Grammatical and rhetorical reasoning in upper secondary students' collaborative talk about a literary text

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ABSTRACT

This paper explores different talk types and characteristics of grammatical and rhetorical reflections in L1 students' collaborative talk about a literary text ($n = 12$, aged 15–17). The data is drawn from an intervention of contextualized grammar teaching in Swedish upper secondary school. To illuminate different talk types and the characteristics of the grammatical and rhetorical reflections, a deductive and inductive analysis in NVivo was carried out. The findings partly confirm previous results concerning rules of thumb and grammatical misconceptions. The current study also indicates that there is a relationship between talk types and prompted questions, and the quality of grammatical and rhetorical reasoning. When students are trying to locate a grammatical concept, the talk type is mainly characterized as cumulative and disputational, whereas linking grammar and rhetoric is exploratory. This paper discusses explanations for these relationships along with strategies for teachers when facilitating and supporting the development of students' metalinguistic understanding.

1. Introduction

During the last decade, research on grammar teaching in L1 education has gained new ground. Several studies have shown that knowledge of language is a relevant goal within the L1 subject (Myhill et al., 2012; Strandberg & Lundström, 2023; Van Rijt, 2020; Van Rijt & Coppen, 2021). In addition to the conceptual importance of grammar, studies have shown the importance of connecting grammar teaching to work with authentic texts and writing (Marjokorpi, 2023; Myhill et al., 2013a, 2018; Strandberg, 2023a). In line with Myhill et al. (2020), this study is based on the assertion that teaching grammar in the context of authentic text, such as novels, can develop students' metalinguistic understanding of how written texts are crafted and shaped. In this paper, the dialogic talk among students is investigated as well as the quality of their grammatical and rhetorical reflections to illuminate how metalinguistic understanding can be supported in the classroom.

The learning benefits of students' collaborative practices through group talk are well documented across different educational contexts. Yet despite these benefits, grammar education has long been characterized internationally as a monologic and individual learning endeavor where students mainly work with parsing exercises in different teaching materials (Hudson, 2004; Strzelecka & Boström, 2014; Van Rijt, 2020).

Students, as well as teachers, have thus experienced the learning of grammar to be largely recitational (see, for example, Watson 2015). Shifting from designing a monologic grammar education to a dialogic and exploratory teaching practice is of utmost importance. There is now a body of research that has explored a more collaborative approach to grammar teaching in L1 education (cf. Fontich 2014, Fontich and Camps 2014). For example, Myhill et al. (2013a) has shown that deliberate incorporation of opportunities for students to discuss and play with the grammar points introduced is fundamental in fostering effective learning. Van Rijt et al. (2020, 2022) has also investigated a more exploratory and collaborative approach to grammar teaching involving linguistic meta concepts. Their results show that stimulating students to engage in exploratory talk appears to be a useful design principle for interventions aiming to foster grammatical reasoning and understanding.

However, the quality of students' group talk in L1 grammar education is seldom investigated when students ought to connect grammar and rhetoric. Additionally, in Sweden, where the current study is set, there is limited research on grammar teaching and education in general, and especially when it comes to students' reasoning. Thus, it is relevant to explore different talk types when students discuss a literary text from both a grammatical and rhetorical perspective. As Knight and Mercer

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(2015) point out, collaboration is strongly connected to positive educational outcomes, but only if they are mediated by reasoned discussion such as exploratory talk (see also Mercer and Littleton 2007). In addition, Watson and Newman (2017) highlight that more research is needed on students' talk about grammar and writing to gain a deeper understanding of how metalinguistic understanding can be elicited and mediated through group talk. Thus, it is relevant to explore how this can occur, and especially, what happens on a classroom level when students are expected to approach a text from a grammatical and rhetorical perspective through group talk.

This study explores Swedish upper secondary students' talk about the use of sentence fragments and noun phrases in a text excerpt from a thriller novel. During the task, the students are asked to identify the syntactically incomplete sentences and the noun phrases in the text excerpt and then reflect on authorial choices and rhetorical effect of the grammatical choices identified. The aim of the study is to explore different talk types and characteristics of grammatical reflections in L1 students' group talk when they try to link grammatical choice to rhetorical effect and, thus, identify critical aspects of them. In the present paper, grammatical reflections are defined as talk concerning structural aspects of language, whereas rhetorical reflection are to be understood as talk focusing on effect and style of different grammatical choices. Through an in-depth qualitative analysis of the characteristics of students' group talk during the task, the study further aims to illuminate strategies for teachers when supporting students' understanding of grammar as choice. The following research questions will be addressed:

RQ1. What characterizes students' group talk in terms of talk types and grammatical reflections?

RQ2. In what ways do the students link grammatical choice to rhetorical effect and how do they succeed in this endeavor grammatically and rhetorically?

2. Background

2.1. Grammar teaching and metalinguistic development

Internationally, grammar teaching in L1 education is mainly motivated based on two perspectives: as an important subject in its own right (knowledge-related rationale), or as being beneficial to students' reading and writing development (literacy-related rationale) (Strandberg, 2023b; Van Rijt, 2020). Knowledge-related perspectives on grammar teaching in L1 education are gaining some momentum (see for example Van Rijt et al. 2021) but at the same time many questions still need answering about the second one, especially in terms of students' ability to make connections between grammar choices and rhetorical effect. This paper aims to contribute to a deeper understanding of how these connections can be made and supported to develop students' metalinguistic understanding (cf. Myhill 2011).

Within a literacy-related perspective on grammar teaching, researchers have searched for effective ways of connecting grammar to writing. While this has been a contentious connection for decades within language teaching in general, evidence is now beginning to emerge in favor of contextualized grammar teaching in relation to writing (Graham et al., 2012; Myhill et al., 2012). Contextualized grammar teaching is oriented to writers' grammatical choices, where students learn to draw links between a grammatical choice, its rhetorical effect and meaning through the analysis of authentic texts (Myhill et al., 2013a, 2020). According to this approach, the teaching of grammar is given importance not only to the definition of a grammatical term, but also the function it plays in a sentence and how it changes the rhetorical effect in a sentence or text (Chatterjee & Halder, 2023). In the light of reported studies on contextualized grammar teaching it is conceivable that such teaching approaches have been successful in developing students' metalinguistic understanding (cf. Chatterjee & Halder 2023). However, despite accumulating evidence in favor of contextualized

grammar approaches, what encompass this approach on a classroom level is still insufficiently explored. One aspect is that most research conducted in this area has almost exclusively been done in Anglophone contexts (Macken Horarik et al., 2015; Myhill et al., 2012), not others. Another is that the relationship between talk type and quality in relation to outcomes on grammar and rhetoric is not yet well understood.

Many of the previous studies on metalinguistic understanding have used dialogic talk (cf. Jones and Chen 2018, Newman and Watson 2020, Watson et al. 2021). For example, Chen and Myhill (2016) investigate the development of metalinguistic understanding in younger students' talk about writing (age 9–13). They provide four categories when describing different levels of metalinguistic understanding, namely *identification, elaboration, enhancing* and *application* (Chen & Myhill, 2016, p. 107). Their results show that identification and locating is highly prevalent among students' talk about writing. The authors claim that identification is an initial and crucial point for the development of metalinguistic understanding. However, they conclude that identifying is not sufficient for mastery of grammatical concept since students need to move rapidly to the elaboration and extension of their thinking. Thus, learners need to be provided with the possibility to move beyond identification to more elaborated or extended understanding of how grammar works in different contexts (Chen & Myhill, 2016). However, how this movement can occur and be facilitated remains briefly addressed in the literature.

In turn, Watson and Newman's (2017) study shows that adolescents struggle to articulate grammatical choices, especially since identification of grammatical concepts in texts seems to be challenging. They emphasize the importance of a specialized metalanguage for students to be able to discuss syntax in texts. Based on their results, Watson and Newman (2017) claim that procedural activity such as talk about writing can develop students' declarative knowledge about language and is thus important in building metalinguistic understanding. When students ought to identify a grammatical choice, different reasoning strategies can be used. Previous research shows that rules of thumb are commonly used among students. Such rules include mnemonic devices and audit questions (e.g. who or what + verb + subject = direct object). However, research has shown that such strategies often confuse students in their reasoning or does not predict their linguistic reasoning quality (Brøseth & Nygård, 2019; Van Rijt et al., 2024). On the contrary, using linguistic manipulations when identifying a grammatical phenomenon, in which they manipulate the construction dealt with (e.g. topicalizing a phrase, replacing a phrase with another one or switching a sentence from active to passive etc.) seems to be a much more fruitful strategy as it can predict students' reasoning quality (Van Rijt, 2024; Van Rijt et al., 2024). These findings indicate that students' development of metalinguistic understanding may be facilitated by using linguistic manipulation rather than rules of thumb. However, how and to what extent students rely on these strategies when analyzing grammatical choices in different text is an area in need for further research.

In summary, there is much to be learned about talk types and the development of students' metalinguistic understanding. To fill this knowledge gap, the current study seeks to contribute to these aspects by investigating Swedish students' group talk when they try to link grammar and rhetoric during an intervention where contextualized grammar teaching is tested.

2.2. Typology of talk

Dawes et al. (1997) developed a framework to put students talk during collaborative work into different categories. They presented a taxonomy of different talk types that has been developed by several researchers. In order to explore the talk types of the students' group talk, Knight and Mercer's (2015) and Mercer and Littleton's (2007) theoretical framework of this taxonomy is used, aiming to highlight the nature of talk used when students discuss grammar and rhetorical effect in a literary text. The theoretical framework consists of three different types

of group talk that represent social modes of thinking: *disputational talk, cumulative talk* and *exploratory talk*.

According to Mercer and Wegerif (1999), disputational talk is mainly characterized by assertions, disagreement, and short exchanges between the participants. Seldom is explicit reasoning evident in this talk type and when disagreeing the participants do not provide support for why that is. A common sort of talk within this talk type is the increased use of utterances such as "that's wrong", "yes, it is, no it's not", "it goes there", "I'm right" etc. Disputational talk is therefore negative in nature.

Cumulative talk, on the other hand, is characterized by self-repetition and comments leading to uncritical agreement, again with limited evidence of shared understanding being created (Mercer & Wegerif, 1999). Within this talk type, participants tend to build on each other without real engagement with ideas. This talk type is usually calm and unaggressive and is common when groups are organized based on friendship. Common utterances would be "okay", "you're probably right." Compared to disputational talk, this type of talk is positive in nature.

Finally, exploratory talk occurs when participants engage critically but constructively on each other's ideas. Comments and suggestions are offered for joint consideration in the group. These statements may be challenged and counter-challenged, but these are justified, and alternative suggestions or hypotheses are offered. In contrast to the other talk types, in exploratory talk reasoning is more visible and knowledge is made publicly accountable (Wegerif & Mercer, 1997). Commonly used utterances will be questions such as "what do you think?", "why is that?, "I think x because…", "is there another way to do it?" etc. At the same time, exploratory talk is particularly hard to achieve, and students need to be trained in this type of talk, and preferably supported by 'ground rules' to facilitate the process (Mercer, 2013).

Knight and Mercer (2015) claim that only exploratory talk supports learning, as it builds on joint knowledge construction. Similarly, Camps (2015) emphasize the value of exploratory talk when developing students' metalinguistic understanding. Along a similar line, Newman and Watson (2020) claim that dialogic metatalk may support students to think metalinguistically about writing, as it can stimulate exploration of writing choices (see also Myhill and Newman, 2019). However, studies focusing on talk types in L1 grammar education are limited. Thus, this study can contribute with valuable insights regarding talk types when students ought to link grammatical choices with rhetorical effect.

3. Research design

The data for this paper is a subset of data from an educational design research project in Sweden, where contextualized grammar teaching was designed, developed, and tested in upper secondary school (Strandberg, 2023b). This paper focuses on the first cycle of the design process, where grammar teaching was linked to the reading of the thriller novel *The Silver Road* (Silvervägen) by Stina Jackson. The first cycle of the design process consisted of three lessons of 60–80 min each in three different secondary classes in Sweden. The reading of authentic texts such as a novel was the point of departure for the explicit teaching of grammar in the intervention to develop students' metalinguistic understanding (cf. Myhill 2011). The novel used was chosen by the teachers, as they had been working with that novel before and thought it suited the target students. Involving teachers in choosing the target text thus contributes to ecological validity (cf. Cohen et al. 2011). The authentic text guided which grammatical phenomena was in focus. Therefore, the focus of the first cycle was expanded and complex noun phrases and sentence fragments, as these were commonly used by the author to build description and create emphasis and suspense in the text. Inspired by Myhill et al. (2020), the authentic text was also used when the grammatical phenomenon was explained, such as examples from the thriller novel. When a grammatical phenomenon was explained, the instruction also supported students in discussing the connection between grammar and rhetorical effect (cf. Myhill et al. 2020). The main

purpose of the lessons was to teach students to identify grammatical choices in texts and reflect upon their rhetorical effects with the aid of the grammatical concepts being taught. For a complete account of the teaching design, see Strandberg (2023b).

In the assignment used in the current paper, the students were asked to analyze the following text excerpt from the novel *The Silver Road* by Stina Jackson (original Swedish below the translation):

Meja lay with her hands on her stomach and tried not to listen to the sounds. The hunger that screamed under her fingers and then the rest. The disgusting sounds that forced their way up through the sparse floorboards. Silje's gasping breath and then his, the new man's. The creaking of the bedposts and then the dog that started barking. She heard the man tell it to go to bed.

Meja låg med händerna över magen och försökte att inte lyssna efter ljuden. Hungern som skrek under hennes fingrar och sedan det andra. De äckliga ljuden som trängde sig upp genom de glesa golvplankorna. Siljes flämtande andhämtning och sedan hans, den nye mannens. Gnisslandet från sängstolparna och så hunden som började skälla. Hon hörde hur mannen röt åt den att gå och lägga sig (Jackson, 2018, pp. 13–14).

As the extract shows, the author begins the paragraph with a sentence consisting of two coordinated main clauses with a shared subject. The first sentence is followed by four syntactically incomplete sentences of which the first, second and fourth contains a complete relative clause. Thus, they form expanded noun phrases which in turn functions as the subjects of the clauses. However, these clauses lack predicates. As can be seen in the excerpt, the syntactically incomplete sentences also include adverbial and noun phrases (*and then the other; and then his, the new man's*). All syntactically incomplete sentences in the excerpt function as specifications of the rheme of the opening sentence: the rheme in the first sentence [*sounds*] is thus specified by all syntactically incomplete sentences.

In the first part of the task, students were asked to read the excerpt aloud to each other. Thereafter, the students were asked to identify the syntactically (in)complete sentences in the text excerpt and explain why a sentence was syntactically complete or not.[1] They were then asked to discuss how the choice of text structure affects how they perceived the text and whether the author violates any linguistic norms. They were also asked about author intention. Then, the students were supposed to turn the incomplete sentences into complete sentences and then read both versions aloud to each other and reflect upon how these changes impacted the rhetorical effect. In the second part of the task, the students were asked to identify all the noun phrases in the text excerpt. Then they had to discuss how the author's use of noun phrases affects the descriptions of the characters and the environment. Finally, the students were tasked with rebuilding the noun phrases, making them as long as possible and as short as possible, and discuss how the composition changed by this.

The task was preceded by a teacher led instruction of what constitutes syntactically (in)complete clauses and how they can be used in literary texts. For example, the teaching scheme involved the differences between a sentence and a clause as well as subject and predicate within clauses. The purpose of the task was to draw students' attention to linguistic structures and what grammatically constitutes syntactic completeness and noun phrases, but also how writers can use these grammatical choices to create certain effects in a text (cf., Myhill 2013a).

The students volunteered for participation in the research and following the ethical code of the Swedish Research Council (2017), and

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[1] This part of the task is investigated in a previous paper (Strandberg & Toropainen, 2022), focusing on the strategies the students use when identifying syntactical (in)completeness.

all students gave their informed consent to participate in the study. In the consent form, it was stated that all data would be used anonymously for scientific research. No students withheld their consent. In the current article, a total of 12 students participated (5 females and 7 males), who were divided into three groups.

It should be noted that both authors are former teachers in L1 secondary education. They are closely connected to a variety of educational practices within L1 education in their respective countries, such as teacher education. Both authors believe that L1 grammar teaching could benefit from a more collaborative, exploratory and contextualized approach (cf. Myhill et al. 2013a). In the present study, the first author co-designed the intervention understudied together with the participating teachers, although the final educational design decisions were mainly made by the teachers. During the intervention, the first author functioned as the project manager. The second author, on the other hand, was connected to the project when the data collection was completed and thus contributed with analysis of the data and the representation of the findings.

4. Method

The empirical data used in the current study consists of three video recordings of student group talk during the task (see Table 1). The recordings were made with an iPad, without any observer present, to ensure that students' talk would occur as naturally as possible. The iPad camera was on throughout the task. The analysis was conducted on group talk transcribed from the audio recording, with video recording to support this process. The transcription followed a manifest content approach (Erickson, 2006), which entailed a focus on verbal actions. In general, the recorded group discussions were transcribed verbatim by the first author. Exchanges relating to the exercise have been transcribed, while conversations about other things have been omitted. An utterance is deliminated as the speech by one participant, until next participant speaks. This delimination is relevant for the second part of the analysis of talk types, were a quantification focusing on the proportion of talk types is in focus. Longer episodes of silences occur as the students either read, think, or write down something which they have arrived at. Therefore, the length of the group talks cannot be related to the number of utterances. The transcription included limited technical notation except "-" to indicate when a student gets interrupted by another student, punctuation to facilitate the reading of the data and relevant annotations made in square brackets (e.g. [inaudible] where the words could not be made out). As the conversations were in Swedish, quotes presented in the result section are translated into English by the first author. The original Swedish quotes of the episodes used in the result are presented in Appendix A. The data analysis presented in Section 5, was conducted on the translated data to enable the second author to participate in the analysis. In the context of coding, the first author regularly cross-referenced interpretations of the English data to ensure their alignment with the corresponding Swedish data.

4.1. Data analysis

To answer the research questions, a deductive and inductive analysis was carried out in NVivo (QSR International Pty Ltd., 2020). The coding process was done in collaboration by the authors. The analysis was mainly qualitative, but with some quantitative elements to shed light on the proportion of the different talk types among the students.

The first step of the coding process concerned the qualitative identification of talk types within each group talk (RQ1). The transcriptions from each group were first coded deductively for talk types following Knight and Mercer's (2015) typology of talk types (see Table 2). The transcriptions were read and coded conjointly by the authors based on the coding manual presented in Table 2. During this qualitative step of analysis, the episodes identified as specific mode of interaction within the group talks (for example *cumulative talk*) are initially to be seen as interactional sequences (cf. Mercer and Littleton 2007). Discrepancies regarding the coding were discussed until agreement was reached. Talk type codes did not overlap, i.e., if an exploratory talk type featured within a longer cumulative episode, the cumulative sequence would be coded until the point of the exploratory episode begins and then again afterwards. Thus, coded episodes vary in length. For example, a lengthy episode of cumulative talk with no embedded disputational or exploratory talk is coded as one large episode. Therefore, a quantitative representation of the extent of different group talk will be presented in the result section. The quantitative analysis is based on the proportion of utterances that is coded to a specific talk type within each interactional sequence, rather than the frequency of codes. A quantification based on utterance level is however problematic as the talk types identified in the qualitative coding of talk types are to be conceptualized as interactional concepts and not isolated as individual contributions (cf. Mercer and Littleton 2007). Nevertheless, in order to illuminate the proportion of different talk types within each group this was assessed as a pragmatic stance to achieve an additional analytic perspective of the empirical data.

There are also some analytical challenges when applying a deductive analysis of Knight and Mercer's (2015) coding frame. For example, it should be noted that stretches of students talk sometimes had some elements of more than one talk type, for example the use of reasoning words within a disputational episode. Yet, if the use of reasoning words was not expanded or commented by another student but rather followed by the student in question being interrupted, this was still labeled as disputational.

Table 1
Empirical data.

Group	Length in minutes of the recordings	Number of students	Number of utterances
1	49:28	4	859
2	47:46	4	482
3	52:55	4	615

Table 2
Typology of talk types used in the analysis (after Knight and Mercer 2015, p. 310).

Type of talk	Characteristics	Analysis
Disputational	Characterized by disagreement and individualized decision making. There are few attempts to pool resources, to offer constructive criticism or make suggestions.	'Short exchanges, consisting of assertions and challenges or counter-assertions ("Yes, it is." "No, it's not!").'
Cumulative	Speakers build positively but uncritically on what the others have said. Partners use talk to construct "common knowledge" by accumulation.	'Cumulative discourse is characterized by repetitions, confirmations, and elaborations.'
Exploratory	Partners engage critically but constructively with each other's ideas. Statements and suggestions are offered for joint consideration. These may be challenged and counter-challenged, but challenges are justified, and alternative hypotheses are offered. Partners all actively participate, and opinions are sought and considered before decisions are jointly made. Compared with the other two types, in exploratory talk knowledge is made more publicly accountable and reasoning is more visible in the talk.	Explanatory terms and phrases more common – for example, 'I think' 'because/'cause', 'if', 'for example', 'also'.

While the result will present a quantitative analysis of talk types, the numbers presented are supposed to help the reader to understand the context, but it is the qualitative data from which core meanings are finally drawn. The quantitative representations are therefore combined with illustrative examples of interactional sequences of different talk types evident in the groups.

The second step of the coding process concerned the characteristics of the students' grammatical and rhetorical reflections' during the task (RQ1 and RQ2). To analyze these characteristics, an inductive analysis was carried out in NVivo, following the constant comparison method (Corbin & Strauss, 2015). The transcriptions of the students group talk were inductively analyzed line by line. The coding process was initially carried out in collaboration between the authors, establishing tentative open codes. The initial codes were then compared and crosschecked to develop a shared coding frame. The open codes were thus synthesized, resulting in several axial codes, codes and subcodes, which will be the focus in this paper. When this was accomplished, the remaining data was coded individually by the first author, and systematically checked with the second author at a later stage. Again, any cases of doubt were noted and solved through discussion. When an utterance did not correspond to the established codes within the coding framework, a new code was formed. By following this inductive procedure, the codes that were synthesized are based on the raw data. In Table 3, an example of the inductive coding process is presented. The authors reached full agreement of the coding scheme. In Appendix B, the final coding tree is presented in its entirety. These codes provide insights into the characteristics of students' grammatical and rhetorical reasoning. In the

Table 3

Axial code, code, and sub codes with examples from the data (note that students' names have been changed to ensure their anonymity).

Raw data	Sub codes	Code	Axial Code
Pascal: at the same time, I'm thinking that if you're going to use those tricks of replacing and stuff like that, if you put scream in front then it's really weird- 'screamed it was the hunger' The only thing you can put in front here really is 'was', was it the hunger that screamed?	Linguistic manipulation *Topicalization or replacement*	Reasoning strategy *Linguistic strategies applied in order to identify a grammatical phenomenon*	Grammatical reflection
Cesar: is there any pattern, like that each- Pascal: 'They heard' in every sentence Cesar: those incomplete sentences are always green? Pascal: yes, but it's the same kind of sentence all the time, it's that she heard something. It is actually the case that it is the same sentence four times 'she heard something, she heard something, she heard something and she heard something'	Inferences *Simple deductions or correlations*		
Kent: Breath is something you do, you breathe Joakim: so, you mean both are verbs?	Rules of thumb *Audit questions of rules of thumb*		

result section, a qualitative analysis of the distinguished codes central to the linking of grammar and rhetoric is presented.

5. Results

The result section is structured as follows. First, a presentation of the proportion and characteristics of talk types among the groups is given. Thereafter, characteristics of the students' grammatical and rhetorical reflections are described. Finally, distinguishing relationships between talk types and grammatical and rhetorical reflections are presented.

5.1. Talk types

This section presents the results relating to the first research question, that is, what characterizes students' group talk in terms of talk types. The proportion of different talk types varied among the three groups. Fig. 1 gives an overarching indication of the proportion of different talk types within the interactional sequences of the data set. As the figure shows, Group 1 mainly engaged in disputational talk while Groups 2 and 3 vary more around cumulative and exploratory talk. To illuminate the types of talk that the groups engaged in, illustrative examples from each group will be presented.

As Fig. 1 shows, the talk type in Group 1 is mainly disputational. Episode 1 indicates the sort of disputational talk that distinguishes Group 1's interactions. Comments and input presented by a member of the group is seldom followed up and different line of thoughts go on at the same time. In general, Group 1 have very short exchanges ("a head word-", "no!", "yes, it is!"), and they often interrupt each other (see for example utterance 452, 454 and 463 in Episode 1). In addition, their talk contained few cohesive ties.

Episode 1. Illustrative example of disputational talk (Group 1).

451.	Joakim: what was noun phrases again?
452.	Thomas: this is- these are noun phrases, the green-
453.	Joakim: those are verb phrases
454.	Thomas: the green, no that-
455.	Joakim: but I have to see, is that like in, what, her, or?
456.	Thomas: noun phrases are nouns like this, no-
457.	Kent: as head word-
458.	Thomas: No!
459.	Kent: yes, it is!
460.	Thomas: no, as you put in front of like-
461.	Kent: yes, as head word!
462.	Joakim: you put in-
463.	Thomas: the road, the road is-
464.	Joakim: it said that, he, she, it, that-
465.	Ruben: everyone speaks at the same time-
466.	Thomas: yeah, so can we keep it cool now-

A large extent of cumulative talk was evident in Group 2 and 3. When both groups were trying to locate a grammatical structure, for example incomplete sentences within the text excerpt, they mainly built positively but uncritically on each other. During these cumulative episodes, they used talk to construct common understanding of the grammatical phenomena through accumulation. In Episode 2, an example from Group 3, who had a large proportion of cumulative talk, is presented. As the episode shows, they positively agree on which sentences are incomplete and not ("yes, the last one is complete", "yeah"). This episode is characteristic for the cumulative talk within all groups. A common feature is, as Lars and Pascals' inference in Episode 3 shows ("it is incomplete", "it is clearly incomplete", the accumulative and implicit use of language intuition to locate and name a specific grammatical phenomenon.

Episode 2. *Illustrative example of cumulative talk (Group 3).*

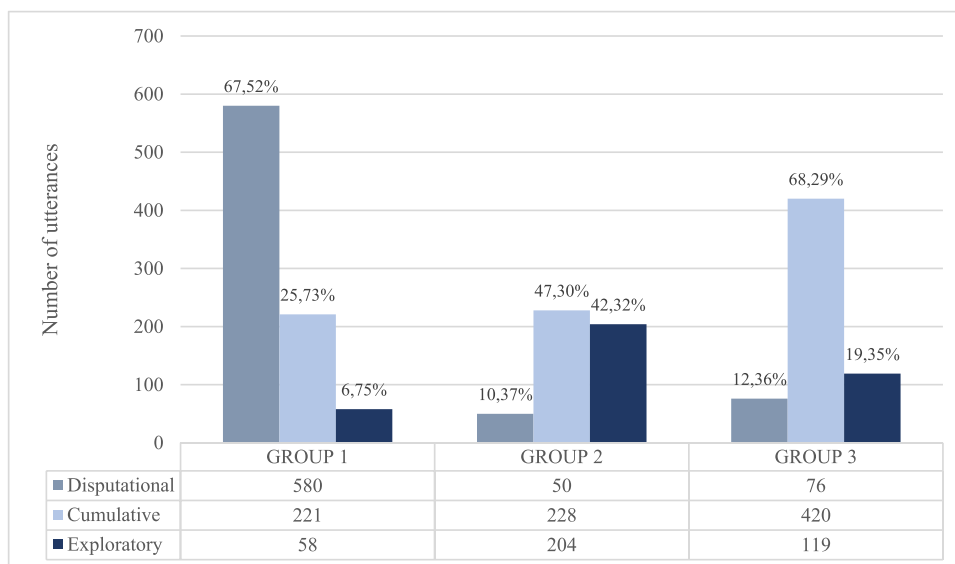| 68.	Alicia: But the last one is also- isn't it?
69.	Lars: Yes, the last one is complete
70.	Cesar: Yeah
71.	Lars: and, but *Silje's gasping breath and then his, the new man's*, it is incomplete

Fig. 1. The relative proportion of different talk types within the data set.

72.	Pascal: It is clearly incomplete
73.	Lars: and then *the creaking of the bedposts and then the dog that started barking*, yes, it is also incomplete
74.	Pascal: So, are we saying that the first and last are complete and the others are incomplete then?
75.	Lars: Yes
76.	Pascal: yes, okay

Episode 3 illustrates the use of exploratory talk to build a joint understanding of the syntactically incomplete sentences and create shared meaning, in this case orchestrated by Anna in Group 2. Frequently used terms in this group are different reasoning words that distinguish exploratory talk from other types of talk (cf. Boyd and Kong 2017). In Group 2, commonly used reasoning words are among others *because, think, maybe, if* etc., as shown in Anna and Isabelles exchanges in Episode 3 ("because it only describes the sounds", "I think it's a bit difficult because…"). These terms are used to critically engage in the task to create a shared understanding of the phenomena. Initially, Episode 3 shows that the students are uncertain whether the second sentence in the text excerpt is complete or not. Different statements and suggestions by the group members are offered for joint consideration. Initially, they are not certain why the sentence is syntactically incomplete. Finally, in exchange 37 Isabelle challenged the statements by suggesting adding what might be missing. The episode shows how group members actively participate in the task and how different opinions are considered before they reach a joint decision and move forward with the task. Thus, compare to the other talk types, Group 2 shows how reasoning is more visible in the talk. With that in mind, Group 2 was also the most successful in terms of completing the task. The quality of the grammatical and rhetorical reasoning will be analyzed in Sections 5.2 and 5.3.

Episode 3. *Illustrative example of exploratory talk (Group 2).*

32.	Anna: Yes, but it's a subject, but there isn't a predicate because *the hunger that screamed* is the whole subject
33.	Julia: Or?
34.	George: Maybe it's an adjective…
35.	Anna: Because it only describes the sounds
36.	George: I think it's a bit difficult because I understand that it can be both but-
37.	Isabelle: If you think like this then, what could we add to make it- or what did we say, that it was incomplete, right?
38.	Anna: Mm
39.	Isabelle: What could we add to make it complete?
40.	Anna: 'It was'

| 41. | Isabelle: Oh. Yes, that's true. Ah, then I can agree that it is incomplete |
| 42. | Anna: It feels like they're all kind of incomplete until here, because all of them here- here it says she tried not to listen to the sounds, and these are the different sounds she didn't try to- kind of |

5.2. Characteristics of grammatical reflections

In this section, the results concerning the characteristics of students' grammatical reflections are presented. A central part of the task is to identify and explain grammatical phenomena in the text excerpt, i.e., syntactically incomplete sentences and noun phrases. This section of the paper focuses on the characteristics of the grammatical reflections in the group talks. In addition, this section concentrates on students' use of grammatical terminology and how that impacts students' conclusion and reasoning.

In the task instruction provided to the students, they are first asked to identify a grammatical phenomenon. A large proportion of the identification process in each group concerns locating or naming without students explicitly showing any real conceptual understanding. The following examples is typical of the locating and naming episodes:

Episode 4. *Locating and naming (Group 2).*

57.	Anna: and so the last one, *she heard the man tell it to go to bed*, it's complete
58.	Julia: Mm
59.	George: yes
60.	Isabelle: yes

Episode 5. *Locating and naming (Group 1).*

201.	Joakim: but it is incomplete
202.	Kent: no
203.	Joakim: no, it's complete

When each group are locating and naming a grammatical phenomenon, they tend to either accept or disagree on the suggestion offered, both without any actual explanation provided. After such exchanges, they moved forward with the task uncritically. Thus, these episodes are mainly cumulative or disputational in nature, which will be further explained in Section 5.4. This relationship suggests that the activity of locating and naming inherently tend to bring about an interaction that can be labeled as disputational or cumulative.

In some cases, the identification process moves beyond locating or naming toward conceptual development of the grammatical phenomena in focus. During these occasions, the students use different reasoning strategies to identify and explain a grammatical phenomenon. A common reasoning strategy in Group 2 and 3 is the use of linguistic manipulations. In Episode 6 an example of this exploratory talk is presented. In the example, Group 3 tries to change the word order of the second sentence to identify the noun phrase. Due to this, the students succeed in identifying the modifiers of the noun phrase. The use of reasoning strategies such as linguistic manipulations seems to be a fruitful tool for Group 3, as this is something they recurrently use when they struggle in the identification process. Reasoning strategies therefore tend to be followed by conceptualizations such as "the noun phrase is the one with the subject" (Anna, Group 2) or "the verb phrase is the only one that can be split up, so the verbs can sort of be separated" (Lars, Group 3).

Episode 6. *The use of a linguistic manipulation (Group 3).*

266.	Pascal: but like, does it belong to the noun phrase then? Yes, it has to, right?
267.	Cesar: does it?
268.	Lars: it's like 'that screamed under her', or I don't know
269.	Cesar: I don't think there's another one
270.	Pascal: at the same time, I'm thinking that if you're going to use those tricks of replacing and stuff like that, if you put *scream* in front then it's really weird – 'screamed it was the hunger' The only thing you can put in front here really is 'was', 'was it the hunger that screamed?'

A highly frequent sub code concerning linguistic manipulations are also discussions about noun phrases in relation to expansion. For example, Anna in Group 2 states that "noun phrases can be expanded, and words that describe the head word are also noun phrases". Along a similar line, Alicia in Group 3 says that "words that describe the head word can also belong to the phrase". Conceptualizing noun phrases based on the criteria of expansion tend to both support the students' identification process but also obstruct it to some extent. For example, a lot of confusion arises when students reflect upon whether prepositions and verbs can be part of the noun phrase or not.

In contrast to linguistic manipulations, rules of thumb seem to be a more problematic reasoning strategy. Rules of thumb is shown when students base their grammatical reasoning on statements such as "something you do is a verb" (Thomas, Group 1) or "if something creaks, then it does something and then you can interpret it as a verb" (Lars, Group 3).[2] Considering this semantically grounded strategy, the students face challenges in the identification process. An example of how rules of thumb can obstruct the identification process of noun phrases is when Kent in Group 1 claims that "breath is something you do, you breathe" and Joakim then says "so you mean both are verbs?". It is thus evident that when using rules of thumb the students base their conceptualization of verbs on semantics, which encourage the discernment of verbal possibilities in words that do not have the grammatical function of a verb, something also seen in previous studies (cf. Myhill 2000, Van Rijt et al. 2019).

5.2.1. Students' use of grammatical terminology

A central aspect of the characteristics of the grammatical reflections within the dataset is students' use of grammatical terminology. Therefore, this section focuses on the use of grammatical terminology and how it may facilitate the joint understanding of the grammatical phenomena and whether this seems to facilitate the following discussion about authorial choices and rhetorical effect. In Table 4, the frequency of grammatical terminology used in student talk is presented, as well as occasions in which students showed misconceptions in their use of terminology.

Table 4
Frequency of grammatical terminology used in student talk.

Grammatical term	Groups	References
Sentence	1, 2, 3	128
Noun phrase	1, 2, 3	98
Verb	1, 2, 3	67
Verb phrase	1, 2, 3	38
Preposition	1, 2, 3	29
Noun	1, 2, 3	26
Prepositional phrase	1, 2, 3	25
Head word	1, 2, 3	22
Subject	1, 2	9
Pronoun	1, 2, 3	7
Adjective	2	4
Conjunction	2, 3	3
Predicate	2	3
Object	2, 3	2
Adverb	3	2
Clause	3	2
Period/full stop	1, 2	2
Subordinate clause	3	1
Total use of terminology	1, 2, 3	468
Occasions in which students showed misconception in their use of terminology	1, 2, 3	18 (0, 038 %)

Number of misconceptions in relation to the students' use of grammatical terminology mostly relates to the identification of noun phrases. The students seem to struggle to understand the hierarchical structure of language and thus how to distinguish the modifiers of a complex noun phrase. For example, when verbs and prepositions are a part of a noun phrase, the students start to divide the phrase into several phrases. A misconception demonstrated by Group 3 is when Alicia claims that "*The hunger that screamed*" should be a verb phrase as it contains a verb. The same goes for Group 2, where Anna says the following:

> *the creaking from the bedposts* is the subject, so the creaking is actually the subject. But is *from- is from*, like a prepositional phrase? Or is it still- *from*, it becomes a prepositional phrase, or? (Anna, Group 2)

Anna shows some partial understanding of the function of noun phrases. However, the misconception concerns the post-modifiers of the noun phrase. Group 2 starts to think that due to the preposition "from" it has to be prepositional phrase. The result therefore indicates that identifying the modifiers of noun phrases is especially difficult for all three groups. As Lars in Group 2 says "you sort of know what the words are in themselves, but you don't know which words end up in which phrase".

Even though the use of grammatical terminology sometimes confuses the students during the identification process, it generally seems to facilitate discussion among the students. The dominance of terms such as "sentence" or "noun phrase" is not that surprising since these were prompted in the task instructions for the students. However, several of the concepts listed in Table 4 are not used in the actual assignment provided to the students. For example, "verb", "verb phrase" and "head word" are used by the students to tackle the task at hand. In Episode 7, an example of how the use of grammatical terminology in Group 3 facilitates the students' conceptualization of noun phrases is presented. The episode shows that terminology such as "nounified verb" help the students during the word-class identification process and, subsequently, in the identification and conceptualization of noun phrases.

Episode 7. *Using grammatical terminology to identify and explain (Group 3).*

447.	Pascal: *the creaking*, wait, to creak
448.	Cesar: *the creaking*, is it a verb?
449.	Pascal: no, it's a noun. A- nounified verb. A verb that has become a noun
450.	Lars: but, if something creaks, then it does something and then you can interpret it as a verb
451.	Cesar: The creak*ing*
452.	Pascal: but originally, it's a verb but it's a noun there

When identifying the syntactically incomplete sentences, the use of grammatical terminology also facilitates discussion among the students. For example, in Episode 8 the students discuss how the syntactically incomplete sentences are dependent on the complete sentences in terms of coherence and cohesion. Julia claims that all sounds are listed and described by the incomplete sentences and that the description is closed by a complete sentence. For reader comprehension, the students therefore implicitly argue that the sentences are semantically and syntactically interdependent (see also Strandberg and Toropainen 2022). Finally, Anna explains this theme-rhyme relationship using grammatical terminology. In her final statement, the use of grammatical terms such as subject and predicate supports her argument regarding textual dependency. Here, the terminology is thus being used to support transfer of grammatical knowledge into application of text analysis.

Episode 8. *Using grammatical terminology to explain dependency.*

208.	Anna: but they depend on, of- we talked about that, didn't we? How the dependent and independent sentences sort of fit together - we wrote this text [inaudible] and these sentences, like, they only wrote these here, like *the different sounds*, from the first sentence, so in case you wouldn't have had the first sentence, you would have known that there was a lot of sounds, but what kind of sound is it?
209.	Julia: who is it that hears all the sounds
210.	Anna: Yes, exactly. You wouldn't really have understood what they were, why they were there, so yes. Yes.
211.	Julia: but the first sentence starts with describing, and then all these other sounds follow, and the last sentence, it sorts of closes- so, like it sort of finishes like- So, if you were to continue to describe like, if we hadn't heard- if they hadn't said her, then the sentence, or like the text itself, wouldn't have been clear, because then you would have continued to describe- it kind of requires a sentence that closes, like now she has finished the description, or how to say-
212.	Anna: Mm
213.	Julia: The complete ones are, or the incomplete ones are very dependent on the complete ones in order to understand
214.	Anna: Yes, exactly. You use, so if a sentence, an incomplete sentence, lacks a predicate, then it uses the predicate from the previous sentence, which was heard. And if it lacks a subject, it uses the subject from the previous sentence. Like Meja went in the forest and saw a wolf, like, then you kind of know that it was Meja who saw a wolf in the forest because it's not another subject, so yes.

5.3. Linking grammar and rhetoric

The main aim of this section is to explore whether and how students succeed in linking grammar and rhetoric. Thus, the results concerning the second research question are presented. The identification of a grammatical phenomenon seems to be a crucial obstacle in terms of task completion. For example, for the students to be able to discuss rhetorical effect of a grammatical choice in the text, the students first need to be able to successfully identify the grammatical choice at hand. A dominance of discussions regarding identification, locating and naming within the data is thus not that surprising. However, Group 1 tend to remain on an identification level due to their disagreement and individualized decision making and, when tackling the task, they do not seem to be able to link grammar and rhetoric successfully. Group 3 and especially Group 2, on the other hand, succeed in this endeavor as they mainly work together to create shared understanding and thus start exploring how the grammatical choices alter different effects.

Because Group 1 do not manage to identify the grammatical concept in the text excerpt, they face challenges related to the next step of the task when they are supposed to link grammar and rhetoric. A common response in Group 1 regarding the rhetorical effect of using syntactically incomplete sentences are generic comments such as "it simply results in a little more effect" or "it's better" or "it's sounds nicer" (similar findings found in Myhill et al. 2013b). The same goes for Group 3, whose students also struggles when linking grammar and rhetoric. They, however, manage to discuss the rhetorical effect of sentence fragments more thoroughly but do not seem to be able to build on their metalinguistic knowledge to explain the effect. Due to this, along with the fact that

Group 2 is most exploratory by nature, Group 2 and 3 will further be used as illustrative examples of task completion when grammar and rhetoric are linked.

When identifying the syntactically incomplete sentences, Group 2 reach the conclusion that subject and predicate are missing from the incomplete sentences. In their rewritten version, they therefore add "she heard" before each of the incomplete sentences. Building on this joint understanding, they read the excerpt aloud with expression, and then start to discuss authorial choices and the rhetorical effect when excluding subject and predicate. When discussing the use of sentence fragments as graphic sentences (from capital letter to full stop), Isabelle first claims "why she [the author] chose to focus on it, or like put it at the beginning of the sentence, maybe because she wants to highlight that extra clearly". Here, an implicit understanding of topicalization somewhat emerges. In Episode 9, Isabelle further claims that the absence of subject and predicate is a way of avoiding "choppy writing". This is followed by a discussion of how this affects the reader of the text. Anna says that subject and predicate sometimes function as filter words and is therefore redundant. According to Anna, the use of sentence fragments increases reader involvement as the absence of subject and predicate creates a closer connection between the reader and the described scene. George follows up on this reflection when he claims that the use of sentence fragments creates a feeling of simultaneity.

Episode 9. *Linking grammar and rhetoric (Group 2).*

98.	Isabelle: [...] but I think she chose to write like that because- yes, but as you George said before, that here, first she says like this *Meja was lying with her hands on her stomach* and then there are all these sounds which sort of describe the first, yes but this like, the sounds in the first sentence, and that- why she have chosen them to be incomplete is so that it won't be so choppy, like, when you read
99.	Julia: so, we've got all the information from the first sentence
100.	Anna: yes, exactly
101.	Julia: then we don't need to write and repeat *Meja did, she saw, she thought*, but all that is needed are these incomplete sentences
102.	Anna: yes
103.	Isabelle: mm
104.	Anna: no, but the thing is that you, you hear, the further you get into- well, the thing is that when you kind of write and then you try to get through- so when you write a novel, you kind of want the readers of the book to feel as if they were in the book, and then filter words such as 'see', 'she saw', or 'she heard', it sort of- sort of filters this experience through the characters. So instead of sort of writing *Meja heard the hunger, Meja heard that, Meja heard that*, she just writes like that because then it's as if *we* heard in a different way, or how to say it
105.	Isabelle: mm
106.	Julia: mm
107.	George: mm
108.	Anna: it makes you go deeper into the story. Feel with.
109.	George: maybe it's just a detail thing but like she hears all this at the same time and it's something I've noticed in books often that when it happens then like, to make this sound like it is happening all at once, then the use of incomplete sentences like this is common so that everything just flows on each other
110.	Julia: mm
111.	George: otherwise, it becomes, like, that she heard that and then the next moment, and then the next second she heard that and if you add like Meja heard and then she heard again and again

As can be seen in the exchange above, discussions about redundancy in terms of author intention is also evident. Along the same lines, Group 3 also claims that the missing subject and predicate (which in their rewritten version is "it was") is redundant "because it doesn't make any difference" (Lars, Group 3). Pascal in Group 3 claims the following:

> but it's okay, it doesn't really matter because it's not supposed to be a completely grammatically correct novel- you rather want to capture the reader and uh, make the reader think it's exciting to read the book (Pascal, Group 3).

Here, Pascal makes connections between linguistic norms om different communicative contexts. Thereafter, when linking grammar

and rhetoric, Group 3 start to compare grammatical choices in relation to different communicative contexts. In Episode 10, the students in Group 3 make comparisons to different genre when they discuss the grammatical choices made by the author.

Episode 10. *Comparison to different genre (Group 3).*

87.	Alicia: […] it's like if every sentence is complete, you wouldn't get the same feeling. If every sentence begins with *it was, it is, she heard-*
88.	Lars: Yes, it would be a bit boring-
89.	Pascal: Yes
90.	Lars: and repetitive and then it becomes- it is not as dramatic
91.	César: It would be boring
92.	Lars: Yes, so it seems to fit better in a factual text than in a- in a story like this, a thriller novel like this, then you want, you kind of want, you want to keep it rather short. It should be exciting, and it should be exciting when you read it too. It's not so exciting if everything starts with *it was-* it becomes a bit long and boring, maybe
93.	Pascal: yes
94.	Alicia: mm
95.	Lars: And as long as you don't- as long as you understand what you read, maybe it's better to use incomplete sentences in some situations
96.	Pascal: the point is not that you should isolate them-
97.	Lars: Well, exactly. It's the context
98.	Pascal: You read them right after each other
99.	Lars: Mm
100.	Pascal: So, then it's almost as if it's actually the same sentence

Again, reflections regarding redundancy are prominent. However, Lars also claims that it becomes to repetitive and therefore not as dramatic to use syntactically complete sentences. He elaborates this by comparing the novel to factual texts, in which he believes syntactically complete sentences are more suitable as such texts often follow the sentence structure subject-verb-object.

5.4. Relations between talk types and grammatical and rhetorical reflections

In this final section, distinguishing relationships between talk types and grammatical and rhetorical reflections are presented. Fig. 2 shows how the three distinguished categories previously presented regarding characteristics of grammatical reflections intersect with talk types. The frequency data indicates that the students might use talk types differently depending on the task at hand. For example, more open questions about rhetorical effect seem to generate dialogues of more exploratory nature, whereas locating or naming tend to prompt cumulative or disputational talk. However, when students move beyond locating and

naming and start identifying using reasoning strategies instead, a completely different pattern of talk types emerges. For example, during the adaption of linguistic manipulations students mainly engaged in exploratory talk (namely 79 % exploratory talk [see Episode 6] and 21 % cumulative talk). Thus, the results indicate that when students adapt such strategies they start to engage critically and constructively with each other's ideas. It is however possible that the reflective nature of the activity itself also can engender the talk type as well as the other way around.

As can be seen in Fig. 2, the analysis further indicates that students who manage to link grammar and rhetoric and discuss authorial intentions and grammatical choices are more likely to engage in exploratory talk. As there seems to be a relationship between task completion and the amount of exploratory talk (see Section 5.1 concerning the proportion of talk types in different groups), the results presented in Fig. 2 need to be problematized in relation to which factor prompts the other. As Group 2 has the highest proportion of exploratory talk and manage to link grammar and rhetoric rather successfully, one could argue that type of talk also facilitates those kinds of discussions. For example, the use of reasoning words such as *because, think, if, but* etc. in Episode 9 seems to prompt the students to elaborate their reasoning and thus to a higher extent explain and constructively challenge the conclusions presented in the group. Counter to Group 2, Group 1 mainly engage in disputational talk and therefore tend to get off track as no one seems to invite one another to elaborate their reflection or to think critically and deeply.

Overall, the data suggest that there is a noteworthy relationship between talk types and different tasks that are prompted. There are also some indications of the value of exploratory talk for facilitating task completion, though the evidence for whether this is prompted by the task at hand or facilitated through the use of reasoning strategies is limited.

6. Discussion

The current study set out to explore upper secondary students' group talk about sentence fragments and noun phrases in a text excerpt from a thriller novel. These group talks provide important insight into the ability of adolescent students to reflect metalinguistically on texts, and the role of different talk types and grammatical metalanguage in supporting this.

Due to the fact that grammar teaching in L1 education has been

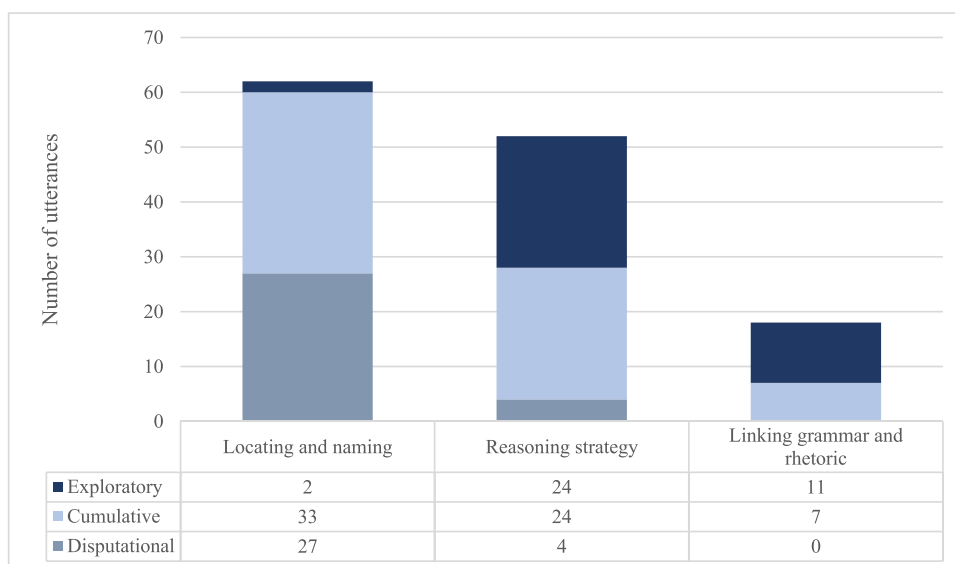|	Locating and naming	Reasoning strategy	Linking grammar and rhetoric
■ Exploratory	2	24	11
■ Cumulative	33	24	7
■ Disputational	27	4	0

Fig. 2. How different codes concerning grammatical and rhetorical reflections intersect with talk types.

characterized as a monologic and individual learning endeavor where learning grammar is namely recitational (cf. Hudson 2004, Van Rijt 2020, Watson 2015), the result presented here regarding the importance of educational productive dialogue, especially the use of exploratory talk, is important. On a general level, the data shows how the use of exploratory talk can facilitate fruitful discussions about grammatical choices and rhetorical effect in a text. As previous studies have shown (Myhill, 2021), generating exploratory group talk about grammatical choices appears to be a critical element of metalinguistic development, moving from a static view of grammatical knowledge to a more dynamic view (cf. Newman and Watson 2020). When students in Group 2 critically and constructively build on each other's ideas about grammatical choices in the text and subsequently manage to link grammar and rhetoric rather successfully, the results indicate that such dialogue fosters the development of metalinguistic understanding (cf. Chen and Myhill 2016). As Knight and Mercer (2015) shows, exploratory talk is a social mode of thinking together in which students engage critically but constructively with each other's ideas and reasons are both given and challenged. In line with their results, this paper shows that exploratory talk is partly prompted by the use of reasoning words (see also Boyd and Kong 2017). When the students in Group 2 build on each other's ideas and challenge different reasons presented through exploratory talk they tend to successfully discuss the text from both grammatical and rhetorical perspectives.

However, not all the groups within the present study succeed in this endeavor. The task completion among the three groups appears to be related to their ability to work together and use the kind of talk which mediates effective collaboration (cf. Knight and Mercer 2015). Although group tasks of the kind analyzed here have been shown to partially generate discussions that are characterized as exploratory, the results also show that students can still end up in disputational talk that is characterized as ineffective due to its negative nature (cf. Knight and Mercer 2015). The characteristics of the talk in Group 1 was mainly identified as disputational, which, in turn, led to complications when the students ought to identify and discuss the grammatical choices in the text. Thus, the results partially confirm the established effectiveness of Knight and Mercer's (2015) different talk types. Additionally, the proportion of talk types in all three groups are mostly cumulative. One could argue that the first part of both part of the task, namely identifying the syntactically incomplete sentences and the noun phrases, stimulate cumulative talk types as identification processes tend to be cumulative in nature, especially when the answer appears to be given by the students. Due to the results presented in Section 5.1 and 5.2, disputational and cumulative talk thus seem to have an important function for some student peer group tasks when identifying and labeling grammatical concepts. Thus, even though the results show predominant advantages of exploratory talk a combination of all talk types might be fruitful when tackling a grammatical task such as the one provided to the students. It is however noteworthy that students who mainly engage in disputational and cumulative talk remain on an identification level. Furthermore, it should also be pointed out that the result indicate that exploratory talk is more likely to stimulate more advanced linguistic reasoning during the identification process due to its reduced reliance on rules of thumb and its increased reliance on linguistic manipulations. Yet, students' reflections seem to benefit from a mixture of talk types. In situations where students are certain of the identification, applying the use of linguistic manipulations becomes redundant and thus the talk type could, for example, remain on a cumulative level. Theoretically, talk types could also correlate with group dynamics, whether students are close friends or not and students' level of ambition, but that is beyond the scope of the present paper. Thus, since the present study has a limited sample of students, future studies are necessary to confirm the kinds of relationships that can partly be drawn from this study.

In line with previous result (see for example Chen and Myhill 2016), the present study also shows how crucial the identification of a grammatical phenomenon is when students are supposed to analyze

grammatical choices and their effect in a text. Connected to the finding that students seem to struggle with the identification of noun phrases is their use of reasoning strategies. The analysis revealed some familiar challenges when students ought to analyze grammatical choices within texts, namely the challenges of using semantically based reasoning strategies such as rules of thumb (Myhill, 2000; Watson & Newman, 2017; Van Rijt, 2024; Van Rijt et al., 2024). It is noteworthy, however, that despite their difficulties outlined above, there were many examples of students using linguistic manipulations as a fruitful reasoning strategy when identifying noun phrases. From a pedagogical perspective, it is important that students learn to approach grammatical identification processes with explicit knowledge about different reasoning strategies provided by the teacher as well as an understanding of their limitations. Such strategies are certainly used by the students in the current data set, but their awareness of the effectiveness of, for example, rules of thumb and linguistic manipulation appears to be limited. As Van Rijt et al. (2024) points out, linguistic manipulations are difficult to learn and hard to process and are thus more cognitively demanding; they are, however, much more indicative of grammatical understanding than rules of thumb (see also Van Rijt 2024). Therefore, students need to be exposed to illustrative examples on how such strategies can be applied. Didactic models about linguistic reasoning may serve as tools for teachers to help students to apply reasoning strategies (cf. Dielemans and Coppen 2020).

When students tackle the task prompted, they make use of several grammatical concepts in their analysis. The current study shows how many times students explicitly referred to grammatical terms. Contrary to previous studies on students' metalinguistic reflections (Watson & Newman, 2017; Watson et al., 2021), the frequency of grammatical terminology used in students talk about writing is relatively high. This is a noteworthy finding, especially since many terms used are not presented in the task instruction. A potential explanation to this may be the explicit teaching of grammar that preceded the task analyzed which might have triggered the grammatical concepts used. This corresponds with previous studies that shows how metasyntactic reflections often requires explicit teaching (Gombert, 1992; Myhill & Jones, 2015; Van Rijt et al., 2019). However, the frequency of grammatical terms used could also be understood in relation to the linking of grammar and rhetoric that the task aimed to accomplish. Contextualized grammar teaching focuses on writers' grammatical choices, for example the use of syntactically incomplete sentences in a thriller novel, and the rhetorical effect of these choices (cf. Myhill et al. 2013a, 2020). According to this approach, the teaching of grammar is given importance not only to the definition of a grammatical term, but also the function it plays in a sentence and how it changes the rhetorical effect in a sentence or text (Chatterjee & Halder, 2023). This study illustrates how grammar could be made meaningful not by rote learning, but by linking grammar to the function and the rhetorical effect it plays in a certain communicative context. As the task provided to the students aim to include all these aspects, the use of grammatical terminology in Group 2 indicate that it has a function beyond recreational use. In their discussion about the syntactically incomplete sentences, grammatical terms such as absence of subject and predicate are used to articulate grammatical patterns in the text, and then to link these to the rhetorical effect on the reader. In line with Watson et al. (2021), the grammatical terminology thus becomes an effective tool in the analysis when used properly (see also Watson and Newman 2017). Collectively, these results appear consistent with previous research on the pedagogical benefit with the grammar for writing practice (Myhill, 2021; Myhill et al., 2013a, 2020), namely that linking grammar and rhetoric can help students to verbalize authorial choices and what effect those choices yield. Through the discussion of grammatical choices in a thriller novel, the present study suggests how grammar can become meaningfully linked to rhetoric in the L1 classroom.

Finally, it is clear that in order for students to engage in effective talk during group task where grammatical choices are explored, teachers

need to be able to support these kinds of discussions properly. In this study, students' talk about grammatical choices was carried out without any teacher present. In the result, it becomes evident that students' talk could have been advantageously supported by a teacher. As Chen and Myhill (2016) emphasize in their study on students' talk about writing, teachers that are confident in their subject knowledge of grammar can effectively scaffold students' development of metalinguistic understanding (Myhill et al., 2013b). For example, teachers thus need to be able to teach and support the use of different reasoning strategies when tackling a grammatical problem (cf. Van Rijt et al. 2024), and they need to signal when students tap into irrelevant knowledge (Banga & Van Rijt, 2023) or engage in grammatical misconceptions when talking about grammatical phenomenon (Myhill, 2003). However, this study also shows the importance of teachers' pedagogical knowledge of talk types and how to train students effectively in exploratory talk, especially since it has been proven to be hard to achieve (Mercer, 2013). First, teachers need to be able to recognize these different types of talk in the classroom in order for them to stimulate more effective talks. In addition, as Mercer (2013) points out, students need to be trained in this type of talk and supported by ground rules. Such rules could be that members of groups should seek agreement before making decisions, that they should ask one another for ideas and perceptions, and that they should give reasons for their views and be asked for them (Mercer, 2008). If students ought to follow those rules, more effective dialogues in the L1 classroom could be developed.

7. Conclusions

The results presented here concern students collaborative talk about writing in a literary text. Although the present study is based on a rather limited number of students from only a Swedish L1 context, the results are nevertheless indicative. Like previous studies on students talk about grammatical choices in different texts (e.g., Chen and Myhill 2016, Watson and Newman 2017, Watson et al. 2021), it appears that students struggle with reflecting on grammatical structures and thus need to be properly supported by teachers in this cognitively challenging endeavor. Understanding the ways student work together to navigate during analysis of grammatical choices in a text and of ways that teachers can support them to do so more effectively, are not only important for improving students' metalinguistic development but also for promoting their ability to use effective dialogue during group task in general (cf. Knight and Mercer 2015). Further studies illuminating the relationship between different talk types and successful metalinguistic reflection could include how students' development of cognitively demanding reasoning strategies, such as linguistic manipulations, can be facilitated when reflecting on grammar in the context of writing.

CRediT authorship contribution statement

Agnes Strandberg: Writing – original draft, Visualization, Project administration, Methodology, Investigation, Formal analysis, Conceptualization. **Jimmy van Rijt:** Writing – review & editing, Visualization, Formal analysis, Conceptualization.

Declaration of competing interest

We have no conflicts of interest to disclose.

Appendix A. Episodes of data used in original Swedish

Episode 1. *Illustrative example of disputational talk (Group 1).*

451.	Joakim: vad var nominalfraser nu igen?
452.	Thomas: det här är, det är dom här nominalfraser [pekar] det gröna
453.	Joakim: det är verbfraser
454.	Thomas: det gröna, nej det,
455.	Joakim: men jag måste se, är det som är det här i, vad, hon eller?
456.	Thomas: nominalfraser är alltså substantiv så här, nej
457.	Kent: som huvudord
458.	Thomas: nej!
459.	Kent: jo det är det!
460.	Thomas: nä, som man sätter framför typ
461.	Kent: ja, som huvudord!
462.	Joakim: man sätter väl i-
463.	Thomas: vägen, vägen är
464.	Joakim: det stod ju att, han, hon, den, det-
465.	Ruben: alla skriker i mun på varandra
466.	Thomas: ja, alltså kan vi inte hålla det sansat nu-

Episode 2. *Illustrative example of cumulative talk (Group 3).*

68.	Alicia: Men den sista är väl också det?
69.	Lars: Ja, den sista är fullständig.
70.	César: Jo
71.	Lars: och, men *Siljes flämtande andhämtning och sedan hans den nye mannens,* den är ofullständig.
72.	Pascal: Den är solklar ofullständig.
73.	Lars: och så *gnisslandet från sängstolparna och så hunden som började skälla,* ja den är också ofullständig-
74.	Pascal: Så är vi på att första och sista är fullständiga och dom andra är ofullständiga då?
75.	Lars: Ja
76.	Pascal: ja, okej

Episode 3. *Illustrative example of exploratory talk (Group 2).*

32.	Anna: Jo, men alltså det är ju ett subjekt men det finns typ inte ett predikat för att hungern som skrek är ju hela subjektet
33.	Anna: Eller?
34.	George: Det kanske är ett adjektiv-
35.	Anna: För att det beskriver ju bara ljuden.
36.	George: Jag tycker att det är lite svårt för att jag förstår ju att det kan vara både och men-
37.	Isabelle: Om man tänker så här då, vad hade man kunnat lägga till då för att den ska bli… eller hur sa vi, att den var ofullständig va?
38.	Anna: Mm
39.	Isabelle: Vad hade man kunnat lägga till för att den skulle bli fullständig?
40.	Anna: Det var
41.	Isabelle: Aa. Jo, det är sant. Aa då kan jag hålla med om att den är ofullständig.
42.	Anna: Det känns som att alla typ är ofullständiga tills hit för att alla dom här… här står det ju hon försökte att inte lyssna efter ljuden och det här är ju dom olika ljuden hon inte försökte på typ

Episode 4. *Locating and naming (Group 2).*

57.	Anna: och då den sista *hon hörde hur mannen röt åt den att gå och lägga sig,* den är ju fullständig
58.	Julia: Mm
59.	George: ja
60.	Isabelle: ja

Episode 5. *Locating and naming (Group 1).*

201.	Joakim: men den är ofullständig
202.	Kent: nej
203.	Joakim: nej, den är fullständig

Episode 6. *The use of a linguistic manipulation (Group 3).*

266.	Pascal: men som, tillhör det nominalfrasen då? Ja det måste det ju, eller?
267.	Cesar: gör det?
268.	Lars: det är ju som 'som skrek under hennes', eller jag vet inte
269.	Cesar: jag tror inte det är en till
270.	Pascal: jag tänker samtidigt om man ska använda dom där tricken att byta ut och sånt, om du sätter *skrek* framför då blir det ju jättekonstigt – 'skrek det var hungern' Det enda man kan sätta framför här egentligen är ju 'var', 'var det hungern som skrek?'

Episode 7. *Using grammatical terminology to identify and explain (Group 3).*

447.	Pascal: gnisslandet, vänta, att gnissla
448.	Cesar: gnisslandet, är det ett verb
449.	Pascal: nä, det är väl ett substantiv. Ett… substanifierat verb, ett verb som har blivit ett substantiv
450.	Lars: alltså om någonting gnisslar, då gör det ju någonting och då kan man ju tolka det som ett verb
451.	Cesar: gnissland*et*
452.	Pascal: men det är ju ett verb i grunden men det är ett substantiv där

Episode 8. *Using grammatical terminology to explain dependency.*

208.	Anna: men dom är ju beroende på, av- vi pratade väl om det, gjorde vi inte? Alltså hur dom beroende och oberoende meningarna liksom hör ihop med- vi skrev ju den här texten [ohörbart] och dom här meningarna, alltså den, dom skrev ju bara dom här, alltså dom olika ljuden, från den första meningen, så ifall man inte hade haft den första meningen så hade man vetat att det var massa ljud men vad är det för ljud liksom.
209.	Julia: vem är det som hör alla ljuden-
210.	Anna: Ja, precis. Man hade inte fattat riktigt, vad dom, varför dom var där, så ja. Ja.
211.	Julia: men alltså första meningen börjar ju liksom med att beskriva, och sen kommer alla dom här ljuden och sista meningen, den stänger som igen. Alltså liksom så här avslutar så här som- så att om man skulle fortsätta beskriva liksom, om vi inte hade hört- om dom inte hade sagt hon då hade ju liksom inte meningen, eller liksom själva texten blivit klar, utan då hade man fortsatt beskriva, det krävs ju som en mening som stänger igen, liksom nu har hon beskrivit klart, eller hur man ska säga-
212.	Anna: mm
213.	Julia: Dom fullständiga är ju, eller dom ofullständiga är ju väldigt beroende av dom fullständiga för att förstå
214.	Anna: Ja, precis. Man använder ju, alltså ifall en mening, alltså en ofullständig mening saknar ett predikat så använder den ju predikatet från den förra meningen, som var lyssnar. Och ifall den saknar subjekt så använder den ju subjektet från den förra meningen. Typ Meja gick i skogen. - och såg en varg, typ, då vet man ju liksom att det var Meja som såg en varg i skogen för det är inget annat subjekt, så ja.

Episode 9. *Linking grammar and rhetoric (Group 2).*

98.	Isabelle: […] men jag tänker att hon valt att skriva så för att… ja, men som du George sa innan, att här, först säger hon så här *Meja låg med händerna över magen* och sen är det alla dom här ljuden som liksom beskriver som första, ja men det här, ljuden i första meningen och att, varför man då har valt att ha dom ofullständiga är för att det inte ska bli så här hackigt, typ, när man läser
99.	Julia: alltså vi har ju fått all information från den första meningen
100.	Anna: ja exakt
101.	Julia: sen krävs det ju inte att vi skriver och upprepar Meja gjorde, hon såg, hon tänkte utan det krävs ju bara dom här ofullständiga meningarna
102.	Anna: ja
103.	Isabelle: mm
104.	Anna: nä men asså saken är att man, man hör, man kommer ju längre in i… asså saken är att när man typ skriver och så och sen så försöker man få genom, alltså när man skriver en skönlitterär bok så vill man ju typ att dom som läser boken ska känna sig som om vore liksom i boken och då så här filterord som typ att se, hon såg, eller hon hörde, det liksom… filtrerar liksom den här upplevelsen genom karaktärerna. Så istället för att liksom skriva Meja hörde hungern, meja hörde det där, Meja hörde det där, så skriver hon bara så där för då är det som om vi hörde på ett annat sätt, eller vad man ska säga.
105.	Isabelle: mm
106.	Julia: mm
107.	George: mm
108.	Anna: det får en att komma liksom djupare in i storyn typ. Känna sig med
109.	George: det kanske bara är en detaljgrej men liksom hon hör ju allt det här samtidigt och det är något jag märkt i böcker ofta att när det händer då liksom, för att få det här att låta som att det här händer på en gång då blir det sådana här ofullständiga meningar så att allting bara flyter på varandra
110.	Julia: mm
111.	George: annars blir det ju ofta så här att hon hörde det och sen i nästa stund och sen i nästa sekund hörde hon det här och om man lägger till så här Meja hörde och sen hörde hon igen och igen

Episode 10. *Comparison to different genre (Group 3).*

87.	Alicia: […] det är väl typ att om varje mening är fullständig så hade man inte fått samma känsla. Om varje mening börjar med *det var, det är, hon hörde-*
88.	Lars: Ja, det blir lite tråkigt-
89.	Pascal: Ja
90.	Lars: och upprepande och sen blir det- det blir inte lika dramatiskt.
91.	César: Det blir trist.
92.	Lars: Ja, alltså det passar ju som bättre i en faktatext än i en, i en sån här, en sån här spänningsroman, då vill man ju, man vill ju liksom man vill ju fatta sig liksom hyfsat kort ändå. Det ska liksom vara pang på och det ska ju vara spännande när man läser också. Det är ju inte så spännande om allt börjar på *det var-* det blir lite segt, kanske
93.	Pascal: jo
94.	Alicia: mm
95.	Lars: Och så länge man inte som- så länge man förstår det som man läser så kanske det är bättre att man i vissa fall har ofullständiga meningar
96.	Pascal: meningen är ju inte att man ska bryta ut dom egentligen-
97.	Lars: Nä, exakt. Det är ju sammanhanget.
98.	Pascal: Man läser dom ju direkt efter varandra.
99.	Lars: Mm
100.	Pascal: Så då blir det ju nästan som att det är samma mening egentligen

Appendix B. Coding tree

TALK TYPES	FILES	References
	3	76
Disputational	3	25
Cumulative	3	35
Exploratory	3	16

CHARACTERISTICS	FILES	References
	3	747
GRAMMATICAL REFLECTIONS (Axial Code)	3	
Terminology implicit (Code)	2	6
Topicalization (Sub code)	1	1
Subject	1	1
Adjective	1	1
Predication	2	3
Terminology explicit	3	468
Sentence	3	128
Noun phrase	3	98
Verb	3	67
Verb phrase	3	38
Preposition	3	29
Noun	3	26
Prepositional phrase	3	25
Head word	3	22
Subject	2	9
Pronoun	3	7
Adjective	2	4

(continued on next page)

(*continued*)

CHARACTERISTICS		FILES	References
		3	747
	Conjunction	2	3
	Predicate	1	3
	Object	2	2
	Adverb	1	2
	Clause	1	2
	Period/full stop	2	2
	Subordinate clause	1	1
Misconception or partial understanding		3	46
Locating or naming		3	62
Reasoning strategy		3	52
	Language intuition	2	8
	Inferences	3	17
	Comparison with previous examples	2	5
	Rules of Thumb	3	12
	Linguistic manipulation	3	48
Express confusion or uncertainty		3	52
Dependency		3	20
	You can only understand incomplete sentences in context	2	5
	Incomplete sentences are dependent of a context	2	5
	Theme-rheme	3	10
Grammatical norms		3	12
	A question of right or wrong	3	4
	Complete sentences equal proper language	1	1
	Grammatical norms are contextually bound	2	2
	Incomplete sentences are grammatically incorrect	2	2
	Incomplete sentences are not necessarily norm violations	2	2
	Rules can be user determined	1	1
Conceptualizing		3	28
RHETORICAL REFLECTIONS		3	48
The effect of shortened NPs		1	5
Genre		2	6
Generic comment about effect		2	5
The effect of using incomplete sentences		3	14
The effect of changing the incomplete to complete		3	18
LINKING		3	18
Contrasting writing alternatives		1	2
Incomplete sentences create a feeling of simultaneously		1	2
Putting something first creates emphasis		1	2
The incomplete sentences implicitly describe what happens in the scene		2	3
Author's intention redundancy		2	7
Complete sentences are more descriptive		2	2
The use of incomplete sentences increases reader involvement		2	3
PROCEDURAL		3	211
Meta reflection of the task		1	2
Negotiating writing alternatives		2	12
Asking questions about the content		2	15
Color coding		3	34
Getting a sense of instructions or how to proceed		3	71
Read aloud		3	76

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