CHAPTER THREE

Use of Teacher's Made YouTube Instructional Video Package and Student's Performance in Educational Technology in Faculty of Education, University of Calabar, Calabar

Gibson Samuel Okworo, PhD
Department of Educational Technology and Library Science
University of Uyo, Uyo
Akwa Ibom State
&
Abigail Aniefiok Effiong
Department of Curriculum and Teaching
University of Calabar, Calabar

Abstract
This study was on the use of teacher's made YouTube instructional video package and student's performance in Educational Technology in Faculty of Education, University of Calabar. Two research questions and two hypotheses were formulated to guide the study. Quasi experimental design was adopted. Sixty-four educational technology students were purposively used in their intact. One instrument was developed by the researcher-Educational Technology Performance Test (ETPT). The data obtained from respondents was analysed using Mean and Standard Deviation and Analysis of Covariance (ANCOVA) for research questions and hypotheses respectively. The findings of the result reveal that the use of teacher-made YouTube instructional package does not significantly affect academic performance of year one educational technology students. Recommendations were made to improve method of teaching educational technology. Integration of YouTube Video in teaching and learning should as a matter of urgency be adopted as a communication medium. Lecturers must keep pace with the new technologies in the classroom through regular attendance in workshop, conferences and in-service learning.

Keywords: Instructional Video, Package, Performance, Teacher's made Youtube**,** Technology.

Introduction

COVID-19 PANDEMIC: THE PENDULUM FOR RECONSTRUCTION OF INSTRUCTIONAL SYSTEM IN NIGERIA

The use of multimedia in the classroom is not a new phenomenon. However, the type of media used and how it is used is changing with technological innovations. Educators have employed various forms of multimedia in the classroom for decades, dating back as early as the 1920's (Snelson and Perkins, 2009). In the 1950's, teachers used technology such as 16mm projectors; the 1980's and 1990's gave birth to VHS and DVD's to provide visual aids and increase students' engagement. The 21st century has been marked by revolutionary growth in the use of technology, including cell phones, tablets, iPad and laptop computers (Greenhow, Robelia, & Hughes, 2009). Media content is now accessed via the Internet and through Web 2.0 technologies where users interact and collaborate to create content (Harris and Rea, 2010). Such social media sites allow people to share and generate information with the rest of the world. The website "YouTube" is one source of social media that has grown in popularity over the past five years, including its use in the classroom as an educational tool.

YouTube is an online public communications site. The site allows for registered users to upload and have it available to the public their videos for viewing. Anyone who goes to the site can view the videos that are posted on the site. The videos are anything from beginner videos to more professional videos. YouTube is a free video-hosting website that allows members to store and serve video content. YouTube members and website visitors can share YouTube videos on a variety of web platforms by using a link or by embedding HTML code. YouTube is an American video-sharing website headquartered in San Bruno, California. The service was created by three former PayPal employees—Chad Hurley, Steve Chen, and Jawed Karim—in February 2005. In November 2006, it was bought by Google for US$1.65 billion. YouTube now operates as one of Google's subsidiaries. The site allows users to upload, view, rate, share, add to favorites, report and comment on video, and it makes use of Adobe Flash Video technology to display a wide variety of user-generated and corporate media videos. Available content includes video clips, TV show clips, music videos, short and documentary films, audio recordings, movie trailers and other content such as video blogging, short original videos, and educational videos.

YouTube is definitely one of the best platforms for searching and accessing educational video resources. In fact, the strength of YouTube is not only in it being a resource of educational videos but is also a powerful tool for creating and editing videos. Several teachers still overlook some excellent editing features and creative possibilities that

YouTube provides. For instance, one can use YouTube editor to create beautiful slideshows and presentations to share in class, or use it to create a Hangout and invite students to take part.

Although much of the content on YouTube is for entertainment purposes, there exists an enormity of educational content. For example, YouTube EDU was created in 2009 as an educational hub for lectures, courses, and examples and is used by professionals and non-professionals in a variety of fields. Evidence suggests that YouTube as an educational tool has extended to the medical field (Clifton & Mann, 2011; King, Greidanus, Carbonaro, Drummond, & Patterson, 2009), within the field of language learning (Terantino, 2011), in educator training (Hudock & Warden, 2001; Sun, 2014), and to promote cross-cultural understanding (Bloom and Johnston, 2010). With such broad applicability, YouTube is a source of media that is an integral part of the education system.

As a learning resource, YouTube can be used to support those students who, because of their digital learning styles, are accustomed to using technology such as the internet, video blogging, and text messaging than more traditional classroom learning tools. For non-traditional, older learners, YouTube offers them an opportunity to experience new technology that will help to provide them with marketable skills for future careers. Through this innovative online resource, instructors can help learners to create or utilize content that is personally relevant, thereby providing a more engaging learning environment. In addition, YouTube is a free teaching resource for schools, which is an important consideration for educational budgets.

Through YouTube, links can be easily clipped into PowerPoint presentations, documents, or online teaching platforms by simply cutting and pasting the selected video URL that is displayed on the YouTube site. Another way YouTube can be used is by providing an online plat-form for the posting of a video of a quest speaker for the course, which is especially useful for online classes and for classrooms located in more rural settings where appropriate speakers may be difficult to find. In addition to using video clips, some instructors are videotaping and posting online, also known as video-casting, their lectures on YouTube for both online and in class learners. For example, two professors at the University of Minnesota created a 3-D animation. Video cast explaining a mathematical concept that attracted more than 1 million views, and Kansas State University Professor of Cultural anthropology posted a video cast web 2.0 that drew more than 400,000 views.

Through such online mechanisms, provide online courses. YouTube offers an opportunity to instructors to greatly expand their educational audiences, even to international locations, not only increasing their ability to, but also increasing the public's awareness of the universities, departments and programs. Additionally, another benefit of YouTube is that students can access scholarly content, real-life situations, and demonstrations of applicable skills as part of the course lecture in the form of video clips. This provides an additional opportunity for educators to engage students visually in the educational learning process.

Learning with multimedia elements, such as videos, has been shown to be effective for learning activities. Learners are able to see, hear and produce the required behaviors. There is a variety of online media, including videos which enable these elements to be available. YouTube, Teacher Tube and Vimeo are online video repositories in which videos are made available (Norlidah, DeWitt & Saedah, 2013). Users are able to download, view and share video clips on an extensive variety of content which includes film clips, television shows, music and instructional videos, vlogs or video blogs, as well as amateur video. The YouTube becomes social media when the videos are shared and comments and other forms of interaction occur on the site. Social media has been shown to be effective for learning. Learners are able to develop higher order thinking skills such as decision making and problem solving as well as communicate and collaborate using social media (Bunus, 2010; Greenhow & Robelia 2009).

In addition, connections can be made to what they learnt in their classrooms (Greenhow and Robelia 2009) and learning becomes more engaging (Bunus, 2010). Hence, there are potentials for YouTube, both as video with audio and visual elements, as well as a social media to be used for instruction. The general benefits of media in the classroom and the benefits of classroom discussions are considered and supported by Blended Learning Theory as well as Information Processing Theory. These theoretical foundations clearly demonstrate the intentional integration of YouTube as an innovative resource for schooling. Schools continue to increase their use of multimedia in the classroom due to the many potential learning benefits it provides (Hudock & Warden, 2001; Wingard, 2004; Berk, 2009; Lee and Lehto, 2013). Berk (2009) presented several examples of ways that media helps students to interact with the course material. For example, using a video may help to draw attention to a specific concept and work to maintain students' attention on that concept throughout the duration of the video. Other benefits of using media in the

classroom include the ease in availability of diverse materials, vividness of procedural instruction, and relevance to the target population (Hudock & Warden, 2001; Lee & Lehto, 2013). Other researchers suggest that video content specifically from Web 2.0 technology increases students' engagement (Roodt & Peier, 2013; Sherer & Shea, 2011).

However, schools/colleges should be critical of the videos selected in order to ensure their relevance and learning potential (Al-Jarf, 2012). With the popularity of Web 2.0 technologies, instructors need to be deliberate and intentional in their use of multimedia in the classroom. Garrison and Kanuka (2004) define blended learning as, "thoughtful integration of classroom face-to-face learning experiences with online learning experiences". The use of YouTube in the classroom ought to fall under this definition; however, it is of special importance to note the intention behind the blending of technology with face-to-face instruction. The two should complement one another in a well-balanced combination that is uniform.

Allam (2006) observes that the creative challenge of using moving images and sound to communicate a topic was indeed engaging and insightful, but adds that it also enables students to acquire a range of transferable skills in addition to filmmaking itself. These include research skills, collaborative working, problem solving, technology, and organizational skills. In some cases, video can be as good as an instructor in communicating facts or demonstrating procedures to assist in mastery learning where a student can view complex clinical or mechanical procedures as many times as they need to. Furthermore, the interactive features of modern web-based media players can be used to promote 'active viewing' approaches with students.

Creative classroom techniques incorporating technology provide a more productive and enriched learning environment, preparing future educators in today's technology-driven society requires schools to adopt new teaching strategies which motivate and engage the new tech-savvy web 2.0 generation. YouTube provides a public access web –based platform that allows people to easily upload, view and share video clips on www.youtube.com. YouTube also allows users to share video clips across the internet through other websites, mobile devices, blogs, and email. Developmental, cognitive, and educational theories have recognized the importance of interaction amongst peers within a classroom setting. For example, Media Synchronicity Theory (Dennis, 2008).

Media synchronicity theory describes the ability of a medium to create the sense that all participants are concurrently engaged in the communication event. Media with high degrees of synchronicity, such as face-to-face meetings, offers participant the opportunity to communicate in real time, immediately observe the reactions and responses of others, and easily determine whether co-participants are fully engaged in the conversation. Media synchronicity theory implies real-time interaction between learners-learners and teacher-learner, which enables the teacher observe reaction and responses of others and easily determine whether students are actively participating in the conversion. McLaughlin and Luca (2002) emphasize a combination of methodologies including project-based learning, collaborative learning, and extensive exposure to media combined to enhance the learning experience. However, it depends on what is shown and to whom (Snelson & Perkins, 2009). Although showing videos better connect to digital natives and bridges the gaps with non-traditional students, schools/colleges should ensure the relevancy and learning potential of videos. In addition, active learning techniques should be employed with multimedia use, such as YouTube.

Bah (2014) carried out a study on the effect of YouTube video instruction on secondary school students' interest and achievement in practical land preparation in Yobe State. It also examined the influence of gender on students' interest and achievement in the subject. Quasi experimental design, specifically pre-test post-test control group design was adopted. The sample size was 80 SS11 students comprising 52 males and 28 females from intact classes. The two classes were randomly assigned experimental and control groups. The experimental group was taught with YouTube video instruction while the control group was taught with customized video-taped package. The treatment lasted for four weeks. To guide the study, six research questions and six hypotheses were formulated. Agricultural Achievement Test (AAT) comprising thirty practical questions and an interest inventory were developed. The two instruments used for data collection were face validated by three experts and their reliability index were .84 and .91 respectively. Analysis of covariance (ANCOVA), mean and standard deviation were used to analyze the data collected for the study. The results showed that YouTube video instruction had significant effect both on students' interest and achievement in practical land preparation; gender had no significant influence on students' interest and achievement in practical land preparation; interaction effect of YouTube video and gender on students' achievement in practical land preparation was not significant and interaction effect of YouTube video and gender on students' interest was not also significant. Therefore, the major contribution of

this study is in the area of enhancing the students' interest and achievement in practical land preparation. The study has shown that teaching practical land preparation using YouTube video instruction enhance the interest and achievement of students. Finally, the researcher recommended among others that agricultural science teachers should adopt the use of YouTube video instruction to facilitate teaching and learning. This study examined the use of YouTube instructional video package and students' performance of year one Educational Technology in Faculty of Education, University of Calabar, Nigeria.

Statement of the Problem

In the past, traditional lectures have been the central method for content delivery in our classrooms. However, with advancements in technology, this type of teaching pedagogy alone might no longer be sufficient, especially for promoting scientific inquiry and critical thinking. Schools might consider adding a video per assigned reading, much like the examples provided in this paper. Other suggestions or tips include using YouTube in the classroom to increase diversity content, demonstrate complex material, show real life examples of events which students would otherwise not be able to see, analyze and produce performances, and help meet diverse students' learning needs. Considering that the majority of students are digital natives and tech-savvy or net generation rather than digital immigrants, the use of social media in the classroom appears to be the way education in general, and the individual classroom in particular, will be transformed. This study is therefore aimed at finding out if teacher's made YouTube instructional video package could enhance effective way of teaching/learning Educational Technology fundamentals in Faculty of Education, University of Calabar to improve students' academic performance.

Purpose of the Study

The aim of the study was to examine the effect of using of teachers made YouTube instructional video package on academic performance of students in educational technology, Faculty of Education, University of Calabar.

Specifically, the study sought to achieve the following objectives:

1. Examine the effect of using teacher made YouTube instructional video package on academic performance of year one Educational Technology students.
2. Examine the effect of using teachers made YouTube instructional video on students' academic performance in Educational Technology based on their cognitive ability levels

Research Questions

The following research questions were developed to guide the study:

1. To what extent does the use of teacher made YouTube instructional video package affect students' performance in Educational Technology?
2. How does teacher-made YouTube instructional video package affect students' academic performance in Educational Technology based on their cognitive ability levels?

Null Hypotheses

The following null hypotheses were formulated for the study.

Ho_1: There is no significant means difference between the scores of students taught Educational Technology with teacher's made YouTube instructional video package and those taught without it.

Ho_2: There is no significant means difference between the scores of students taught Educational Technology with teacher's made YouTube instructional video package based on their cognitive ability levels

Methodology

The research design for this study is quasi-experimental research design aimed at investigating the use of teacher-made YouTube instructional video package on students' academic performance of year one educational technology students in Faculty of Education, University of Calabar. In carrying out this study, the researcher adopted the quasi experimental approach. This is because the experimental research involves observation of situation as it is and setting up experiment condition or collection of group to different treatment. The population for the study comprised all the year one 2018/2019 Educational Technology students in the department of Curriculum and Teaching, totally sixty-four (64) students. The selection was done using purposive sampling technique. The 2018/2019 year one students of educational technology were purposively selected and randomly assigned to experimental and control groups. The sample of the study consisted of all the 2018/2019 year one students of Educational Technology numbering sixty-four (64) students. Thirty-two (32) were randomly assigned to the experimental group, while the other 32 were assigned to control groups. The ETPT was used to determine the performances of students. It has 20 multiple choice items with each item having four options lettered A-D. Each correct answer was scored 5 marks and incorrect answer zero

(0), giving a maximum of 100 marks and a minimum zero (0). This performance test was administered on both the experimental and control groups. In addition, lesson note was prepared by the researcher for the control group, and an instructional YouTube package for the experimental group on the topic in educational technology: Instructional Materials and Classification Based on Sensory Modalities. The instructional package for the experimental group was developed using the ASSURE Model. The model served as a procedural guide for designing and conducting instruction that incorporate learning and technology. The package has the cueing power to arrest the attention of the learners, animated pictures with colours, light, lettering and sound were introduced to motivate students and reinforced them to learn on their own pace. On method of data preparation, data obtained were scored by the researchers and categorized into high and low. Those who scored the midpoint of 10 and below were considered as low, while those that scored 11 and above were considered as average and those that score 20 and above were considered as high mean and standard deviation were used for answering the research questions while Analysis of Covariance (ANCOVA) was used for testing the hypotheses. The results obtained are presented in the light of the research questions and hypotheses formulated to guide the study.

Research Question 1: How does the use of teacher made YouTube instructional video package affect students' performance in Educational Technology?
Mean and standard deviation were used for answering this research question. The result of the analysis is as presented in Table 1.

Table 1: Mean and standard deviation of the effect of teacher's made YouTube instructional video package on students' performance in Educational Technology

Instructional Strategies	N	Pretest		Posttest		Mean Difference
		Mean	SD	Mean	SD	
YouTube Instructional Video Package	32	43.59	6.75	81.72	12.29	38.13
Lecture Method	32	43.75	10.70	63.44	13.76	19.69

The result in Table 1 revealed the pretest and post test means of treatment group (those taught with You Tube video instructional package) of 43.59 and 81.72 and their respective standard deviations of 6.75 and 12.29 respectively. The result further shows the pretest and post test means of control group (those taught with lecturing method) of 43.75 and 63.44 and their respective standard deviations of 10.70 and 13.76 respectively with a mean difference of 19.69 between the treatment group and the control group. This difference in mean implies that the use of teacher's made YouTube instructional video package affect students' performance in Educational Technology.

Research Question 2: How does teacher-made YouTube instructional video package affects students' academic performance in Educational Technology based on their cognitive ability levels?
Mean and standard deviation were used for answering this research question, the result of the analysis is as presented in Table 2.

Table 2: Mean and standard deviation of the effect of teacher's made YouTube instructional video package on students' academic performance in Educational Technology based on their cognitive ability levels

Cognitive Ability Level	N	Pretest		Posttest		Mean Difference
		Mean	SD	Mean	SD	
Low	13	38.46	3.15	73.85	12.94	35.39
Average	14	47.86	3.78	83.93	7.39	36.07
High	5	61.00	1.00	96.00	4.18	35.00

The result in Table 2 revealed the pretest and post test means of low ability students of 38.46 and 73.85 respectively with standard deviations of 3.15 and 12.94 respectively. The Table further shows the pretest and post test means of average ability students of 47.86 and 83.93 and their respective standard deviations of 3.78 and 7.39 respectively and lastly, the Table also shows the pretest and post test means of high ability students of 61.00 and 96.00 respectively and their respective standard deviations of 1.00 and 4.18. The mean differences of high and low ability students, low and average as well as average and high are 0.39, 0.68, and 1.07respectively. Comparing mean differences of low, average and high ability students respectively shows that teacher's made YouTube instructional video had the best enhancing effect on low and average ability students.

Null Hypothesis 1: There is no significant means difference between the scores of students taught Educational Technology with teacher's made YouTube instructional video package and those taught without it.

Table 3: Result of ANCOVA analysis of the difference between the scores of students taught Educational Technology with teacher's made YouTube instructional video package and those taught without it

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6248.680[a]	2	3124.34	19.75	.000
Intercept	7279.957	1	7279.96	46.01	.000
Pretest	901.414	1	901.41	5.70	.020
Instructional strategies	5385.873	1	5385.87	34.04	.000
Error	9650.929	61	158.21		
Total	353025.000	64			
Corrected Total	15899.609	63			

a. R Squared = .393 (Adjusted R Squared = .373)

The result in Table 3 reveals that the calculated F value of 34 .04 is greater than the critical F value of 4.00 at 1 and 63 degrees of freedom with .05 level of significance. With this result, the null hypothesis that says there is no significant means difference between the scores of students taught Educational Technology with teacher's made YouTube instructional video package and those taught without it was rejected. This implies that there is significant means difference between the scores of students taught Educational Technology with teacher's made YouTube instructional video package and those taught without it

Null Hypothesis 2: There is no significant means difference between the scores of students taught Educational Technology with teacher's made YouTube instructional video package based on their cognitiveability levels

Table 4: Result of ANCOVA analysis of the means difference between the scores of students taught Educational Technology with teacher's made YouTube instructional video package based on their ability levels

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	1934.39[a]	3	644.80	6.58	.00
Intercept	606.19	1	606.19	6.18	.02
Pretest	740.54	1	740.54	8.41	.00
Instructional strategies	4119.41	2	2059.71	21.00	00
Error	2746.08	28	98.07		
Total	218375.00	32			
Corrected Total	4680.47	31			

The result in Table 4 reveals that the calculated F value of 21 00 is greater than the critical F value of 3.32 at 2 and 29 degrees of freedom with .05 level of significance. With this result, the null hypothesis that says there is no significant means difference between the scores of students taught Educational Technology with teacher's made YouTube instructional video package based on their ability levels was rejected. This implies that teacher's made YouTube instructional video package do significantly affects students' academic performance in Educational Technology based on their cognitive ability levels.

Discussion of Findings

The result of the analysis of the effect of use of teacher-made YouTube instructional video package on academic performance of year one Educational Technology students revealed that the use of teacher-made YouTube instructional video package do significantly affect academic performance of year one Educational Technology students. This finding is attributed to the incorporation of design element of visuals, graphics, narration, sound, colours, charts, animations which encourage individual learning as well as student's engagement. As a learning resource, YouTube support those students who, because of their digital learning styles of the contemporary society, are accustomed to using technology such as the internet, video blogging, and text messaging than more traditional

classroom learning tools. This finding supports that of DeWitt, Alias, Siraj, Yaakub, Ayob and Ishak (2013), who found that YouTube has a very powerful potential for teaching and learning in the performing arts.

The result of the analysis of the effect of use of teacher's made YouTube instructional video package on academic performance of year one Educational Technology students based on their cognitive ability level revealed that the use of teacher's made YouTube instructional video package do significantly affect academic performance of year one Educational Technology students based on their ability levels. This finding could be attributed to the fact that low and moderate ability students are being more captivated and focused when taught using You Tube instructional video package. This was achieved through the incorporation of design element of visuals, graphics, narration, sound, colours, charts, animations which encourage individual learning as well as student's engagement. As a learning resource, YouTube shows that students are accustomed to using technology such as the internet, video blogging, and instant text messages more than the traditional classroom learning tools. This result supports the findings of Teens and Chau (2011), who found YouTube to be more entertaining than any other source. Berk (2009) pointed the use of video in a college class to improve presentations, since more sense are alerted. This author further encourages schools/colleges to add learning outcomes to their video use such as "grab students' attention, focus students' concentration and cognitive ability level , generate interest in the class, draw on students' imagination, improve attitude toward content and learning and to make learning fun".

Video use for classes is universal when studying teachers' use of YouTube in the classroom, "More than 80% of survey respondents tapped into online sites such as YouTube for video to use in their teaching" Respondents were enthusiastically using it. Roodt and Peier (2013) found YouTube use in class was for illustrating concepts. In their study, 71% of students believed the use of YouTube increased their attention and more than half of respondents agreed that the usage of YouTube was overall successful, finally 65% would encourage usage in future classes.

Conclusion

Based on the findings of the study, it was concluded that Use of YouTube instructional video package do affect performance of year one Educational Technology students' in Faculty of Education, University of Calabar, Nigeria. YouTube is a dependable resource for knowledge impartation and sharing. It is used as an instructional video package that assists both teachers and students in their goal-seeking activities. The study highlights that students of Faculty of Education depend on their technology to solve a host of their academic challenges, especially their cognitive level and place of residence. The

patronage of YouTube as a global infrastructure for learning should be continually advocated for improved study of Educational Technology.

Recommendations

1. In the context of teaching and learning, YouTube is used as a video repository to assist lecturers and students, as well as the fact that, innovation and creativity among lecturers and students can be triggered. Efficient teaching methods should be practiced to specifically deal with the integration of YouTube videos in teaching and learning.
2. Thus, lecturers must keep pace with the needs of the present generation of students but at the same time maintain the artistic value and originality. YouTube can be used to enhance the knowledge base in our contemporary classrooms.
3. Policy planners and implementers of the curriculum should consider the integration of information technology and develop the information technology skills among lecturers and learners.

References

Al-Jarf, R. (2012). Online videos for specific purposes. *Journal of Educational and Social Research, 2*(6), 17-21.

Allam, C. (2006) in Bijnens, M., Vanbuel, M., Verstegen, S., Young C., Handbook on Digital Video and Audio in Education, Creating and using audio and video material for educational purposes, The Videoaktiv Project.

Berk, R. A. (2009). Multimedia teaching with video clips: TV, movies, YouTube, and mtvU in the college classroom. *International Journal of Teaching and Learning, 5*(1), 1-21.

Bloom, K., & Johnston, K.M. (2010). Digging into YouTube videos: Using media literacy and participatory culture to promote cross-cultural understanding. *Journal of Media Literacy Education, 2*(2), 113-123.

Bunus, P. (2010). The Social Network Classroom. *Technology enhanced learning: Quality of teaching and educational reform,73,* 517-524.

Clifton, A., & Mann, C. (2011). Can YouTube enhance student nurse learning? *Nurse Education Today, 31*(4), 311-313.

Garrison, R. D., &Kanuka, H. (2004). Blended learning: uncovering its transformative potential in higher education. *The internet higher education,* 7, 95-105. Doi: 1016/j.iheduc.2004.02.001

Greenhow, C. and Robelia, B. (2009).Informal learning and identity formation in online social networks. *Learning, Media and Technology, 34* (2), 119–140.

Greenhow, C., Robelia, B., & Hughes, J. E. (2009). Learning, teaching, and scholarship in a digital age Web 2.0 and classroom research: What path should we take now?.*Educational Researcher*, *38*(4), 246-259.

Harris, A. L., & Rea, I. A. (2010). Web 2.0 and virtual world technologies: A growing impact on IS education. *Journal of Information Systems Education, 20*(2), 137-145.

Hudock, A. M. & Warden, S. A. G. (2001).Using movies to teach family systems concepts. *The Family Journal, 9*(2), 116-121.

King, S., Greidanus, E., Carbonaro, M., Drummond, J., & Patterson, S. (2009). Merging social networking environments and formal learning environments to support and facilitate interprofessional instruction. *Med Educ Online, 14*(5), 1-9.

Lee, D. Y. &Lehto, M. R. (2013). User acceptance of YouTube for procedural learning: An extension of the Technology Acceptance Model. *Computers & Education, 61*, 193-208.

McLaughlin, C. & Luca, J. (2002). A learner-centered approach to developing team skills through web-based learning assessment. *British Journal of Educational Technology*, 33(5), 571-582.

Norlidah Alias, DeWitt, D., SaedahSiraj (2013). Development of science pedagogical module based on learning styles and technology. Kuala Lumpur: Pearson Malaysia Sdn. Bhd.

Roodt, S., &Peier, D. (2013). Using YouTube in the classroom for the next generation of students. *Issues in Informing Science and Information Technology, 10*, 473-487.

Sherer, P., & Shea, T. (2011).Using online video to support student learning and engagement. *College Teaching*, *59*(2), 56-59.

Snelson, C., & Perkins, R. A. (2009). From silent film to YouTube: Tracing the historical roots of motion picture technologies in education. *Journal of Visual Literacy, 28*(1), 1-27.

Terantino, J. M. (2011). Emerging technologies YouTube for foreign languages: You have to see this video. *Language Learning and Technology*, *15*(1), 10-16.

Wingard, R. G. (2004). Classroom teaching changes in Web-enhanced courses: A multi-institutional study. *Educause Quarterly*, 1, 26-35.