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YOUTUBE IN TEACHING GEOMETRY

34.1 INTRODUCTION

In 2006 we started to record video tutorials in mathematics and descriptive geometry at The Department of Mathematics and Descriptive Geometry. We use an interactive whiteboard to record video and program CamtasiaStudio for editing. Then we place the videos on the school website. In 2006 YouTube did not exist. Website so far attracted around 27,000 visitors, not only our students but also students of other technical universities. Our students repeatedly expressed interest in further videos. The amount of material has already filled the assigned server. Now we are looking for new places where we can put our new videos.

Now, however, youtube is a new phenomenon, people are looking for video tutorials on anything - recipes, hairstyles, gardening. So why don't we put our video tutorials on youtube.com?

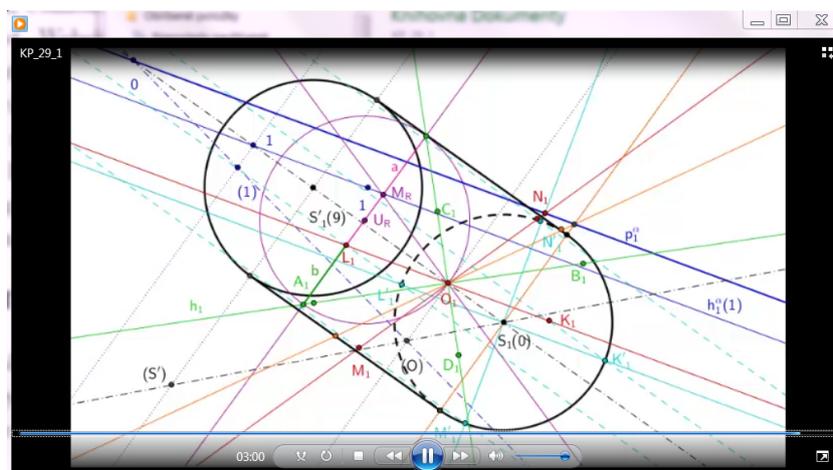


Fig. 34.1 Video

Source: own elaboration

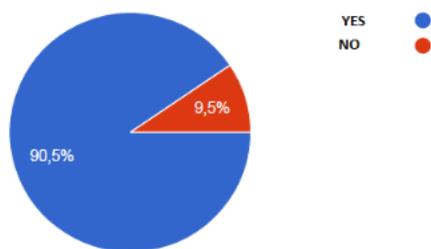
34.2 QUESTIONNAIRE

We asked students for their opinions. 117 students of Faculty of Mining and Geology and Faculty of Metallurgy and Materials Engineering did reply. Answers related to mathematics and descriptive geometry.

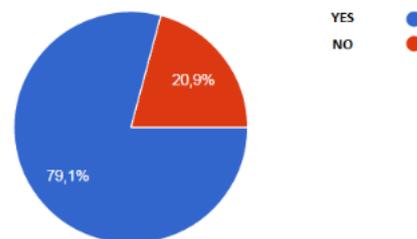
34.2.1 The first part of questions

The first set of questions focused on the relationship of students to instructional videos and watching them on youtube.com.

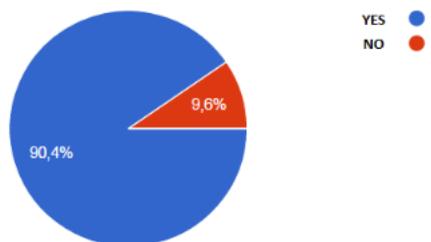
Do you watch videos on youtube.com?



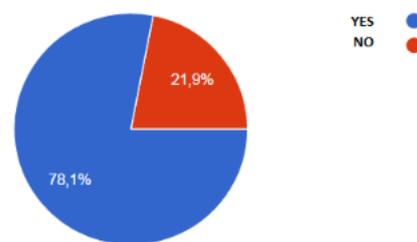
Do you watch videos that are related to your profession?



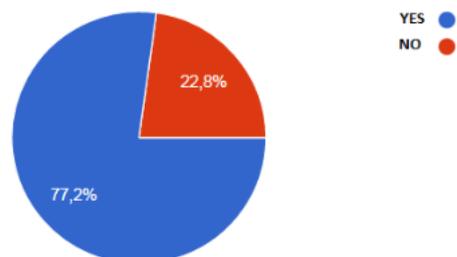
Do you watch videos that concern your study?



Are you looking for videos on other websites?



What kind of training tutorials will satisfy you the most?



Is this form attractive for you?

Do you want more of these learning materials?

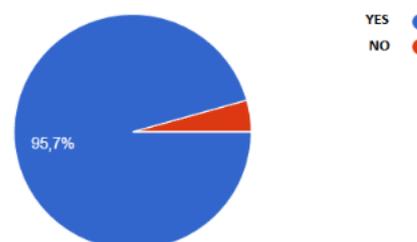


Fig. 34.2 Question 1 - 6

Source: own elaboration

From the responses, it is clear that students watch videos very often.

34.2.2 The second part of questions

Furthermore we were wondering what kind of training video students prefer and if it is important for them, where they find them.

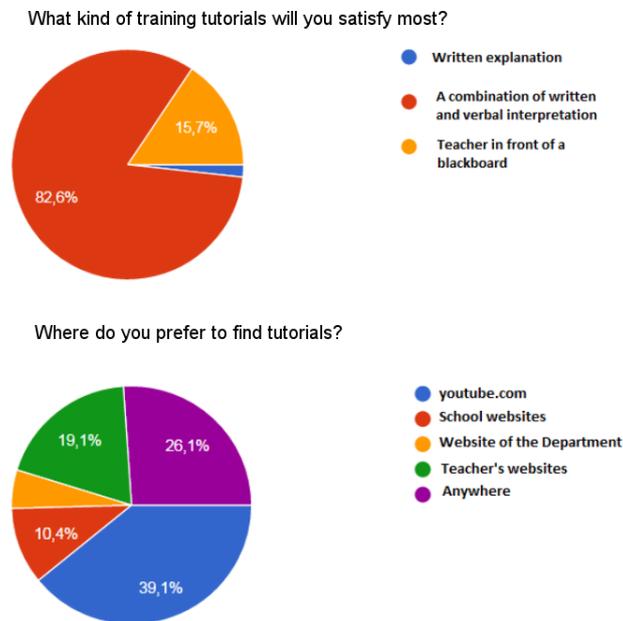


Fig. 34.3 Question 7 - 8

Source: own elaboration

34.2.3 The last question

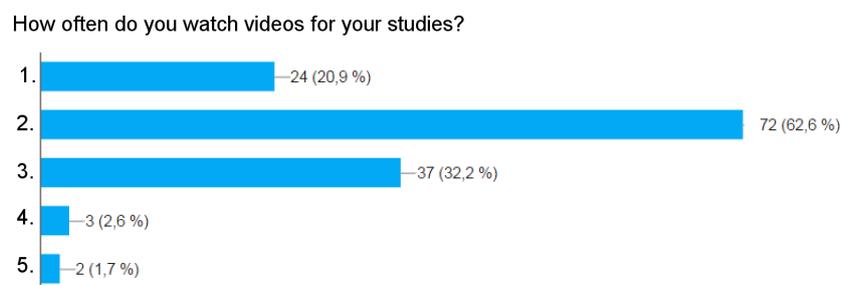


Fig. 34.4 Question 9

Source: own elaboration

1. Every lecture.
2. Just when preparing for the exam.
3. Seeking some topics.
4. Only once.
5. Never.

34.2.4 Linking with engineering practice

Linking with engineering practice in the questionnaire, the students were able to express the content of videos. Often they wished to have handled materials from engineering practice. We have established cooperation with students from higher grades and jointly created a set of examples of engineering practice based on their own experiences. We focus on solving practical problems of engineering practice that can be solved by using the topics taught in the geometry subject.

34.3 SUMMARY OF RESPONSES

This supplement works very well for students. The videos are used mainly to get prepared for the exam. It is not important to them, where the video is hosted. It is important to have information that the video exists.

34.4 OUR PLANS FOR THE FUTURE

Today we finished videos in the curriculum for Faculty of Mining and Geology and the Faculty of Metallurgy and Materials Engineering. In the next two years, we plan to shoot videos for students of Faculty of Mechanical Engineering and Faculty of Civil Engineering. These materials we plan to put on youtube.com. There are two reasons. We will not have a problem with a place on the server and the materials can easily reach our students and even students from other universities. The aim is that the video was created for all classes of geometry that are taught at our university.

CONCLUSION

Student reactions to the video tutorials are very positive. We have good reviews even from students from other universities. For us, this is an encouragement for further work and confirmation, that sharing the results of our work with all who are interested is good idea, and Youtube.com is a good place to make this happened.

REFERENCES

1. <http://homen.vsb.cz/~ham73/>
2. <https://www.techsmith.com/camtasia.html>

YOUTUBE IN TEACHING GEOMETRY

Abstract: *More and more people are turning to the Internet for help in solving their problems. They seek guidance as texts and increasingly video. Even in technical practice people have come to watch the video on youtube that will help them solve their problem. To confirm this assumption, we conducted a survey among students on the basis of the result, we decided to put video tutorials on youtube and offer them to share not only our students but also the public.*

Keywords: *Youtube, video, video tutorials, studying materials.*

YOUTUBE VE VÝUCE GEOMETRIE

Abstrakt: *Stále více se lidé obracejí k internetu s žádostí o pomoc při řešení svých problémů. Hledají jak návodné texty, tak stále častěji videa. I v technické praxi si lidé zvykli dívat se na videa na youtube, která jim pomohou vyřešit jejich problém. Pro potvrzení tohoto předpokladu jsme provedly anketu mezi studenty a na základě jejího výsledku jsme se rozhodly umístit výuková videa na youtube a nabídnout je ke sdílení nejen našim studentům, ale i veřejnosti.*

Klíčová slova: *Youtube, video, výuka, studijní materiály.*

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