

The Impact Of Educational Videos On The Academic Performance Of University Students In Distance Learning

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Abstract

This study aims to analyze the impact of using educational videos on the academic performance of university students. It examines the impact of exposure to educational videos, attitude toward these videos and motivation for using them on the academic performance. Further, this study also analyzes the moderating effect of area (urban or rural) on the relationship of these three independent variables with the academic performance. A survey was conducted among students of various academic faculties of Virtual University of Pakistan. A total of 400 university students were sampled: 200 from urban areas and 200 from rural areas of the country. The results of this study demonstrate that all of the three independent variables have significant and positive impact on the academic performance of students. However, there is no statistically significant mediating effect of area (urban or rural) on the relationship between each of independent variables and the academic performance.

Keywords: Educational videos, digital videos, e-learning, exposure to educational videos, attitude toward educational videos, motivation for educational videos, academic performance.

I. Introduction

It is deemed that emerging research has brought forth the idea of video-based educational contents as a key to enhancing literacy for both raising awareness and educating the masses in formal, non-formal and informal learning domains. It is an admixture of a melting pot of various technological and conceptual domains including communication, learning, psychology, education and many more. It uses systems that utilize technological media communication and provides educational materials to the students irrespective of their physical location (Dinc, 2017; Yilmaz, 2019).

Video-based learning has been used as an educational tool to assist in classroom teaching and it predates World War – II (Yousef et al.,

2014). Integration of video-based education and learning methodologies in the mainstream academic settings has grown exponentially during the last few decades and has birthed an array of debates. Chief among these debates is examining the relationship between audiovisual educational contents and their impact on learning and educational models especially in the post Covid-19 scenarios. The advancements and amalgamation of digital audiovisual media with contemporary educational scenarios have enabled new forms of educational tools and methodologies (Farooq & Al-Jandan, 2015; Radianti et al., 2020).

Media technologies are fast becoming inevitable for the education system. These systems allow incorporating digital media

technologies in a diverse and unique teaching and learning processes in higher education (Johnson, Becker, Estrada, & Freeman, 2014). Educational videos are now largely available owing to accessible Internet and equipment to produce video content. Moreover, with the rapid advancement of digital media technologies, the opportunities to produce, incorporate and share educational videos have increased at university level (Kay & Kletskin, 2012). Many researchers already acknowledge the effectiveness of the use of videos in education, advocating its usefulness as an integral tool for training (Rajadell & Garriga-Garzón, 2017) and video-based learning is changing the world's education system (Ark, 2012).

Developments in information communication technologies (ICTs) have turned into a very good resource with enormous possibilities (Nagy & Bernschütz, 2016). Research scholars have become increasingly sensitive to the way media is being used to curated ideologies pertaining to various aspects of pedagogy nowadays. Mayer, Fiorella and Stull (2020) have described the use of videos in various asynchronous and synchronous educational environments and learning scenarios for both active and passive learning. Noetel et al. (2021) elucidated that the use of videos can assist students in comprehending the course content and it also offers them the opportunity to partake in an engaging synchronous learning setting. Such contemporary learning practices have been used by many universities to ensure better learning outcomes (Alonso et al., 2011; Dang et al., 2016; Demaidi et al., 2019). Use of technology-based learning models have positive results that improve students' performance (Alonso et al., 2011), engagement (Anthony et al., 2019; Shen et al., 2009), and motivation levels (Boticki et al., 2009).

2. Students Perceptions about Educational Videos

Students' behavior toward learning is also changing and many students are now preferring flexible, round-the-clock, and customizable learning settings, which is characteristically enabled by the availability of online resources (Cronhjort & Weurlander, 2016). Majority of the educational institutions and universities are moving toward video-based online learning (Fiadotau, Sillaots, & Ibrus, 2019). Many studies also concluded that digital videos for educational purposes improve their perceived learning experience (Bharani et al., 2017; Bond et al., 2018; Nadeak & Naibaho, 2020). Tulinayo, Ssentume, and Najjuma (2018) found positive and significant relationship of students' perceived usefulness of digital technologies for learning with their attitude towards use of these technologies, their capacities to use it, and their intentions for using them.

Despite the growing popularity of video-assisted learning, few studies found that students' attitudes toward online education practices were very negative, chiefly raising apprehensions pertaining to lack of relational practices and skill development (Dong, Cao, & Li, 2020; Vandenberg & Magnuson, 2021). Furthermore, the third world countries are faced with many challenges when it comes to the availability and usage of the technological infrastructure.

It is quite intriguing that students from various class settings use digital videos for their learning and academic purposes, so ultimately there is a strong effect on their attitude. So, in this regard, there are some evidences from the study of Bakeer (2018) explaining that attitudes of students toward available technology are very positive and also enhance their learning in context of skills, grades and motivation to learning of academic performances. Similarly, Martí-Parreño, Galbis-Córdova, and Miquel-Romero (2018) also found that technology-based learning is very attractive for students and it has a positive impact on their attitudes and perceptions.

Wong et al. (2021) found that dissatisfaction with the content and cognitive difficulties can decrease students' unwillingness to learn. It is also found that more exposure to digital video has more negative effects on students learning (Choe et al., 2019; Hui & Campbell, 2018). Mahoney, Macfarlane and Ajjawi (2019) also suggested to check the impact of digital video interventions on student learning.

3. Use of Educational Videos in Pakistan

Pakistan is in the list of such countries where rapid developments in technology are taking place but few aspects such as video-based educational technologies are in the infancy stages. It becomes pertinent to explore emerging and budding phenomena and understand the dynamics as to how a certain technology is impacting education. In a country like Pakistan, there are still many schools of thought that believe that conventional teaching methodology cannot be overruled easily and that it will require a lot of time before technology is fully inculcated in the mainstream education.

The rapid developments in ICTs, most importantly the access to high-speed Internet, have impacted significantly on the learning environments and have accelerated the use of videos in higher education. There has been a significant increase in the use of online courses by the educational institutions and an increased awareness among the academic circles as to how videos can be used effectively to enhance the teaching and learning experience (Schneps et al., 2010). In Pakistan, only Allama Iqbal Open University (AIU), and a more contemporary institution the Virtual University (VU) are offering programs in distance mode. VU is the first federally chartered public sector university of the country whose model is based completely on modern information and communication technologies (ICTs). It offers its programs through free-to-air satellite TV channels and Internet. Web-based technologies have added

value to the delivery of knowledge in a traditional classroom. Technologies providing blogs, wikis and social networking are changing the dimensions of education (Roodt & Peier, 2013). Though the Virtual University of Pakistan has made its mark in the educational sector of Pakistan, but there is still a significant dearth in video-based educational initiative and models that exist in the country. Furthermore, there is a realization to change and introduce innovative technologies in tertiary level education also, where still knowledge and informational contents are being communicated through conventional lectures (Arum et al., 2012). The concept of education and learning has recently evolved from a more primitive, instructor-led approach to a more contemporary learner-centric education modes empowering the end recipient, the student.

These technologies have influenced the way people acquire knowledge and the resources that they can tap in. It was found that the availability of educational videos resulted in considerable improvement in the academic performance of college students (Nagy & Bernschütz, 2016). Even in hybrid teaching environments, it was observed that videos increased productivity and engagement levels of students (Tang & Austin, 2009).

4. Video-based Learning and Academic Performance

Video-based distance education enables students to access an enormous amount of information at their own pace and level of comfort. Mustafa et al. (2022) examined the acceptance of economics learning media through various movie clips, and studied perceived ease of use (PEU), perceived usefulness (PU), attitude toward using (ATU), and behavioral intention to use (BIU). In all the direct and indirect effects, a significant relationship was discovered by them. Similarly, the study of Galatsopoulou et al. (2022) concluded that students' positive attitudes towards videos can be used in multiple active

learning scenarios to enhance their motivation and engagement levels and provide a learning environment that is joyful, collaborative, and welcoming (Bailey, Almusharraf, & Almusharraf, 2022; Dalle et al., 2021; Ghosh, Jhamb, & Yu, 2022; Keržič et al., 2019; Songkram & Osuwan, 2022; Turan & Cetintas, 2020).

Moreover, Chantornet et al. (2011) stated that the satisfaction and motivation of students can be increased in online learning environments that are supported by digital videos. MacCallum (2009) found that students are more likely to use digital videos if they feel it can improve and enhance their academic performance. Hence, motivation is influenced by their satisfaction and simultaneously, it can affect the relationship between usefulness for academic performance (Chaiprasurt et al., 2011).

Miller (2009) and Robin (2008) suggested that exposure to digital videos enables analytical thinking and enhances problem solving skills which enables effective approach to synthesizing analyzing and evaluating knowledge and/or information. In addition, Sadik (2008) stated that exposure to digital videos encourages students to think more deeply and assists them in personalizing their experiences, enriches their knowledge and increases their academic performance.

Video-based instructional content, nowadays, is becoming available and accessible in various online educational platforms (Baturay, 2015). These platforms, in recent years, have been identified as massive open online courses popularly known as MOOCs. Few popular MOOCs are Coursera, EdX, Udacity and Udemy which have become popular trends in higher education scenarios. Many of these also have videos as an integral component of their pedagogy. Online courses can be developed with the help of open-source learning management systems or adaptive hypermedia-based

frameworks (Baig, 2011). Videos are deemed as a popular resource in e-learning (Guo, Kim, & Rubin, 2014).

Educational videos have unique features like round-the-clock availability, accessibility from any location, formally curated contents and up-to-date materials which provide tremendous benefits to the students and teachers and contribute significantly to improving student engagement in classroom activities. One such example is YouTube which, over the years, has become one of the most popular video sharing platforms, globally. It is also enabling students in terms of accessing educational contents and engaging classroom discussion and achieving learning objectives more effectively (Sherer & Shea, 2011).

Another research by Tan and Pearce (2011) indicated that the use of video was an effective tool for providing subjective understanding to the students and engaging them at the same time. Videos on various subjects provide diversified ideas and opinions and can be catered by different dissemination mechanisms. Also, videos can incorporate examples to explain points better (Bravo, Amante, Simo, Enache, & Fernandez, 2011).

On the flip side, Demetriadis and Pombortsis (2007) found that the main inadequacy of online video lectures was the lack of interactivity and communication between the students and the teachers.

Zhang, Zhou, Briggs, and Nunamaker (2006) found that while watching videos, features providing more interactivity and control like pause, rewind, stop, and play lessened the duration required for learning as the learners could specifically examine the essential parts or could review the poorly understood content repeatedly, thereby, enabling better knowledge acquisition.

Students nowadays have been sensitized with the use of online resources and have been found to consume academic and nonacademic

contents on the Web more than any other medium (Duvenger & Steffes, 2012). The upcoming generation after the “Millennials” onwards, are deemed as hyper-connected learners who fundamentally rely on cyber technologies for gathering information (Buzzetto-More, 2013) with a specific fondness toward user generated content (Jones & Shao, 2011).

Some of the research pertaining to educational video show that the incorporation of videos in learning methodologies has more appeal for visual learners. This supports the basic premise of the Cognitive Theory of Multimedia Learning (Eick & King, 2012). The Cognitive Theory of Multimedia Learning (Mayer, 1997) states that every human possesses two separate channels to process auditory and visual information. The process of active learning takes place when both channels process information and build memory. This phenomenon is also referred to as the dual channel assumption. According to Mayer and Moreno (2002) students perform better when scientific information is presented as animation and narration at a time.

After the advent and availability of media production tools, numerous educators and researchers have advocated the use of video as an essential component for presenting the context or initiating point of learning. Videos having good content like visuals, text and audio can be shared on different online communities (Goldman, 2007). Furthermore, videos can also be interlinked with resource links, discussion boards, online chat and other forms of multimedia content, as part of a distance learning environment (Karppinen, 2005).

A study of 147 psychology students depicted that exposure to video by the students was more impactful and beneficial as compared to a simple text for presenting real-life scenarios in order to improve students retention, comprehension and satisfaction (Choi & Johnson, 2007). A research study conducted in another

setting among students from the disciplines of English and Management depicted that exposure to digital video facilitated in understanding the relative facets of learning. Furthermore, it increased the emotional engagement significantly throughout the learning process, thereby, effecting the students’ academic performance positively (South et al. 2008).

The traditional face-to-face learning scenario or a typical classroom environment is attributed by more interactive and discussion-based learning settings, whereas, video enables learning through reflection which, otherwise, would be difficult to achieve (South et al., 2008) in traditional teaching setups. Lange (2008) also claims that exposure to video may also encourage participation and could have a positive impact on learning processes and eventually on the outcomes. Prensky (2005) states that younger students are more inclined toward video contents because they find it more attractive and enjoyable. The usage of educational videos eventually benefits them in their learning and academic process. In a survey studying the use of various teaching techniques, it was found that younger students engaged more with multimedia content, and older students preferred to use video-based content (Tang & Austin, 2009).

The advancements in media production technologies and their availability to the masses have enabled people to produce educational videos using their personal computers. Further, video productions are no longer an expensive affair (Houston, 2000). Information and communication technology (ICT) has now become an essential part of both online and traditional education systems. Students, nowadays, are tech savvy and can make uses of ICTs more efficiently for their studies (Henderson, Selwyn, & Aston, 2015). However, students in developing and underdeveloped countries are also facing challenges to adapt to

the rapid transformations in education delivery models and methods.

This study aims to analyze the impact of exposure to educational videos, attitude toward these videos and motivation for using them on the academic performance of university students in the context of Pakistan. Further, this study is also comparative in nature, analyzing academic performance of students living in the urban and rural areas of the country.

5. Hypotheses

Keeping in view the aforementioned studies, the following hypotheses are formulated to meet the objective of this study:

H1: There is a positive and significant impact of student's exposure to educational videos on their academic performance.

H2: There is a positive and significant impact of students' attitude toward educational videos on their academic performance.

H3: There is a positive and significant impact of students' motivation for educational videos on their academic performance.

H4: There is more positive and significant impact of exposure to educational videos on academic performance of urban students as compared to rural students.

H5: There is more positive and significant impact of attitude toward educational videos on academic performance of urban students as compared to rural students.

H6: There is more positive and significant impact of motivation for educational videos on academic performance of urban students as compared to rural students.

6. Methodology

This study is quantitative in nature and conducted on university students living in both urban and rural areas of Pakistan. All university students of Pakistan enrolled in distant learning programs based on digital videos were considered as population. Total 400 undergraduate level students from Virtual University of Pakistan were taken as a sample, 200 from urban areas and 200 from rural areas. These students belonged to different academic disciplines. Purposive sampling technique was used, and data was collected through Google Forms (an online survey administration tool).

A questionnaire was prepared in order to investigate the impact of usage of educational videos on the academic performance of university students. This questionnaire was comprised of five sections: a) students' demographics; b) exposure to educational videos; c) attitude toward educational videos; d) motivation toward educational videos; and e) academic performance.

After preparing the questionnaire, a pilot study was conducted among 30 students to check the reliability of the instrument. Cronbach's Alpha values of four main variables including exposure to educational videos, attitude toward educational videos, motivation toward educational videos, and academic performance were 0.715, 0.749, 0.755, and 0.718 respectively.

6.1. Measures

First three questions of the questionnaire focused on the demographics of university students; that included gender (male or female), and area (urban or rural). In this study, exposure to educational videos, attitude toward educational videos, and motivation for educational videos were taken as independent variables, however, academic performance was a dependent variable. Statements for these four main variables can be seen in Table 1.

First independent variable "Exposure to Educational Videos" was measured with a 4-item

scale. Responses related to all four statements were recorded on a five-point Likert scale. Response categories for the first statement related the purpose of watching educational videos include 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; and 5 = strongly agree (see Matas, 2014). Response categories for second item related to weekly exposure to educational videos include 1 = once a week; 2 = twice a week; 3 = thrice a week; 4 = four to five days a week; 5 = six to seven days a week. Response categories for third item related to daily exposure to educational videos include 1 = less than one hour; 2 = one to two hour; 3 = two to three hours; 4 = three to four hours; 5 = more than four hours (see Gentile, Reimer, Nathanson, Walsh, & Eisenmann, 2014). Responses for fourth item regarding comfortability while watching videos

were also recorded on a five-point Likert scale, where 1 = extremely uncomfortable; 2 = uncomfortable; 3 = neutral; 4 = comfortable; and 5 = extremely comfortable (see Matas, 2014).

A scale developed by Butt and Run (2012) was adapted to measure the second independent variable “Attitude toward Educational Videos” and this scale was consisted of 10 items. A scale consisted of 15 items was used for third variable “Motivation for Educational Videos”, and it was adapted from a scale of academic motivation (Vallerand et al., 1992), and scales for perceived ease of use and perceived usefulness (Davis, 1989; Galatsopoulou et al., 2022). A 10-item scale for the dependent variable “Academic Performance” was adapted from the study of Galatsopoulou et al. (2022).

Table 1 Statements for the Dependent and Independent Constructs in the Questionnaire

Exposure to Educational Videos (EEV)
1. I watch educational videos to fulfil my learning objectives.
2. How often do you watch educational videos in a week?
3. How many hours do you watch educational videos in a day?
4. How comfortable do you feel watching educational videos?
Attitude toward Educational Videos (AEV)
1. Educational videos are of good quality.
2. Educational videos are appropriate for the course learning objectives.
3. Educational videos are interesting.
4. Educational videos are persuasive.
5. Educational videos are appealing to my individual values.
6. Educational videos are informative.
7. Educational videos are objective.
8. Educational videos are meaningful.
9. Educational videos are realistic.

10. Educational videos are easy to understand.

Motivation for Educational Videos (MEV)

1. I experience pleasure and satisfaction while learning new skills from educational videos.
2. I find it enjoyable to watch educational videos.
3. I experience broadening of my knowledge about subjects from educational videos.
4. In the case of educational videos, I have the option to listen to lectures of different instructors on the same topic.
5. I feel pleasure when I surpass one of my achievements by using educational videos.
6. I experience personal satisfaction in using educational videos in my quest for excellence in my studies.
7. I experience pleasure when educational videos help me in discussions with my peers.
8. I feel good about educational videos while studying subjects which appeal to me.
9. Watching educational videos makes me feel imaginative and gives me ideas.
10. Educational videos allow me to save time and focus on what is important.
11. I believe that educational videos are more engaging than classroom environment.
12. Educational videos motivate me to spend more time on study.
13. Educational videos save my time.
14. Watching educational videos enhances my creativity.
15. I feel happy that I can get knowledge through educational videos anywhere and anytime.

Academic Performance (AP)

1. It is easy to learn new concepts with the help of educational videos.
 2. The use of educational videos contributes significantly to the acquisition of relevant knowledge.
 3. Educational videos improves the quality of my understanding of the concepts.
 4. Educational videos are helpful for gaining quick understanding of the concepts.
 5. Educational videos are helpful for completing academic work in time.
 6. Educational videos are helpful in maintaining attention while studying.
 7. Educational videos reduces cognitive load.
 8. The use of educational videos is effective in achieving learning goals.
 9. Educational videos facilitate critical reflection.
 10. Complex procedures can be understood easily with the help of educational videos.
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The responses for each statement of “Attitude toward Educational Videos”, “Motivation for Educational Videos”, and “Academic Performance” were recorded on a five-point Likert scale, where 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; and 5 = strongly agree.

7. Results

The descriptive analysis of demographic variables indicated that there were 219 (54.75%)

male and 181 (45.25%) female students. Among 400, fifty percent students belonged to the urban areas and other fifty percent were living in the rural areas.

In order to test hypotheses, regression analysis was applied. Hypothesis H1 predicted a significant and positive impact of student’s exposure to educational videos on their academic performance.

Table 2 Impact of Exposure to Educational Videos on Academic Performance of Students

Variable	B	SEB	β	t	Sig.
Constant	15.222	.826		18.434	.000
Exposure to Educational Videos	.723	.115	.304	6.305	.000

Note: R square change=.093, F (1,389) = 39.75, $p < .001$

Table 2 shows that exposure to educational videos (EEV) has a statistically significant and positive impact on academic performance (AP) of students ($\beta = .304$, $t = 6.305$, $p = .000$). Further, the $R^2 = .093$ indicates 9.3% of

the variance in AP that is explained by EEV. Though this value is low yet H1 is supported.

[The second hypothesis H2 posited a positive and significant impact of students’ attitude toward educational videos on their academic performance.

Table 3 Impact of Attitude Toward Educational Videos on Academic Performance of Students

Variable	B	SEB	β	t	Sig.
Constant	13.446	.758		17.742	.000
Attitude toward Educational Videos	.331	.035	.430	9.375	.000

Note: R square change= .185, F (1,389) = 87.90, $p < .001$

Table 3 shows that attitude toward educational videos (AEV) has a statistically significant and positive impact on academic performance (AP) of students ($\beta = .430$, $t = 9.375$, $p = .000$). Further, the $R^2 = .185$ indicates 18.5% of

the variance in AP that is explained by AEV. Though the value of R^2 is low yet H2 is accepted.

Hypothesis H3 predicted a positive and significant impact of motivation for educational videos on their academic performance.

Table 4 Impact of Motivation for Educational Videos on Academic Performance of Students

Variable	B	SEB	β	t	Sig.
Constant	13.460	.856		15.731	.000
Motivation for Educational Videos	.225	.027	.407	8.256	.000

Note: R square change= .165, F (1,389) = 68.16, $p < .001$

Table 4 shows that motivation for educational videos (MEV) has a statistically significant and positive impact on academic performance (AP) of students ($\beta=.407$, $t=8.256$, $p=.000$). Further, the $R^2=.165$ indicates 16.5% of the variance in AP that is explained by MEV. Though this value is low yet H3 is also supported.

The fourth hypothesis H4 of this study assumed a more positive and significant impact

of exposure to educational videos on academic performance of urban students as compared to rural students. Simple moderation analysis (model 1) was performed in Process Macro 4.0 to measure the moderating effect of area (urban or rural) on the relationship between exposure to educational videos (EEV) and academic performance (AP).

Table 5 Moderation Effect of Area and Exposure to Educational Videos on Academic Performance

Variable	B	SEB	t	Sig.	LL	UL
Constant	1.924	.546	3.521	<.001	.850	2.99
Exposure to Educational Videos	.251	.025	9.857	<.000	.201	.301
Area (Urban=1, Rural=2)	-.505	.347	-1.455	.1462	-1.18	.177
EEV*Area	.019	.0162	1.211	.226	-.012	.051

Note: R square change=.752, $F(3,387) = 399.92$, $p<.001$

Table 5 show that area of students does not moderate the relationship between EEV and AP ($B= .019$, $t= 1.211$, $p=.226$). Thus, H4 is not supported.

Hypothesis H5 posited a more positive and significant impact of attitude toward educational videos (AEV) on academic performance (AP) of urban students as compared to rural students.

Table 6 Moderation Effect of Area and Attitude Toward Educational Videos on Academic Performance

Variable	B	SEB	t	Sig.	LL	UL
Constant	11.45	2.39	4.783	<.000	6.747	16.163
Attitude toward Educational Videos	.446	.111	4.009	<.000	.227	.665
Area (Urban=1, Rural=2)	1.336	1.51	.881	.378	-1.64	4.31
AEV*Area	-.077	.070	-1.09	.275	-.216	.061

Note: R square change=.187, $F(3,387) = 29.72$, $p<.001$

Table 6 show that area of students does not moderate the relationship between AEV and AP ($B= -.077$, $t= -1.09$, $p=.275$). Thus, H5 is not supported.

H6 predicted a more positive and significant impact of motivation for educational videos (MEV) on academic performance (AP) of urban students as compared to rural students.

Table 7 Moderation Effect of Area and Motivation for Educational Videos on Academic Performance

Variable	B	SEB	t	Sig.	LL	UL
Constant	9.5877	.6541	3.6124	<.000	4.37	14.80
Motivation for Educational Videos	.999	.124	8.085	<.000	.755	1.24
Area (Urban=1, Rural=2)	-2.523	1.67	-1.503	.134	-5.82	.778
MEV*Area	.124	.0781	1.580	.114	-.030	.272

Note: R square change= .727, $F(3,387) = 307.08$, $p<.001$

Table 7 show that area of students does not moderate the relationship between MEV and AP ($B = .124$, $t = 1.580$, $p = .114$). Thus, H6 is also not supported.

8. Discussion

Despite varied research portraying mixed views pertaining to digital media incorporation in the mainstream educational and learning scenarios, it is depicted that the rapid developments in information and communication technologies (ICTs) will eventually overcome the shortcomings that are propagated by different opposing schools of thought. The robust internet and communication technologies are enabling the masses to access, use and create content that has applications in almost all industries and services. Especially in the education sector, round-the-clock-access to education and greater flexibility to engage in educational experiences irrespective of physical locations are deemed to be the future. Students are no longer constrained by the four walls of a classroom, and can now engage in networked learning experiences with peers and academics from around the world (Jayatilleke & Gunawardena, 2016).

This study examined the impact of educational videos on academic performance of university students. First hypothesis H1 predicted a significant and positive impact of exposure to educational videos on the academic performance of students. The results show that this hypothesis is supported. Further, regression analysis indicates 9.3% of the variance in academic performance is explained by exposure to educational videos. Findings of previous studies (Tan & Pearce, 2011; Tang & Austin, 2009; Yousef et al., 2014; Zhang, Zhou, Briggs & Nunamaker, 2006) also confirmed that usage of digital videos have significant impact on academic performance of students.

Hypothesis H2 predicted a significant and positive impact of attitude toward educational videos on the academic performance

of students. This hypothesis was also accepted. Further, regression analysis indicates 18.5% of the variance in academic performance of students is explained by their attitude toward educational videos. This finding is aligned with the results of previous studies (Rajadell & Garriga-Garzón, 2017; Robin, 2009; Roodt & Peier, 2013).

The third hypothesis H3 of this study is also supported, which assumed a significant and positive impact of motivation for educational videos on the academic performance of students. Results show that 16.5% of the variance in academic performance of students is explained by their motivation for educational videos. Brav et al. (2011) also found that students get motivations from digital videos to achieve better academic performance.

Moderating effect of area (urban or rural) was also studied in this study. Hypotheses H4, H5 and H6 predicted a more positive and significant impact of three main independent variables of this study exposure to educational videos, attitude toward educational videos, and motivation for educational videos on the academic performance of urban students as compared to rural students. All of these three hypotheses are not supported. A possible explanation could be that better Internet facilities in both urban and rural areas of Pakistan are still not available. Further, power shortage is another big problem in the country. Such hurdles may affect overall exposure, attitude and motivation level of students, regardless of their area.

9. Conclusion

This research demonstrates that exposure to educational videos, attitude toward these videos, and motivation to use them have a significant and positive influence on the overall academic performance of students. However, area (urban or rural) does not have a statistically significant moderating effect on the relationship of these three independent variables with academic performance, possibly due to common problems

in different areas of Pakistan like lack of internet facilities and electricity shortage. This indicates that change, evolution and modernity in the educational system especially e-learning require substantial and definitive changes to all stakeholders, policymakers and infrastructure providers that can support the transformation. The incorporation of media technologies in teaching methodology will have far reaching consequences and will greatly help the development and delivery of educational and learning contents to the students.

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