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Effectiveness of Video Presentation to Students' Learning

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Abstract This study was conducted to identify the effectiveness of video presentation to students' learning. This was derived due to the changes and updates the world has to offer on enhancing student's wisdom. Instructors and even students rely or use educative videos to learn, compare and understand concepts. The use of video is only beginning to meet the needs of today's and tomorrow's learners. Using videos in teaching is not new. It was proposed that videos are effective when used to develop information literacy, using a student survey to measure the effectiveness of video lectures. Video based materials boost students' creativity and cooperation. Access to video can help motivate students and create a distinctive context for their learning experience. Questionnaires were administered to 224 students of Benguet State University to measure effectiveness of video presentation to student's learning. From the outcomes, it was found out that there is no significant difference on students' perceptions of the effectiveness of video presentation to students' learning when grouped according to sex. Moreover, results revealed that a significant difference exists among students' perceptions of the effectiveness of video presentation when grouped according to their academic level. Furthermore, it is revealed that the level of effectiveness of video presentation to students learning is highly effective.

Keywords Effectiveness, Video presentations, Students' learning, Year level

1. Introduction

Learning is the acquisition of knowledge and skills possible through systematic interaction between teachers and learners. It happens every day and involves teacher, learner, and methodology and materials interaction. Parts of these materials are known as instructional resources (J. A. Akerele, et al, 2012) [1].

Technology nowadays is common among schools, offices, and to every individual, as this supports learning and helps in developing knowledge, wherein, integration is the use of technology to enhance, reiterate, present, and assess how students understand the syllabus or the program (Edutopia, 2005) [2]. Moreover, this supports both teaching and learning.

Using videos in teaching is not new. They date back to prehistoric times when cave instructors used 16mm projectors to show cave students examples of insurance company marketing commercials in business courses (Berk, R. A., 2009) [3]. Video as a change instrument in the classroom has undertaken a unique cycle of adoption over time. Broadcast television and film were first used sparingly, primarily as out-of-the classroom forms of enrichment (A.D. Greenberg, et al., 2012) [4]. Presenting the cycle in the year 1960-1970s, television films were on trend, 1980, video tapes were used, and 1990s marked booming of Two-way videoconferencing, camcorders and video CDs. In the year 2000, DVDs, streaming videos, the popularly youtube, and camera-enabled smartphones were in fashion (Zanetis, J. et al., 2012) [5].

Video based materials boost student creativity and cooperation. Access to video can help motivate students and create a distinctive context for their learning experience. Based on a true story- the incorporation of video in the classroom, it has allowed Broadmeadows students and teachers to help in broadcasting school announcements, use pre- recorded classes to overcome teacher shortages and influence Internet-based digital video to enhance self-directed learning (A. D. Greenberg, et al., 2012) [4].

As for the paradigm of the study, independent variables consists the student nurses' academic year level and sex while the dependent variable incudes student's view on effectiveness of video presentation to learning.

This study will impart a relevant idea on how to enhance comprehension through learner control and multimedia interpretations. This study will open opportunity for instructors and students to use multimedia presentations especially with the use of video- based materials to create stronger memory. Instructors will be imparted with knowledge on how to motivate, explain and help students cope up with the norms of video materials hence helping students to easily instill information in their minds.

The purpose of this study is first; to determine if a significant difference exists on students' perceptions of the effective use of video presentation when grouped according

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to academic level and sex and, second determine the level of effectiveness in using video presentations to student's learning process. This was derived due to the changes and updates the world has to offer on enhancing student's wisdom. Instructors and even students rely or use educative videos to learn, compare and understand concepts.

2. Background

Videotape recorders can be used in a number of different ways to enhance teaching and learning in both large groups and small groups. A carefully arranged video can be a good starting point for initiating student discussion of important issues in medical practice. In our profession, it is also being observed that using video presentations explains and demonstrates ideas and concept regarding our topics easier, hence beneficial on our part (Harrison, F., 2003) [6].

Video images can also be made available via a website for students to view in their private study time. Example includes illustrating clinical conditions, showing clinical skills, and stimulating student discussion. When illustrating clinical conditions, it is important that students become familiar with the principle signs and symptoms of common clinical conditions. Movement disorders are more easily seen than described. As for showing clinical skills, the correct procedure for basic clinical skills can be presented on video before the students attempt these procedures for themselves, thus, aiding in retaining the skills before performing (Harrison, F., 2003) [6].

Combination of video and text makes sense, as it was believed that video is effective for more than simply showing dynamic processes. Video itself is a tool for learning that when properly applied obtains extensive benefits. It's also a medium for collaboration, and a language unto itself that is of universal appeal (A.D. Greenberg, et al., 2012) [4].

The American Public Broadcasting System's (PBS) annual teacher survey on media and technology, the percentages of teachers finding value in multimedia and video content has increased each year since 2007. Result for 2010 shows that 68 percent believe that video content stimulates discussions. 66 percent believe video increases student motivation. 61 percent believe video is preferred by students. 42 percent believe video directly increases student achievement (A. D. Greenberg, et al., 2012) [4]. Generally, it implies that video usage increases and enhances students' learning.

Furthermore, a study entitled, "Learning through Digital Media Experiments in Technology and Pedagogy" states that videos don't have to be long for it to be captivating. Actually, shorter segments may place greater emphasis on close viewing and resultant comprehension. Through the use of technology, video presentation arises in teaching and in learning. It is currently utilized in introducing ideas, lectures, discussions and updates. Video-based materials on specially produced educational videos, documentaries, NEWS and films appear in many programs these days (R. T. Scholz, 2011) [7].

Hsin and Cigas (2013) [8] used short videos to enhance student satisfaction and motivation for an online introductory course in computer science/mathematics. They achieved a significantly higher percentage of involved students and their average grades increased. Another method to engage and to motivate students is showing entertainment videos (Steffes & Duverger, 2012) [9]. As Steffes and Duverger reported, showing supplementary videos within an entertainment context at the beginning of the class can be used to increase the positive mood of the students. Both previous studies, Bravo et al. (2011) [10] and Steffes and Duverger (2012) [9], emphasize the importance of the proper design of supplementary video content and the methodology of displaying video to students.

The effects of using supplementary videos are increasing student activity. An important issue is establishing a methodology of embedding video clips in multimedia teaching material in order to improve the learning process (Kay, 2012) [11]. The selection of appropriate video clips and methodology for their display within the teaching materials represents an important issue for curriculum design, leading to positive learning outcomes (McConville & Lane, 2006) [12]. Using appropriate teaching media and methods to organize and present only relevant information may also increase the efficiency of the self-learning process (Ruiji, 2012) [13].

Moreover, findings of the study "Effect of Video on the Teaching of Library Studies among Undergraduates in Adeyemi College of Education, Ondo" revealed that when video is used in teaching, it enhances learners' positive attitude towards the course. Also, it affects their performances positively (J. A. Akerele, et al, 2012) [1].

The effectiveness of using podcasts as teaching tools has been investigated to identify how these educational videos could be used to help with exam revision (Hill & Nelson, 2010) [14]. Hahn (2012) [15] suggests that videos are effective when used to enhance information literacy courses, using a student survey to measure the effectiveness of video lectures. Hahn's study showed that the majority of the students found the videos useful in supporting the lectures they had participated in. Students are also comfortable using written materials, since these are often quicker and better designed, but the students who preferred written materials also used the recorded video lectures.

The social learning theory of Bandura emphasizes the importance of observing and modeling the behaviors, attitudes, and emotional reactions of others. Bandura (1977) [16] states, "Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action." Social learning theory explains human behavior in terms of continuous reciprocal interaction between cognitive,

behavioral, and environmental influences.

Because it encompasses attention, memory and motivation, social learning theory spans both cognitive and behavioral frameworks. Bandura's theory improves upon the strictly behavioral interpretation of modeling provided by Miller & Dollard (1941) [17].

The highest level of observational learning is achieved by first organizing and rehearsing the modeled behavior symbolically and then enacting it clearly. Molding modeled behavior into words, labels or images results to better retention than by simply observing. Individuals are more likely to adopt a modeled behavior if it results in outcomes they value (Bandura, 1993) [18].

Therefore, copying modeled behavior into words, labels or images mark better retention of ideas, concepts than by simple observation. If students value the outcomes, they are more likely to adopt a modeled behavior. Through the use of video- based materials retention and motivation of students are enhanced.

3. Methods

3.1. Design

The researcher used quantitative research specifically the descriptive design to measure the effectiveness of video presentation to student's learning. A self-reporting survey was utilized.

3.2. Sampling

The study was conducted in Benguet State University-College of Nursing, La Trinidad, Benguet, where respondents were selected. The researcher selected students currently enrolled in the College of Nursing for the school year 2014- 2015. With that, Slovin's formula was used in identifying the number of students to be selected per year level and random sampling was used in selecting the respondents in all year level. 57 students each level were chosen for the 1st and 3rd years, 47 students form the 2nd years, and 62 students form the 4th years.

3.3. Instrument

The instrument for this study is composed of two (2) sections. The survey tool was based on the Michigan State University- IT services: Learning Design and Technology.

The first section includes the respondent's year level and sex. The second section is the survey questionnaire itself, composed of ten (10) items that embodies the concept of effectiveness of video presentations such as 3D video presentation, animations, and return demonstration video clips. Likert scale was used with scores ranging from 1-4. Whereas, a score of 1 is highly not effective, 2 is not effective, 3 is effective, and 4 is highly effective.

3.4. Ethical Considerations

The researcher personally administered and distributed the survey questionnaires to the respondents. No identifying information was recorded on the survey instruments to ensure the anonymity of each respondent. Enough time was allocated for the respondents to answer the questionnaire. Afterwards, the instrument was collected and consequently prepared for tabulation and analysis.

Participation in the study is strictly voluntary with implied consent assumed with return of the completed survey. The respondent's identification will remain private. There are no risks identified for being a part of this study.

3.5. Statistical Treatment

The data were analyzed using the statistical program of Statistical Package for the Social version 20 (SPSS Inc., 2011) [19]. Descriptive statistics including arithmetic mean and standard deviation were used to identify the level of effectiveness of video presentation to students learning in the four (4) different academic levels. Mean scores were calculated for each item. In mean scores, higher scores implied the higher effectiveness of video presentations to the student's learning and lower scores implied less effectiveness. T-test was utilized to determine if a significant difference exists between male and female's perceptions on the effectiveness of video presentation.

Moreover, analysis of variance (ANOVA) was used in identifying the differences in students' perceptions when grouped according to their academic levels. Tukey's Honest Significant Difference Test was utilized as a post-hoc analysis treatment. This was used to determine which populations differed significantly in the results.

4. Results and Discussion

This presents the results of the gathered data necessary to answer the statement of the problem. It was interpreted according to the objectives of the study.

4.1. Level of Effectiveness on Using Video Presentation to Students' Learning Process

As seen on Table 1, level of the effectiveness on using video presentation to students' learning is highly effective. In a study by Brecht and Ogilby (2008) [20] who worked on video lecture and teaching strategy found out that, students who used video were 73% of the respondents. The high use rate suggests that students broadly accept and use video lectures as a form of computer-based instruction and as an enhancement of traditional classroom courses. Moreover, 31.5% viewed the video in advance of classroom lectures, 72.2% used it to do homework, 72.4% used it to prepare for examination, 63% agreed that video is good for tutoring help and 38.9% believed that it helped to raise their course grade.

Moreover, another study mentioned that effectiveness of video as a medium found that video group performed better than the group without instructional media. The video group did significantly better than the chart group. He concluded

that video was an effective medium for teaching / learning in schools (Isiaka, 2007) [21].

4.2. Perceptions of the Effectiveness on Video Presentations of Male and Female Students

Table 1 show that there is no significant difference between male and female perceptions of the effectiveness of video presentation to student's learning. Hence, the male and female populations have the same view of the effectiveness of video presentations as a teaching aid. The result coincides with the study of Akerele, J. A., et al. (2012) [1] as it mentioned that sex did not contribute to the students' attitude towards the course, Library Instruction Programme.

In addition, another study revealed that there is no significant difference between male and female's perception and between business school's freshmen and senior students' perception on the visuals in presentation (Murtaza, G., et al, 2011) [22].

However, a study entitled "Using Supplementary Video in Multimedia Instruction as a Teaching Tool to Increase Efficiency of Learning and Quality of Experience" showed that there were slight differences between the perception of male and female students on the use of supplementary videos (Milos Ljubojevic, V., et al., 2014) [23].

Table 1. Perceptions of the effectiveness of male and female students

	Sex	N	Mean	Std. Deviation	Significance (2-tailed)
Means	Female	194	3.31	0.47	0.69
	Male	30	3.35	0.40	0.66
Mean			3.33		

Similar to the study of Galletly, R., (2012) [24], where students' age and gender were concerned, the study produced some results of interest. In the study, sex correlated only with confidence using technology. Female students were more confident using technology, in the sense of using videos for learning than males.

4.3. Difference in Perceptions of Effectiveness of Video Presentations among the Different Year Levels

Table 2 shows that there is a significant difference among the respondents' view of the effectiveness of video presentation when grouped according to their year level.

Table 2. Analysis of variance of the effectiveness of video presentation considering the difference in year level

		Sum of Squares	df	Mean Square	F	Sig.
View of the Effectiveness of Video Presentation	Between Groups	5.963	3	1.988	10.50	0.00[S]
	Within Groups	41.624	220	0.189		
	Total	47.587	223			

[S]– Significant at 0.05 level of confidence.

Significant differences can be seen in the perception of the effectiveness of video presentation to learning when Levels I and III were compared to Level IV. On the other hand, a significant difference is also shown in level II when compared to level III, whereas, all lower levels differed significantly with the seniors, excluding level II. The results revealed that in general, perceptions of all levels differ from each other and a significant difference was observed. This may imply that use of video presentation has an effect to every year level.

On the part where 1st year were compared to 4th years, shown in Table 3, a significant difference was observed. It is supported by the study of Murtaza, G., et al, 2011 [22], when it revealed that there is a significant difference between perceptions of freshmen and senior students about visual aid usage in presentation. The results of this study indicate that the view point of freshmen and senior students about visual aid usage in presentation is different. Moreover, it implies that freshmen perceive the use of visual aids in presentation, the degree of complexity in visuals, and text size preferred to color significantly more favorably than seniors. It has been empirically proven that seniors and freshmen have different views regarding usage of visual aid for presentations since they belong to different levels of earning. However, no further specific studies have yet been made regarding the effectiveness of video presentation when year level is mentioned.

Table 3. Multiple comparisons on the students' perceptions of the effectiveness of video presentation when grouped according to year level

Year Level		Mean Difference	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
I	II	0.1100877	0.56	-0.110505	0.330681
	III	-0.1789474	0.12	-0.389875	0.031980
	IV	0.2571307[S]	0.00	0.050500	0.463762
II	I	-0.1100877	0.56	-0.330681	0.110505
	III	-0.2890351[S]	0.00	-0.509628	-0.068442
	IV	0.1470430	0.29	-0.069445	0.363532
III	I	0.1789474	0.12	-0.031980	0.389875
	II	0.2890351[S]	0.00	0.068442	0.509628
	IV	0.4360781[S]	0.00	0.229447	0.642709
IV	I	-0.2571307[S]	0.00	-0.463762	-0.050500
	II	-0.1470430	0.29	-0.363532	0.069445
	III	-0.4360781[S]	0.00	-0.642709	-0.229447

[S]– Significant at 0.05 level of confidence.

5. Conclusions and Recommendations

The results of the study revealed that the level of the effectiveness of using video presentation to student's learning is highly effective. Also, it was shown that there is no significant difference between the perceptions of students

on the effectiveness of video presentation to learning when grouped according to sex. Meanwhile, it was revealed that there is a significant difference among students' perceptions on use of video presentations when grouped according to their academic level. Significant differences can be seen when Levels I and III were compared to Level IV in their perceptions of the effectiveness of video presentation to students' learning. A significant difference is likewise shown in level II when compared to level III, whereas, all lower levels differed significantly with the seniors except level II.

With the results, it is presumed that sex is not a variable in the students' perceptions of the effectiveness of video presentation to learning. Furthermore, it was concluded that difference in academic level affects students' perceptions of the effectiveness of video presentations. Also, outcomes revealed that the level of effectiveness of video presentation to students' learning is highly effective.

Nevertheless, the researcher believes that further studies need to be conducted with a larger population. Also, it is recommended that to further validate this study, a possible inclusion include control and experimental groups per year level. Moreover, a further study on the perceptions of different year levels on the effectiveness of video presentation should be conducted.

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