport.
There are many of us on the field. Dodgeball
is fun because you can throw a ball at
someone
and because you are moving.
We are many on the
field. Kick the can is fun
because you have to
sneak behind the one who is
it. Minecraft is fun
because you play the game.

Text 756057, MP0 Outdoor Activities[4]

Grammatical variation is also related to the term *sentence fluency*, which can be defined as "the way words and phrases flow throughout the text" (Culham 2003; Kristoffersen 2023, p. 7). Culham (2003) notes, when she describes sentence fluency, that sentences are "well built. They move. They are varied in structure and length. Each one seems to flow right out of the one before" (p. 178). This implies that grammatical variation can potentially contribute to sentence fluency, but sentence fluency is also dependent on other linguistic mechanisms, such as cohesion, which is beyond the thematic scope of this article.[5]

Finally, we include a fourth sub-competence, which will, in many ways, depend on and integrate the other three. We label this fourth component, *grammar as choice*, building on the distinction between the grammar of structure and grammar of choice (Carter and McCarthy 2006; Myhill et al. 2012), as well as on insights from rhetorical grammar, as expressed by Lefstein (2009, p. 382):

> The point of grammar study is to enable pupils to make choices from among a range of linguistic resources and to be aware of the effects of different choices on the rhetorical power of their writing.

Grammar as choice, thus, points to the student's ability to make active and relevant choices as to which grammatical constructions would be best suited to convey a certain

meaning in the given text. Obviously, making rhetorically based grammatical choices would not be possible without having mastered the given construction, or in other words, having it as part of one's repertoire, and probably also requires that one is able to juggle a certain grammatical repertoire, consisting of a range of features, some of which have a certain complexity. This implies that the four components in our model are clearly intertwined and that grammar choice is highly dependent on the other three. Moreover, one could argue that three of the sub-competencies (repertoire, complexity, and variation) could potentially be considered to be the same—e.g., that they could all fall under the term complexity (cf. Ortega 2003). However, we have chosen to describe them separately, mainly because they are often expressed in different ways in the texts.

5. Methods for Data Collection and Analysis

In our study, the two aspects of repertoire and complexity will be investigated primarily by counting instances of a selection of grammatical constructions. We present the results of this in the form of simple, descriptive statistics in order to illustrate general tendencies in the material. However, we have not carried out thorough quantitative analyses with the aim of testing a specific hypothesis. It is not possible to quantify the next two measures—variation and choice—in a similar way. Rather, qualitative analyses are necessary to display these measures in order to show how grammatical features come into play in a selection of texts. Therefore, to be able to answer our research questions—giving an overview of linguistic features and discussing how these features illustrate grammatical competence—our study combines quantitative overviews of linguistic features with qualitative text analysis focusing on specific linguistic features and their semiotic contribution.

5.1. The Data Set

Our primary data set comprises a total of 534 texts written in Norwegian by L1 students in the 1st and 2nd grades (ages 6–7). All students followed the L1 Norwegian curriculum. Despite the fact that a tiny percentage of the pupils were multilingual, none of them had specialised instruction in Norwegian as their second language.[6] The texts were collected from different schools and classrooms that participated in the project and did not, thus, represent the level of one single group or school and, moreover, did not solely reflect one teacher's or one school's teaching of writing. All texts were ranked and placed into three main levels (below average, average, and above average) by an independent rating panel. The panel founded their judgements on an overall, not grammar-specific, set of assessment criteria that had been developed by the research team (Skar et al. 2020b).[7] The issue of general writing achievement is not a focus area for the current study, although it serves as a backdrop for our interpretations. For more details on the achievement concerning both measurement and results, see Skar et al. (2020b, 2020a).

Our text sample is representative in that it includes equal numbers of texts from all three levels of achievement. The text sample in this study consists of texts that were gathered at two separate measure points (MP2, at the end of 1st grade, and MP4, at the end of 2nd grade), both including texts from the same students, but with a time interval of approximately one year. In this study, we have mainly investigated empirical patterns at the group level and not the writing trajectories of individual students. However, examples from individual student texts are included for illustrative purposes.

Our texts were collected during an intervention in the FUS project. The overall intervention had several components: a professional development programme and peer activity sessions for the participating teachers. Each semester throughout the two-year period had ten project weeks, with three types of activities: instructional activities (including assessment); teachers' learning activities; and network sessions (Skar et al. 2020a). The students were asked to complete two different writing tasks, one of which (*Outdoor Activities*) asked them to write a descriptive text, and the other (*Magical Hat*) asked for a narrative text. The tasks were performed on separate days. Both text types are represented in the text sample

from both measure points included in this study (MP2 and MP4).[8] The assignments were formulated as follows:

> **Outdoor Activities:** Write a letter to the researchers about what you like to do during the outdoor school breaks;
>
> **Magical Hat:** Imagine that you find a magical hat. When you put it on, you can change into anything you want. Tell the reader about what you transform into and what happens on that day.

5.2. Method of Analysis

To account for the distribution of grammatical features across the data set, we registered and counted occurrences of a selection of grammatical features. In the process of analysing the data set, we employed an exploratory and descriptive approach. There were no prefigured categories (Creswell 2013). Our perspective was open as to which grammatical features and constructions would appear in the students' texts. However, standard grammatical categories were formed at the outset and guided our analysis, and we were also informed by previous research on grammatical complexity (see Section 4). In other words, our analytical process was characterised by an abductive approach, drawing from both theoretical and empirical insights (Peirce 1994). Our coding categories were mainly taken from the standard descriptive Norwegian reference grammar (Faarlund et al. 1997). There were two reasons for this. Firstly, it is the most theory-neutral option, compared to, e.g., generative grammar or systemic–functional linguistics (Halliday and Matthiessen 2014). Secondly, these terms are those that best mirror the Norwegian school curriculum and textbooks. In addition, statements in previous research studies (see Sections 3 and 4) guided the exploration, as these studies, in many ways, gave direction to this search and gave us certain expectations as to which constructions would be found frequently. In sum, this implies that, although our overall view of writing is functionally based, the grammatical terminology employed is taken from descriptive, structural grammar.[9]

Our categories were established as they emerged in the text material from a pilot study of a sample of texts collected before the intervention. This text sample, thus, became a pilot for our coding procedures. More specifically, when a certain construction type appeared in a student's text, this would then be coded and registered in all subsequent texts. A range of grammatical features were, thus, coded according to these categories: single words; sentence fragments; main clauses; subordinate clauses-nominal, adverbial and relative/adjectival; infinitive clauses; complex grammatical phrases; formal/expletive subjects; topicalisation of non-subjects; and coordination of sentences.

Throughout the coding process, two researchers worked together on the bulk of the data set, and all categories were established and defined after a common discussion to ensure that the definitions of the categories were equally understood. All coding was performed manually, which was an issue of necessity with this text sample from very young writers, as the handwriting and spelling required careful interpretation during the analysis. Parts of the data set were analysed individually, although in these cases, we performed spot checks to increase the reliability of the analyses.

In the analytical process, relevant grammatical features were registered for each text, as well as the number of instances of this feature. Through this process, we obtained information about the students' repertoire—how many students and which students included a certain feature in their texts. Given theoretical assumptions about grammatical complexity (see Section 4), this process also provided information about this aspect of grammatical competence. Moreover, we gained information about the frequency of grammatical features at the group level—how common was a certain feature (i.e., how often did it occur) within the text sample? For some students, there may also have been many occurrences of a certain feature, whilst for others, there were very few or none.

In our treatment of the empirical data, we combined quantitative counting and qualitative text analysis. More specifically, the aspects of grammatical competence that are measured in numbers and in tables mostly show the grammatical repertoire and complex-

ity and also, to a certain extent, variation (how many different constructions are used). However, the description of grammatical variation and the grammatical choices required that we carry out qualitative, manual analyses of individual texts and contextually enriched interpretations of these texts. For these measures, we conducted a close reading of a large sample of texts, focusing on grammatical features. These two dimensions provided supplementary information, which, together, helped to provide a more accurate picture of the complexity of the students' grammatical competence.

6. Results

Our research questions—which grammatical features appear in the texts and what they can tell us about grammatical writing competence—demand different types of analyses. Pointing back to our four postulated sub-competencies of grammatical competence, this process provided information about the grammatical repertoire as well as the grammatical complexity of individual students and at the group level. We present these numbers and our interpretation of them in Section 6.1 below. However, we aim to describe grammatical competence more broadly, including variation and rhetorical choice. For these measures, counting alone would not provide a satisfactory picture of the texts or of the students' grammatical competence. In Section 6.2, we focus on the aspects of variation and choice and present some selected texts from the larger data set, with the objective of illustrating characteristic aspects of the data set that would not be covered if the only analysis was based on counting features and constructions.

6.1. Grammatical Repertoire and Complexity

During the project period, which lasted for two years, texts were collected at different measure points. The first point (MP1) was at the very beginning of the project, and measure point 2 (MP2) was when the students had completed their first year of school. Measure points 3 (MP3) and 4 (MP4) were parallel to measure points 1 and 2, but one year after, in the students' second year of school.

Let us first establish that quite a large proportion of these young writers do not write full sentences. Figure 2 below shows the distribution of texts with (1) no written words, (2) single words, (3) single words and sentences, and (4) sentences. These four categories emerged from our analysis of the coded texts from our data set. A small sample of the texts were blank. Others contained only drawings or pseudowriting. All of these texts are gathered in the category "No words", marked in blue in Figure 2. At MP2, particularly, quite a lot of students wrote single words that were not grammatically combined into larger units. Far fewer students wrote single words at MP4. Figure 2 displays this tendency in the orange field in every column. The yellow field shows the share of students who wrote texts with at least one full sentence. Overall, this pattern suggests that, among students, single words tended to appear before phrases and sentences.

An overview of the quantitative results for both measure points and all registered categories is provided in Table 1 below. This table shows the number of students who utilised a certain grammatical feature in their written text on one occasion, thereby demonstrating that it was part of their repertoire. The results are displayed as a percentage of the total number of instances of one text type at one measure point, thus providing an overview of the number of texts or pupils that used a certain feature at each measure point and for each text type.

In the left-hand column of Table 1, we see a selection of the different grammatical features that have been investigated. The distribution of texts at the different measure points is as follows: MP2 Outdoor Activities 148 texts; MP2 Magical Hat 147 texts; MP4 Outdoor Activities 128 texts; and MP4 Magical Hat 111 texts. Comparing the number of texts with the chosen grammatical feature with the total number of texts at each measuring point will yield the relative number of texts that show a certain grammatical repertoire—i.e., the text that has at least one occurrence of the relevant feature.

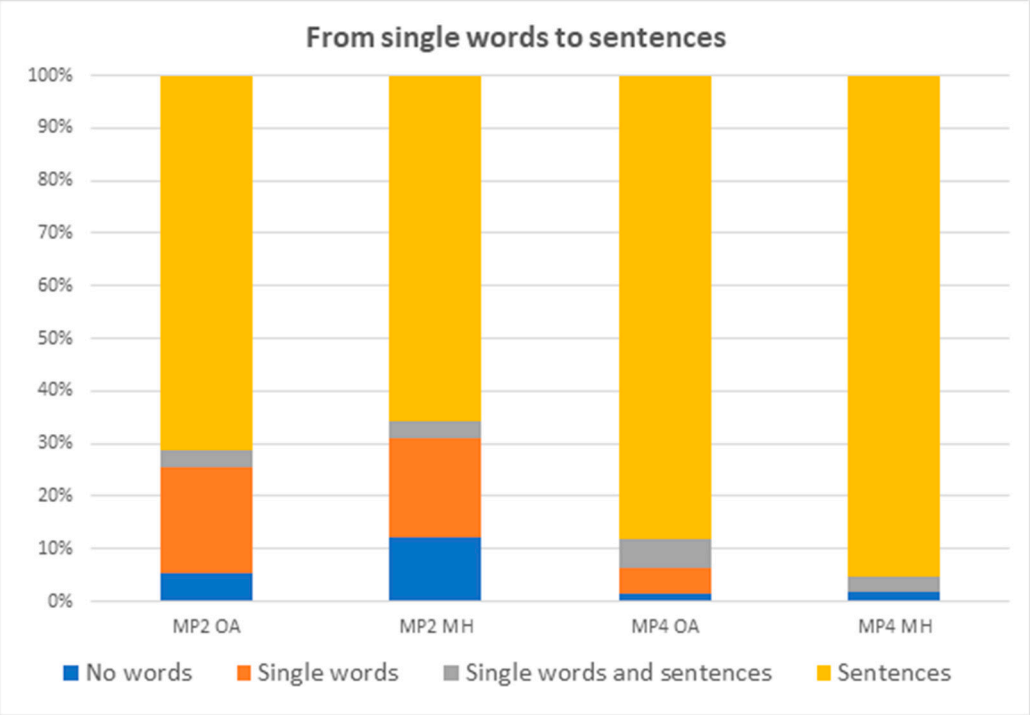

Figure 2. Distribution of texts with no words, single words, words/sentences, and sentences. MH = Magical Hat. OA = Outdoor Activities.

Table 1. Grammatical repertoire.

Grammatical Repertoire: Relative Number of Texts with the Grammatical Feature				
Grammatical Feature	**MP2 Outdoor Activities**	**MP2 Magical Hat**	**MP4 Outdoor Activities**	**MP4 Magical Hat**
T-units	74.32% (110/148)	70.75% (104/147)	89.84% (115/128)	95.50% (106/111)
Phrases	19.59% (29/148)	31.97% (47/147)	35.16% (45/128)	44.14% (49/111)
Nominal Clauses	6.76% (10/148)	14.97% (22/147)	17.19% (22/128)	26.13% (29/111)
Adverbial Clauses	22.97% (34/148)	20.41% (20/147)	43.75% (56/128)	41.44% (46/111)
Relative Clauses	7.43% (11/148)	19.73% (29/147)	20.31% (26/128)	42.34% (47/111)
Infinitive Clauses	58.78% (87/148)	4.76% (7/147)	82.81% (106/128)	22.52% (25/111)
Additive Connections	25% (37/148)	32.65% (48/147)	33.59% (43/128)	51.35% (57/111)
Formal Subjects	12.84% (19/148)	10.88% (16/147)	27.34% (35/128)	28.83% (32/111)
Topicalisations	20.27% (30/148)	42.86% (63/147)	34.38% (44/128)	65.77% (73/111)

An overall and not very surprising finding that can inferred from Table 1 is that more students demonstrated several of the features at measure point 4 than at measure point 2—in other words, when the students were older, in this case, a difference of one year. Also, we observe that students in the "above average" group displayed more features than those in the "below average" group, which shows that the grammatical repertoire mirrors other domains in the assessment forms. This is by no means a surprising result. What is more surprising is how some of the features seem to vary between the two text types. This pattern is particularly visible in the categories of infinitives, adverbial subordinate clauses and topicalisation of non-subjects.

Other relevant observations that can be made from the numbers in Table 1 above and Figure 3 below are, firstly, that at measure point 2, fewer pupils wrote actual sentences when responding to the Magical Hat task than for the Outdoor Activities task. Several of

the Magical Hat texts were totally blank. There could be several explanations for this. MP2 was towards the end of the first grade, so the code competence of the students may have been low. The Magical Hat task also seems to have been more cognitively demanding than the other task. At measure point 4, we see an opposite picture—more students wrote full clauses when completing the Magical Hat task. A possible explanation for this is that it was more natural to respond to the Outdoor Activities task using keywords and lists. In these texts, we typically see repetitive lists of sentences with similar syntactic structures. It could, however, be argued that a list is actually a very relevant way of answering this writing task, meaning that the students may have chosen the most efficient way to answer, cf. rhetorical grammar (Lefstein 2009).

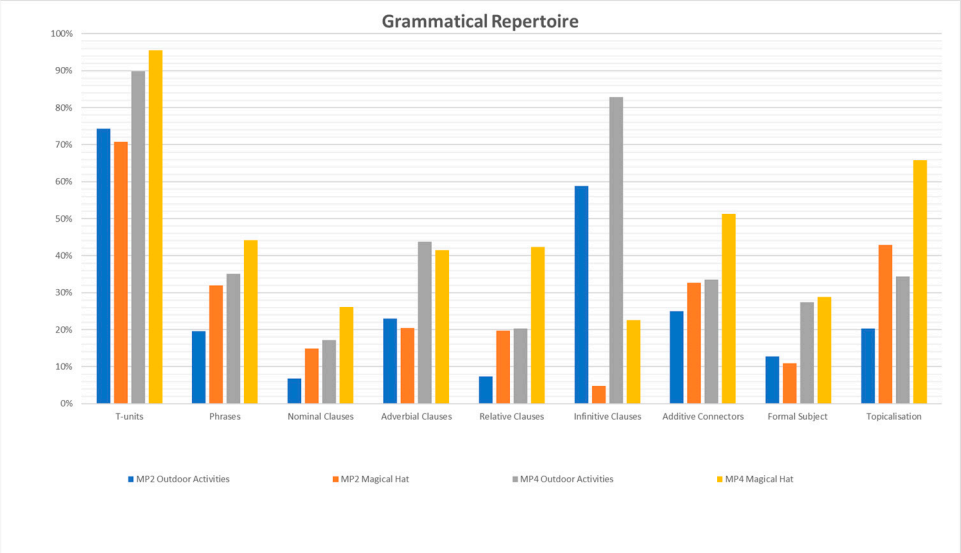

Figure 3. Relative number of texts with the grammatical feature at each measuring point.

Figure 4 shows the numbers of occurrences adjusted for text length measured in the number of T-units or main clauses, so what is displayed is the relative occurrence of a certain grammatical feature for all combined text at each point in time. The reason for this is that the texts vary quite a lot in length, so these numbers will more clearly illustrate the empirical patterns of each group. Note that when we adjust for text length, the use of "and" as an additive connector is, in fact, quite stable across groups and across text types. Also, this figure shows that the differences between the measure points are not that big when the numbers are adjusted for text length, although there are some noticeable differences between text types, which we will return to.

A few comments on the most central grammatical features are necessary. Complex phrases are, in our case, defined as phrases including a voluntary addition. This implies that an instance of determiner + noun is excluded, but that determiner + adjective + noun ("a quite big dog" 151024) or adverb + adjective ("really funny" 260025), where the adjective is modified, are included. The number of texts with one or more complex phrases increased from MP2 to MP4 (see Figure 3), but there was also a difference between the text types in that there was generally a greater number of complex phrases in the Magical Hat texts than in the Outdoor Activities texts, at least at measure point 2 (see Figure 4).

As for the feature of topicalisation, which in our study was defined as a sentence in which the subject is not the constituent in the sentence's initial topic position, the numbers were slightly different. From MP2 to MP4, the occurrence of topicalisations increased, although only internally within each text type (see Figure 4). The number of sentences with topicalisations was higher in the Magical Hat texts than in the Outdoor Activities texts. There were more texts with this feature in MP2 Magical Hat than in MP4 Outdoor Activities. Moreover, we may note that more detailed qualitative analyses show that each of the Outdoor Activities texts featured many locative adverbials in this position, whereas

the Magical Hat texts tended to have temporal adverbials. Many of these seem to be light temporal adverbs such as *then*, as illustrated, for example, in text 262032 in Section 6.2 below. This may contribute to the explanation of why the Magical Hat texts displayed more of these topicalised constituents than the Outdoor Activities texts. In adult spoken language, the majority of sentences are also subject-initial—i.e., not with topicalisation.

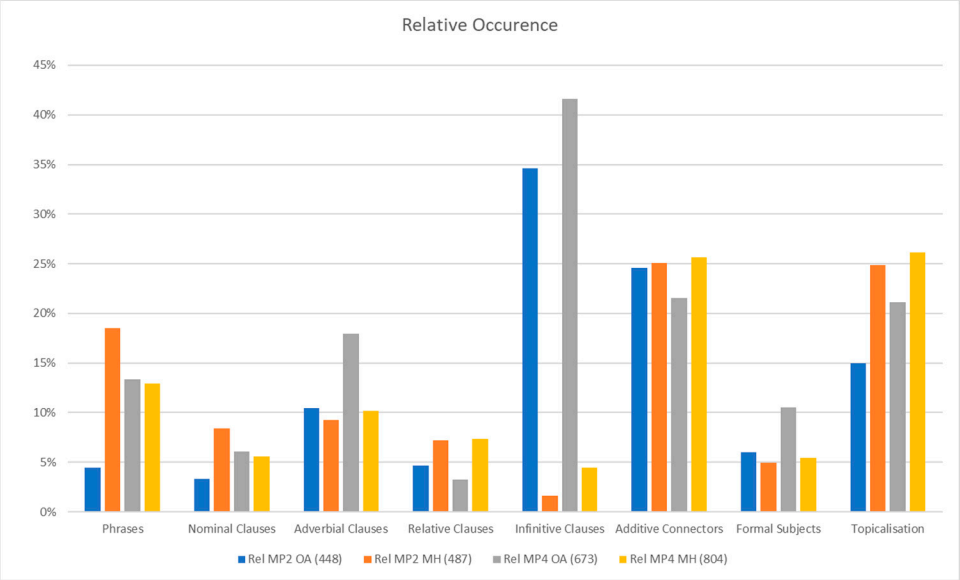

Figure 4. Relative occurrence of different grammatical features.

As for the content of the topicalised constituents, we can state that most of these are simple, single-word constituents. More specifically, the most frequent topics are light adverbials specifying time (for Magical Hat texts) and place (for Outdoor Activities texts). However, despite there being few complex topic constituents, there are some topicalised subordinate clauses. This is a feature that increases with age (from MP2 to MP4) and that is more frequent in the higher-achieving group. In particular, we see adverbial clauses specifying time (for both text types) and if/so-conditional sentences (for Magical Hat texts), as illustrated in the text excerpts below:[10]

(4) If I found a magical hat, I would. . .

When I had walked for a long time, I was attacked by quite a big dog.
Text 151024, MP2 Magical Hat

(5) I found a magical hat. When I put it on I knew that the world would never be the same again. When I walked in that door there were lots of my family there.

Text 254040, MP4 Magical Hat

(6) When we are on the climbing frame, there is also someone who is playing tag.

Text 253013, MP4 Outdoor Activities

A type of construction that typically shows degrees of sentence expansion as well as mastery of grammatical hierarchy is the occurrence of subordinate clauses. These come in different types: nominal; adverbial; adjectival/relative; and infinitive clauses[11]. We note that the number of texts with nominal clauses (the *that*-clauses) increased from MP2 to MP4, but that overall, there were more instances in the Magical Hat texts than in the Outdoor Activities texts (see Figure 4).[12] As we have primarily presented numbers to show tendencies in the material, we cannot conclude whether or not the difference is statistically significant.[13]

The number of texts with adjectival or relative clauses also increased from one measure point to the next, but the number of occurrences was radically higher in the Magical Hat

texts compared to the Outdoor Activities texts—a parallel pattern to the one observed for topicalisation. As for adverbial clauses, the picture is slightly different. For this feature, there was also an increase between MP2 and MP4, but we do not see the same difference between text types. In fact, there seem to be slightly more occurrences in the Outdoor Activities texts than in the Magical Hat texts. Adverbial subordinate clauses were included in the repertoire of approximately the same number of students, independently of both text types. When we look at the number of occurrences at the group level, however, there were far more of them in the Outdoor Activities texts than in the Magical Hat texts, which is probably due to the fact that there were many causal sentences in the former, but not that many conditional and temporal clauses in the latter.

Finally, the infinitive clauses reveal an interesting pattern. The increase from MP2 to MP4 also applies here, although the difference between text types is radically in favour of the Outdoor Activities texts, which is also the opposite pattern compared to what we have seen for, e.g., topicalisation and complex phrases.

The overall tendency, seen through a manual close reading of the whole text sample, where T-units were counted, was that the text length increased from MP2 to MP4.[14] Also, if one looks at each text type, all the grammatical phenomena registered increased with age, from MP2 to MP4, which implies that more students made use of more grammatical features. However, the pace of the increase is different when the two text types are compared. For example, in the Magical Hat texts, some students displayed infinitives, whereas the Outdoor Activities texts displayed massive amounts of these.

As noted in Section 4, the literature points to several grammatical feature types as being particularly complex and gives examples, such as subordinate clauses and complex phrases. We may note that several of these features occurred in many of the texts in the data set. As soon as the students started to produce full sentences, not only single words, the grammatical constructions that were investigated seemed to appear very soon in the texts produced. None of the grammatical features investigated appeared only in MP4 and not in MP2. Also, none of the constructions appeared only among the texts in the "above average" group and not in the "average" group.[15] However, we must note that there were indeed more occurrences in the "above average" group, but when the numbers were adjusted for text length/number of T-units, the difference was not that big.

There are certain construction types that did not occur in our data set and, as a consequence of our choice of analytical categories, do not appear in the table—examples worth mentioning are passive sentences and gerunds/nominalisations. These are grammatical features that are typically linked to the written medium and to formal language.

6.2. Grammatical Variation and Choice

We have concluded that the repertoire is quite complex from an early age, but our third aspect of grammatical competence concerns variation, whether the students use many similar constructions within the same text or vary them. This aspect is not easily measured by only counting occurrences, although, for example, the high frequency of infinitive clauses in the Outdoor Activities texts would point towards a low degree of variation for this feature in these texts. From qualitative analyses, we can notice that this is the case. Again, variation is more easily noticed when it is absent, as seen in the example of text 253035 in Section 4, which is repeated below (see original Norwegian text in Appendix A).

I like to play tag.

I like to just relax.

I like to be alone.

I like to be with friends.

I like to be on the carousel.

I like to be on the climbing frame.

I like to play on the swing.

I like to play Simon says.

Text 253035, MP2 Outdoor Activities

As a counterexample, consider the Outdoor Activities text 450019 as well as the Magical Hat text 256009, both cited below and both displaying the occurrence of many different grammatical phenomena. In general, a number of relatively short texts in the data set show a high degree of grammatical complexity and variation. Text 256009 is illustrative of this, displaying, e.g., topicalisation, modal verbs, and subordination.

To the researchers,

In winter I like to build a snowman.

I also like to go sledging. I like to slide.

When a lot of snow has come dad

used to shovel snow and put it in a pile.

Then I use to jump from the shed and right

into the grove. I think that's fun.

In spring I like to cycle and to be outside.

I like to do handstands and skip rope.

The sun gets higher in the sky in summer.

Then we can go to the beach. There we

can have a swim in cold water. I like to swim.

When I ask if someone wants to play kick the can

many of them want to. I like to be together.

In autumn I like to walk around for Halloween

I like to make the house look scary with spiders and pumpkins.

I like to dress up on Halloween.

In autumn leaves fall from the trees.

I usually gather it and throw it in the air.

Text450019, MP4 Magical Hat

Magical hat

If I found a magical hat then I would

be a unicorn. As a unicorn I would

ride a sledge on the rainbow and fly very

high in the sky and dress up with

ribbons and play hide and seek with

other unicorns. I would also find a

treasure that contains many jewels. I would

have pink fur and light blue horns.

Text 256009, MP4 Magical Hat

It is an interesting observation that in the Outdoor Activities texts, all inflected verbs are in the present tense. No other verb forms are registered. The extract in (7) below illustrates a typical text example. See also the text example in 253035, cited in Section 6.2 above, which is also typical, including a row of sentences in the present tense ("I like to. . ."):

(7) I usually play on the playground. There I normally climb. I sometimes play quietly, but that doesn't happen too often.

In the Magical Hat texts, however, both past and present tense, as well as compound forms (present perfect, future, conditional) and modal verbs, are attested. Typical examples include the following:

(8) If I had found a magical hat then I would have wished I would wish that I became a mermaid.

(9) If I found a magical hat I would have become a rabbit and driven a car.

We have now discussed certain common grammatical development features in the set of texts. Still, the findings display quite striking differences between the two text types in that the frequency of specific grammatical features differs between the two writing tasks, which underpins the argument that certain genres trigger certain grammatical choices. It may seem that the Magical Hat task mobilises more grammatical resources from the students' repertoire than the Outdoor Activities task. Several of the grammatical phenomena are present among more students in these texts.

In particular, our analyses reveal that certain grammatical features seem to be typical for the text type. The Outdoor Activities task displays more infinitive clauses and causal adverbial clauses (*because*-clauses), whereas the Magical Hat task triggers conditional clauses (*if/then*-clauses) and temporal clauses (*then*-clauses), as in this example:

Dog. I went for a walk with my owner

and ate food. Then I played

with chewing toys. Then I wanted to sleep.

Then I woke up.

Text262032, MP2 Magical Hat

Two task-triggered features are particularly noticeable in our sample. The first of these is verb forms. In the texts from the Outdoor Activities task, all student texts that included tensed verbs were written in the present tense. No other verb forms were registered in these texts, regardless of the level of achievement or the measuring point.

In the texts responding to the Magical Hat tasks, the verb forms were radically different and far more complex and varied. In the texts, we found both past and present tense, as well as many compound verb forms, such as present perfect, future, and conditional. In addition, a variety of modal auxiliaries was also registered, yielding modal compound verbs expressing modality.

We saw earlier that previous studies had postulated that modal verbs would primarily appear in higher-level ages (Perera 1984, 1986). Our data set, thus, contradicts this claim, showing that young writers display this ability early on in their writing development. It appears to be triggered by the writing task rather than being linked to a developmental stage.

The second task-triggered grammatical feature is the use of subordinate clauses, as aforementioned. We have seen that as soon as the students start to produce sentences of a certain length, subordinate clauses soon appear. However, also for this feature, there were quite striking differences between the text types. The Outdoor Activities texts displayed an extreme frequency of infinitive clauses and causal adverbial clauses, whilst the Magical Hat texts displayed more nominal clauses and quite a large number of conditional adverbial clauses (if/when). Typical cases are seen in the text examples below:

Magical Hat

I wish that the swimming pool would open

I wish that the aeroplane would open and that I would get candy every day

And that I didn't go to school

And that the circus would open

And that coronavirus would disappear forever

Text 253023, MP2 Magical Hat

Outdoor Activities

Football is fun because it is exciting and because it is sport.

Dodgeball is fun because one can throw a ball at people and because you are moving around.

Text 254056, MP2 Outdoor Activities

We saw earlier that previous research stated that weak writers tend to use more "*because*-sentences" and "*if*-clauses", whereas strong writers often use more "*that*-clauses" (Myhill 2008). We also quoted Høigård, who argued for the opposite view—namely, that conditional subordinate clauses (with *if*, *because*, *since*) are almost non-existent in early school years. What we see in our data set is that, conversely, these differences can be related as much to text type as to writer development. Certain genres and tasks triggered instances of certain grammatical structures, which is also clear in the text below (260047).

Hi researchers,

Do you know what I would have been if I had a magical hat then I would have been an ice cream because I love ice cream and I would have been a cheetah or a dog because then I get a lot of hugs and I want to be a researcher because then I can find a vaccine or would have been a teddy bear named researcher isn't that a great name and I would have been a mouse or a Y I want to be a letter and I want to be a gummy bear because then I stick.

I like to be a cheetah

Text 260047, MP2 Magical Hat (see original Norwegian text in Appendix A**)**

"According to the functional approach to writing, to write is to act purposefully" (Skar et al. 2020a, p. 202). When children write, they make choices from a repertoire of possibilities, and "these possibilities are judged as more or less effective, depending upon factors such as audience, purpose and context" (Lefstein 2009, p. 380). Text 260047 illustrates well that the student had a certain recipient in mind during the writing process. The text is multimodal, with both verbal text and a drawing, and we see that the student made use of a range of semiotic resources to communicate the message. Grammatically, it is quite typical for our text sample, with a repetitive syntactic structure (here repeating, for example, "I would"-constructions several times), yet there is also some variation. For example, the student posed two questions to the recipient (this is visible through the syntax/word order but not through explicit punctuation).

Also, the text shows how the student seemed to be employing a "knowledge-telling" strategy (Scardamalia and Bereiter 1987), where new content items are written down as the

student comes up with them. We highlight this text in order to show that the student made grammatical as well as textual choices influenced by the context in which the writing took place and that it is neither possible nor justifiable to reach an interpretation of any value without taking this context into account. In our case, this means that the communication situation was created when they were given the task "Write a letter to the researchers about what you like to do in the outdoor school breaks". Hence, the formulation of the task is a central part of the contextual frame. We have previously seen examples showing that this affected grammatical choices of, for example, verb forms. Whether or not these choices are made consciously or not is beyond the scope of our discussion here, but as Myhill (2008, p. 287) sums it up, "Writing is, first and foremost, a communicative act, created in a context, and linguistic structures are meaning making resources to support that communicative act".

7. Discussion

All in all, these analyses show that the grammatical repertoire of beginner students is well-developed. All eight of the grammatical constructions are present in both age groups (6 and 7 years), given that the students have started to formulate written sentences. Several supposedly complex grammatical constructions appear at an early stage and increase with increasing text length—for example, subordinate clauses, topicalisation of non-subjects, and complex phrases. However, an important nuance of the full picture is the difference in the characteristics found in the two text types, "Outdoor Activities" and "Magical Hat".

After the non-verbal and single-word phases, the overall pattern seems to be that the typical development goes from primary production of main clauses to also including subordinate clauses, from simple to more complex phrases, and from SVO to more varied word order (i.e., topicalisation), but mostly of non-complex constituents. In general, the text length (amount of T-units) increases, and complexity increases to a certain degree, but when the numbers are adjusted for text length, we see that longer texts do not necessarily display more complex constructions than shorter texts (at group level), nor more grammatically varied texts. In short, the grammatical repertoire of young writers seems to be well-developed, as they typically produce complex constructions. They also produce more of these as they become older (i.e., at the later measure point), but much of this development can be explained by the fact that they write longer texts (see Hunt (1965) for a similar observation). With increasing text length, the frequency of complex constructions increases.

The overall results from the analysis show that even though the grammatical repertoire of young writers is well-developed, displaying a variety of grammatical features, there seems to be a high frequency of certain constructions. Examples of this include coordinated clauses and repeated subordinate clauses, a low frequency of complex noun phrases and complex topics. We also saw that many of the texts, particularly in the Outdoor Activities task, were quite repetitive, repeating identical grammatical patterns such as infinitives and adverbial subordinate clauses. Such repetitive patterns are more often found in oral language, but according to Myhill (2008), this is more noticeable in written texts, and also more frequent in early writing. For this insight, Myhill refers to Perera (1984, p. 187), "In writing 'paralinguistic and prosodic features are absent, so monotony of grammatical structure is thrown into prominence'."

In a recent study of students' writing, Maagerø et al. (2021) point to a similar trend, although for a slightly older age group. They point out that an oral style seems to characterise the students' writing in that they tend to "spread out information through new clauses and sub-clauses" (Maagerø et al. 2021, p. 8). In contrast, writing is usually more lexically dense and integrated than speech (Perera 1987), with increased use of, e.g., non-finite subordinate clauses, verbless subordinate clauses, ellipses, nominalisation, participial subordination and attributive adjectives. Perhaps, however, this does not apply so much in the early stages of writing development, where the written language seems to mirror the oral language to a larger degree than among older and more skilled writers. According to Loban (1976), patterns in writing tend to mirror similar patterns in oral language that had occurred approximately one year earlier.

A final point is related to the difference between coordination and subordination, which is a trend in our data set. Even if subordination occurs at an early stage, coordination (or parataxis) is more frequent, as illustrated in the text below:

To the researchers,

When I find the hat then I will get a kitten

and I can fly

and I can swim in candy

and I fly over every city

and everything is fun.

And I will be really good at gymnastics

and that I get superpower

and I can walk on water.

Text 255001, MP4 Magical Hat

As seen in Section 6, however, subordination increases between our two measure points. This pattern may also find a parallel in the characteristics of speech. As pointed out by Kress (1994) and Czerniewska (1992), co-ordination is typical for spoken language, reflecting the greater use of repetition and chaining in speech in contrast to the joining of clauses in writing "by the hierarchical processes of subordination, which gives a more tightly integrated texture to the language" (Perera 1987, p. 183). Studies have also shown that subordinated clauses are typical of oral language (Basterrechea and Weinert 2017). Also, Maagerø et al. (2021, p.1) point out that in spoken language, new information is often "realized in long chains by means of subordination or coordination". Moreover, they argue that in their material, subordination is typical and that this must be interpreted as close to spoken discourse. We can thus conclude that subordination seems to increase in favour of the coordination of sentences and that both these features are typical also for oral language, so this strengthens the assumption that early writing tends to mirror some features of speech.

Looking back at some of the assumptions in the cited literature in Section 3, we can state that some features do indeed increase with age, such as the number of subordinate clauses and complex phrases. But as these constructions also appear in MP2, as soon as writers have started to produce full sentences, we can conclude that these (complex) constructions are in the repertoire of the writers. Several supposedly complex structures appear early and increase in number as the students write longer texts. Non-subject topics appear at an early stage, which nuances the findings in Myhill (2008, 2009), as does the subordination of clauses, which is contrary to the findings in Massey et al. (2005). The statement made by Høigård (2019) that conditional subordinate clauses (with the subjunctions *if*, *because*, *since*) are almost non-existent in early school years is clearly counterproved in our data set. Finally, there is clear counter-evidence to the expectation that modal auxiliaries would appear late (e.g., Harpin 1976; Loban 1976; Perera 1984, 1987) in many of the Magical Hat texts, which include a diversity of verb forms.

8. Conclusions

We set out to answer two research questions: (i) Which grammatical features appear in a selection of young students' texts? and (ii) What do these features reveal about different aspects of the students' grammatical writing competence? Our findings are both empirical and theoretical.

Empirically, we have seen that all of the investigated grammatical constructions are present in both age groups, given that the students have started to formulate written sentences. The indication is that the grammatical repertoire of beginner writers is well-developed and quite complex at an early stage, as argued by Applebee (2000): children

appear to have access to the core grammatical structures of English by the time they start school. To interpret our findings, we have argued that a more fine-grained understanding of grammatical competence is helpful. Our theoretical contribution is, thus, the discussion of grammatical competence as different yet integrated sub-competencies. In particular, it became clear that the text type was highly influential for some of the grammatical features in the texts—underpinning the assumption that grammatical choices are rhetorically triggered. Pointing to the model of grammatical competence introduced in Figure 1 in Section 4, we may state that, in order to be able to make relevant grammatical choices when writing, one needs to have a developed grammatical repertoire, including diverse levels of complexity, and also to be able to vary one's constructions. In a school setting, this might imply that students would benefit grammatically from diverse writing assignments to facilitate the exploration of a wide repertoire of grammatical choices in diverse text types and writing contexts.

Author Contributions: Conceptualization, M.N.; methodology, M.N. and A.K.H.; formal analysis, A.K.H. and M.N.; investigation, M.N. and A.K.H.; data curation, A.K.H.; writing—original draft preparation, M.N.; project administration, M.N. All authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement: The FUS project has been approved by the Norwegian Centre for Research Data (NSD), and adhering to the guidelines and ethical standards outlined by the Norwegian National Research Ethics Committees.

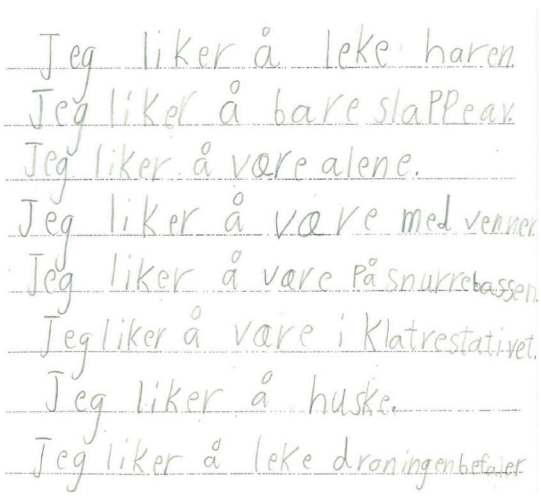
Informed Consent Statement: Informed consent was obtained from all subjects involved in this study.

Data Availability Statement: The data from this study can be made available upon request to the corresponding author.

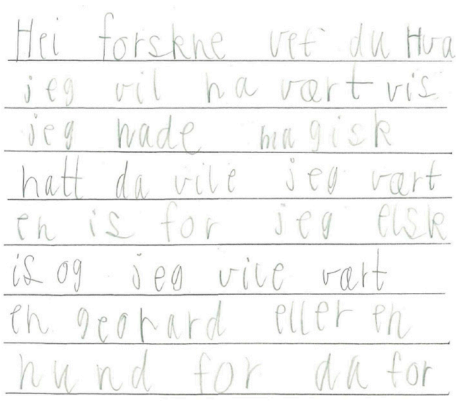
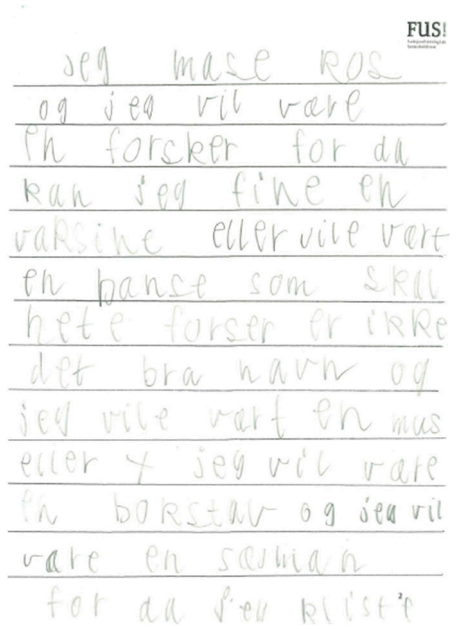
Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

The Appendix A displays two original student texts (handwriting and drawing) with Norwegian transcription. The English translations of the text are found in this article.

	Jeg liker å leke haren. Jeg liker å bare slappe av. Jeg liker å være alene. Jeg liker å være med venner. Jeg liker å være på snurrebassen. Jeg liker å være i klatrestativet. Jeg liker å huske. Jeg liker å leke droningen befaler.

Text 253035, MP2 Outdoor Activities

	Hei forskne vet du Hva jeg vil ha vært vis jeg hade vært magisk hatt da vile jeg vært en is for jeg elsk is og jeg vile vært en gepard eller en hund for da for
	jeg mase kos og jeg vil være en forsker for da kan jeg fine en vaksine eller vile vært en banse som skal hete forser er ikke det bra navn og jeg vile vært en mus eller Y jeg vil være en bokstav og jeg vil være en sæiman for da jeg kliste
	Jeg liker å være GEOP ARD

Text 260047, MP2 Magical Hat

Notes

1 This is also generally highly valued in the evaluation of the students' texts (see also Hertzberg 2005).

2 The distinctions are not relevant to our study, as we are not measuring the effects of teaching.

3 Interestingly, Lorentzen (2009) also observes that different kinds of lists (shopping lists, wishlists, and name lists), in addition to texts resembling letters, are among the first text types that children usually write.

4 MP0 (measure point zero) refers to a sample of texts that were collected prior to the intervention in the project. It served as a pilot sample for our study. More about the intervention in Section 4.

5 In some studies, fluency also refers to the number of words written in a given amount of time (e.g., Skar et al. 2022). This is, however, not the definition we are aiming for.

6 More specifically, the teachers in FUS reported that 83.2% had Norwegian as their L1. 10.7% had learned both Norwegian and another language from birth, whereas 5.9% reported another language as their L1 (Skar et al. 2023).

7 The eight rating scales created were Audience Awareness (S1), Vocabulary (S3), Organisation of Content (S4), Language Use (S5), Punctuation (S6), Spelling (S7), Handwriting (S8), and Relevance (S9).

8 MP0 served as a pilot for our study, as aforementioned.

9 A similar solution is chosen by Myhill et al. (2012).

10 In the current study, we have not carried out fine-grained analyses of these phenomena; this is left for future research. Note that Hundal (2017) states that temporal subordinate clauses tend to replace young writers' frequent use of the typical "and then, and then" structure.

11 It is a theoretical question whether an infinitive construction should be included as a subordinate clause due to its structure being parallel to subordinate clauses or whether it should be considered a nominal constituent, as it has no tense. For our purposes, this has no importance for the analysis.

12 When we adjust for text length (see Figure 4), the result is slightly different, but the tendencies remain similar.

13 This also applies to other results in this section.

14 In this study, we have counted T-units, not single words, which means that the measures of text length are not precise, but the overall impression is quite obvious at this point. The numbers of T-units are 448 (MP2 Outdoor Activities), 487 (MP2 Magical Hat), 673 (MP4 Outdoor Activities), and 804 (MP4 Magical Hat).

15 The main reason that a substantial number of features do not occur in the "below average" group is that the majority of texts in this group were either non-verbal (only a drawing) or in the form of single words, a list or maybe one full sentence.

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