

Student Attitudes Towards The Integration Of YouTube In Online, Hybrid, And Web-Assisted Courses: An Examination Of The Impact Of Course Modality On Perception

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Abstract

Current mediated realities and the proliferation of user generated online content have introduced a multiplicity of measures for publishing and accessing instructional resources. Educators are encouraged to harness these contemporary modalities in order to engage today's digital learners. In particular, the research suggests that targeted YouTube videos enhance the engagement, depth of understanding, and the overall satisfaction of students. This paper will discuss the benefits of the use of YouTube in the instructional process consistent with the Cognitive Theory of Multimedia Learning. Additionally, the findings of a study conducted at a Mid-Atlantic Historically Black College or University (HBCU) that focused on the impact of YouTube on course instruction and student engagement as well as differences in perception based on gender and course modality will be presented. According to the findings, incorporation of YouTube into course instruction enhances student's perception of learning efficacy and increases engagement, gender has no impact on the perceived value of YouTube in the teaching and learning process, and course delivery method impacts student opinion whereas students who favor fully online instruction demonstrate a predilection to want YouTube integrated into course instruction, watch course YouTube videos, and consider course embedded videos more favorably than traditional students.

There are a number of relevant implications to the findings presented in this paper that illustrate that YouTube supports multimedia learning and student engagement and is particularly effective at enhancing the educational experience of fully online learners. Finally, it puts forward the idea that course delivery method should be taken into consideration when determining use of online videos and video sharing services.

Keywords: YouTube, Multimedia Learning, Instructional Video, Educational Videos, User Generated Content, Online Video, Cognitive Theory of Multimedia Learning, Web 2.0 Tools in Education, Online Education, Video Sharing Services

Introduction

Today's students are digital natives (individuals born around or after 1985) who have been found to view more content, academic or not, on the Web than on any other medium (Duvenger & Steffes, 2012). As a generation of hyper-connected learners, they consider Web-based technologies integral to the information gathering process (Buzzetto-More, 2013a) with a particular preference for user generated content (Jones & Shao, 2011).

User generated content refers to any data or media that is created and contributed by a user to a Website and resembles the hallmark of Web 2.0. YouTube is the most prominent user generated content provider and also the world's largest video sharing service with approximately, 100 hours of video uploaded to the server every minute, over 6 billion hours of video watched each month by more than 1 billion unique monthly visitors (YouTube). More video is added to YouTube per month than the 3

major U.S. television networks created in 60 years (Prigg, 2012). Finally, YouTube is not just one of the most visited sites on the Web; it is currently the number 2 search engine, despite being first and foremost a video sharing service and not a search engine (Buzzetto-More, 2013a).

Since this paper specifically explores Web-based video services, the two types of video services available online were considered and include: (1) video viewing services that allow users to view videos, and (2) video sharing services that allow individuals to upload videos and share them with others for commentary. When the top 15 video viewing and sharing services were examined based on overall traffic and number of unique monthly visitors, the results demonstrate the dominance of YouTube with an estimated 1 billion unique monthly visitors compared to the 150 million visitors of the second most popular video viewing Website Netflix, or the 120,000,000 of the next two most popular video sharing services Yahoo Screen and Vimeo (eBizMBA, 2013). While there are over 50 video sharing services in existence, YouTube is without question the goliath and is both is phenomenally popular with, as well as familiar to, the current generation of learners (Buzzetto-More N. , 2014). Additionally, because it is the second most common place individuals go one the Web to locate information (Buzzetto-More, 2013a), it is the only video sharing services under consideration as part of the study currently being discussed.

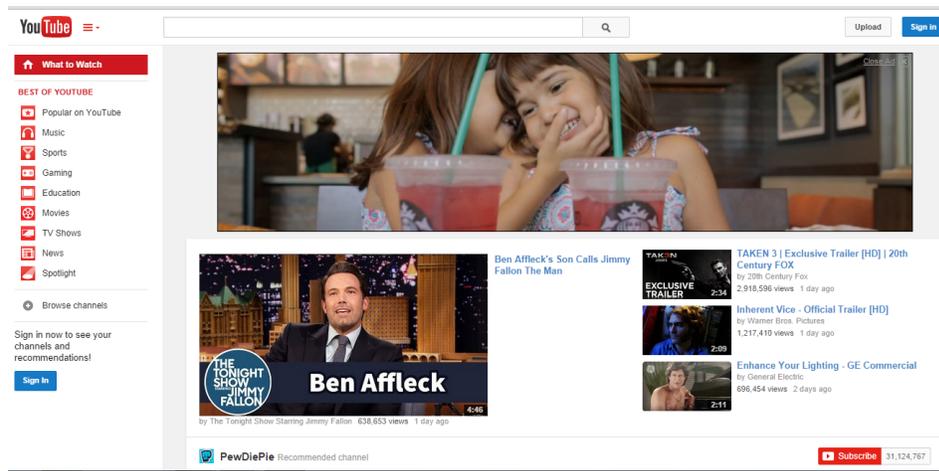


Figure 1. YouTube Homepage

Impacting education, YouTube provides free access to a huge volume of educational videos. [YouTube EDU](http://www.youtube.com/edu) (<http://www.youtube.com/edu>) is a service for educators which contains short lessons from teachers, full university courses, professional development materials, and inspirational videos from global leaders. YouTube Teachers was created to help K-12 teachers use educational videos to educate, engage and inspire students with content aligned to common core standards. Finally, [YouTube for Schools](https://www.youtube.com/schools) (<https://www.youtube.com/schools>) is an opt-in program that allows schools to access thousands of educational videos from vetted YouTube channels like PBS, TED, and Khan in a secure environment.

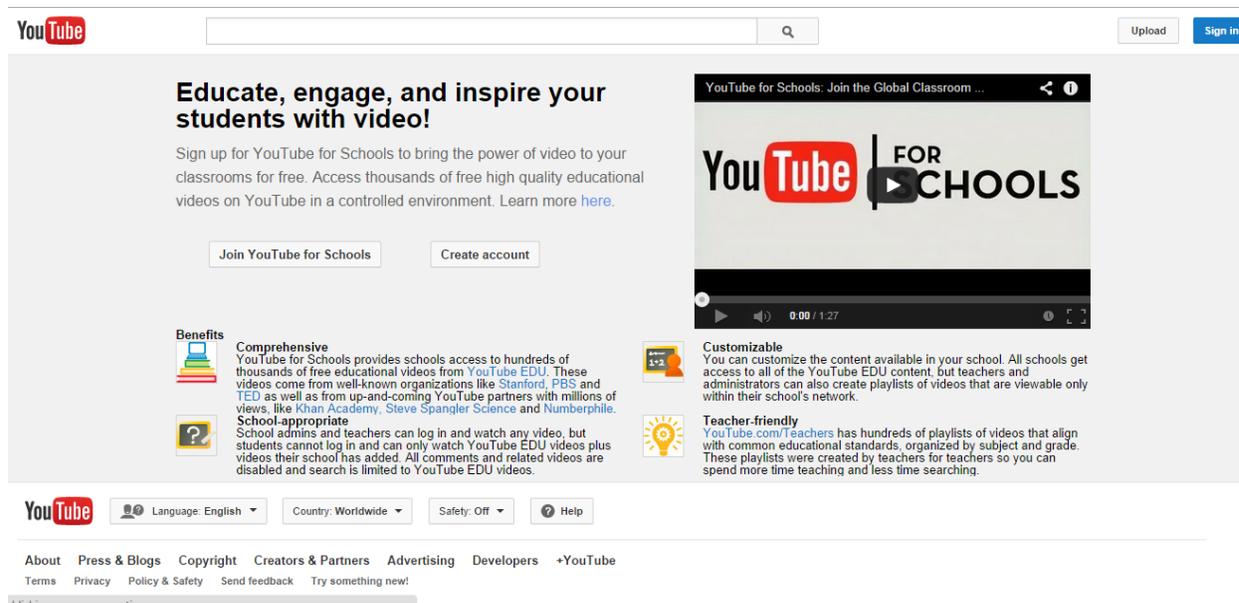


Figure 2. YouTube For Schools Screenshot

Scholarship involving the use of YouTube has been prevalent since its introduction in 2005. A thorough review of the literature was published in the *Journal of Online Learning and Teaching* (Snelson, 2011) where the author found that the topics most commonly discussed in the YouTube related literature include, but are not limited to, the experiences of YouTube users, use of YouTube in politics, YouTube videos in the medical field, methods for harvesting data from YouTube, and teaching with YouTube. Further, the author explained that out of 188 articles containing the word YouTube in the title, only 30 came from the field of education.

A 2013 article in (Alias, Razak, elHadad, Kunjambu, & Muniandy, 2013) reviewed the YouTube related articles published between 2007 and 2013 in seven major educational technology journals. According to their findings, there remains a lack of significant research focusing on the impact of the use of YouTube on student learning. Additionally, in a 2012 study, an expert panel participated in a three-round Delphi process involving two cycles of online questionnaires and feedback reports. The resulting findings were a list of seven research priority categories for educational research focused on YouTube that were identified and ranked in order of priority: (1) users, groups and communities; (2) teaching/learning; (3) social/political impact; (4) video creation/production; (5) legal/ethical; (6) media management; and (7) commercial interests.

Teaching and learning remain an area where more research on the use and impact of YouTube is needed, additionally because the literature shows that personal learning styles differ especially among online and traditional learners (Young, Hausler, & Sanders, 2008), differences in perception between students based on learning modality and incorporation of YouTube into the teaching and learning process is an area worthy of exploration. This paper is an effort to rectify this shortcoming and presents the results a study conducted in the spring of 2013 at a Mid-Atlantic minority serving institution that sought to examine student perceptions regarding the use of YouTube videos to augment instruction in online and classroom-based courses. Specifically, a focus on the differences in perception among online and traditional learners was explored. The research procedures included the modification of a course delivered in fully online, and Web-assisted formats in order to incorporate the heavy usage of YouTube videos throughout the instructional process. Following completion of the courses, a survey was administered using the online survey tool Zoomerang.

Seven hypotheses were developed and explored as part of this study. These hypotheses focused on the impact of YouTube on course instruction and student engagement as well as differences in perception based on gender and online, in-person, or hybrid course delivery format and were as follows:

- Hypothesis 1 (H1): Incorporation of YouTube enhances course instruction.

- Hypothesis 2 (H2): Use of YouTube increases student engagement.
- Hypothesis 3 (H3): Gender has no impact on the perceived value of YouTube in the teaching and learning process
- Hypothesis4 (H4): Preferred course delivery method impacts student perceptions of the use of YouTube in the teaching and learning process.
- Hypothesis5 (H5): Students who prefer fully online course are more likely to want YouTube videos added to their courses than students enrolled in hybrid and in-person courses
- Hypothesis6 (H6): Fully online students have a more positive perception of the value of YouTube in the teaching and learning process than non-online students
- Hypothesis7 (H7): Fully online students are more likely to watch course YouTube videos than their in-person counterparts

Literature Review

The research on educational video usage shows that videos appeal to visual learners in support of the Cognitive Theory of Multimedia Learning (Eick & King, 2012) The Cognitive Theory of Multimedia Learning is the idea that we have both auditory and visual channels for processing information and building memory and that the active process of learning is more successful when both the auditory and the visual channels are stimulated simultaneously, also known as the dual channel assumption (Moreno & Mayer, 2002). According to Mayer and Moreno (2002, p. 90) “the cognitive process of integrating is most likely to occur when the learner has corresponding pictorial and verbal representations in working memory at the same time.”

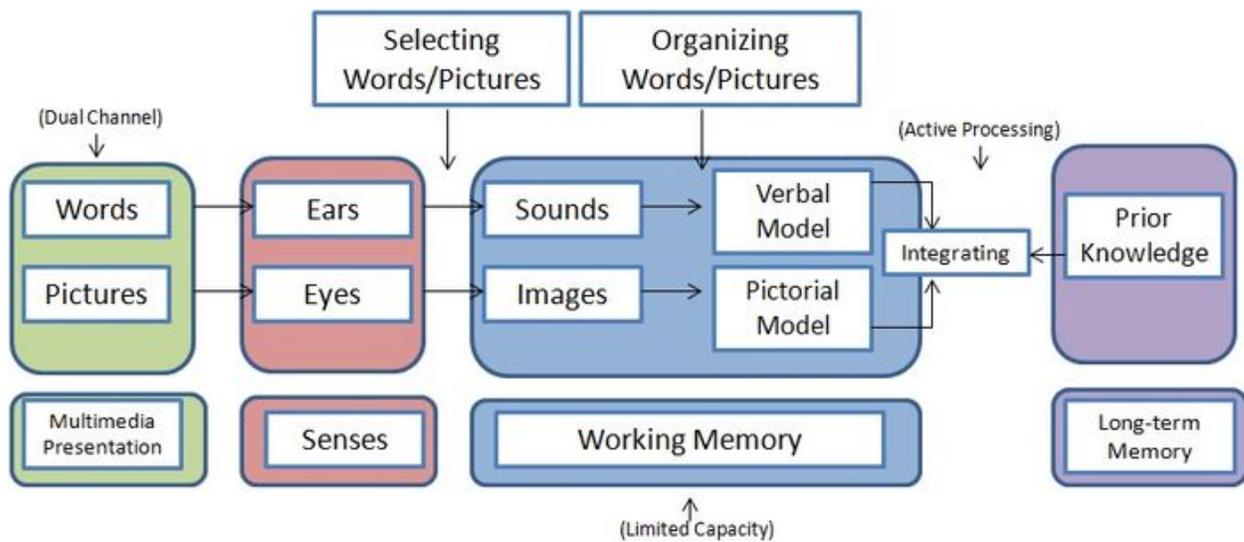


Figure 3. Moreno and Mayer's Cognitive Theory of Multimedia (2002)

Incorporation of YouTube videos into the instruction has been shown to support multimedia learning (Berk, 2009; Eick, & King, 2012;. Miller, 2009). Further, use of YouTube has been found to capture students' attention (Buzzetto-More, 2014; Duvenger & Steffes, 2012; Greenberg & Zanetis, 2012), make learning more interesting (Buzzetto-More, 2013a), and enhance the overall learning process (Buzzetto-More, 2013; Hilner, 2012; Jones & Graham, 2013; Tan & Pearce, 2012). More specifically, well-selected YouTube videos have been found to help students engage more deeply with subject matter, and recall the information they've learned longer (Burke & Snyder, 2008; Buzzetto-More, 2014; Duvenger & Steffes, 2012; Roodt and Peier, 2013). YouTube has also been shown to expand access to information (Snelson, 2011; Burke and Snyder, 2008), promote critical thinking (Logan, 2012), foster active and flexible learning environments (Liu, 2010; Roodt & Peier, 2013), support analytical discourse (Burgess & Green, 2009) and multiple approaches to reasoning (Revoir, 2012), provide students with memory cues so as to support conceptualization through visualization (Eick & King, 2012), and increase students' depth of understanding (Jones & Graham, 2013; Logan, 2012).

YouTube has also been found to be a best fit to the characteristics of the Net Generation (student raised since the introduction of the World Wide Web) of digital learners and a valid approach to tap their multiple intelligences and learning styles (Liu, 2010) with high levels of acceptance (Buzzetto-More, 2014; Donoker, 2011; Kelly, Lyng, McGrath, and Cannon, 2009). Usage has been found to enhance discourse, collaboration, and engagement in online and hybrid courses (Buzzetto-More, 2014; Greenberg & Zanetis, 2012; Revoir, 2012;). Videos can be embedded within most learning management systems and incorporated into course discussions, assignments, quizzes, and tutorials (Snelson, 2010) as well as used to support independent learning and assist in tutoring (Berk, 2009 and Kelly, Lyng, McGrath, and Cannon, 2009). Whereas some studies have found YouTube particularly effective at enhancing fully online courses (Jones & Graham, 2002) others have indicated that use of online video sharing services is most effective when they are used to complement rather than replace lecturer demonstration supporting a hybrid or blended model (Kelly, McGrath, & Cannon, 2009).

The style of instruction at traditional universities is most often teacher-driven, whereas the instructor is the quintessential sage on the stage lecturing on the subject of his or her expertise. Lectures are successful and meaningful when the presentation style of the instructor and coordinating activities appeal to a learner. Online learning is not teacher lead and rather is more self-directed and flexible learning approach where it is focused on the needs, interests, learning styles, abilities, and aspirations of learners (Buzzetto-More N. , 2013b). Further, the literature shows that personal learning styles differ especially among online and traditional learners (Young, Hausler, & Sanders, 2008). As such, differences in perception between online and traditional learners in terms of incorporation of YouTube is an area worthy of exploration. Information discovered by such inquiry can be used to help better inform the decision making of educators during the instructional planning process.

Methodology

Participants

Founded in 1886, the [University of Maryland Eastern Shore](#) (UMES) is a Historically Black, 1890 land grant institution. It is a member of the University system of the State of Maryland, the U.S. state with the highest population of African Americans. UMES primarily serves first generation, low income, and minority learners. The student population is approximately 4500, with a student body that is approximately 78% African-American, 9.6% white, 1.4% Hispanic, and 11% international, primarily coming from the continent of Africa and/or from the Caribbean region. The gender distribution of the University is 64% female and 36% male. The freshmen-to-sophomore retention rate is 71%, and the graduation rate is 41%. The school was ranked in the top 25 among Historically Black Colleges or Universities (HBCU) in 2014 and the acceptance rate for applying students is 62.4% with the majority of students coming from the Mid-Atlantic region, more specifically the Baltimore and Washington D.C. urban center. By conducting this study at an HBCU, it provides research on a population that has previously not received sufficient focus. Whereas a number of studies about the use of YouTube in teaching and learning have been conducted at majority institutions, this is the first study of this type that has been conducted at a Historically Black Colleges and/or University. Further, examinations conducted at Historically Black Colleges and/or Universities are important because the critical mass of African American college students can be found at HBCUs, which represent less than 3% of U.S. colleges and universities but produce 25% of our nations Black college graduates as well as the preponderance of African American doctoral degree recipients (Adams, 2012).



Figure 4. [University of Maryland Eastern Shore Website](#)

Materials

All students enrolled at the University of Maryland Eastern Shore are required to complete 12 credits of online learning prior to graduation. During online courses there are no physical meetings and all teaching and learning occurs online. Online learning at UMES is facilitated by the Center for Instructional Technology and overseen by the University's Online Learning Committee. Prior to delivery of an online course a rigorous application and review process is necessary. Finally, online courses are evaluated by a committee applying the Quality Matter's evaluation rubric.

Hybrid courses are ones where some small portion of seat time (physical meeting time) is forfeited due to the weight of the online learning that has been incorporated into instruction. Hybrid courses have a much greater emphasis on online learning than Web-assisted courses and are given the formal designation as hybrid at UMES, denoting the blending of physical learning with online experiential activities. Web-assisted courses are traditional synchronous in-person courses where a course Website has been developed, and is being used, in order to enhance instruction..

Business Communications, a course delivered in fully online and Web-assisted formats was modified in order to incorporate the heavy usage of YouTube videos throughout the instructional process. The instructor designed a number of the videos utilized. Examples of some of the instructor generated videos are as follows:

Understanding Management. Available at <http://youtu.be/NepQQbvQ0IE>

Building Your Brand. Available at <http://youtu.be/kkyk4iBFBi8>

Brief History of Computers and the Internet. Available at <http://youtu.be/SJSjdwPKMNw>

Social Media Risks and Safety. Available at <http://youtu.be/zIFqNXmqiVE>

Becoming an Effective Presenter. Available at <http://youtu.be/0307dyY0vmg>

Dale Carnegie Principles. Available at <http://youtu.be/RNN7ZvV9JjU>

Course lecture notes were made available in MS PowerPoint, MS Word, as well as in YouTube video formats. Additional videos were created and posted to YouTube to enhance student understanding of key course concepts as well as to introduce concepts in a more dynamic format. Finally, a variety of YouTube videos that were not created by the instructor were also incorporated. These videos ranged from documentary segments, relevant excerpts from television shows, scenes from mainstream

movies, interviews, lectures from professors at other Universities, short presentations, and thought provoking and/or amusing videos relevant to course content.

YouTube videos were also incorporated into two online discussions (one where students watched and analyzed several videos from a list of available videos and another where students located and shared videos with their classmates), two course assignments that involved student reflection and additional research, and an extra credit opportunity.

Other features of the courses included use of a separate online adaptive response assessment system linked to the course e-text, an online grade book, and involvement of a Web-based simulation. The Blackboard LMS was utilized as the primary delivery instrument for both courses. The Web-assisted version of the course operated much in the same as the online class with the exception that it included weekly meetings and thusly less emphasis on online discussions and interactions. There was no difference between the online and Web-assisted students with respect to how YouTube was incorporated into their course instruction.

Procedures

A study conducted in the spring of 2013 at a Mid-Atlantic minority serving institution sought to examine student perceptions regarding the usage of YouTube videos to augment instruction in online and Web-assisted courses. In order to examine student perceptions a survey was developed and delivered using the Zoomerang/Survey Monkey system. Pre-testing was done in order to inform the survey design process. The developed survey was comprised of a combination of dichotomous, Likert-scaled, ordinal, ratio, short answer, Guttman scaled, and contingency questions. The survey was evaluated by several content and methodological experts in order to examine bias, vagueness, or potential semantic problems. Finally, the survey was pilot tested prior to implementation in order to test the efficacy of the research methodology. It was then modified accordingly.

During the data collection process, students who had completed the treated courses received an automated email with a personalized link to the online survey. Using the email invitation collector component of Survey Monkey, a unique link was generated for each recipient. While individual responses were anonymous, this linked each response directly to an email address which was used to track completions and not specific responses. Additionally, students were given the option of opting out of the study.

The automated email message was not the only point of contact. Response rates were tracked and following the initial invitation, two reminders were sent to non-respondents in two week intervals following the initial invitation.

The survey was distributed to 367 potential participants and completed by 221 respondents, representing a response rate greater than 60%. During the data analysis process the raw data was exported from the Survey Monkey system and imported into Microsoft Excel where descriptive statistics such as mean, skewness, standard deviation, and confidence level were examined and frequency distribution in the form of counts and percentages considered.

Seven hypotheses were developed and explored as part of this study. These hypotheses focused on the impact of YouTube on course instruction and student engagement as well as differences in perception based on gender and course delivery format and were as follows:

- Hypothesis 1 examines students overall perception as to whether YouTube enhances course instruction. This is purposefully a broad hypothesis and is supported by three research questions presented as Likert scaled agreement statements:
 - *The Use of YouTube can enhance the learning process*
 - *I would like to have YouTube incorporated in more of my classes*
 - *The videos enhanced my learning/understanding of course content*
- Hypothesis 2 specifically focuses on engagement, whereas a perceived improvement in instruction (as considered in Hypothesis 1) is not mutually inclusive so as to encompass engagement. It is addressed by two Likert scaled agreement questions:
 - *YouTube can make classes more interesting*
 - *The use of YouTube as a learning tool engages students*

Additionally, a subset of questions provided further exploration about the impact of YouTube on student engagement using a five-point usefulness scale (from very useless to very useful) where participants were asked to rank the usefulness of YouTube in terms of engaging students, stimulating/engaging students in class discussions, and creating a more exciting learning environment.

- Hypothesis 3 postulated that the gender of participants has no impact on the findings and is examined with a crosstabulation and an Anova. This is a topic that has not received sufficient coverage in the existing literature.
- Hypothesis 4 marks the beginning of the exploration as to whether preferred course delivery method impacts student perceptions and also involves an Anova and a post-hoc Tukey. It does not seek to determine the nature of the impact, just whether a perceptual difference based on preferred course modality exists.
- Hypothesis 5 specifically inquires as to whether online students are more likely to want online videos added to their courses than their hybrid and in-person counterparts by posing the Likert-scaled agreement statement *I would like to see more of my instructors post short videos online* and considering the results with an Anova and a post-hoc Tukey.
- Hypothesis 6 looked at whether perception was more positive based on learning modality with only fully online and traditional courses considered. This hypothesis did not consider their preferred modality as examined in Hypotheses 4 and 5 but rather the modality in which they were enrolled at the time of the study. Crosstabulations and Anovas were used in to evaluate the differences in responses to the following Likert-scaled statements:
 - *I enjoyed the videos on the course Website*
 - *The videos enhanced my learning/understanding of course content*
- Hypothesis 7 postulated that online students due to their predilection for online learning and information seeking are more likely to watch YouTube videos than traditional students. It was considered by examining participant responses to the Likert scaled statement *If a course website includes videos how likely are you to watch those videos*

Results

Forty-five percent of respondents were male and 55% female. In terms of race and ethnicity, the majority of respondents (61.2%) identified themselves as African American, 18.7% self-identified as white or of European Descent, 6.4% reported that they are African, 3.2% said that they are Hispanic, 3.2% categorized themselves as Asian/Pacific Islander, 2.3% self-identified as a Caribbean Islander, .5% reported being Middle Eastern, and 4.5% self-identified as other. When age was asked 79.4% of respondents reported being between 18 and 24, 15.6% said that they were 25-31, 1.8% reported that they were 32-40, and 3.2% of respondents reported being over 41. A series of dichotomous questions were posed in order to explore participants' prior exposure to, and use of, YouTube whereas 98% of respondent had used YouTube prior to the course and 68% have used YouTube to research or look up something for class..

Respondents were asked to consider the frequency of their use of YouTube and rank their use on a scale of 1-5 where 1 equaled never tried, 2 equaled tried a couple of times, 3 equaled use occasionally, 4 equaled use weekly, and 5 equaled use daily. This data is presented in Table 1: Frequency of Use of YouTube.

Table 1.

Frequency of Use of YouTube

Table 1: Frequency of Use of YouTube	
Mean	3.80
Standard Deviation	0.904

Confidence @ 95%	0.041021
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The following section will present the results from, as well as a discussion of, the seven hypotheses that were tested as part of this study. These hypotheses focused on the participant perception of the impact of YouTube on course instruction and student engagement as well as differences in perception based on gender and course delivery format. In order to consider each hypothesis appropriate testing measures were performed and included examination of frequency distribution and/or descriptive statistics (as appropriate) as well as conduction of crosstabulations, Anovas, and post-hoc Tukeys where fitting. In the following section, each hypothesis will be discussed individually and in turn.

A. Hypothesis ₁ (H₁): Incorporation of YouTube enhances course instruction

In order to test Hypothesis 1 (H1): "Incorporation of YouTube enhances course instruction" respondents were asked to respond to three Likert-scaled agreement questions where 1 equaled strongly disagree, 2 equaled disagree, 3 equaled neutral or undecided, 4 equaled agree, and 5 equaled strongly agree. According to the respondents 70.7% agreed/strongly agreed that "The use of YouTube can enhance the learning process"; 86% agreed/strongly agreed that "The videos enhanced learning and understanding of course content"; and 82% agreed/strongly agreed that they "Would like to see YouTube in more of their classes". These findings, which are represented in Table 2: Student Perceptions of YouTube in Course Instruction, support Hypothesis 1

Table 2.

Student Perceptions of YouTube in Course Instruction

Table 2: Student Perceptions of YouTube in Course Instruction			
	<i>The Use of YouTube can enhance the learning process</i>	<i>I would like to have YouTube incorporated in more of my classes</i>	<i>The videos enhanced my learning/understanding of course content</i>
Mean	3.857	4.11	4.23
Standard Deviation	0.907	0.766	0.787
Confidence @ 95%	0.041160	0.034758	0.066471

B. Hypothesis 2 (H₂): Use of YouTube increases student engagement.

Student engagement was examined with two question sets. The first question set utilized a five-point Likert-scaled agreement type questions. When asked to respond to the statement "YouTube can make classes more interesting," 89% of respondents agreed/strongly agreed. Additionally, when asked to respond with strength of agreement/disagreement to the statement "The use of YouTube as a learning tool engages students," 89% of respondents agreed/strongly agreed, as well. Table 3: Student Engagement presents the data analyzed for these questions.

Table 3.

Student Engagement

Table 3: Student Engagement		
	<i>YouTube can make classes more interesting</i>	<i>The use of YouTube as a learning tool engages students</i>
Mean	4.2602	4.1972
Standard Deviation	0.697	0.713
Confidence @ 95%	0.0316621	0.0323792

A second subset of questions provided further exploration about the use the impact of YouTube on student engagement. A five-point usefulness scale (from very useless to very useful) was developed and participants were asked to rank the usefulness of YouTube in terms of engaging students, stimulating/engaging students in class discussions, and creating a more exciting learning environment. According to the findings, 94% of respondents said that YouTube is useful/very useful at engaging students μ 4.37, 99% found it useful/very useful at stimulating class discussions μ 4.41, and 99% found it useful/very useful at creating a more exciting learning environment μ 4.46.

C. Hypothesis 3 (H3): Gender has no impact on the perceived value of YouTube in the teaching and learning process

The literature has reported minor attitudinal differences among male and female students with respect to the use of YouTube in education (Kelly, McGrath, & Cannon, 2009). As a result, the differences in the perceptions of female and male respondents were considered. A crosstabulation was performed as well as an Anova that considered the differences in responses to the statement “The use of YouTube can enhance the learning process” among male and female respondents. These findings are represented in detail in Table 4: Impact of Gender on the Perceived Value of YouTube in Teaching and Learning and affirm Hypothesis 3 (H3): “Gender has no impact on the perceived value of YouTube in the teaching and learning process”.

Table 4.

Impact of Gender on the Perceived Value of YouTube in Teaching and Learning

Table 4: Impact of Gender on the Perceived Value of YouTube in Teaching and Learning					
Crosstabulation					
The use of YouTube can enhance the learning process.					
The use of YouTube can enhance the learning process.	Gender?				
Answer Options	Female	Male	Total		
Strongly Disagree	0	5	5		
Disagree	5	4	9		
Neutral/Undecided	28	22	50		
Agree	60	40	100		
Strongly Agree	26	25	51		
Total	119	96	215		
Mean	3.90	3.81	3.85		
Standard Deviation	0.905	0.905	0.905		
ANOVA					
ANOVA	SS	DF	MS	F	P
Between:	0.430	1	0.430	0.525	0.469
Within:	174.495	213	0.819		
Total:	174.925	214			

D. Hypothesis 4 (H4): Preferred Course delivery method impacts student perceptions of the use of YouTube in the teaching and learning process.

Participants were asked to indicate their preferred course delivery format (not their actual current course enrollment) whereas 26% of respondents indicated a preference for fully online courses, 54% indicated a preference for hybrid courses, and 20% indicated a preference for fully synchronous classroom-based courses. An Anova was performed to examine the differences in the responses based on preferred course delivery format to the statement “The use of YouTube can enhance the learning process.” Table 5” Student Perceptions and Preferred Course Delivery Format presents the findings, which support Hypothesis 4 (H4): “Course delivery method impacts student perceptions of the use of YouTube in the teaching and learning process. The ANOVA was followed by a post hoc Tukey, which found significance between in-person and online students and in-person and hybrid students but no significance between fully online and hybrid learners.

Table 5.

Student Perceptions and Preferred Course Delivery Format

Table 5: Student Perceptions and Preferred Course Delivery Format					
<i>The use of YouTube can enhance the learning process.</i>					
<i>The use of YouTube can enhance the learning process</i>	<i>What type of course format do you prefer?</i>				
	Fully Online	Hybrid	In-Person	Total	
Mean	4.13	3.82	3.60	3.85	
Standard Deviation	0.905	0.909	0.910	0.905	
ANOVA					
ANOVA	SS	DF	MS	F	P
Between:	6.546	2	3.273	3.966	0.020
Within:	174.969	212	0.825		
Total:	181.515	214			
Post Hoc Tukey HSD Test					
HSD .05= 0.38					
HSD .01=0.47					
	B	C			
A	N/S	P<.01			
B		P<.01			

D. Hypothesis5 (H5): Students who prefer fully online courses are more likely to want YouTube videos added to their courses than students enrolled in hybrid and in-person courses

Students were asked to indicate their level of agreement in response to the statement “I would like to see more of my instructors post YouTube videos online.” A crosstabulation and Anova were performed followed by a post hoc Tukey test whereas the post hoc Tukey, found significance between in-person and online students and in-person and hybrid students but no significance between fully online and hybrid learners. As a result of the analyses performed and displayed in Table 6, H5 (H5): “Students who

prefer fully online courses are more likely to want YouTube videos added to their courses than students enrolled in hybrid and in-person courses” was affirmed.

Table 6.

Impact of Preferred Course Delivery Format On Student Interest in Online Course Videos

Table 6: Impact of Preferred Course Delivery Format On Student Interest in Online Course Videos					
Crosstabulation					
<i>I would like to see more of my instructors post YouTube videos</i>					
<i>I would like to see more of my instructors post YouTube videos</i>	What type of course format do you prefer?				
Answer Options	Fully Online	Hybrid	In-Person	Total	
Strongly Disagree	0	1	2	3	
Disagree	1	6	5	12	
Neutral/Undecided	8	24	13	45	
Agree	26	61	18	105	
Strongly Agree	20	24	4	48	
Total	55	116	42	213	
Mean	4.16	3.87	3.40	3.86	
Standard Deviation	0.876	0.876	0.876	0.874	
ANOVA					
ANOVA	SS	DF	MS	F	P
Between:	13.836	2	6.918	9.009	0.000
Within:	161.248	210	0.768		
Total:	175.084	212			
Post Hoc Tukey HSD Test					
HSD .05= 0.38					
HSD .01=0.47					
	B	C			
A	N/S	P<.01			
B		P<.01			

E. Hypothesis6 (H₆): Fully online students have a more positive perception of the value of YouTube in the teaching and learning process than non-online students

Hypothesis6 (H₆): “Fully online students have a more positive perception of the value of YouTube in the teaching and learning process” was considered through the examination of the responses to follow-up questions that were posed to 100 students with a response rate of greater than 60%.

The responses of students enrolled in both fully online and non-online sections of the same course to the statement “I enjoyed the videos on the course website” were compared. The respondents were also asked their agreement to the statement “the videos enhanced my learning/understanding of course content.” Comparisons were considered and Anovas conducted.

Based on the analyses conducted Hypothesis 6 (H6): “Fully online students have a more positive perception of the value of YouTube in the teaching and learning process” was affirmed. The data used to test hypothesis five is presented in Table 7: Comparison of the Perceptions of Students Based on Course Enrollment.

Table 7.

Comparison of the Perceptions of Students Based on Course Enrollment

Table 7: Comparison of the Perceptions of Students Based on Course Enrollment					
<i>I enjoyed the videos on the course website</i>					
<i>I enjoyed the videos on the course website</i>	<i>Was your course offered fully online?</i>				
	Fully Online Yes	Fully Online No	Total		
I enjoyed the videos on the course website					
Mean	4.55	4.18	4.38		
Standard Deviation	0.557	0.704	0.652		
ANOVA					
	SS	Df	MS	F	P
Between:	2.886	1	2.886	7.422	0.008
Within:	24.109	62	0.389		
Total:	26.995	63			
<i>The videos enhanced my learning/understanding of course content</i>					
<i>The videos enhanced my learning/understanding of course content</i>	Fully Online Yes	Fully Online No	Total		
Mean	4.44	3.91	4.23		
Standard Deviation	0.724	0.759	.782		
ANOVA					
	SS	Df	MS	F	P
Between:	4.385	1	4.385	8.025	0.006
Within:	33.875	62	0.546		

Total:	38.259	63			
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F. Hypothesis7 (H7): Fully online students are more likely to watch course YouTube videos than their in-person counterparts

This study sought to explore whether course enrollment impacts the likelihood for students to watch course videos. According to the crosstabulation performed, students enrolled in fully online courses were found to be more likely to watch a video placed on a course Website than those students enrolled in non-online courses. Further, an Anova was conducted and a p value <.05 was obtained. As a result of these findings, Hypothesis7 (H7): “Fully online students are more likely to watch course YouTube videos than their in-person counterparts” was affirmed. These findings are depicted in Table 8: Participant likelihood to watch course YouTube videos.

Table 8.

Participant likelihood to watch course YouTube videos

Table 8: Participant Likelihood to Watch Course YouTube Videos					
Crosstabulation					
If a course website includes videos how likely are you to watch those videos					
If a course website includes videos how likely are you to watch those videos	Was your course offered fully online?				
	Fully Online Yes	Fully Online No	Overall		
Mean	3.94	3.14	3.60		
Standard Deviation	1.393924	1.007516	1.306441		
ANOVA					
	SS	DF	MS	F	P
Between:	9.990	1	9.990	6.429	0.014
Within:	96.340	62	1.554		
Total:	106.330	63			

Discussion

The current study under consideration discusses student perceptions regarding the benefits of the use of YouTube in the instructional process with a specific focus on course instruction and student engagement as well as differences in perception based on gender and course modality. The analyzed data and hypotheses testing was presented in the results section. In the discussion section, the meaningfulness of the results of the tested hypotheses will be explored and related to the existing body of literature.

Hypothesis 1 (H1): “Incorporation of YouTube enhances course instruction” was supported and the results are consistent with what has been reported in the literature (Buzetto-More, 2014; Duvenger & Steffes, 2012; Hilner, 2012; Jones and Graham, 2013; Tan & Pearce, 2012). Participant agreement that videos enhanced the learning process and their understanding/learning of course content validates the relevance of the use of YouTube as an instructional aide and is consistent with the Cognitive Theory of Multimedia Learning which states that video is particularly effective at knowledge construction and memory building. This connection has been explained as occurring because today’s digital learners

have an affinity for use of multi-media technologies in the instructional process and learn best and fastest when the auditory and visual aspects of their brain is stimulated by multimedia presentations where they can navigate back and forth at their own pace (Eick, & King, 2012; Miller, 2009).

For further consideration, some sample excerpts from student discussion posts are included:

Wow the Building Rapport video really enhanced my understanding. I learned there are actual steps to building rapport with someone. Non-verbal cues, the tone of someone voice, the language used, and someone's beliefs and values, all determine how rapport is built. In essence, you have to pay attention to someone's body language, the tone of their voice, the actual language they are using and the ideas (or values) behind their message. Once you have those things mastered, you have to try to match that person's body language and tone, et cetera in order to build rapport with them. The video goes so far as to say that you should try to match the other person's breathing, but I think that is too extreme. If it is a baby, I can understand trying to soothe them but I can't see matching someone's breathing patterns. Over all, all the videos give some good points on communicating verbally, communicating through technology, improving listen skills, and building rapport with people for better communication and to establish yourself as what you want to be.

I actually thought the part about matching the audience's breathing was very helpful and true. I've included this technique in a recent discussion post before, so I'll elaborate some more this time around. In general, most speakers get nervous just before giving a presentation, which is natural. However, with nervousness you may begin to sweat, maybe get a little itchy or fidgety, and your heart rate can certainly speed up from time to time. Your audience, on the other hand usually tends to be very chill and calm, after all they are just sitting and listening right? Trying to match your breathing patterns with the audience could potentially calm you down. Your breathing pace can have a great effect on being able to present effectively. It's like trying to talk to someone when you're mad or angry, you start talking fast because your heart rate is increased and you start saying the first thing that comes to your mind without even considering whether or not you make any sense, now you're rambling and losing your audience's connection. This technique has certainly helped me in my professional experience, I hope others benefit from it too after trying!

This video shows us how easily words can be misinterpreted when working in a diverse situation. The United States is a very diverse country and many people have all different kinds of accents. Being in such a diverse environment it is very important that we are clear with how we speak so words do not get mixed up, and also it is important to listen closely so that we don't mix up what others are saying to us. In some situations messing up what someone is telling you can have very serious consequences

Hypothesis 2 specifically focuses on engagement, whereas a perceived improvement in instruction (as measured by Hypothesis 1) is not mutually inclusive so as to encompass engagement. The findings for these question sets support Hypothesis 2 (H2) "Use of YouTube increases student engagement" and are consistent with what has been reported in studies that have shown that YouTube can capture students interest and attention (Duvenger and Steffes, 2012; Buzzetto-More, 2014), encourage students to engage more deeply with subject matter (Eick & King, 2012; Liu, 2010; Greenberg and Zanetis, 2012), and stimulate analytical discourse and class discussions (Burgess and Green, 2009; Logan, 2012). The results provide positive affirmation of what has already been reported in the literature and offer a further incentive to instructors considering incorporated the use of YouTube into the educational process. Further, instructors at minority serving institutions are often challenged to find resources that will resonate with students; however, the use of YouTube provides instructors tremendous latitude in augmenting instruction with resources that will be more meaningful to learners. For example, one of the most popular videos incorporated in the course featured award winning African American female motivational speaker Lethia Owens and her video Building the Brand Called You available at:<http://youtu.be/6nBqsCwE2H8>. According to a comment provided by a student enrolled in an online course section:

The "Building Your Brand" video was an excellent presentation for all juniors and seniors who will be entering the professional world in upcoming months. I really related to Ms. Owens and this video has changed my entire outlook on life. I feel that since we are all business major(s), that branding is something that we should excel at since companies today are putting more focus on personality and leadership versus academics. As business students future business leaders, and African Americans. essentially we will be working off the clock perhaps more than on the clock. Once we are out of college and working for our desirable companies, we will represent that company whether we are on a flight for a business trip or hanging out at the park with some friends. Branding relates directly to reputation I feel, so one should not act in a manner to damage their reputation or brand because it will reflect their company and their personal brand.

Hypothesis 3 explored an area that has received very little focus in the literature whereas the limited available literature has reported minor attitudinal differences among male and female students with respect to the use of YouTube in teaching and learning. According to the results reported in this paper, there are no differences in the perceived value of the use of YouTube to enhance learning based on gender. These findings affirm Hypothesis 3 (H3): "Gender has no impact on the perceived value of YouTube in the teaching and learning process" but are different than what has been reported in the literature by Kelly, Lyng, McGrath, and Cannon (2009). The interpretation of these results is that both male and female students perceive the use of YouTube positively as an enhancement to teaching and learning.

Hypothesis 4-7 all examined the role of course modality on student perceptions. This is an area that has received some, yet still insufficient, focus in the literature. At the same time, the e-learning literature shows that personal learning styles differ especially among online and traditional learners (Young, Hausler, & Sanders, 2008). As such, differences in perception between online and traditional learners in terms of incorporation of YouTube is an area worthy of exploration. Information discovered can be used to help better inform the decision making of online and traditional instructors during the instructional planning process.

Hypothesis 4 sought to examine whether there is a relationship between preferred course delivery method and student perceptions of the use of YouTube in the teaching and learning process. It specifically and purposefully considered preferred course delivery format rather than their actual course enrollment. While most students agreed that "Use of YouTube can enhance learning" those students who indicated a preference for fully online courses were more positive in their opinions regarding the educational benefits of YouTube. Additional data analysis further helped to confirm Hypothesis 4 (H4): "Course delivery method impacts student perceptions of the use of YouTube in the teaching and learning process" and are consistent with the limited findings that have been reported in the literature (Buzzetto-More, 2014; Jones & Graham, 2013; Liu, 2010).

Hypothesis 5 sought to examine whether there is a relationship between preferred course delivery method and student interest in seeing further use of YouTube in their courses. Similarly to hypothesis 4, it specifically and purposefully considered preferred course delivery format rather than their actual course enrollment. While the preponderance of students wanted to see YouTube incorporated into course instruction, students who indicated a preference for online course delivery exhibited the greatest strength of agreement. As a result, H5 (H5): "Students who prefer fully online courses are more likely to want YouTube videos added to their courses than students enrolled in hybrid and in-person courses" was affirmed in support of what has been reported in the literature (Buzzetto-More, 2014; Jones & Graham, 2013).

Hypotheses four and five provide a valuable addition to the body of research on the use of YouTube as an instructional aide. They indicate that while all students see value in the use of YouTube, those students whose preferred learning modality is fully online exhibit the greatest strength of agreement when it comes to perceived value added as well as desire to see more videos incorporated into course instruction. This information is particularly relevant to fully-online and hybrid course instructors, who will likely see the greatest return on investment for adopting YouTube as a learning enhancement tool.

Hypothesis 6-7 focused on actual course enrollment rather than preferred course delivery method and sought to explore the impact of course enrollment on student perceptions of the use of YouTube in the

teaching and learning process. Hypothesis 6 (H6): “Fully online students have a more positive perception of the value of YouTube in the teaching and learning process” was affirmed by the analyses and is consistent with what has been reported in the literature (Jones & Graham, 2002). Hypothesis 7 focused on an area which has never previously been explored in the literature. This area is whether online students are more likely to watch course YouTube videos than their in-person counterparts. The basis for this hypothesis was the supposition that if online students view use of YouTube in the instructional process more favorably than non-online students than it may be reasonable to posit that they will exhibit a greater predilection to actually watching these videos. As a result of these findings, Hypothesis 7 (H7): “Fully online students are more likely to watch course YouTube videos than their in-person counterparts” was affirmed. While this line of inquiry has not been previously explored with any significance in the literature, one may postulate that hybrid students who are regularly exposed to live instructor lectures have less need to view the YouTube videos than students enrolled in fully online courses (Buzzetto-More, 2014).

Limitations

The most significant limitation of this study is that it focused solely on business students attending a single small-sized U.S. public minority-serving university. Increasing the size of the student population, expanding it across disciplines, integrating multiple institutions of higher education, as well as incorporating both majority and minority serving institutions would enhance the study.

Implications for Future Research

Continued exploration into the use of YouTube in the instructional process is needed. Additional studies may seek to explore impact on course grades, student performance, and/or course retention. Also, investigation into the efficacy of different possible video design specifications is needed. Some preliminary work by Buzzetto-More (2014) that was published recently examined video length and audio preferences. Finally, different instructional practices and uses should be considered and their efficacy compared.

Conclusion

Innovative educators seek new mechanisms for creating engaging and immersive learning experiences that harness the power of flexible technologies. YouTube has tremendous potential to augment a wide-range of aspects of instruction, many of which have yet to be fully explored. The study presented in the current paper examined student perceptions with respect to the value and usefulness of YouTube as a pedagogical tool finding that students perceive that the incorporation of YouTube enhances instruction and increases interest, engagement, and discourse. Student who prefer online learning especially indicated a greater preference for the adoption of YouTube by instructors than their hybrid and in-person counterparts. Gender was found to have no impact on the perceived value of YouTube in the teaching and learning process; however, students enrolled in fully online course sections were found to be more likely to watch course YouTube videos as well as to perceive them favorably than students enrolled in in-person sections of the same course.

This paper has shown the relevance of the use of YouTube as an instructional aide and that use is consistent with the Cognitive Theory of Multimedia Learning which states that video is particularly effective at knowledge construction and memory building. It is the goal of this paper to encourage online educators to embrace video sharing services so as to create purposeful instructional videos, adopt appropriate videos created by others, and incorporate video design into student projects, presentations, assignments, and/or discussions.

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