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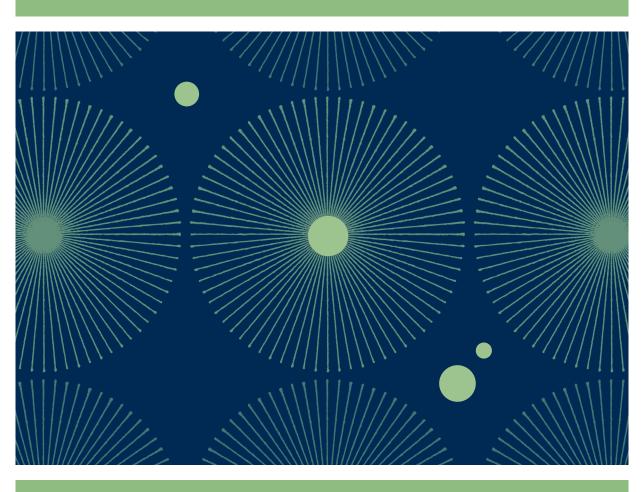
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Producing and using videos in grammar teaching

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Introduction

At probably all universities (at least in Denmark) we often experience cuts both in funding and teaching hours, demanding of teachers that they find new ways of teaching the same curriculum as before the cuts. We cannot change the economy, so the answer is to engage students more in doing their homework and this is where the flipped classroom can be a very useful resource. I follow the definition of the term *flipped classroom* proposed by Wolff and Chang (2016, p. 9):

"[...] a flipped classroom generally provides pre-recorded lectures (video or audio) followed by in-class activities. Students view the videos outside the classroom before or after coming to class where the freed time can be devoted to interactive modules such as Q&A sessions, discussions, exercises or other learning activities."

In 2015, I conducted some experiments in flipped classroom in grammar teaching at Aalborg University. The aim of the project was to: 1) extend the number of teaching hours using flipped classroom; 2) engage the students in self-tuition; 3) help students with no or minimal knowledge in grammar to gain grammatical knowledge better and faster; and 4) find out if flipped classroom is suitable for grammar teaching at a Danish university.

The project was funded with 80 working hours and there were three very important production conditions: 1) I did not have a production team to help me produce the videos; 2) I had absolutely no experience with video production; and 3) I had to produce low budget videos. I produced 10 educational videos with a total playtime of 1:55:23.

Video production

There are a lot of issues to consider when you want to produce a low-budget video including: 1) video type; 2) production style; 3) length; 4) content; and 5) production facilities. In my case, the first question was fairly easy to answer: I was going to produce lecture videos with definitions of grammatical concepts.

I was (and still am) a practitioner without substantial theoretical knowledge about video production, and therefore I turned to the literature to answer the second question about production style. According to Guo, Kim and Rubin (2014), the most commonly used production style in EdX are the following six types:

Slides – PowerPoint slide presentation with voice-over

Code – video screencast of the instructor writing code in a text editor, IDE, or command-line prompt

Khan-style – full-screen video of an instructor drawing freehand on a digital tablet, which is a style popularized by Khan Academy videos

Classroom - video captured from a live classroom lecture

Studio – instructor recorded in a studio with no audience

Office Desk - close-up shots of an instructor's head filmed at an office desk

Ilioudi, Giannakos and Chorianopoulos (2016) also mention a production style used in the Khan Academy which we could name:

The hand – full-screen video of an instructor's hand drawing or writing on a digital tablet

The question was which production style to choose? Since I did not have an assistant to work with the camera or the facilities for much post-production (like editing), the videos had to be shot in one take. Therefore, I ruled out the Studio and Office Desk types, even if they are much more student-engaging than e.g. PowerPoint presentations with voice-over (Guo, Kim & Rubin, 2014). I also ruled out the code style, simply because I found the style too boring to look at, and I wanted to engage the students. The videos were produced during the summer holidays so I did not have an audience for my videos; consequently, I ruled out the Classroom type. That left me with three production styles to choose from, the PowerPoint slides, the Khan-style and the hand. The difference between the Khan-style and the hand is the lack of a visible hand in the Khan-style. Since the Khan-style is more engaging that the PowerPoint slide presentation (Guo, Kim & Rubin, 2014) and since I did not have the software to produce Khan-style videos, I ended up choosing the hand as the production style for my videos.

The third question was the length of the video. A video may last up to six minutes if you want to keep the students' attentions (Guo, Kim & Rubin, 2014). That puts severe limitations on the content of the videos (question 4), and it

ruled out the possibility of shooting a full lecture in a single video. I had to split up the lecture into smaller units, and I decided to produce 10 videos for the second lecture: Video 1: Definition of the sentence; Video 2: Criteria used in defining the constituents of the sentence; and Video 3 - 10: Definition of the constituents of the sentence, i.e. subject, object, and so on.

The fifth question was about the production facilities. My production site consisted of a camera placed at an appropriate height relative to a piece of paper, two spotlights, and a microphone. I was ready to shoot the videos ... or so I thought.

It turned out to be a very good idea to plan the video and the speech before shooting, i.e. the preproduction is of great importance. I wasted a lot of time on takes because of mumbling, pause sounds, and wild digressions. Of course, I had an outline for each video but that was not enough to produce a fluent and continuous stream of speech. In the end, I had to write a manuscript for each video, and later I realized that I had to know the manuscript by heart to be able to make it sound like natural speech.

The last question was which type of writing to use: handwriting or typeface? According to Cross, Bayyapunedi, Cutrell, Agarwal and Thies (2013), handwriting is considered to be personal and engaging (if it is readable), whereas typeface is considered to be clear and legible. I wanted my videos to be personal and engaging, and therefore I chose to use handwriting. My handwriting is not bad, but as it turned out it is much too slow (cf. Kristensen, 2015a), and it caused a lot of pauses when I wrote definitions and examples. Too many pauses make the videos too long. Consequently, I switched to typeface and prepared the definitions and examples in advance, using only my pen to point to the written text (cf. Kristensen, 2015b).

Even if I eliminated factors that could slow down the speed and ultimately make the video too long, most of the 10 videos lasted more than 6 minutes, going from 4:51 to 17:25. I decided to keep the idea of one video for each topic, even if the video's length exceeded the recommended length, because I wanted to exhaust the topic in one (potentially long) film instead of a number of short films

The students' grammatical knowledge

During the first lecture, the students' knowledge about grammar was tested. The test result showed that most of the students could identify only the subject and the verb of the sentences, and only very few students could identify clauses, predicates and so on (cf. figure 1).

After the first lecture, the students were asked to: 1) read a chapter in the text book about grammar; 2) watch the 10 videos; 3) talk to each other in groups about what they had read and watched; and 4) email me questions about the grammatical theory.

The group work and the questions were very important. If the students are ever going to gain an unconscious competence (Noël Burch) in grammar, they must gain a language by which they can talk to others about grammar, and this is where the group work is a very useful resource. The questions on the other hand were very useful because the students had a possibility to articulate what they found difficult – helping them to be aware of what exactly they did not know – and I used the questions to prepare my teaching so that I was only going to talk about issues that the students did not know about. In a normal lecture, I do not know what the students find difficult; so, I have to be very thorough about all topics and issues, which might be unnecessary and it certainly takes a lot of time. In this way, we save a lot of time that could be used for exercises.

In the beginning of the second lecture, after the students had watch the 10 videos (and before talking about the students' questions), the students' watchedgrammatical knowledge was tested again, and the test results showed a clear progress:

		es	s	v	sp	О	op	a	clause
All	Test 1	0	79,9 %	79,9 %	1,7 %	0	0	0	0
	Test 2	35,6 %	96,6 %	100 %	57,6 %	61 %	86,4 %	69,5 %	32,2 %
Some	Test 1	0	18,6 %	18,6 %	16,9 %	27,1 %	0	8,5 %	16,9 %
	Test 2	0	3,4 %	0	8,5 %	33,9 %	5,1 %	23,7 %	3,4 %
No	Test 1	100 %	1,7 %	1,7 %	79,9 %	71,2 %	100 %	91,5 %	83,1 %
	Test 2	64,4 %	0	0	33,9 %	5,1 %	8,5 %	6,8 %	64,4 %

Figure 1: Learning progress in grammar

The scheme must be read in this way: for the existential subjects (es) holds that in the first test no students found all constituents, no students found some constituents, but all students found no constituents. These numbers change in the second test, where 35,6 % of the students found all constituents, no students found some constituents, and 64,4 % found no constituents. Without going into details, we see a very clear progress from the first to the second test: many students are now able to find all subject predicates (sp), objects (o), object predicates (op) and adverbials (a).

The most important news between the two tests, is the fact that the students use another methodology in test 2. In test 1, all students found subjects and verbs in all sentences regardless of whether the subjects and verbs were part of a clause. An example could be:

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Peter knows that the dog is hungry s v s----- v
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An analysis like this does not recognize the fact that that the dog is hungry is actually a clause and the object of knows:

It is a very common mistake for Danish students to forget the clauses' function in the sentence but, in the second test, 32,2 % of the students found all clauses. That means that the students are able to identify the clauses as constituents. From a grammatical point of view, this is a huge and very exciting progress, because awareness of clauses normally comes quite late in the lecture series, and for the weak students the awareness often never comes.

It is also very interesting to see the progress for the students with the lowest and the highest score:

	point Test 1	point Test 2
Student 14	1	14
Student 55	1	9
Student 6	7	16
Student 35	7	12
Student 53	7	13
Student 3	8	17

Figure 2: Learning progress for students with the lowest and highest score

Not surprisingly, the students with the lowest score demonstrate the highest progress from test 1 to test 2, but also the students with the highest score improve their abilities between the two tests – as we can see, the students are now more or less on a level with each other in test 2. The videos have therefore served one of their purposes, i.e. to help students with little or no grammatical knowledge to gain that knowledge quickly. In a normal lecture series, most of the students will not be able to find the different constituents until after the third or fourth lecture; therefore, we have saved a lot of time using the videos.

The students' evaluation of the videos

After the second test, the students were asked to evaluate the videos by filling in a questionnaire. I asked them to give their opinion about among other things the videos' difficulty, length, speed, and if they would like more videos or not. All the students wanted more videos. Almost all of students found the videos adequate, but a small number (5,1 %) found them too difficult and slightly more students (22 %) found some of the videos too long. The longest video (the one about the verbal) took 17:27, and, as per the recommendations of Guo, Kim & Rubin (2014), it is far too long.

I gave the students an opportunity to write comments on the questionnaire, and many of them did. Most of the comments were very positive, saying it was a very good idea to use video for teaching grammar, but a few comments were moderately negative. The following two comments sum op the overall opinion:

"Jeg synes at undervisningsvideoerne er en fantastisk undervisningsform! Så kan man pause og spole tilbage, hvis man har brug for mere tid eller forklaring"

'I think the use of videos is a fantastic way of teaching. It is possible to pause and rewind, if one is in need of more time or explanation'

"Der var for mange informationer på en gang. Men ellers var de gode."

'There was too much information at once. But besides that, they were good!'

The students emphasised as a positive aspect that they could watch the videos as many times as they wanted, and the number of showings indicate that several of the students saw the videos more than once. I did not track each student, so I do not know who saw the videos more than once or if they saw the whole video when they watched it the second time. However, after only the second lecture the video about the subject (cf. Kristensen, 2015b) had been watched 103 times (the number of students in the class was 75). So, some of the students saw the videos more than once.

The few negative comments all concern the amount of information in the videos. With a total playtime of 1:55:23, which equals the amount of time in a lecture, the students are given a lot of information to process. My idea was to make comprehensive videos that exhausted the topic of each video, so that the students could both learn from the videos in the beginning of the course and later on use the videos in preparation for their exam. Indeed, some of the students did use the videos before their exam. The day before the exam, the video about the subject (cf. Kristensen, 2015b) had been watched 142 times. Naturally, it would have been better to produce short videos for the beginning of the course and longer, comprehensive videos for the exam preparation, but there was no time for that in the project.

The students' recommendations

In 2016, I once again conducted experiments with flipped classroom, using the same videos as in 2015, and the results in 2016 were to a large extent the same as in 2015. Guo, Kim & Rubin (2014) only use quantitative data in their research in MOOC videos. In order to get qualitative data on the matter, I decided to interview 4 students about their view on educational videos. In the

interview, I showed the students different types of educational videos, and we talked about their view on the production style, length, content and so on. Due to space limitations, I can only give a very brief summary of the findings and the students' recommendations.

The good news is, that students really enjoy watching educational videos and that they do not really care if the videos are produced by a professional production team or not, as long as the sound and picture quality is fairly good. The students are not that into the production style either – a PowerPoint presentation can be as good as a so-called "talking head" video (cf. Guo, Kim & Rubin, 2014), as long as the content of the video is interesting and informative – this directly contradicts the quantitative findings in Guo, Kim & Rubin (2014), and more qualitative studies are required to determine the students' preferences. However, none of the students found the classroom style engaging, because they felt that the video was approaching the classroom audience rather than them as viewers. According to the students, a video is more personal, if there is an animate entity e.g. a hand in the picture, but content is still more important than animacy. All in all, the students were much more interested in the video content than in production style, and they gave a lot of useful recommendations regarding the structure of the videos:

- 1. The picture or the slides cannot be too overcrowded. Too many graphic elements and colours are confusing.
- 2. The students prefer one piece of information per slide, otherwise they will read ahead and stop listening to the speaker/voice-over.
- 3. Do not use fast forward on the picture side in order to speed up the tempo of the writing. It is not credible and it is confusing for the students.
- 4. The picture and the sound must relate to each other; so, do not write anything on the slides that you are not talking about.
- 5. When you approach the students, do not use rhetorical questions. The students consider it to be fake and not credible.
- 6. Keep a clear structure in your video. Start with the definition of a concept, explain the definition and give a couple of examples to illustrate the ideas.
- 7. Do not say anything in the video that is not important to the topic, and stick to the topic without making digressions, i.e. make the videos as informative as possible exhaust the topic, not the students!
- 8. It is a very good idea to use a pen to point to what you are talking about it makes it easier for the students to keep focused.
- 9. Give a small summery at the end of each video that the students can use as a memo.

Conclusion

In this article, I have described an experiment with the flipped classroom that I conducted in 2015 and 2016. The aim of the project was to: 1) extend the number of teaching hours using flipped classroom; 2) engage the students in self-tuition; 3) help students with no or a minimal knowledge in grammar to gain grammatical knowledge better and faster; and 4) find out if flipped classroom is suitable for grammar teaching at a Danish university. To answer the last question first, flipped classroom is most certainly suitable for grammar teaching at a Danish university. The students' quantitative and qualitative evaluation of the project was very positive, and their knowledge about grammar was dramatically improved between the two tests, indicating that using videos (combined with group work) functioned well as an extra lecture. The students seemed much more engaged in the video lecture than in normal lectures; they read the chapter in the text-book, watched the videos, did the group work, and sent me questions regarding the theoretical content. Normally, the students would only read the chapter in the text-book; so the project has certainly engaged the students in self-tuition. The videos also helped students with no or minimal knowledge of grammar to gain grammatical knowledge better and faster. The speed of the learning process was very high; in the second test, almost all students were able to find all types of constituents in the sentences (it normally takes 3 to 4 lectures), and the test results also showed that students with the lowest and the highest score in test 1 were more or less on a level with each other in test 2. So, in conclusion, flipped classroom was very suitable for grammar teaching at the university and I intend to produce more videos in the near future.

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