

Students' Acceptance of an Educational Videos Platform: A Study in a Portuguese University

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ABSTRACT

The Educast is an educational videos' platform that captures simultaneously video and digital support materials. This paper presents a study on the acceptance of Educast, by students, using the Technology Acceptance Model–TAM. The data was collected through a questionnaire applied to 54 students which results were analyzed using descriptive analysis and non-parametric tests. It was concluded that students expressed a positive attitude towards the variables Perceived Ease Of Use, Perceived Usefulness and Attitude Toward Using. The comparison between ratings assigned to the questionnaire items by the students who viewed video recordings and those that did not was performed, and it was found that the former showed higher levels of agreement with the referred items than the latter. It is considered that introducing some training before students have contact with Educast should be taken into account. The result of this work can be valuable not only for researchers on the Education area, but also for teachers that intend to use educational videos in their teaching/learning environment.

KEYWORDS

Educast, Educational Video, Higher Education Institutions, TAM

1. INTRODUCTION

The Educast is a platform of educational videos made available to the Higher Education Institutions (HEI) in Portugal. This platform captures simultaneously the live classroom recording in video and the digital support material displayed by the instructor on the computer. In the present study, an experience of the use of this platform is described, in the context of the Curricular Unit (CU) of 'Innovation and Entrepreneurship', taught to several doctoral programs at the University of Aveiro (UA).

This work is part of a project that aims to evaluate the acceptance of technologies as a means to improve the quality of the Teaching/Learning process. The data was obtained through the application of a questionnaire. In particular, the study described in this article aims to evaluate the acceptance of Educast by a group of students from the UA, through the Technology Acceptance Model (TAM) (Davis, 1986). Additionally, a comparison between the ratings assigned to the items by students that have seen at least one recording and those who have not seen any videos was performed.

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2. MODELS OF TECHNOLOGIES ACCEPTANCE EVALUATION

There are several models that explain the acceptance of technology by the users, being the TAM one of the most used (Sharma, Joshi, & Sharma, 2016). This model is based on the Theory of Reasoned Action (TRA), in which the Theory of Planned Behavior (TPB) is also based. More recently, the Unified Theory of Acceptance and Use of Technology (UTAUT) was developed based on 8 models, including the TRA and the TAM (Venkatesh, Morris, Davis, & Davis, 2003).

2.1. Theory of Reasoned Action

The TRA model was introduced by Fishbein and Ajzen in 1975, being widely used in social psychology, when the determinants of behavior (Davis, Bagozzi, & Warshaw, 1989) are concerned. This model is a very general model and should be adapted when the objective is to study the determinants of the computer technology's use behavior (Davis et al., 1989). It consists of the variables (1) Actual Behavior, (2) Behavioral Intention, (3) Attitude Toward Behavior, (4) Subjective Norm, (5) Beliefs and Evaluations, and (6) Normative Beliefs and Motivation to Comply. The behavior of the user (Actual Behavior) is determined by the Behavioral Intention, which in turn is influenced by the Attitude Toward Behavior and the Subjective Norm. The Attitude Toward Behavior is influenced by the Beliefs and Evaluations, and the Subjective Norm by Normative Beliefs and Motivation to Comply (Figure 1).

According to Tan and Ramayah (2014), this model has been effectively applied in numerous studies in areas like knowledge management, medical studies, social psychology and information technology adoption.

2.2. Theory of Planned Behavior

The TPB model is a theory that explains individual behavior and was developed based on the TRA. This theory suggests that individual behavior is driven by intention that depends on three factors: (1) Attitude Toward the Behavior, (2) Subjective Norms, and (3) Perceived Behavioral Control, which, in turn, influence each other (Ajzen, 1991) (see Figure 2).

The TPB has been applied in various contexts including technology (Davis, 1989, Chang, 1998), and specifically applied to the use of mobile devices in higher education (Cheon, Lee, Crooks, & Song, 2012).

2.3. Technology Acceptance Model

The TAM, developed by Davis (1986), is the most widely used model whenever it is intended to evaluate the acceptance of a particular technology (Venkatesh et al., 2003).

According to TAM (Figure 3), the Actual System Use (ASU) of the technology being analyzed is determined by the Attitude Toward Using (ATU) that is influenced by two variables: Perceived Ease Of Use (PEOU) and Perceived Usefulness (PU) which, in turn, are influenced by other external

Figure 1. TRA model (Davis et al., 1989)

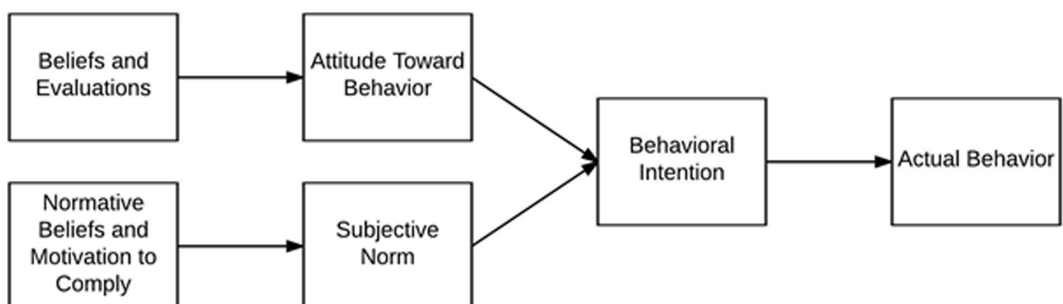
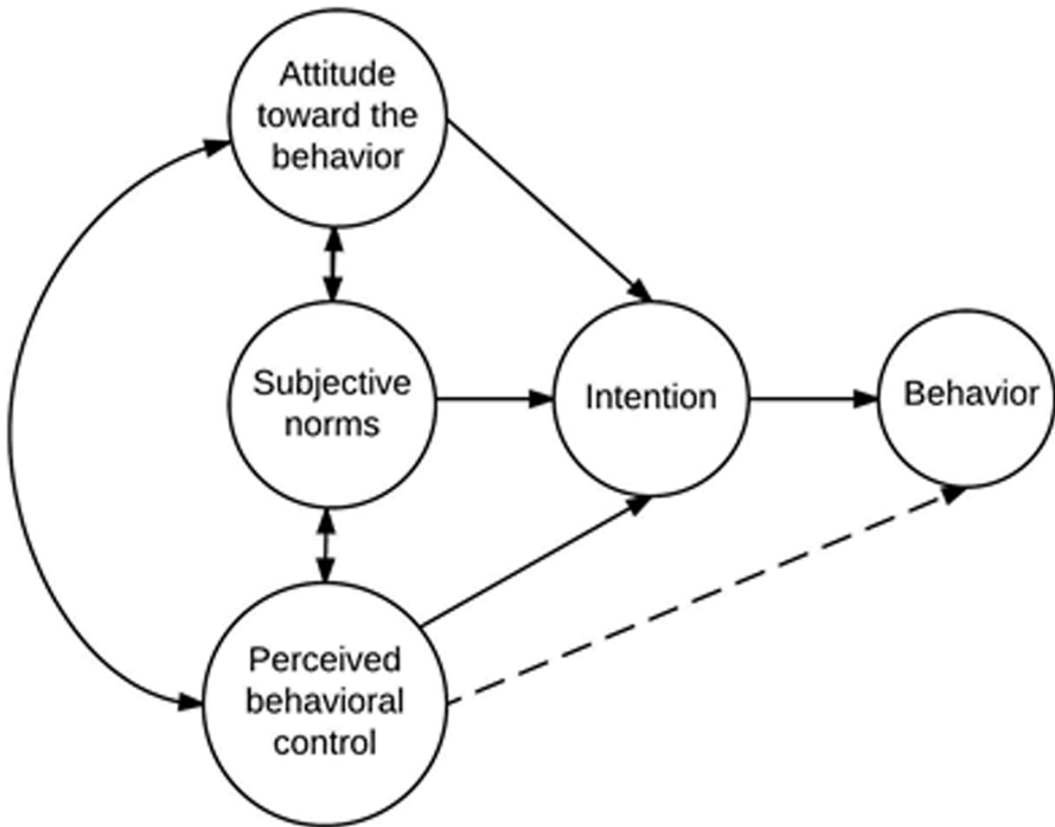


Figure 2. TPB model (Ajzen, 1991)



variables (X1, X2 and X3) (Davis, 1986). The number of external variables depends on the type of study performed. For example, the study from Oum and Han (2011) used six external variables and the one from Kwon and Wen (2010) used four.

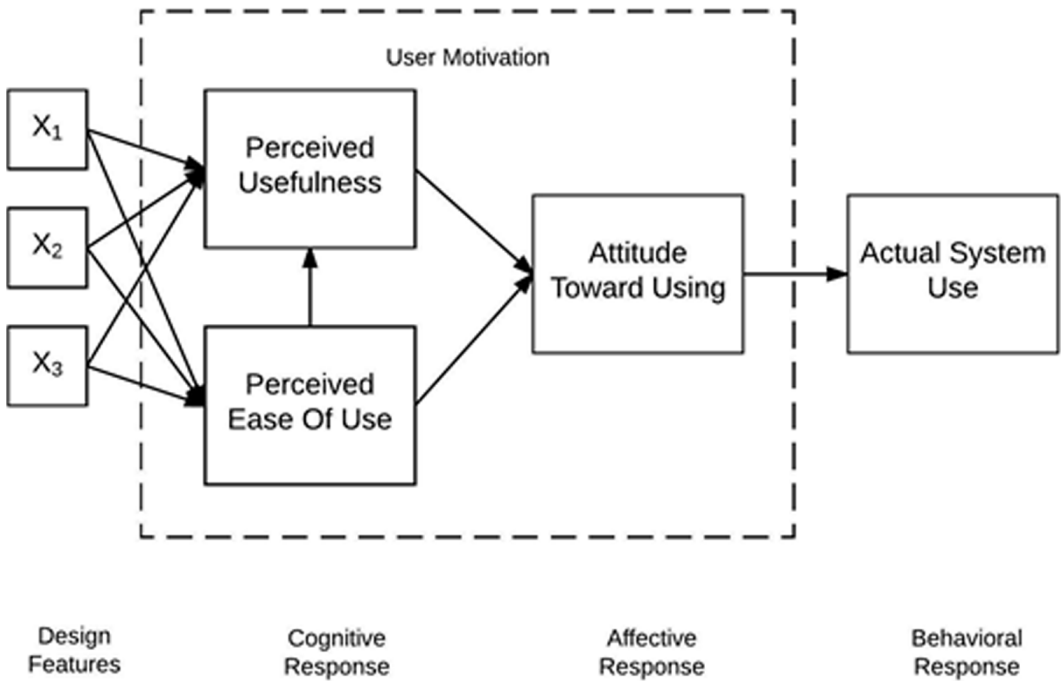
PEOU is defined as the degree to which an individual believes that the use of a particular system is intuitive and does not require great effort (Davis, 1986; Davis, 1989). PU is defined as the degree to which an individual believes that use of the system contributes to increase the performance of his/her work (Davis, 1986; Davis, 1989; Davis et al., 1989). It may be influenced both by external variables or the PEOU, since technologies perceived as easier to use tend to be perceived as more useful. ATU is defined as a positive or negative sense of an individual on the use of the system (Davis, 1986; Davis, 1989; Davis et al., 1989) and is influenced by PU and PEOU variables. The users' motivation is determined by the three variables PEOU, PU and ATU.

The TAM used in practical cases is commonly an adapted version of the original model where external variables are added according to the specific characteristics of the analyzed technology (Oum & Han, 2011). Those models evaluate the acceptance of technologies by users of various tools, such as YouTube (Yang, Hsu, & Tan, 2010), Webcast (Lust, Elen, & Clarebout, 2012), Video podcasting (Sanchez-Fernandez, Jimenez-Castillo, & Marin-Carrillo, 2013), or instructional Video (Donkor, 2011).

2.4. Unified Theory of Acceptance and Use of Technology

The UTAUT, developed by Venkatesh et al. (2003) and represented in Figure 4, is based on other conceptual models of technology acceptance. This model consists of four constructs: (1) Performance

Figure 3. Technology acceptance model (Davis, 1986)



Expectancy, (2) Effort Expectancy, (3) Social Influence, and (4) Facilitating Conditions; and also by 4 moderating variables: (1) Gender, (2) Age, (3) Experience, and (4) Voluntariness of Use.

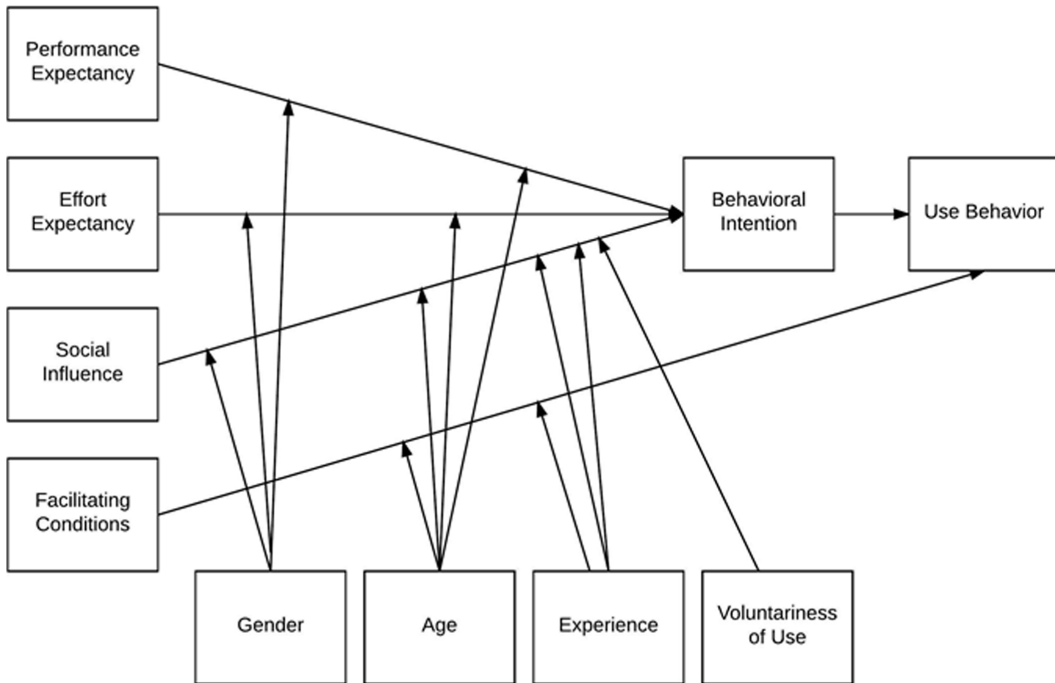
The Performance Expectancy is defined as “the degree to which an individual believes that using the system will help him or her to improve job performance” (Venkatesh et al., 2003, p. 447). This construct evolved from other models’ constructs, like, for example, the PU of TAM (Venkatesh et al., 2003). The Effort Expectancy is defined as “the degree of ease associated with the use of the system” (Venkatesh et al., 2003, p. 450). This construct includes the PEOU of the TAM (Venkatesh et al., 2003). The Social Influence is defined as “the degree to which an individual perceives how important it is for other people to use the system” (Venkatesh et al., 2003, p. 451). The Facilitating Conditions are defined as “the degree to which an individual believes that an organizational and technical infrastructure exist to support the system” (Venkatesh et al., 2003, p. 453). The first three constructs (Performance Expectancy, Effort Expectancy, and Social Influence) influence the Behavioral Intention and the last (Facilitating Conditions) influences the Use Behavior.

2.5. Comparisons of the Models that Predict the Intention to Use Technology

The TPB model is an extension of the TRA that adds the variable Perceived Behavioral Control, defined as the perception of a person on the ease or difficulty of the practice of a particular behavior (Venkatesh & Speier, 1999). According to the result of the study of Chang (1998), TPB is better than TRA in predicting behavior from intention in information systems area (Mathieson, 1991).

The TAM and TPB models predict intention to use an information system quite well, with TAM having a slight empirical advantage. TAM is easier to apply, but only supplies very general information on users’ opinions about a system. TPB provides more specific information that can better guide development (Mathieson, 1991). TPB is more difficult to apply across diverse user contexts than TAM, as TAM’s constructs are measured in the same way in all situations and TPB requires a pilot

Figure 4. UTAUT model (Venkatesh et al., 2003)



study to identify relevant outcomes, reference groups, and control variables, in each different context in which it is used (Mathieson, 1991).

TAM assumes that beliefs about usefulness and ease of use are always the primary determinants of user decisions (Mathieson, 1991). This model explains attitude towards using an information system much better than TPB, and may be the model of choice when ATU is of particular interest (Mathieson, 1991). TAM provides a quick and inexpensive way to gather general information about individuals' perceptions of a system and can be used to measure general levels of satisfaction across a range of users with diverse interests. TPB delivers more specific information, giving more insight regarding why an individual or group might be dissatisfied. However, it is costlier to apply (Mathieson, 1991).

The UTAUT model is a more recent instrument based on eight models (Ling, Downe, Ahmad, & Lai, 2011), including TRA, TPB and TAM. This model includes the Social Influence variable which is not taken into account in TAM (Ling et al., 2011). Mathieson (1991) considers that the fact of TAM not including explicitly any social variables can represent a disadvantage of this model.

3. EDUCATIONAL VIDEO

The videos are important educational resources that enable students to get knowledge more efficiently and intuitively than text-based educational resources (Yu, Pedrinaci, Dietze, & Domingue, 2012).

During the last decades, videos have been widely known and frequently used in many HEI to convey contents in the teaching/learning context (Lujan-Mora, 2012; Fernandez et al., 2011).

Educational videos can be divided into three categories depending on their use and purposes: demonstration videos, narrative videos and recorded lecture sessions (Caspi, Gorsky, & Privman, 2005).

Demonstration videos show and explain a procedure. This category of educational videos can have two aims: (1) allowing students to assist to procedures that otherwise are not available to them or

(2) recording students' performance for feedback purposes (Caspi et al., 2005). This type of videos is used in medical context, since many clinical situations are unavailable to students (Caspi et al., 2005). Demonstration videos are a really good tool to allow and improve autonomous learning, becoming much more effective than other methodologies based on more traditional methods, such as books and written manuals or oral explanations (Caspi et al., 2005).

Narrative videos correspond to the recording of situations where instructors speak about a subject. These videos are commonly used to learn languages, and are "useful and effective because they present the learner with a full communicative and cultural context of language alongside its lexical and grammatical aspects" (Caspi et al., 2005, p. 32). Admiraal and Berry (2016) describe the use of narrative video as a way to assess students that are being prepared to be teachers in the future, in terms of the relationships among their teaching competencies, the way those competencies are used in practice and their development over time.

Recorded lecture sessions consist of videos where a lecture is recorded and can afterwards be reproduced by the user. In this type of communication, instructors present the subject as they do in class (Caspi et al., 2005). These videos have been the most commonly used educational videos during the last decades (Fernandez et al., 2011).

The video recorded lectures have been mainly useful for the following purposes (Canessa, Fonda, & Zennaro, 2009; Palmer, 2007):

- to review/revise missing points and concepts
- to clarify handwritten notes
- to recover missed classes
- to understand concepts when lecturers went too fast
- to prepare for exams
- to avoid writing notes and concentrate on the blackboard
- to help students remember key concepts
- to help to understand the issues

These videos have been least useful when they are too long or contain too much information (Fernandez et al., 2011; Palmer, 2007).

Educational videos are used as instructional material in online learning (Yu et al., 2012). According to Purcell (2010), among Internet Users, almost 70% of adults (≥ 18 years old) watch or download videos frequently, being young adults (between 18 and 29 years-old) the heaviest consumers of online videos (84%).

A wide range of educational videos is available on online video services, like YouTube, Vimeo, Khan Academy, TED and PBS (Lujan-Mora, 2012). When trying to use the video in e-learning, the following recommendations should be considered (Filipe & Dias, 2013):

- use a small introductory video for each topic
- produce short videos to encourage the learning of content and enable a connection between teacher and student
- start the course with a welcome message, where the lecturer presents himself/herself and the course to students

The educational videos, especially in the online courses are very well accepted by the students, because the students like to see the visual expression of the teacher in their relationship with the contents (Filipe & Dias, 2013). However, Fernandez et al. (2011) argue that educational videos must be incorporated into the rest of the course materials, thus promoting a more diverse learning environment.

3.1. The Educast Platform

The Educast is a Portuguese service used to manage educational videos from recording to distribution of academic contents (Filipe & Dias, 2013; Martins, Ribeiro, Ribeiro, & Dias, 2012). This service is based on a technology platform for production, editing and distribution of videos that allows the user to have full autonomy throughout the process (Martins et al., 2012). The educational videos become available to students through the Internet (Filipe & Dias, 2013).

This service is a partnership between the Portuguese Foundation for National Scientific Computing-FCCN (Portuguese manager of the National Research and Education Technology technological network), SWITCH (Swiss manager of the National Research and Education Technology technological network) and the University of Porto (Filipe & Dias, 2013; Martins et al., 2012). It "... provides to all HEI's in Portugal an integration into a professional structure to support the level of production of audiovisual content for e-learning and blended learning. This structure relies on the support of professionals to ensure high levels of service and, consequently, a great confidence to the teachers and other audiovisual content producers in the various academic communities in Portugal..." (Martins et al., 2012, p. 2).

The platform was launched in March 2011 (Filipe & Dias, 2013) with the adherence of 15 HEIs in Portugal. The data after one year indicated that 28 HEIs have joined the project with 1607 videos produced integrated in 311 channels. After two years, there were 37 HEIs using Educast, 5882 available videos in 748 channels (Martins, Ribeiro, Ribeiro, & Dias, 2013).

Following, the main features of this platform are listed (FCCN, 2016):

- to produce cultural, informative, or entertaining video educational contents
- to capture simultaneously the video of the physical action and the slides eventually shown
- to manage the educational content from classes recorded
- to publish the final video in different formats
- to integrate videos in e-learning systems, portals and websites
- to restrict the access to the contents

Although the record of lectures is the main use of this platform, it can also be used in demonstration or narrative videos. The technical requirements necessary for recording a lecture are: Apple Mac computer, Firewire (H)DV camera and tripod, microphone or other audio source and Epiphan device to capture the slides from another computer (FCCN, 2016).

4. METHODOLOGY

This article aims to evaluate the acceptance, by a group of students of the UA, of the recordings of academic content (lessons) published in Educast, as a means of promoting the improvement of teaching/learning process. As TAM was specifically designed for being applied in technology acceptance evaluation, and has been extensively used and easier to apply than other models, it was decided to use TAM in this particular study.

The practical work described below was carried out in the context of the CU 'Innovation and Entrepreneurship', taught to several doctoral programs at the UA, with 70 students enrolled. This CU was structured in 7 lessons of 3 hours each, divided into two parts. All the lessons of this CU were recorded in two videos, one for 1st part and another for the 2nd one, and were made available to the students using the Educast.

The acceptance of Educast was evaluated through the use of a questionnaire, organized into three groups of questions. The first one aimed to characterize the respondents in terms of gender, age, course, occupational status, availability to attend classroom lessons, and the time spent in traveling to the university. The second one aimed to characterize the use of Educast in terms of the number of

assisted videos and the type of device and format used to access them. The third group of questions aimed to collect data on the acceptance of the use of Educast in the teaching/learning context and comprises 9 items corresponding to the TAM (Table 1), measured on a scale of 1 (Strongly disagree) to 5 (Strongly agree).

The items included in PEOU aim to collect data on the degree to which students believe that using Educast is intuitive and does not require great effort, while the items belonging to PU aim to evaluate the degree to which students believe that using Educast enhances their performance. The items included in ATU aim to assess the students' feelings towards using Educast in the learning context.

The collected data were analyzed using the IBM SPSS Statistics 22 software. First, a descriptive analysis was performed in order to characterize the participants and the use of Educast. Afterwards, Mann-Whitney tests were carried out to verify whether there were statistically significant differences between the students that viewed at least one video and those that did not view any video.

5. RESULTS AND DISCUSSION

There were obtained 54 answers to the questionnaire applied to the students attending the 'Innovation and Entrepreneurship' CU. The results are presented in the following sub-sections: (1) characterization of the participants, (2) characterization of the use of the Educast, (3) acceptance of the use of Educast, and (4) comparison of the acceptance of Educast between users and non-users.

5.1. Characterization of the Participants

Regarding the characterization of respondents, it can be noticed that they were 63% female and 37% male and that their average age was 28.4 years old ($s=5.25$), being the minimum 22 years old and the maximum 49 years old.

Table 2 shows the number of respondents attending the CU, by PhD area. It can be observed that most of them were from Biology (39%).

Regarding the occupational status, it can be seen, in Table 3, that most of the participants were researchers (83%), being about 9% employed with activities outside the academic field (Employed-others).

Table 1. Items used in the questionnaire

Construct	Item
PEOU	PEOU1-Overall, I find the Educast is easy to use for viewing the academic contents recordings.
PU	PU1-Using academic contents recordings allows me to have flexibility in the organization of my study/work.
	PU2-Using academic contents recordings allows me to review the materials presented in class.
	PU3-Using academic contents recordings allows me to retrieve classes which I had no opportunity to attend in person.
	PU4-Using academic contents recordings allows me not to be worried about taking notes in class and thus concentrate more on the presentation by the lecturer.
	PU5-Overall, I find the academic contents recordings useful for my learning.
ATU	ATU1-I like the idea of being able to attend courses using academic contents recordings.
	ATU2-If there is the possibility of using academic contents recordings in my learning, I intend to do so.
	ATU3-Overall, I have a positive attitude towards using academic contents recordings in the Teaching/Learning process.

Table 2. Number of respondents attending the curricular unit, by PhD area

Area of the PhD	N
Biology	21
Physical	12
Chemistry	10
Engineering*	9
Others**	2
Total	54

Legend: *Civil Engineering, Mechanical Engineering, and Industrial Engineering and Management.

**Energy Systems and Climate Change, and Tourism.

Table 3. Number of students per occupational status

Occupational status	N
Research	45
Employed – others	5
Professor	3
Unemployed	1
Total	54

Table 4 presents the distribution of the number of respondents taking into account their availability to attend classroom lessons per week. It can be observed that most of the students (72%) have only half a day per week to attend classes (there was 1 missing value).

When analyzing the time that students spend in traveling from the place where they usually are to the UA in order to attend to classes, it can be observed that it is, on average, 31 minutes ($s=39.0$), being the minimum 1 minute and the maximum 180 minutes.

5.2. Characterization of the Use of Educast Platform

The data collected in the questionnaire’s section about the use of the Educast regarding the number of students attending the lessons and viewing the videos’ recordings, type of device used and videos’ format accessed are synthesized in Tables 5, 6 and 7, respectively.

Note that, as already referred, the studied CU was structured in 7 lessons, each one composed of two parts, being videos recorded separately for each part.

Table 4. Weekly availability of students to attend classroom lessons

Availability (per week)	N
1 half day	38
1 day or 2 half days	9
3 half days	1
2 days or 4 half days	5
Total	53

The number of students attending lessons varied from 28 (52%, 5th lesson) to 42 (78%, 1st lesson). In what concerns the videos' visualizations, it can be seen that the number of respondents that viewed the videos varied from 17 (31%, 7th lesson, 2nd part) to 29 (54%, 1st lesson, 1st part and 2nd part).

Regarding the students that attended lessons in person and viewed the respective videos, the number of respondents varied from 6 (7th lesson, 2nd part) to 19 (1st lesson, 2nd part), while the number of students that did not attend lessons in person and viewed the respective videos varied from 8 (2nd lesson, 2nd part) to 19 (5th lesson, 1st part). Considering the devices used to access and view the videos, it can be observed in Table 6 that most respondents used the computer (94%).

Taking into account the videos' format used, Table 7 illustrates that most respondents used the Flash format (54%), followed by QuickTime (40%).

Finally, regarding the place where students accessed the videos, it was found that 60% of them viewed at home, 15% at the UA, 9% at the UA and home, 6% at the workplace, 6% at the workplace and home, 2% at UA and workplace and 2% at other HEI.

5.3. Acceptance of the Use of Educast Platform

The acceptance of the use of Educast in teaching/learning context was evaluated through the variables: PEOU, PU, and ATU of the TAM.

Table 5. Number of students attending the lessons and viewing videos

	Attended lessons:		Number of respondents that viewed the videos	
			1 st part of the lesson	2 nd part of the lesson
1 st Lesson	Yes	42	18	19
	No	12	11	10
	Total	54	29	29
2 nd Lesson	Yes	40	13	12
	No	14	10	8
	Total	54	23	20
3 rd Lesson	Yes	30	9	9
	No	24	15	14
	Total	54	24	23
4 th Lesson	Yes	39	12	14
	No	15	14	14
	Total	54	26	28
5 th Lesson	Yes	28	8	7
	No	26	19	17
	Total	54	27	24
6 th Lesson	Yes	32	11	10
	No	22	17	16
	Total	54	28	26
7 th Lesson	Yes	29	7	6
	No	25	13	11
	Total	54	20	17

Table 6. Devices used to access and view the videos

Devices	
Computer	51
Tablet	2
Computer and Tablet	1
Total	54

Table 7. Format used to access and view the videos

Format	
Flash	26
QuickTime	19
iPod	2
Flash and QuickTime	1
Total	48

Table 8. Frequencies and descriptive statistics for the items from the questionnaire

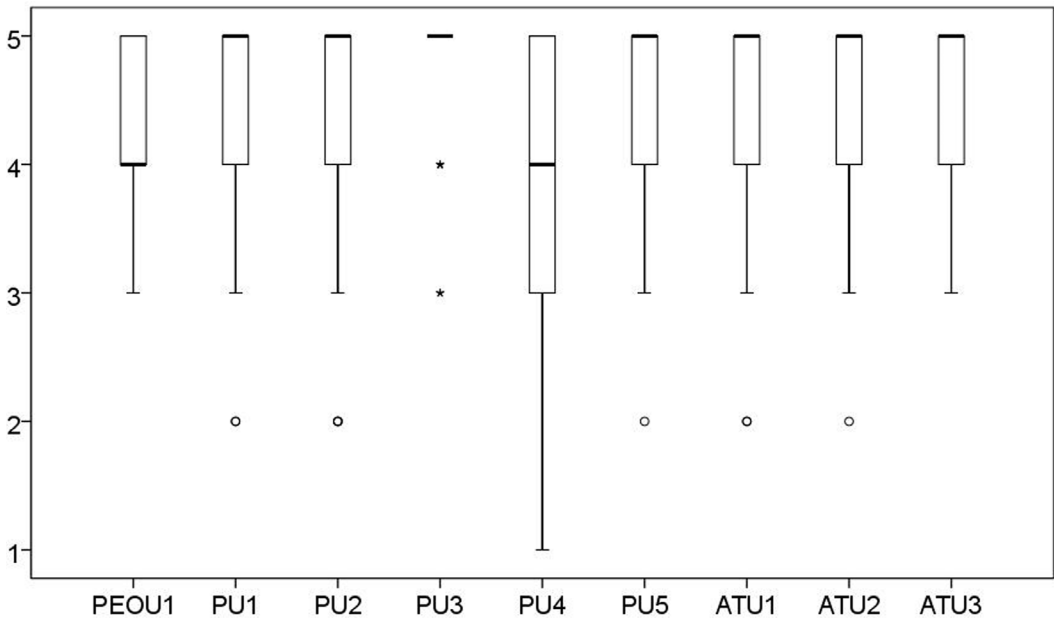
Variable	Item	Level of agreement					Total	Mean	SD
		1	2	3	4	5			
PEOU	PEOU1	0	0	8	21	23	52	4.3	0.72
PU	PU1	0	2	7	13	31	53	4.4	0.86
	PU2	0	3	1	13	36	53	4.6	0.80
	PU3	0	0	2	5	45	52	4.8	0.47
	PU4	3	6	14	13	16	52	3.6	1.21
	PU5	0	1	8	12	32	53	4.4	0.82
ATU	ATU1	0	2	6	10	35	53	4.5	0.85
	ATU2	0	1	8	15	29	53	4.4	0.81
	ATU3	0	0	4	16	33	53	4.6	0.64

The items of the questionnaire that assess acceptance of view of academic content videos published in Educast (see Table 1) were analyzed based on descriptive analysis – frequencies, mean, and standard deviation (SD) – as can be seen in Table 8, and on a graphical representation of statistics – box plot, shown in Figure 5.

In general, students expressed a very positive attitude towards the items related to the PEOU, PU and ATU. It is emphasized however that the ATU variable is the one that has a higher mean value, being this result in line with the study of Sanchez-Fernandez et al. (2013) that mentions that the attitude toward using video podcasts positively affects the effective use of the tool.

Considering the particular items, PEOU1 – “Overall, I find the Educast is easy to use for viewing the academic contents recordings” (as well as PU4, analyzed next), presents a lower median than the other items, revealing that it may be necessary to introduce some training before students having the first contact with the platform.

Figure 5. Box plots of the level of agreement of each item relating to assessment of the use of Educast platform



On average, the highest rated item is PU3 – “Using academic contents recordings allows me to retrieve classes which I had no opportunity to attend in person”, which may mean that e-learning classes can be seen as an alternative for classroom lessons. It is emphasized, however that the item PU4 – “Using academic contents recordings allows me not to be worried about taking notes in class and thus concentrate more on the presentation by the lecturer” has lower classifications than the others, showing that some respondents (44%) do not consider that the video can replace the notes taken from classes, having assigned a score of 3 or less to that item.

Regarding the attitude towards using, it is stressed that ATU3 – “Overall, I have a positive attitude towards using academic contents recordings in the Teaching/Learning process”, has a lower dispersion than the majority of the items, with 92% of the respondents classifying it with levels 4 or 5, showing a very positive attitude towards this platform.

The favorable rating assigned to items PU2 – “Using academic contents recordings allows me to review the materials presented in class”, and PU5 – “Overall, I find the academic contents recordings useful for my learning”, corroborate the results of the study by Canessa et al. (2009), that mention that the recordings are mainly useful for revising missing points and concepts.

5.4. Comparison of the Acceptance of Educast Between Users and Non-Users

Based on the items previously described and analyzed, the comparison of the acceptance of Educast between the respondents that used it at least once and those who did not use, was performed applying unilateral Mann-Whitney tests of hypothesis with a significance level of 5%.

Table 9 presents some descriptive statistics of the two groups for each of the items (see Table 1): number of respondents (N), minimum (Min), maximum (Max) and median, together with the *p*-values of the Mann Whitney tests that were performed.

Taking into account the results presented in Table 9, it can be observed that the central tendencies of the two groups distributions show significant differences (5%) for the items PEOU1, PU5 and ATU3. It was also found that the group of students who viewed the recordings exhibited higher levels of agreement with those items of the questionnaire than the group of students that did not

Table 9. Descriptive statistics and p-value of Mann-Whitney tests

	Used Educast	N	Min	Max	Median	p-value
PEOU1	Yes	31	3	5	5	0.029
	No	20	3	5	4	
	Total	51	3	5	4	
PU1	Yes	31	2	5	5	0.138
	No	21	3	5	5	
	Total	52	2	5	5	
PU2	Yes	31	2	5	5	0.192
	No	21	2	5	5	
	Total	52	2	5	5	
PU3	Yes	30	3	5	5	0.185
	No	21	3	5	5	
	Total	51	3	5	5	
PU4	Yes	30	1	5	4	0.074
	No	21	1	5	3	
	Total	51	1	5	4	
PU5	Yes	31	3	5	5	0.047
	No	21	2	5	5	
	Total	52	2	5	5	
ATU1	Yes	31	2	5	5	0.121
	No	21	2	5	5	
	Total	52	2	5	5	
ATU2	Yes	31	3	5	5	0.051
	No	21	2	5	4	
	Total	52	2	5	5	
ATU3	Yes	31	3	5	5	0.034
	No	21	3	5	4	
	Total	52	3	5	5	

view. Note that such differences may reflect the fact that students who viewed the recordings have a higher perception, overall, towards the Perceived Ease Of Use, Perceived Usefulness, and Attitude Toward Using, although they do not show that tendency on the more specific items (PU1, PU2, PU3, PU4, ATU1 and ATU2). It can be then concluded that there was a greater acceptance of the use of Educast by the respondents that experienced that platform at least once than by the ones that never experienced it. This fact is in line with the results obtained with item PU4 that revealed the need for some training before students having the first contact with the platform, as mentioned previously, helping to break the resistance to change, which happens frequently with new technologies.

6. LIMITATIONS

Some limitations of this work are related with the small sample size ($N = 54$) and composed by students from only one institution, that although attending the same subject, were from different postgraduate degrees. In order to overcome the effects of those limitations, it is important, as future work, to extend this study to other Curricular Units at the UA and to other HEI, being thus possible to generalize the conclusions and to detect some eventual differences in the results. It is also suggested that the Educast be used in the context of Massive Open Online Courses (MOOCs) as these courses are based in educational video recordings and have a large potential audience.

7. CONCLUSION

This paper analyzed the acceptance of an educational videos platform used by HEI in Portugal–Educast, applying the TAM. The study was carried out in the scope of the CU of ‘Innovation and Entrepreneurship’ which is part of the structure of several doctoral programs at the UA.

A questionnaire adapted from the TAM was applied to 54 students and the results revealed that respondents expressed a positive attitude for the various items related to the PEOU, PU, and ATU.

In general, the variable ATU was the highest rated variable, being thus the variable that impacts more the acceptance of the Educast. Considering the particular items, it can be seen that on average PU3 – “Using academic contents recordings allows me to retrieve classes which I had no opportunity to attend in person” is the highest rated one. This result can be interpreted as students considering e-learning classes as an alternative for classroom lessons. It also stressed that, regarding the lower score values assigned to the item PEOU1 – “Overall, I find the Educast is easy to use for viewing the academic contents recordings”, it is considered that introducing some training before students have the first contact with the platform may be a good practice.

Concerning the comparison of the acceptance of Educast between users and non-users, it was found that ratings correspondent to the items that evaluate the overall perception of each variable (PEOU1, PU5 and ATU3) presented higher values for the group of students that used the recordings than for the group of those who did not use, revealing a greater acceptance of Educast by the respondents that experienced that platform at least once than by the ones that never experienced it.

In general, students answered the open question, considering that the recordings were “useful to review concepts” and that “videos were long and should be divided to facilitate finding a particular content”.

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