

## **Video tutorials as a support to the face-to-face teaching**

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### ***Abstract***

*Video tutorials are a useful tool that strengthens the face-to-face classes. This study focuses on the influence of videos on the perceptions of students in the subject Advanced Financial Transactions. The results of this analysis show a high level of learner satisfaction. They consider that videos help them to improve their learning outcome, since these reinforce the practical contents which have been previously taught in the master class. Videos allow students to be more proactive and autonomous in their learning. The findings support the relevance of integrating new educational tools in the university study programmes.*

***Keywords:*** *E-learning; video-tutorial; learner satisfaction.*

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## **1. Introduction**

During the first semester of the academic year 2018/2019, professors of the Financial Economy and Accounting Area at the University of Almería have launched an initiative to help students in the subject *Advanced Financial Transactions*, located in the 3<sup>rd</sup> year of Degree in Finance and Accounting, complementing their academic training in Financial Mathematics.

Among the financial products commonly used by individual investors and companies we find the bonds, both those issued by the State and those that come from the private sector (i.e. they are issued as a financial source by financial and non-financial companies). Its analysis and correct valuation are essential to make decisions, but its treatment presents certain complexity. In this sense, the first video tutorial carried out was “Calculation of the Internal Rate of Return (IRR) of a bond”. This video shows to students a real and complete example, with all the connotations and difficulties that entails. These are related to the accrued interest to be acquire in the secondary market (Valls and Cruz, 2012). From a sequential approach, it is analyzed in a rigorous and simple way, in order that students can understand all the problems without difficulty. In this sense, students do not only learn how the problem should be laid, but also as it should be solved analytically through the Excel spreadsheet.

In general, when students receive their lessons in different subjects included in their study programme, they do so independently, without an interconnection between them. However, although the formal object of the different subjects is different, the material object is the same. This is particularly true in the Finance and Accounting Area. In that way, the same fact, such as the granting of a loan by a financial institution, is treated in both Financial Mathematics and Accounts. So, in our opinion, the close relationship between the different disciplines should be shown to students. Therefore, we decided conducted this video tutorial about “Amortized cost of a loan”, where we explain in detail how this magnitude is calculated in one of the most frequent and real cases, a loan with indexed interest rate (Valls and Cruz, 2009; Cruz and Valls, 2014; Valls and Ramírez, 2014). In order to keep with the valuation criteria of the Spanish General Accounting Plan, this value should be estimated by the account manager of the company. It is a complex calculation which, in practice and due to its complexity, is not being applied with generality, so that it falls into a normative breach.

Thus, the emergence of several teaching tools and its implementation in the higher education are helping to improve the learning processes and outcomes of the students. The goal and results of this analysis are in line with previous studies (Harjoto, 2017; Jiménez-Castillo and Marín-Carrillo, 2013; Zhang et al., 2006). Videos help student to improve their outcome since these reinforce the practical contents which have been previously taught by the master class. Furthermore, the contribution of these videos goes further, because these material will be available to the students even when they reach their working life.

## **2. Survey methodology**

The students' opinions are key to adapt this educational tool toward the requirements of the teaching-learning process and that it is as useful as possible. In light of the foregoing, the feedback process is essential. Thus, in December 2018, the video tutorials were made available to students on the virtual campus. Once students had watched the videos, a survey was carried out among them. This one had the following form:

1. Video tutorials are useful for the study of this subject.
2. Video tutorials help me understand the concepts explained in the face-to-face class.
3. Video tutorials are useful to complete my academic training in this subject, with respect to the explained in the face-to-face class.
4. My level of knowledge is appropriate to assimilate the content of the video tutorials that I have watched.
5. It has been difficult to me to understand the video tutorials due to the new concepts which appear in them.
6. The design (design, font size, etc.) used in the video tutorials is clear and attractive.
7. Video tutorials boost my autonomous learning.
8. The process of making a video tutorial is easy.
9. I'm qualified to create a video tutorial by myself.
10. My knowledge of the subject is enough to develop a video tutorial.
11. My knowledge of the computer tools is enough to produce a video tutorial.
12. The development of video tutorials should be considered compulsory and, valued as a percentage of the mark in the subject.
13. If the elaboration of video tutorials was compulsory and it supposed a percentage of the mark of the subject, what should that percentage be?
14. What video tutorials would you propose to be developed by the professor?
15. What video tutorials would you propose to be developed by yourself?
16. Comments and suggestions about video tutorials (positive and negative aspects).

The questions 1 to 12 should be valued between 1 and 5, where:

1. Totally disagree.
2. Disagree.

3. Indifferent/neutral.

4. Agree.

5. Strongly agree.

The questions 13 to 16 were set out as open-ended, so that students could speak freely on what they wanted.

### **3. Results**

At the end of the semester, a total of 16 students responded to the survey voluntarily. Summarized descriptive statistics (frequency, mean and standard deviation) of the answers to the questions 1 to 12 are given in Table 1. Furthermore, Table 2 shows the distribution of our sample with respect to these variables (questions 1-12).

The statement "Video tutorials are useful for the study of this subject" has been evaluated with 4.5 points (8 students agree and 8 totally disagree), giving 50 per cent of the survey's students the highest rating.

The statement "Video tutorials help me understand the concepts explained in the face-to-face class" has reached, on average, the highest score with 4.69 points (5 students agree and 11 strongly agree), giving 69 per cent of the surveyed students the highest rating.

The statement "Video tutorials are useful to complete my academic training in this subject with respect to the explained in the face-to-face class" has reached 4.5 points on average (giving 56 per cent of the students the highest rating), like the first question. However, this assertion shows a greater dispersion due to one student considers indifferent this tool.

The statement "My level of knowledge is appropriate to assimilate the content of the video tutorials that I have watched" has reached, on average, 4.31 points given that 9 students agree and 6 strongly agree (38 per cent).

The statement "It has been difficult to me to understand the video tutorials, due to the new concepts which appear in them" is viewed favourably. Most of the students are totally disagree (6 students) and disagree (7 students), while around 81 per cent consider the level of their knowledge appropriate to assimilate the video tutorials; and 19 per cent of students are feeling neutral about this.

The statement "The design (design, font size, etc.) used in the video tutorials is clear and attractive" has reached, on average, 4 points where 75 per cent of the students agree or totally agree, while about 25 per cent of the students are neutral. In this sense, it is necessary to emphasize that neither student considers it unattractive.

The statement “Video tutorials boost my autonomous learning” has reached an average score of 4.25. In particular, 13 students agree and strongly agree with this, but 3 students are indifferent to it.

**Table 1. Frequency distribution of the answers 1 to 12.**

Answers	Questions											
	1	2	3	4	5	6	7	8	9	10	11	12
1	0	0	0	0	6	0	0	2	1	0	2	1
2	0	0	0	0	7	0	0	7	6	4	4	5
3	0	0	1	1	3	6	3	3	3	6	2	4
4	8	5	6	9	0	4	6	3	6	6	5	6
5	8	11	9	6	0	6	7	1	0	0	3	0
<b>Mean</b>	<b>4.50</b>	<b>4.69</b>	<b>4.50</b>	<b>4.31</b>	<b>1.81</b>	<b>4.00</b>	<b>4.25</b>	<b>2.63</b>	<b>2.88</b>	<b>3.13</b>	<b>3.19</b>	<b>2.94</b>
Std.dev	0.25	0.21	0.38	0.34	0.53	0.75	0.56	1.23	0.98	0.61	1.78	0.93

Source: Author’s estimation (2018)

The statement “The process of making a video tutorial is easy” shows some degree of dispersion because 9 students think it is complicated, 3 of them feel neutral and 4 students consider it easy to do.

The statement “I am qualified to create a video tutorial by myself” is definitely not shared by students, approximately 43 per cent of them do not consider themselves qualified, while only 38 per cent think they are; and 19 per cent of students feel neutral about it.

With the statement “My knowledge of the subject is enough to develop a video tutorial”, 6 students agree, while 4 students disagree and 6 feel neutral.

The statement “My knowledge of computer tools is enough to produce a video tutorial” presents a large dispersion among the answers. On average, 38 per cent (6 students) do not consider themselves capable of producing a video tutorial, while 50 per cent do consider themselves so (8 students). Considering also the previous assertion, it seems that the students have a greater command over the computer tools rather than the topics of the subject.

The statement “The development of video tutorials should be considered compulsory and valued as a percentage of the mark in the subject” is indifferent to 25 per cent of the surveyed students, the 50 per cent agree and the rest disagree. Additionally, they were asked about what percentage of the grade should be this activity over the total. There were 6 students who chose the weight of a 10 per cent, 4 students considered that between a 10 per cent and a 20 per cent, 3 students came to consider a 30 per cent and even one student proposed up to a 40

per cent; the other 2 students did not specify the weight over the total grade, but they said that it should be a low percentage.

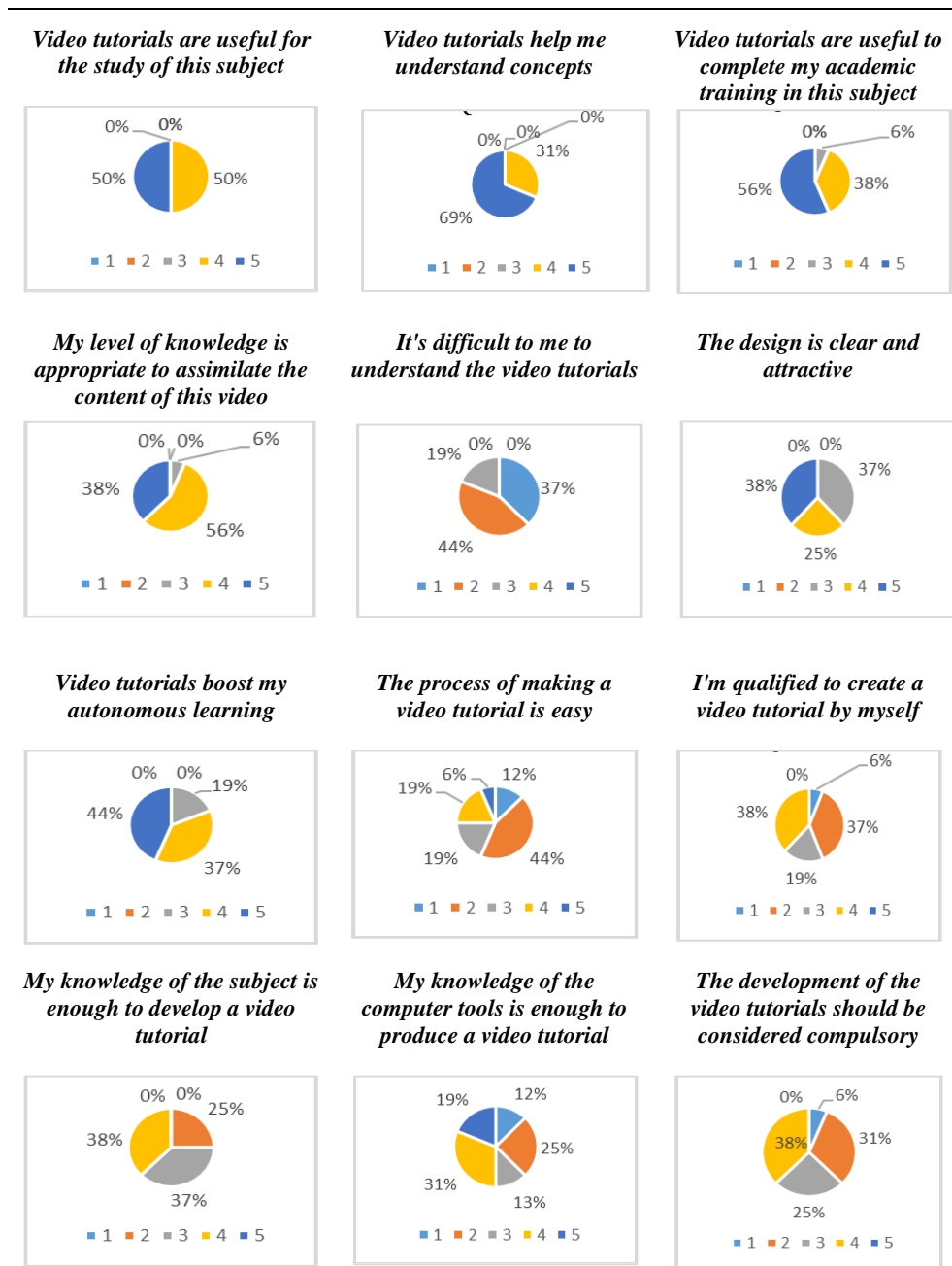


Figure 1. Percentage of question 1 to 12 . Source: Author's estimation (2018).

Considering the question “What kind of video tutorials would you propose to be developed by the teacher?”, most of the students answered that they should focus on the most difficult sections of the subject (pension fund, loans, etc.). Some students suggested that they preferred to have basic material about Financial Mathematics (2<sup>nd</sup> year of Degree in Finance and Accounting) about financial income and loan repayment methods.

Regarding the question “What video tutorials would you propose to be developed by yourself?”, most of the students prefer videos about easy topics of the subject (for example, cash trade, etc.). One student proposed to split up the class into different working groups and that each one of them were responsible for a topic of the subject, supporting in addition, the teamwork. Another student proposed to produce one video for each topic, to commit himself to study the subject in detail and not leave the study for the end of the semester.

Finally, the open question about “Comments and suggestions about video tutorials (positive and negative aspects)” had the following answers:

- *Positive aspects:* It is easy to watch them when you want; the possibility of watching them several times (as many times as one needs); the possibility of rewinding the video when something is not clear enough; videos are clearly explained; the calculation process is shown; the development of video tutorials by the students would force them to study the subject in depth; it is a support for the study; if they were compulsory for the students, it would suppose an extra in the final mark; it makes the study more pleasant; it improves the students’ learning and performance.
- *Negative aspects:* Regarding the calculations in the spreadsheet, it would be better to have a completed video rather than screen dump of the video tutorials; having the support of these tutorials can lead students to not attend class.

#### **4. Conclusions**

The most relevant results of this study are the following:

1. Video tutorials created by the teaching staff represent an useful complement for the students, strengthening and expanding their knowledge acquired with the face-to-face methodology. In this sense, students can watch these videos as many times as necessary at home, according to their necessities. In addition, during the tutorial they can stop and back, if they consider necessary to watch it again. Thus, they can consolidate the topics more complex.
2. Video tutorials are a useful tool for the student to use it in their professional future, when they need to remember some of the topics explained in the subject. We must emphasize that the tutorials have a practical standpoint because the teachers have been based on real

examples of the financial market. Also, the videos explain, in a didactic way, problematic issues found in the professional exercise of the financial management and/or accounting.

3. The creation of video tutorials by students requires that they have previously studied the issue, to acquire the necessary knowledge for its development. Likewise, it requires that students have a good command of computer applications for its implementation.

4. The development of video tutorials by students provides them the knowledge and skills necessary to develop presentations for colleagues, bosses or clients in a future job.

Finally, our study has limitations that provide opportunities for further exploration. Our sample size and video tutorials were scarced. Thus, future research will extent this questionarie and the number of video tutorials to other courses in the Finance and Accounting Area to increase the number of participants.

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