



DISTANCE EDUCATION STUDENTS' OPINIONS ABOUT ASYNCHRONOUS LESSON VIDEOS

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Abstract:

In distance education, synchronous or asynchronous vehicles and ways are used as the mediums of information transmission. The aim of this study is to identify the students' opinions about online asynchronous lesson videos used in distance education practices. We made use of qualitative research methods in this descriptive study. The study sample which was created in compliance with the purposeful sampling method was composed of 22 students studying at distance education undergraduate programs of a university located in The West Blacksea district. In the study, 'Opinion Identification Questionnaire of The Distance Education Videos' which included a series of open-ended questions formed by the researcher, himself, was used. According to the results from the analyses, distance education students stated that videos made their learning permanent, increased their motivation and enabled them with individual learning. They criticize the videos including only slights and sound in addition to the lack of interaction in the videos. Besides, students give advices about making videos accessible for watching on mobile phones, adding interactions and using different video-making techniques.

Keywords: distance education, online learning, lesson videos, asynchronous videos

1. Introduction

The popularity of video use at higher education is increasing day by day. Thanks to videos recognized as a strong means of communication and teaching, educational information or instructions which are difficult to convey via other means of communication can be transmitted easily. Today, universities are investing money in accordance with their purpose to benefit from a variety of video technologies at the optimum level in teaching process (Vanbuel, 2012). For the last few years, many universities which have the necessary infrastructure to give online education have

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started to carry their education programs to online platforms so as to incorporate the students who can't attend or don't chose to attend a formal face-to-face education with the existing education system and be able to compete with the other four-year faculties (Evans & Cordova, 2015). In this sense, the distance education programs within the body of universities provide online-flexible learning facilities for students who want to receive both undergraduate and postgraduate education (NCES, 2011). While online learning concept is described as a teaching model which internet and various technologies are used in and is characterized with the geographical or occasionally temporal difference between lecturer and students (Anathanatayanan, 2014), in relevant literature, researchers have been observed to be in tendency to associate online-learning with distance education (Means, Toyama, Murphy, Bakia & Jones, 2010; Moore, Dickson-Deane & Galyen, 2011). Similarly, in principle, in distance education, education which is planned in accordance with the condition of temporal and spatial differences is provided by means of written or electronic communication vehicles (Gunawardena & McIsaac, 2004). Accordingly, in temporal sense, in distance education systems where spatial difference is taken as 'assumed', synchronous (happening/existing at the same time) and asynchronous (happening/existing at separate times) models for information transmission are utilised.

While synchronous model helps the students and the lecturer in different places to communicate in real time, asynchronous model does not enable them to communicate in real time and it foresees that students will be able to operate their online learning process according to their own speed without depending on any strict time (Rosenberg, 2001). Former studies have revealed that online learning settings utilizing asynchronous video-lessons which do not require the lecturer and the students to be online simultaneously have positive side effects for the learning process (Zhang, Zhou, Briggs & Nunamaker, 2006; Rose, 2009; Fernandez, Simo & Sallan, 2009; Giannakos, Chorianopoulos & Chrisochoides, 2015; Hegeman, 2015; Sadik, 2016). Asynchronous lessons can be given to students through CD, DVD or flash memory as they can be opened to online access. Online asynchronous lesson videos provide students with the flexibility of watching the relevant lesson videos on the net whenever and wherever they want. Not only the fact that students find asynchronous video lessons more enjoyable and less boring than lessons conducted in a classroom setting, but also the fact that students want to control their own learning and interact with the lesson materials whenever they like are shown as underlying reasons for this situation (Choi & Johnson 2005; Whatley & Ahmad 2007). Video lessons both help students to improve their interaction with the lesson materials (Whatley & Ahmad, 2007) and make them feel grateful for the efforts of the ones whom they perceive as existing behind the technological tool. (Reisetter & Borris, 2004). Besides the existing discussions in literature about whether use of media affects learning or not (Clark, 1991; Carter; 1996), while some of the studies reveal that it does not have a significant effect on learning (Maag, 2004; Schnitman, 2007), the others reveal that the media which use sound and image components together have a positive effect on individuals' learning as they help the working memory be used more in comparison to the media including only words

(reading) (Hughes, 2009; Mayer, 2009). Therefore, so as to make video lessons reach at their goals, the users' experiences and pleasure should be taken into account in the process of production of those videos (Sankey, 2013).

Today, new pedagogic approaches enabling to benefit from the potential of 'online learning' technologies that confront to the current pedagogic approaches are expected to be created (Norton & Hathaway, 2008). Henceforth, to take opinions of the students who have personally attended the online learning system and gained experience with it about the video lessons belonging to this technology will create a viewpoint in this sense. In addition, the study results are considered to have the characteristics of a guiding light for lesson design, selection of the right media and creation of the effective lesson videos in distance education systems and other online learning settings.

1.1 Development of Online Asynchronous Lesson Videos

The works of creating Online Asynchronous Lesson (OAL) videos and making them ready for use are generally conducted by the centres of universities for research and technology. The advantages that videos will bring in educational sense and their quality depend on by which method they have been created (Veeramani & Bradley, 2008). In this regard, it is observed that two methods called "in-class" and "non-class" are often used (Sadik, 2016). "In-class" lesson video method, the videos are created using the technical opportunities (camera, microphone, software, etc.) that university provides and with the involvement of the students within the classroom setting (EDUCAUSE, 2008). In "non-class" lesson video method, lecturers create video-lessons using screen-casting software that can blend their voice, images and screens altogether in an office or elsewhere out of the classroom (Howard, 2014). At the university within the scope of this study, videos build up with both of these methods above were used with the sample.

1.2 The aim of the study

The aim of this study is to reveal opinions of distance education students at undergraduate level about OAL (online asynchronous lesson) videos from which they benefit as lesson materials during their education. In line with this overall aim of the study, we will try to get answers for those questions below:

What are the students' opinions;

1. about the effects of OAL videos on their learning?
2. about positive and negative aspects of OAL videos?
3. about the ways to improve and implement OAL videos?

2. Material and Methods

In this study, we benefitted from descriptive research model as we tried to reveal students' current opinions and perceptions about lesson videos. Descriptive researches try to identify the existing state as exactly and carefully as possible (Büyüköztürk, Kılıç,

Akgün, Karadeniz & Demirel, 2009). Because the answers from the students were accepted as written in paper, document analysis method was used.

2.1 Presentation of the videos

OAL videos that students used as lesson materials during their learning processes were created with the screen-casting methods in the university -class setting, in distance education studio-class setting, and/or in the lecturers' offices in a non-class setting. In-class videos were recorded by distance education specialists. They were montaged and processed in the suitable forms that they could be opened to access in the open source code learning management system (in other words in Modular-Object-Oriented-Dynamic-Learning-Environment / in short, in the moodle). Raw forms of non-class videos were gathered from the lecturers and processed in the same way and opened to online use for students. This process can be summarized as in the scheme below.

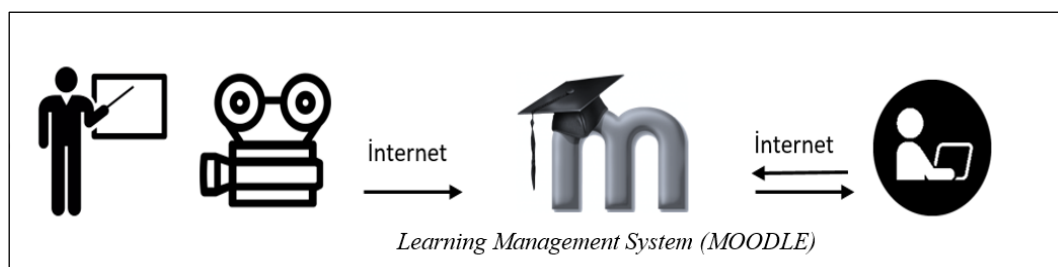


Figure 1: The formation of videos and how are they opened up for being used by students

From the first year, students composing the sample have followed their lessons through the Moodle as the learning management system. During the process, they could access to the videos and other lesson materials through this agent platform located in the university server. They gave answers to the study questions by depending on the video-lessons they followed.

2.2 Participants

As we aimed to learn thoroughly opinions of last-year students who were studying Sociology and Turkish Language and Literature through distance education at a university in the West Black Sea district about OAL videos, we made use of the typical case sampling technique of purposeful sampling method (Yıldırım & Şimşek, 2005). The reason for selecting last-year students was the fact that they had at least 3-year experience of OAL videos. Of the responses to the questionnaires got from the accessible students, the ones that could seem to contribute to the research were included in the process of analysis. From two departments, 22 participants, starting with the Turkish Language and Literature students were coded from S1 to S22. %54 of the participants were male and %46 of them were female. The data about the 22 participant students were as in the table below:

Table 1: The data about the participants

| Department | Sex | Quantity | Intervals of age | Class level |
|------------|--------|----------|------------------|-------------|
| TLL | Male | 5 | 21-29 | 4 |
| | Female | 4 | 21-26 | 4 |
| S | Male | 7 | 22-30 | 4 |
| | Female | 6 | 21-27 | 4 |

TLL: Turkish Language and Literature, S: Sociology

2.3 Data Collection Agent and Collection of the Data

To gather the data, a questionnaire form including 4 questions prepared by the researcher after scanning the literature was used. To ensure the validity of the form, opinions of specialists in “Computer and Teaching Technologies” and “Assessment and Evaluation” were referred to. After ensuring that the questions were clear and the data collected could bring light to the probable solution of the problem by a preliminary appliance of the questionnaire with students at a different department of distance education program, the questionnaire took its final form. In addition, to increase the reliability of the form, the consistency among the responses to the questions in the preliminary appliance of the questionnaire was taken into account. The data were collected only after applying the questionnaire with the Sociology and Turkish Language and Literature students. Of the voluntary students participating in the survey, the ones who responded to the open-ended questions in accordance with the aim of the study were selected and included in the analysis process.

2.4 Data Analysis

In the analysis of the students' responses to the open-ended questions, descriptive analysis approach and content analysis approach were used. Descriptive analysis is the approach that depends on summarization and interpretation of the collected data according to the themes that have been determined formerly. In this approach where direct quotations are frequently included, there is the purpose of remarkably reflecting the views of the individuals who are interviewed or observed (Yıldırım & Şimşek, 2005, p. 224). In content analysis approach, the main purpose is to get the concepts and themes that might explain the data collected. The data summarized and interpreted in descriptive analysis are processed more thoroughly in content analysis. The themes and concepts that could not be detected in descriptive analysis can be detected through content analysis (Yıldırım & Şimşek, 2005, p. 227). In this frame, the documents of every participant were coded by reading again and again to form the themes. Additionally, the themes were supported by quoting remarkable opinions directly from the participants' opinions. The data were classified according to the researcher's coding as real names were not required from the participants. The data (negative and positive opinions) about the second and third open-ended questions included in the questionnaire were analyzed by uniting under a single purpose (second sub-purpose).

3. Results and Discussion

In this section, there are analyses of the student responses to the questionnaire that was prepared so as to take opinions of students participating in the study about distance education OAL videos. The results of the questionnaire were categorized under three subtitles according to the sub-purposes of the study.

Below are the results of the analysis of responses taken from students in line with the sub-purpose of *“What are the students’ opinions about the effect of OAL videos on their learning?”*.

Table 2: The results of the analysis under the first sub-purpose

| Theme | Responses | f |
|---|--|---|
| Positive | OAL videos make learning permanent, I don't forget | 14 |
| | Being able to watch whenever I want affects my learning positively | 11 |
| | I can learn better as I can take notes while watching. | 9 |
| | If the lecturer is the one I like, I learn better. | 7 |
| | Effective learning cannot occur in distance education without videos | 7 |
| | I learn better if videos are supported by other materials | 5 |
| | OAL videos are more effective than in-class lessons. | 4 |
| | It depends on the video itself (in-class, screencasting, etc.) | 3 |
| | I learn better as I feel comfortable with the videos | 1 |
| | Negative | I can't learn if only sound and sights are used |
| If it is a live lesson, any questions may be asked | | 3 |
| Lessons conducted in a class are more effective | | 3 |
| Its effect is weak as there is no interaction in the video. | | 2 |

The findings were analysed under two categories in accordance with the relevant sub-purpose. Some of the student opinions forming the basis for the findings are as below:

“Videos certainly affect my learning positively. Classroom settings are boring to to me and I cannot always concentrate on the lesson, because there are a lot of distracting things around. I can watch videos whenever I want and I can play them back and forth. For example, sometimes, I can pause the video and take notes about the important points.” (S-6)

“It depends on the occasion. For example, I listen and learn the lesson better if I like the lecturer. That the video includes many more components than slights affects my learning as well. The lecturer’s mimics and teaching style and some other features affect my learning.” (S-11)

“Some lecturers only put a slight into the video and speak in the background. In those types of videos, frankly, I can’t learn. Those videos should be supported with other materials as only video itself is not enough to learn well.” (S-18)

When the findings are examined, it is seen that students stated mainly positive opinions about OAL videos and they expressed that the videos affected their learning

positively in terms of permanence. Students focused on the opportunity to pause the video and take notes. Moreover, they pointed out that their learning degree changed depending on the lecturer and the type of the video. A small number of students preferred face-to-face lessons in a classroom setting.

Below are the results of the analysis of responses taken from students in line with the sub-purpose of “*What are the students’ opinions about the positive and negative aspects of the OAL videos?*”.

Table 3: Results of the analysis under the second sub-purpose

| Theme | Responses | f |
|--|--|----|
| Positive | OAL videos enable me to manage my own learning | 14 |
| | They increase my motivation in the lesson | 12 |
| | They are possible to watch whenever I like | 9 |
| | OAL videos affect my success | 8 |
| | Classroom setting is more boring than OAL videos | 7 |
| | I can watch again the parts important to me | 7 |
| | I can watch them whenever/wherever I like | 5 |
| | They help me consolidate the subject I've learned | 4 |
| | As long as the video is of good quality, it is good for me | 3 |
| | OAL videos are convenient for today's education | 1 |
| Negative | It is boring that there are only sound and slight in the video | 10 |
| | I think they are negative as I can't ask any questions | 6 |
| | I overuse my internet and exceed the quota because of videos | 5 |
| | I can't watch the videos of poor quality | 5 |
| | The internet connection gets hanged. | 2 |
| | I'm not able to watch the videos on my mobile phone. | 1 |
| | There aren't mobile application of the videos | 1 |
| Lecturers are reluctant to teach in front of the camera. | 1 | |

The findings were analysed under two categories in accordance with the relevant sub-purpose. Some of the student opinions forming the basis for the findings are as below:

“First of all, the most significant advantage of the videos is the fact that I can watch them whenever and wherever I like. I can determine my own learning by myself, that’s very good. However, it is a weakness that there aren’t any interactions, possibilities to ask any questions and etc.” (S-3)

“I don’t watch if the video is of poor quality. If the video is of good quality, it is surely effective, and also it affects my success and exam score because those videos are like classrooms where we can listen to the lecturers. They are not different from a real classroom setting. Moreover, we can enter such a classroom whenever we want.” (S-21)

“A classroom setting is more boring than videos, of course, here I don’t refer to the videos including only sound and slights. I think in this way maybe because I’m accustomed to distance education. However, I would prefer to watch at a home comfort as I would like. The only problem is that videos fulfil my internet qouta.” (S-17)

When the findings are analysed, it is understood that students stated that videos affected their individual learning mostly positively and increased their motivation. Again, some of the students found the classroom setting boring and pointed out that managing the video content as they liked was an advantage for them. Students expressing negative opinions focused mainly on the video content and they mentioned the disadvantage of the videos including only sound and slights. In addition, the lack of interaction such as the possibility to ask questions is another weakness that students see as a negative aspect.

Below are the results of the analysis of responses taken from students in line with the sub-purpose of *“What are the students’ advices for the development and implementation of OAL videos?”*.

Table 4: Results of the analysis under the third sub-purpose

| Theme | Responses | f |
|-------------|---|----|
| Technical | Videos should have mobile device support application | 12 |
| | An interaction component might be added | 11 |
| | New video recording techniques should be tried | 8 |
| | There should be videos of higher quality | 6 |
| | Videos should be combined with other relevant videos | 4 |
| | Mobile Cameras might be used | 4 |
| | Videos may be three dimensional | 3 |
| | Virtual reality might be applied | 2 |
| Educational | The lecturers who are really voluntary should teach | 5 |
| | Videos might be recorded in different educational settings | 3 |
| | Important points of the subject should be summarized in final | 1 |

The findings were analysed under two categories in accordance with the relevant sub-purpose. Some of the student opinions forming the basis for the findings are as below:

“My first advice is adding mobile device support to the videos. In this age, I think, this is a must. I can watch these videos as I like only through my mobile phone. Of course, the recordings should be of good quality, again. Different places and views might be considered to make the videos more attractive.” (S-7)

“Videos might be combined with some other videos. For example, while teaching a subject in history, videos of real history might be inserted into the video. In addition, interactions that support students. For example, as students, we can vote anything while watching the video.” (S-12)

“Lecturers should be selected among the ones who are willing to teach in front of the camera. Moreover, there are video-recording techniques that show the person (lecturer) as if he/she was in a different place, we come across those videos types on TV. Other techniques like this can be tried so as to attract the students. Surely, we must be able to watch all those videos not only on computer but also on the tablets by means of a suitable application.” (S-22)

When the findings are analysed, it is understood that students mainly stated that videos should have a mobile device support, be interactional, and be tried to be recorded via different video-recording techniques that are not boring. Moreover, it was detected that students advised that the videos should be combined with other relevant videos and that the voluntary lecturers should teach in distance education programs.

4. Discussion and Conclusions

In this study, which examines the opinions of distance education students about OAL videos, the opinions of last-year undergraduate students who benefitted from lesson videos during their undergraduate education were taken. According to the findings, it is seen that students mainly stated positive opinions about the effects of the OAL videos on their learning and that those videos affected their learning positively. The students expressing positive opinions mostly showed the fact that their learning gets permanent, the advantage of watching whenever they like and the possibility to take notes by pausing the video as the underlying reasons for this. In researches with regard to permanent learning, in accordance with this finding, the videos have been emphasized to be providing the learners with much more use of their working memories, and thus to be increasing the retention period of knowledge (Choi & Johnson, 2005; Tempelman-Kluit, 2006; Buckley & Smith, 2007). Students positive opinions about being able to watch the videos whenever they like show that the OAL videos not only coincide with the main philosophies of distance education but also satisfy students' expectations for saving time and space (Eygü & Karaman, 2013) in relation to their sense of satisfaction. On the other hand, the students expressing negative opinions about the OAL videos emphasized the ineffective video types and the lack of interaction.

Students' overall opinions about the OAL videos are mainly observed to be positive. In more specific terms, students are observed to have stated that OAL videos affected their individual learning positively and increased their success and motivation. Again, some of the students find the class setting boring and emphasize that the opportunity to manage the video content as they like is advantageous for them. In parallel with those results, the results of researches in the relevant literature emphasize, among the main advantages of online video lessons, that online video-lessons support students' learning and give them the opportunity to manage their own learning (Belcheir & Cucek 2001; Choi & Johnson 2005; Zhang et al., 2006; Whatley & Ahmad 2007). Evans & Cordova (2015), with regard to success, in their comparative study between the classes where lesson is conducted with traditional methods and the video-lessons, found out that students completing the course with video-lessons scored better in the exam, which supports our finding. However, in this sense, Evans (2014) came up with results totally opposite of ours. With respect to motivation, Choi & Johnson (2005) revealed that the multimedia learning materials such as sound tracks and video-lessons had positive impact on motivation of the students. Also, in most of the studies, as supportive of these findings, students preferred video-lessons to class setting and found the class setting more boring (Belcheir & Cucek 2001; Choi & Johnson 2005; Whatley &

Amad 2007). The students expressing negative opinions explained their reasons as some videos included only sound and slight (screencasting) components and there was a lack of interaction in the lesson videos. Students can both know the lecturer better and feel better in terms of communication if they see the lecturer and hear his/her voice (Reisetter & Borris, 2004). Nonetheless, provided that they are designed carefully, it is known that "screencasting" videos directing students in their active learning experiences, highlighting the important points in the content and having a design that increase student's learning abilities are effective (Jamaludin & Osman, 2014).

About the development and implementation of the OAL videos, students especially advised that videos should be able to be watched through mobile phones. In addition to this, they advised inserting interaction to the videos, trying other non-boring video-recording techniques and using videos of better quality, as well. Some other advices about the use of today's technological tools such as virtual reality and three-dimensional videos are fewer in number but remarkable to state. Furthermore, students drew attention to the fact that more positive outputs might be provided if lecturers who are voluntary to teach in distance education programs take part in the video-lessons.

5. Suggestions

So as to make the distance education reach at its goal, existing technologies should be set to work at the optimum level in accordance with the educational purposes. Therefore, studies about the use and impact of other technologies as much as the video technology in educational settings should be kept on. In this sense, to take the opinions and suggestions of the experienced users not only develops the use of the technology, but also provides a guidance for the design of the future educational settings.

On the other hand, in terms of the effective use of videos, interaction questions might be added and similar studies might be planned for those interactional videos. In addition, today, there are learning management systems that can control the participation and participation degrees of students in the videos. For new studies, those systems can be used as the educational settings.

In development of the videos, some new techniques such as virtual reality, green screen and three dimensionality might be made use of and comparative studies may be conducted by using the other video types. In this sense, video design and teaching design processes of distance education centres might be examined. Finally, new studies to understand the viewpoints, attitudes and capabilities of lecturers taking part in distance education on the issue of new technologies might also be designed.

References

1. Ananthanarayanan, V. (2014). Social presence in culturally mediated online learning environments. In R. D. Wright (Ed.), *Student-Teacher interaction in online learning environments* (pp. 1-21). Texas, USA: IGI Global.
2. Belcheir, M.J., & Cucek, M. (2001). *Student perceptions of their distance education courses* (Research Report. No. 2001-04). Idaho: Office of Institutional Assessment. Retrieved from <http://www.boisestate.edu/iassess/reports/2001/RR2001-04.pdf>
3. Buckley, W., & Smith, A. (2007). Application of multimedia technologies to enhance distance learning. *RE: view*, 39(2), 57-65.
4. Büyüköztürk, Ş., Kılıç Ç., E., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2009). *Bilimsel araştırma yöntemleri*. Ankara: Pegem Akademi Yayıncılık.
5. Carter, V. (1996). Do media influence learning? Revisiting the debate in the context of distance education, *Open Learning*, 11(1), 31-40. DOI: 10.1080/0268051960110104.
6. Choi, H. J., & Johnson, S. D. (2005). The effect of context-based video instruction on learning and motivation in online courses. *The American Journal of Distance Education*, 19(4), 215-227.
7. Clark, R. E. (1991). When researchers swim upstream: Reflections on an unpopular argument about learning from media. *Educational Technology* 31(2): 34-40.
8. EDUCAUSE. (2008). *7 things you should know about lecture capture*. Retrieved from <http://net.educause.edu/ir/library/pdf/ELI7044.pdf>
9. Evans, H., & Cordova, V. (2015), Lecture videos in online courses: A follow-up, *Journal of Political Science Education*, 11(4), 472-482. DOI: 10.1080/15512169.2015.1069198.
10. Eygü, H., & Karaman, S. (2013). Uzaktan eğitim öğrencilerinin memnuniyet alguları üzerine bir araştırma. *Kırıkkale Üniversitesi Sosyal Bilimler Dergisi*, 3(1), 36-59.
11. Fernandez, V., Simo, P., & Sallan, M. (2009). Podcasting: A new technological tool to facilitate good practice in higher education. *Computers & Education*, 53, 385-392. DOI: 10.1016/j.compedu.2009.02.014 .
12. Giannakos, M., Chorianopoulos, K., & Chrisochoides, N. (2015). Making sense of video analytics: Lessons learned from clickstream interactions, attitudes, and learning outcome in a video-assisted course. *The International Review of Research in Open and Distributed Learning*, 16(1). Retrieved from <http://www.irrodl.org/index.php/irrodl/rt/prinFRIENDLY/1976/3198>
13. Gunawardena, C. N., & McIsaac, M. S. (2004). Distance Education. In D.H. Jonassen (Ed.), *The Handbook of Research on Educational Communications and Technology*, 2nd Ed. (pp. 355-395). Mahwah, NJ: Lawrence Erlbaum Associates. Retrieved from <http://ocw.metu.edu.tr/file.php/118/Week10/Gunawardena-McIsaac-distance-ed.pdf>

14. Hegeman, J. (2015). Using instructor generated video lectures in online mathematics courses improves student learning. *Online Learning*, 19(3), 70-87.
15. Howard, I. (2014). *7 steps Guide to Screencasting*. Speech and Motor Neuroscience Group, Plymouth University. Retrieved from http://www.ianhoward.de/publications/ScreencastingGuide_ISH_2014.pdf
16. Hughes, G. (2009). Social software: New opportunities for challenging social inequalities in learning? *Learning, Media and Technology*, 34(4), 291-305.
17. Jamaludin, R., & Osman, S. Z. M. (2014). The use of a flipped classroom to enhance engagement and promote active learning. *Journal of Education and Practice*, 5(2), 124-131.
18. Mayer, R. E. (2009). *Multimedia Learning*. Cambridge, UK: Cambridge University Press.
19. Maag, M. (2004). The effectiveness of an interactive multimedia learning tool on nursing students' math knowledge and self-efficacy. *Computers, Informatics, Nursing*, 22 (1), 26–33.
20. Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*. Technical Report. USA: US Department of Education.
21. Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). e-Learning, online learning, and distance learning environments: Are they the same?. *The Internet and Higher Education*, 14(2), 129-135.
22. National Center for Education Statistics (NCES). (2011). *Distance Education in Higher Education* (Indicator 43- 2011). The Condition of Education 2011. Retrieved from http://nces.ed.gov/programs/coe/pdf/coe_dhe.pdf
23. Norton, P., & Hathaway, D. (2008). Exploring two teacher education online learning designs: A classroom of one or many?. *Journal of Research on Technology in Education*, 40(4), 475-495.
24. Reisetter, M., & Boris, G. (2004). What works: Student perceptions of effective elements in online learning. *The Quarterly Review of Distance Education*, 5(4), 277-291.
25. Rose, K. K. (2009). Student perceptions of the use of instructor-made videos in online and face-to-face classes. *Journal of Online Learning and Teaching* 5(3).
26. Rosenberg, M. J. (2001). *E-learning: Strategies for delivering knowledge in the digital age*. Newyork: McGraw-Hill.
27. Sadik, A. (2016). Students' Preferences for types of video lectures: lecture capture vs. screencasting recordings. *Journal of Educational Multimedia and Hypermedia*, 25(2), 189-208.
28. Sankey, M. (2013). *Lecture capture in Australasian universities*. The Australasian Council on Open, Distance and e-Learning (ACODE). Retrieved from http://www.acode.edu.au/pluginfile.php/419/mod_resource/content/1/ACODE_Lecture_Capture_Report_2013.pdf

29. Schnitman, I. (2007) *The dynamics involved in Web based learning environment (WLE) interface design and human-computer interactions (HCI): Connections with learning performance* (Doctoral dissertation). West Virginia University, Morgantown.
30. Tempelman-Kluit, N. (2006). Multimedia learning theories and online instruction. *College & Research Libraries*, 67(4), 364-369.
31. Vanbuel, M. (2012). How to move beyond lecture capture: Technology guide. The European Commission. Retrieved from <http://association.media-and-learning.eu>
32. Veeramani, R., & Bradley, S. (2008). Insights regarding undergraduate preference for lecture capture. *University of Wisconsin-Madison E-Business Institute*. Retrieved from http://www.companywebcast.nl/wp-content/uploads/2015/04/Insights_undergraduate_preference_lecture_capture.pdf
33. Whatley, J., & Amrey A. (2007). Using video to record summary lectures to aid students' revision. *Journal of Knowledge and Learning Objects*, 3, 184–195.
34. Yıldırım, A., & Şimşek, H. (2005). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri*. Ankara: Seçkin Yayıncılık.
35. Zhang, D., Zhou, L., Briggs, R., & Nunamaker, J. F. (2006). Instructional video in e-learning: assessing the impact of interactive video on learning effectiveness. *Information and Management*, 43(1), 15–27.

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