

Grammatical terminology and the application Gramte

Birgitta Lastow and Gisela Håkansson

Introduction and background

The purpose of the Gramte program is to meet the needs of university students who feel that they are not mastering the grammatical terminology needed for studying linguistics or foreign languages. In all learning contexts it is important to have the adequate background knowledge. This is even more crucial when it concerns the basic concepts and terminology which will be used by the teachers during the course.

A problem which is increasing today is that students differ a lot in their knowledge of grammar when they come to university. This puts great demand on the teachers' ability to individualize, as well as on the students' ability to cope with their differences in background knowledge. Often students are ashamed to ask simple questions about concepts and terminology which they had once mastered.

For individual repetition of terminology that has been mastered earlier, what could be more suitable than a computer program? The computer makes it possible for the students to work at their own pace, to choose when it is convenient and their shortcomings are not made public. Furthermore, a computer can give immediate feedback. As is true for most learning, the learning of metalinguistic concepts has to be reinforced by active use in order to be acquired at a deeper level (Ramsden 1992, Marton et al. 1977). This implies that the grammatical terminology needs to be actively used as an analytic tool in order to be genuinely learned. By use of a computer, it is easier for students to work with exercises. The possibility to stop at any point of hesitation to find the appropriate grammatical descriptions and concepts in a 'grammar' that is connected to the exercises further enhances the learning potential.

The program

The software (Gramte) was developed in Apple Hypercard, version 2.3, and consists of two files: an application including all exercises and a document (stack) with help texts, which can be reached from the exercise part and vice versa. Both parts consist of a number of pages, which have the shape of cards in a card deck. The user can navigate through the cards by pressing arrow buttons (see e.g. figure 1 below) or by using menu commands. The menus are tables of contents of the exercise and help files, respectively.

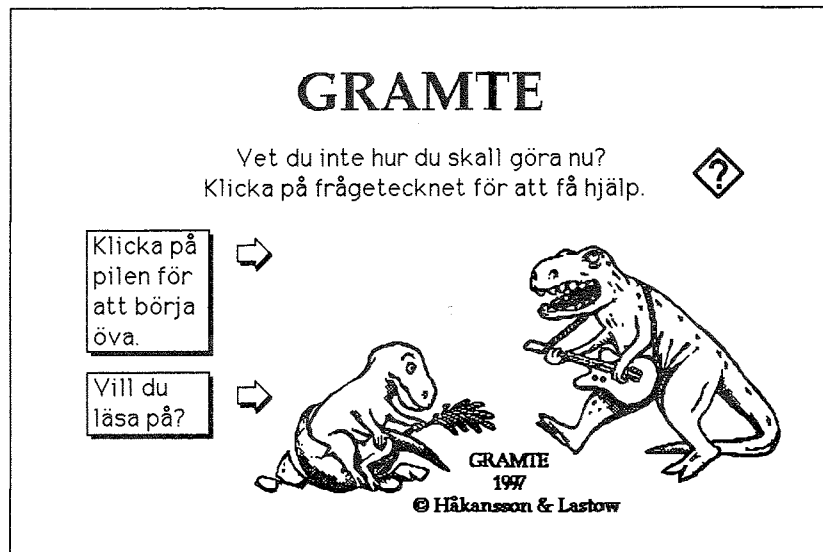


Figure 1. Gramte.

The exercises concern three different topics: word categories, word formation and functional categories. These topics are displayed on the main contents card (see figure 2).

As you can see, the topics are underlined. In Gramte, all underlined text is hypertext, a link to another object, i.e. if you click on the text, for example *Ordklasser* 'word category', a new card with a table of all word category exercise topics will be displayed (see figure 3).

The exercises within each topic are ordered according to increasing level of difficulty. The first word category exercises deal only with one word category each. The word categories judged to be problematic for students or

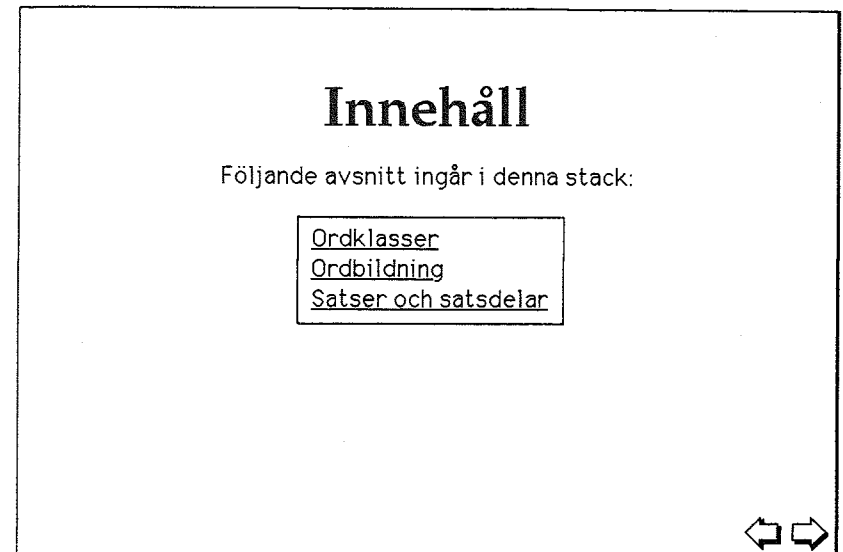


Figure 2. Main contents.

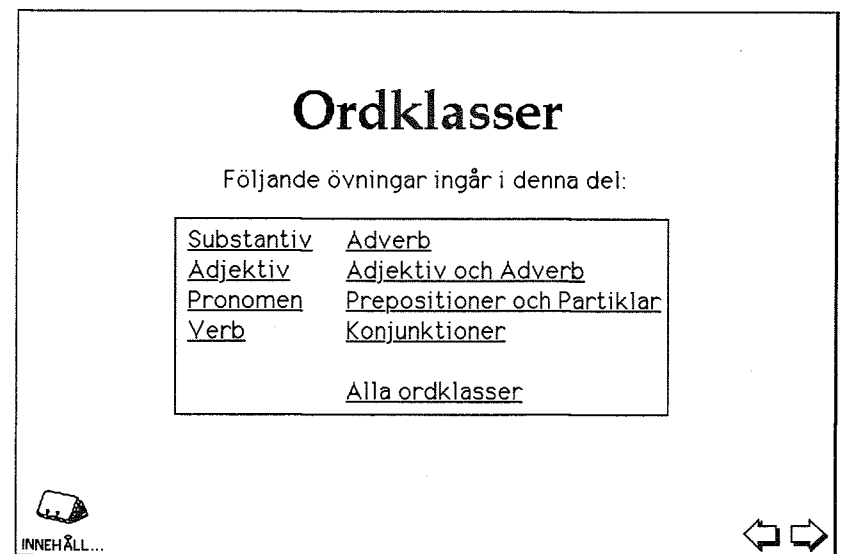


Figure 3. Table of all word category exercise topics.

as having important subcategories or features are represented by several exercises (adjectives, adverbs, and verbs), whereas the ones that are easier to understand (such as numerals, prepositions, articles, and interjections) do not have a separate exercise.

Word category exercises

The exercises concerning subcategories and specific features of word classes often have an appearance similar to the 'Verb form exercise' shown in figure 4 below. The students are supposed to classify the verb forms given in the leftmost column of the card by selecting the appropriate radio button. The four possible radio buttons are grouped together, which means that selecting one button will result in deselecting the previously selected radio button, as is normally the case when working with radio buttons.

VERBFORMER				
	Uppgift		Radera allt!	
	Infinitiv	Presens	Preteritum	Supinum
gör	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
sprang	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
velat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
kan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
följa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ridit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
snöade	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
åkt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
bo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
satte	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

KORREKT?

Figure 4. Verb form exercise. Radio buttons.

When the students are satisfied with their answers (see figure 5), they can click on the *Korrekt?* 'Correct?' button to check if they were right or wrong. If all answers are correct, they will get a round of applause and a blinking text FULL POTT! that gives the students an extra feeling of success. Otherwise, they will only get *Rätt!* 'Right!' or *Fel...* 'Wrong...' in the rightmost column.

VERBFORMER				
	Uppgift		Radera allt!	
	Infinitiv	Presens	Preteritum	Supinum
gör	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
sprang	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
velat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
kan	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
följa	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ridit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
snöade	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
åkt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
bo	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
satte	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

KORREKT? FULL POTT!


Figure 5. Verb form exercise with answers.

A slightly different style of exercise is shown in figure 6. Here the students work with pull-down menus instead of radio buttons. The basic idea of the exercise is, however, the same as in the verb form exercise.

If the students don't understand what to do when encountering a new exercise, there is always help available. If they press the button *Uppgift* 'Task', they will get a dialog window with a short explanation of what they are supposed to do.

Besides the task button, there are always two other buttons at the top of each card – the question-mark button, which gives a brief explanation of the card buttons, and a rectangle button called either *Radera allt!* 'Erase everything' or *Börja om!* 'Start over', which restores the card to its original appearance.


A second type of exercise is a classification exercise using a text. Depending on the level of difficulty, it may be an exercise where the students have to find all words belonging to a specific category, e.g. verbs (see figure 7). In this case the exercises are actually formed as a game. One word at a time is highlighted and, if it is a verb, the students are supposed to press the verb button and if not, they should just wait. The selection will then move to the next word in the text and so on. A correct answer will give 5 points and

BISATSTYPER Uppgift  Redera allt!

De understrukna orden nedan inleder bisatser.
Ange bisatstypen för varje mening.

Typor av bisatser

Jag tror att jag ska gå och köpa en ananas!
När jag gick förbi stationen började det åskregna.
Eftersom det hade börjat åska, gick jag till Marianne.
 Bredvid huset där Marianne bor finns en glasinnsamling.
Om någon kastar glas där på natten, blir Marianne arg.
 Plötsligt var det någon som pratade bakom mig.
 "Yet du om Johans äventyrsspel är till salu?"
 Det var Marianne som undrade!

 **KORREKT?**




 

Figure 6. Subclause type exercise. Pull-down menus.

VERBSPEL 1 Uppgift  Börja! Avbryt!

Hunden. Maxpoäng: 100

Hunden är ett flockdjur och mår inte bra av att lämnas ensam. Några timmar går det kanske bra, men man ska absolut inte lämna hunden någon längre tid. Det kan ofta vara ett lyckat alternativ att skaffa en dagmatte eller en daghusse. På sikt kan man tänka sig att just dagmatteyrket skulle kunna utvecklas till att bli ett riktigt framtidsyrke! I jobbet kan det ingå att man ger hunden social träning tillsammans med andra hundar, och kanske också lättare dressyr. Jag kan också tänka mig dagmatteicenser med krav på utbildning som hundpsykolog.

Resultat:

Verb **Hastighet: 5**




 

Figure 7. Verb game.

an incorrect answer -2 points. The speed of the 'moving' selection ranges from 1 to 10 (highest) and can be altered by the pop-up button *Hastighet* 'Speed'.


At a higher level of difficulty, there are exercises where the students are supposed to go through the whole text and state the correct word category of each word by pressing the appropriate category button (see figure 8). As shown in the figure, there are ten word categories: noun, verb, adjective, preposition, adverb, pronoun, coordinator, numeral, interjection and article.


ORDKLASSER 3 Uppgift  Börja om!

Vargen

För hundra år sedan jagade man faktiskt fortfarande varg i Småland. När man anade varg i närheten samlade man sig i skallkedjor. Jägarna drev vargarna framför sig mot speciella nät som man hade spänt mellan träden. Ibland fångade man vargar i varggropar där man hade lagt bete. Groparna låg ofta i någon sluttning ner mot en dalgång. Omkring år 1860 försvann vargen plötsligt från Småland. Då byggde man stambanan mellan Göteborg och Stockholm vilket förmodligen avskräckte vargen.

Resultat:

Substantiv **Verb** **Adjektiv** **Preposition** 

Adverb **Pronomen** **Konjunktion** 



Räkneord **Interjektion** **Artikel**  

Figure 8. Word categorization exercise.

Here, the selection of words moves forward when the word has been correctly classified, and thus the students have the opportunity to find out what the word category should be even if they don't know, by clicking on the category buttons until they find the right one. A built-in interactive component gives the students immediate feedback in difficult situations, where they are liable to make a wrong choice, but where the answer may have been correct in another context. In those cases, the students will get an explanation of why the answer was wrong.

These more complex word categorization exercises also exist in a game variant, where the students need to classify a word during a specific time interval or else the selection will move forward to the next word. As

mentioned before, the students can select a speed of their own choice ranging from 1 (slow) to 10 (impossible).

The students may also click on the round question mark button and point at a specific word in the text to find out the category of that single word. Furthermore, they can choose to go to the help stack by pressing a button in the dialog window and read the help text associated with the grammatical terminology used in the exercise. As an example, the help text associated with the prepositions is shown in figure 9. Note that the examples in the square are well-known Swedish proverbs and not constructed 'grammar sentences'. The words marked in bold are examples of the word category under discussion.

PREPOSITIONER 24 av 54

När katten är borta, dansar råttorna **på** bordet.
Det finns något **bakom** bergen.
Man får ro **med** de åror man har.

En preposition anger vanligtvis en spatial (rumslig) eller en temporal relation. Själva ordet "prepositioner" avslöjar att det är ord som "har sin ställning före" (pre = före, position = ställning). (Det är inte alla språk som har prepositioner: en del har postpositioner och en del har kasusändelser på substantiv.)

Prepositioner är oböjliga och obetonade. Om en preposition är betnad betraktas den som en partikel.

GÅ TILLBAKA **ÖVNINGAR** INNEHÅLL... ? ← →

Figure 9. Help text concerning prepositions

Word formation exercises

The word formation part of Gramte consists of five exercises, where the students learn about prefixes, suffixes and roots. They also have the opportunity to practise their knowledge of word categories in the exercises where adding a suffix will change the word category (see figure 10 below).

ORDBILDNING 1 Uppgift 2 Radera allt!

Bilda de andra orden i ordfamiljen genom att lägga till ändelser till stammen "rök". Det saknas fyra substantiv, två adjektiv och ett verb.

Substantiv **Adjektiv** **Verb**

rök

Antal korrekta ord: 0 **KORREKT?**
Maximalt antal: 7

Svar

Figure 10. Word formation exercise.

Functional categorization exercises

The last part of Gramte consists of the functional categorization exercises, where the students classify the parts of a sentence one by one through the whole text. The sentence parts which are to be classified are selected automatically by the program. These exercises are in direct correspondence to the word categorization exercises with several word category buttons (see figure 11).

The help stack

The help texts in the help stack cover the same topics as the exercises: word categories, word formation, phrases, clauses and functional categories. The word category topic has the twelve word categories as subtopics (see figure 8 above) and the subtopics of the functional category topic are: subject, predicate, object, predicative and adverbial. In total, this amounts to 54 cards. The explanations are based on the descriptions found in Jørgensen & Svensson 1986, which is a modern comprehensive Swedish grammar. It is extensively used as a reference grammar in grammar teaching at the university level. For an example of a help card, see figure 9 above.

SATSLÖSNING 1 Uppgift ? Börja om!


Sven

Sven har många problem. Hans dator fungerar inte. Det blir ingen bild. Tangentbordet är inte inkopplat. Hans bord är alldeles för lågt och han sitter mycket obekvämt. Han böjer sig fram till tangentbordet. Han får ont i ryggen. Det är synd om Sven.

Resultat:

Subjekt Predikat/Verb Objekt

Predikativ TSR-adverbial Satsadverbial



← →

Figure 11. Functional categorization exercise.

The help stack is fully integrated with the exercises, since on each help card there is a rectangular button ÖVNINGAR 'exercises' which will take the students to an exercise where they immediately can practice the new knowledge. The other rectangular button, GÅ TILLBAKA 'go back', is mostly used when the students enter the help stack to read about a specific topic in order to be able to perform exercise task. When they have finished reading, they can press the 'go back' button to return the last card they visited, i.e. the exercise.

All cards also have arrow buttons leading to the next or previous card in the stack, a question mark button for navigation help and a cardfile button *Innehåll* 'Contents' that will take the user to the help stack table of contents.

Experiences

One of the fundamental principles of modern university pedagogy is that the students should take responsibility over their own learning (SOU 1992). The use of computer programs to support the students in their learning processes has a natural place within this framework.

Gramte has been used with groups of linguistics students. The general impression is that students prefer to work with a computer, in contrast to traditional grammar exercises. With this new approach, they have

experienced that grammar is fun. There have also been many positive reactions from university lecturers concerning this entertaining way of practising grammar.

Thus we have seen that the use of Gramte has the potential of fulfilling the following goals:

1. Gramte meets the needs of student individualization.
2. Gramte increases the general level of competence in the group.
3. Gramte makes grammar entertaining.

Acknowledgement

This project has been supported by CITU (Centre for Information Technology in Education) at Lund University and Apple Computer, Inc.

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