Want to Enroll in a MOOC? No Thanks, My Professors Have Their Own Videos.

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Purpose: The paper explores how professors, in adopting short digital video lectures as a complementary teaching platform outside the classroom, could better enhance the learning experience for digital natives, i.e. millennial students, in challenging the growth of massive open online courses (MOOC). Specifically, the use of personalized, class-specific, video content made available on YouTube, in which the professor-of-record appears, is examined as a complementary learning platform for students required to read textbook material in preparation for class discussions.

Method / Design and Sample: Students were required to view class-specific digital videos on YouTube and thereafter complete a questionnaire to examine the stated hypotheses. A total of 182 students taking either face-to-face or online marketing classes participated in the study. A quiz was also administered among the students with the questions formulated from the videos.

Results: The collected data provided evidence that students learning experiences are enhanced if class-specific digital videos lectures are adopted as a delivery platform of class material. The learning experiences recorded by students are deepened even further if the professor-of-record actually appears in the videos.

Value to Marketing Educators: These findings offer marketing educators valuable insights on how their face-to-face and online classroom-learning environment can be enriched. Creating online digital videos helped students gain a better understanding of class material. Extending the academic reach outside the classroom by producing personalized, class-specific digital videos presents faculty with an alternative entry-point into students' busy schedule that complements the depth of learning experienced in the classroom.

Keywords – Digital Pedagogy, Digital Video, Teaching Style, Learning Outcomes

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In recent years there has been a tremendous surge in the use of digital media educational platforms to extend the reach of education to different student populations. The combination of multimedia objects such as graphics, sound clips and data in a more integrated, multi-sensory digital medium has enabled students to not only acquire knowledge differently but to become more immersed in the learning experience (Miller, 2005; Kinshuk & Russell, 2001). Facilitating online classes was the first iteration adopted in utilizing this medium and was best characterized by instruction delivered through private, for-profit universities. They specialized in providing distance-learning modules that did not require students to attend campus and primarily catered to students employed in the workforce over the age of 22 and from across the US (Cronin & Bachorz, 2005).

The most recent development in the evolution of digital educational platforms is the creation of MOOCs, massive open online courses. These large-scale classes primarily allow students to enroll for free and provide open access to anyone with an internet connection. Currently, many of the teaching institutions offering MOOCs do not award college credits (Kolowich, 2013). The enthusiasm revealed in the press surrounding MOOCs has many stakeholders pondering the future of education, and the educational role that universities will perform in the coming decades (Carr, 2012; Delbanco, 2013). There seems to be no-end in sight about how far digital educational platforms may grow in advancing learning opportunities for the 21st century.

At the same time, and as society embraces the digital world more each day, the digital immigrant population is in decline as digital natives (millennial students) are coming of age (Prensky, 2001). While this is a natural step in society's evolution, it is having a disruptive effect in the classroom. As millennial students seek to utilize their normalized digital behaviors in the college classroom, there is a potential obstacle in place. Many professors (digital immigrants) current teaching styles are based on "an outdated paradigm of teaching and learning" (Senger at al, 2012). They still use standard textbooks and delivery methods, such as PowerPoint slides, and are limited in their capacity to adapt the latest technology into the classroom setting. Meanwhile, other professors, who are eager to stay current in technology teaching trends, are also struggling to acclimatize with the demands of the digital student population. Therefore how can the classroom learning experience become more closely aligned to the

professors' teaching ability and the student desire to learn?

There is no clear answer to this question as we are in the middle of a digital revolution and teaching styles, practiced for decades, are in a state of transformation. As societies embrace this digital revolution at an incredible pace by engaging in new behaviors (that utilize Apps, more productive software, and ever-advancing consumer devices such as smartphone or tablets), it is difficult for both educational institutions and professors to stay abreast of these innovative technologies in the classroom. Yet teaching styles cannot remain frozen and faculty must be encouraged to experiment with new teaching styles. This research examines an application that has significant potential to help professors modernize their teaching style and facilitate the educational mandate of digital natives, i.e. the creation of digital video content. The purpose of this study is to gain a better understanding of the impact of digital videos on students' learning experience. We explore the adoption of class-specific, personalized-video produced material as the means of delivering relevant academic content in preparation for class discussions, rather than solely requiring students to read textbook chapters.

LITERATURE REVIEW

Prensky (2001) introduced the concept of 'digital natives' as a reflection of how students' learning experiences differ on the basis of their digital lifestyle. They have become 'native speakers' of the language of technology. Having been born into a ubiquitous digital media environment, they better understand the role of technology as a constituent of the everyday digital lifestyle. This immersion is so profound that Prensky suggests it represents a discontinuity from previous generations as digital natives obtain and use information differently. As a result, Prensky proposes that the very basis of instruction needs to adapt to embrace this new strain of student learning.

> *"Our students have changed radically. Today's students are no longer the people our educational system was designed to teach."(p1)*

Prensky went on to describe how older generations could be viewed as 'digital immigrants', i.e. they had an understanding of the digital world and acquired some degree of digital literacy, but they were conditioned by their life experiences in which technology played little part in how they were educated. And yet these digital immigrants were in control of educating the 'digital natives'. For Prensky, this was a contradiction that undermined the very role of education itself, i.e. to inform.

> *"But this is not just a joke. It's very serious, because the single biggest problem facing education today is that our digital immigrant instructors, who speak an outdated language (that of a pre-digital age), are struggling to teach a population that speaks an entirely new language."* (p2)

It is important to understand the different mindset that exists between digital natives and digital immigrants in the area of education. In effect, they both share a common educational objective but may hold a totally different perspective about how best to facilitate it's achievement.

The premise of this paper was initiated based on the success of the digital learning model developed by Salman Khan and available online at Khan Academy (khanacademy.org). Khan Academy produced short digital videos, normally no longer than 15 minutes, on subjects such as math, biology, and physics. Salman Khan narrated the videos and he used a simple tablet and microphone to produce each 'blackboard video', i.e. blackboard style-video with chalk writing (Ani, 2013). As Khan narrated each lesson video, he used the chalk writing on the tablet to display the lesson plan. The videos lessons were uploaded onto the Khan Academy website which could be accessed by students of all levels and from anywhere in the world. It could be viewed as a form of one-to-one teaching / learning and is still in its infancy as a concept. It utilizes the digital video platform to be at the center of the teaching delivery mode in explaining class materials. While the dialogue is still open about the possible success of this model among education experts, especially in the elementary and high school levels, this digital learning model has achieved considerable success in a relatively short span of time.

Different studies have been conducted on the use of video lectures that utilize different video formats and cover various aspects of the student educational experience. Brecht at al (2008) used content files (such as PowerPoint) as the visual component and added the audio narrative to create their videos. Specifically, they tested the feasibility and effectiveness of video lectures as a form of video instruction to assist failing students (who were uninterested in adopting the traditional classroom), and to facilitate an enhanced curriculum by broadening the depth of material covered. Their findings indicated that students found the videos substantially appealing and perceived them as an effective platform for learning. More importantly, there was a 72% reduction in failing grades among students who had access to the videos. Whatley and Ahmad (2007) developed short videos that were used as revision aids by students in building an archive facility to revisit lectures at a later time. Students reported that the videos were useful for revision purposes and were of benefit when they missed a lecture. Steffes and Duverger (2012) examined the use of humorous videos in the classroom that are congruent with the subject. They found these videos more effectively reinforce the material and contributes significantly towards retention in both the short and long term, by approximately 6%.

In looking at the issue of enhanced learning opportunities, how do we evaluate student engagement? Students who are engaged and motivated to learn are good learners and effective teaching can stimulate this and sustain student

engagement (Skinner & Belmont, 1993). Using videos are identified as one way that professors can enrich the learning environment. Work undertaken by Mitra et al (2010) presented findings investigating the depth of learning achieved using videos. They identified different ways that the student engagement can be improved and stressed that it was important that they were used as part of an overall blended approach by the professor. This could be undertaken by allowing students engage critically the video material through class questioning and provoking discussions. They also suggest that video and text should be studied together in facilitating a deeper understanding of the topic (ibid). In other words, it is important that both the text and video materials run in tandem as part of the student engagement as neither are as effective while standing alone.

The use of the digital video concept to deliver the learning experience has also been referred to as '*Flipping the Classroom'* (Selingo, 2012). The underlying premise is that students can review specific digitized and personalized information / theory prior to the scheduled class time. The face-to-face class time is then reserved for practical debate, discussion, and review of specific theories and concepts. The personalized digital video does not attempt to substitute the classroom experience but examines the potential complementary learning platform that embraces the internet students so readily engage.

Understanding how students engage textbooks in the digital age is also an indicator of how technology is evolving in the classroom and this varies across different levels of instruction. The early childhood experience seems to be attracting more students towards digital devices as the platform for reading textbooks. In a recent report published on understanding the e-reading habits of children aged 2-13 years of age, significant behavioral changes were discovered about how children were embracing digital devices to read eBooks.

"If Kids are Our Future, Our Future is eBooks" (Greenfield, 2013).

Some school districts are even mandating that textbooks be phased out to allow digital devices to become the norm for storing and accessing textbooks. North Carolina public schools, for example, have set a deadline of 2017 to align curriculum with digital devices (Jenkins, 2013). However the higher education market has not yet reached this level of device penetration as a replacement for the assigned textbook. While students complain about textbook pricing, there is still a comfort level about possessing the textbook in hand as the majority of students still buy hard copies. College students still relate to how the conventional textbook facilitates learning, leaving them in better control of their study demands (McNeish et al. 2012). But the publishing industry is slowly introducing additional textbook material online and beginning to offer standard textbooks in multiple formats, such as hard copy and digital, to satisfy specific demands of students (Howard, 2013).

Research has been undertaken to analyze the traditional face-to-face and online instructional formats. Nichols (2009) examined student evaluations from across both platforms and found evidence that those students who had more direct contact with the professor, i.e. in-class, valued both the course and professor more positively than those students who took their class on-line.

As these disruptive components of the digital revolution congregate in the classroom, how does the professor continually enhance the quality of the student's learning experience? How can professors adapt their teaching practices to embrace the digital age and the students therein? One method could be to become a 'digital individual', described as taking the form of a social identity which individuals acquire based on their digital activities, specifically developed as digital representations of their professional identities (Agre 1994). The digital individual can be defined as

> "*the form of social identity that individuals acquire as their activities become influenced by - and often mediated through - digital representations of themselves*" (Agre 1994).

In this research, the concept of 'digital individual' was represented by unique digital material, i.e. material a professor uploaded online to support the classroom and made available only to students taking the class.

Societies have discovered that their ordinary activities are increasingly being mediated by computerized representations of their members. In these situations technology has evolved so significantly that their profession, or daily activity, is no longer capable of ignoring the undue influence technology now exerts.

RESEARCH HYPOTHESES

Textbooks play an important role in the classroom as they enable professors establish their syllabi based off the specific content. However there is concern that as digital media become more pervasive, students are spending less time reading textbooks and more time engaging social media sites (Berrett, 2013). While this can be seen as a distraction for professors, it should be seen also as an opportunity for them to explore digital platforms to appreciate the quality of digital content that can support a student's desire to learn. Quillen (2013) explained how important the enlarged Internet bandwidth capacity was for schools and that pedagogic possibilities are only now beginning to emerge.

It is proposed that students will accept the digital video format as a popular medium for learning.

> **H_{1a}**–*Students believe that the digital video format is an effective platform for the delivery of supplemental class materials.*

Fortune et al (2006) suggested that students taking online classes, designed to be 'high tech', may be more independent and not require face-to-face

interactions. Therefore, students taking online classes should benefit more from viewing videos as this facilitates a deeper learning experience in comprehending the class materials, without the necessity for the face-to-face demands of attending weekly classes.

> **H_{1b}** – *Students taking online classes believe more strongly that the digital video format is an effective delivery platform for course materials than students taking face-to-face classes*

Additionally, it was proposed that students thought positively about watching videos as a platform for expanding their knowledge on a particular topic. In other research, Corbett et al (2010) produced evidence that suggests that utilizing video activity as part of the classroom environment enhances the student's learning experience. Viewing videos has become a normalized delivery mode for digital natives as they now readily access videos on mobile devices across different platforms, such as Twitter, Facebook and YouTube, to acquire information, provide entertainment, and/or facilitate their social existence.

> **H_{2a}** –*Students in both the online and face-to-face classes believe that viewing a class video would be more likely to expand their knowledge of the subject.*

As referenced in H1b, it was suggested that online students rely more heavily on other teaching platforms, as they are not able to engage the professor in the classroom on a weekly basis. Embracing class videos, as a means of deepening their knowledge of the subject in support of their high tech learning experience, is also predicted to be stronger among online class students.

> **H_{2b}** - *Students taking online classes believe more strongly that the use of video materials enhances their learning experience than students taking traditional face-to-face classes.*

As the shift in how students are reading textbooks is in transition, and as the digital native students are more connected online, it is proposed that students believe their time is better applied watching videos on the class material rather than reading textbooks. They believe this can be of greater value to them in acquiring knowledge:

> **H_{3a}** – *Students in both online and face-to-face classes recognize the time spent viewing the videos to be more valuable to their business education than reading the textbook.*

Online class students read textbooks and adopt other modes of online delivery to communicate with the class material e.g. discussion boards or blogs. There is normally no direct physical interaction with the professor-of-record. Therefore, it is proposed that online students believe more strongly that spending time viewing personalized videos would offer more value to their knowledge acquisition than spending time reading textbooks:

> **H_{3b}**–*Students in online classes will have a more favorable opinion about spending their time watching the videos instead of reading the textbook than students in face-to-face classes.*

Students positively accept the use of digital videos as a successful platform for delivering class material. It is proposed that videos, in which the professor-of-record appears, will more likely enhance the student's learning experience than those videos that do not have the professor-of-record appearing in them. Therefore, it is predicted that:

> **H_4** – *Students taking the classes in which the professor-of-record also appears in the video will have a more positive learning experience than students who view the videos and do not have the professor-of-record appearing in the videos.*

Finally, we wanted to see how personalized videos affect the learning performance of students. It is proposed that students whose professor-of-record appears in the video would be more motivated to be engaged and thus would affect their educational performance in a positive way, as opposed to students whose professor does not appear in the videos. All of the students were required to take a quiz in attempting to measure their learning outcomes after watching the videos. Quizzes are an acceptable measure of comprehension and have been used successfully in marketing research projects to gauge the level of factual knowledge among participants (Dotson & Hyatt, 2000; Wood & Lynch, 2002). Therefore, it is proposed that:

> **H_5**: *Students, who have the same professor-of-record in class that appears in the videos, will perform more effectively in a knowledge quiz than students taught by another professor who does not appear in the videos.*

METHODOLOGY

Sample

The study was conducted at a small private university in the north east of the U.S. Over two semesters (Spring and Fall 2013) a number of students taking marketing classes were selected to participate in the study, consisting of conveniently selected undergraduate students in eight marketing courses; three *International Marketing* classes (one online and two face-to-face) and five *Principles of Marketing* classes (two online and three face-to-face). The total sample consisted of 182 students (59 online, 123 face to-face). See Table 1 for demographic breakdown of sample.

Table 1. Sample

Class	Group	n	Major			Gender		Year in Program			
			Marketing	Other Business	Non Business	M	F	Freshman	Sophomore	Junior	Senior
Students taking Online classes	1	59	25	31	3	32	27	0	24	10	25
Students taking face-to-face classes	2	123	52	61	10	67	56	6	51	39	27
Total		182	77	92	13	99	83	6	75	49	52

Video Design

In preparation for the research, the professor developed and produced two short videos, each approximately 14 minutes in length. The videos showed the professor seated in his office, communicating directly to camera and referring to the students from each class, see Fig.1. The videos included 'talking head' images of the professor's face and shoulders. Each video was recorded on laptops using licensed Screenflow software and the production was of good quality.

Figure 1. Screenshots From Video 2: Social Media

The videos contained on overview of theory from related chapters in the prescribed textbooks and each class syllabus had listed this material to be studied. At times the video displayed PowerPoint slides in support of the dialogue and references were made to other shorter related videos that ran in support of the material under discussion. Descriptions of the videos are described below.

Video 1: 'Distribution'

The video considered logistics and introduced the importance of seaports in the distribution chain. The Port of Long Beach, California, is examined and the logistical support offered to businesses importing products into the US market from the Far East is discussed.

Video 2: 'Marketing Using Social Media'

The video examined the use of social media and how different social media sites have succeeded in building a strong marketing presence with their members. Specifically the professor in the video explored the difference between how Facebook (B2C social media site) and Linkedin (B2B social media site) have evolved their marketing strategies across the two different market sectors.

The videos were released over a two-week period and posted on a named YouTube channel and facilitated access was provided through a Blackboard link for each class. Students were requested to view the videos and then shortly afterwards to undertake a detailed questionnaire. After the two weeks access was removed and students were scheduled to take a quiz. Once this data was collected the videos were then used as a basis for class discussions.

The first part of the study was exploratory in nature using a self-assessed web questionnaire to assess perspectives about the use of video materials in class. The questionnaire consisted of single items measures (Sackett & Larsson, 1993; Rossiter, 2005) itemized questions followed by open-ended questions. It was important for the research to also gather qualitative data as a means of allowing the participants to reflect on the topic and some of the responses are presented later in the results section. The online questionnaire had a number of descriptive questions following by open-ended, qualitative questions. The remainder of the questionnaire contained attitude related questions using a five-point Likert scale (strongly agree 1 to strongly disagree 5), see Appendix 1. Finally participants were asked to answer some demographic questions.

The second part of the study examined whether there was a different learning experience depending on who appeared in, or narrated, the class video. Generally, MOOCs and similar large online classes engaged professors who have no specific links with the students and may actually be from another institution. A key premise of this research was that the

professor-of-record, who taught the class, also appeared in the video. It was proposed that students became more engaged and motivated in learning the material given the direct link to the professor in the classroom each week (either in the real or virtual class setting).

In order to test this, two of the eight classes chosen for the research were taught by another professor from the same Department, i.e. the professor appearing in the video viewed by these two classes was different than the professor-of-record teaching these classes. Once the videos were taken down all of the participating students were asked to take a 10 - question quiz, see Appendix 2, as related to the video content.

For the purpose of the research students were divided into three groups;

Group 1: Two online classes, the professor-of-record appeared in the videos

Group 2: Four face-to-face classes, the professor-of-record appeared in the videos

Group 3: Two face-to-face classes, the professor-of-record did not appear in the videos.

RESULTS

Part One.

To test Hypotheses 1 to 3, we first analyzed the ratios (H1a, H2a and H3a) and then performed independent T-test analysis (H1b, H2b, and H3b) to check for differences between the online and face-to-face classes. The Levene's t was used to check the between-group variance equality. No F's appeared to be significant, and thus excluded the possibility of group variance equality. Therefore we proceeded with t-test analysis, see Table 2 overleaf.

> **H_{1a}**–*Students believe that the digital video format is an effective platform for the delivery of supplemental class materials.*

We recorded a total of 181 responses to evaluate H1a. Respondents answered a 5 scale Likert question from strong agreement (1) to strong disagreement (5). Out of the 181 respondents, 69 (38%) strongly agreed and 86 (48%) agreed that the use of videos in the classroom environment is an effective platform for the delivery of class materials. Hence, 86% of the respondents supported the adoption of videos as an effective platform for the delivery of class materials showing support for H1a.

In the questionnaire we offered students an option to expand on different topic while completing the questionnaire. In this instance the students clearly referred to how effective the videos were as a platform for delivering course material and some of the responses included:

> *"It is easier to handle the chapter, and allows the participant to become more engaged in the material."*
> *"It would because I would be more prepared and know what's going on during the discussion."*
> *"It gave me a better handle on the material, and allowed me to become more confident in class discussion."*

Open-ended responses suggest that this generation of students endorses the use of digital videos as a delivery platform for class material. Commonly students used phrases such as *'gave me a different insight'* or *'able to follow the professor more effectively'* as a result of viewing the videos related to the class suggesting that these students benefitted from the experience.

Since both the students in the online and face-to-face classes positively endorsed the adoption of video to distribute class material, we also considered it beneficial to compare and analyze the groups. Since students in online classes value more high tech touch points with the professor, we predicted that they would be more favorable towards the use of video. Therefore it was proposed that:

> **H_{1b}:** *Students taking online classes believe more strongly that the digital video format is an effective delivery platform for course materials than the students taking face-to-face classes*

We wanted to observe whether there was a difference of opinion between online students, who rarely get to meet their professor, or face-to-face students who meet their professor regularly. A significant difference was recorded between the two groups ($t(181) = 3.689$, $p < .001$), with a medium effect size $r = .30$. On average, online class students would much prefer to view a video ($M = 1.53$, $SD = .65$) than face-to-face class students ($M = 1.96$, $SD = .88$). Therefore H1b is supported.

Table 2. Independent T- test results:

Hypothesis	Group	n	M	SD	Levene's test for equality		t	Df	*p* (2-tailed)	R
					F	*p*				
H1b	Online	57	1.53	0.65	0.03	0.68	3.69	179	0.00	0.3
	Face-to-Face	123	1.96	0.88						
H2b	Online	58	1.53	0.63	0.11	0.92	4.02	179	0.00	0.32
	Face-to-Face	123	1.98	0.84						
H3b	Online	58	1.84	0.95	0.00	0.97	1.56	180	0.12	0.14
	Face-to-Face	124	2.08	1.05						

H_{2a} – *Students in both the online and face-to-face classes believe that viewing a class video would be more likely to expand their knowledge of the subject.*

We looked into the response percentages to observe whether students believe viewing the video, in which the professor explained the material, would help them expand their knowledge. Out of 182 responses, 64 (35%) strongly agreed and 92 (50%) agreed with this statement. Therefore 156 (85%) of the respondents responded that watching a class video would expand their knowledge of the subject.
Students expanded in agreeing that viewing the videos expanded their knowledge of the material by making comments, such as:

"The video encouraged me to think more about the matter and gave me a different insight than just reading the chapter."
"Students would be more knowledgeable (watching videos) before heading to class and be able to follow the professor more effectively."
"Gain better knowledge on subject matter before being exposed to it in class."

Again, the phrases used by the students to describe their capacity to acquire more knowledge from viewing the videos are favorable to the use of video as an additional tool in class. Phrases including '*encouraged me to think more'* or *'would be more knowledgeable'* or *'gain better knowledge on subject matter'* are each powerful endorsements of the student's enhanced learning experience.

H_{2b} - *Students taking online classes believe more strongly that the use of video materials enhances their learning experience than students taking traditional face-to-face classes.*

Furthermore we wanted to observe whether there was a difference of opinion between the two groups of classes and whether the required videos would expand their knowledge. We predicted that the online class environment would be more prone to video adoption as less interaction is present with the professor. The results supported our prediction ($t(178) = 4.016$, $p < .001$, $r = .32$). On average the students in the online environment agreed more ($M = 1.53$, $SD = .63$) than students in the face-to-face environment ($M = 1.98$, $SD = .84$). Therefore H2b is supported.

H_{3a} – *Students in both online and face-to-face classes recognize the time spent viewing the videos to be more valuable to their business education than reading the textbook.*

Lastly, we evaluated how students valued their time in watching videos in comparison with reading textbooks. Out of the 182 respondents, 77 (42%) strongly agreed and 59 (32%) agreed with this notion. In total 136 respondents (75%) believe that time watching videos are more valuable than actual textbooks.
In support of this hypothesis, some of the students' responses are listed below:

"Just was nice to see some of the information in the chapters visually explained by the professor rather than just reading the chapter."
"I liked that the professor gave his own examples other than the ones in the book. I made a completely different connection from the chapters after seeing the videos."
"You get more of a classroom experience with the videos than just reading from the book".

'*Visually explained*', or '*completely different connection*' are two interpretations of how well the students valued the time spent viewing the videos rather than reading the textbook. And the benefits gained from doing this are emphasized by their expressions. The time invested in watching the videos was enlightening in a different way than that experienced from reading the textbook.

H_{3b}–*Students in online classes will have a more favorable opinion about spending their time watching the videos instead of reading the textbook than the students in face-to-face classes.*

Since the digital natives, and specifically online students, are prone to use digital material more than

printed books, we predicted there was going to be a difference between the two class settings. However, the results did not support our prediction (t (182) = 1.56, p < .122, r = 0.14). Students in both class settings share their opinion about the use of digital material, online students agreed only slightly higher (M = 1.85, SD = .95) than face-to-face students (M = 2.09, SD = 1.05). Therefore, H3b is not supported.

Part Two.

The research examined how important it was for students to have a continuous association with the professor appearing in the video and in the classroom. We predicted a statistical difference between the classes in which professor-of-record appeared in the video (Groups 1 and 2) with the classes that did not have the professor-of-record appear in the video (Group 3).

Table 3. ANOVA Results for H4 and H5

Hypothesis		*Sum of Squares*	*Df*	*Mean Square*	*F*	*p*
H4	Between Groups	36.73	2	18.37	28.69	.000
	Within Groups	114.61	179	.64		
	Total	151.34	181			
H5	Between Groups	269.44	2	134.72	38.92	.000
	Within Groups	619.56	179	3.46		
	Total	888.99	181			

H_4 – *Students taking the classes in which the professor-of-record also appears in the video will have a more positive learning experience than students who view the videos and do not have the professor-of-record appearing in the videos.*

The results supported our prediction, as there was a significant difference at the .05 level. For the three groups: F (1, 182) = 28.687, p < .001, the effect size was η^2 = .25. Post Hoc comparison using Tukey HSD test indicated that there was a significant difference between the groups in which the professor-of-record appeared in the video: Group 1 (M = 1.53, SD = .68), Group 2 (M = 1.65, SD = .72), and Group 3 (M = 2.59, SD = 1) where the professor in the video was not the professor-of-record in the class. Therefore, H4 is supported.

This hypothesis is also strongly supported by the students. Identifying the direct link students developed with the professor in the video and thereafter in the classroom was clearly referenced and responses included:

"It featured my professor, who is teaching the course, so I knew it was directly related to my grade and subject."
"Seeing a familiar face teaching in a familiar way, visual."
"I felt like I was talking face-to-face with the professor. I found this tactic to be very successful in my understanding of the material."
"I liked the incorporation of videos, along with commentary from my teacher."

'

Talking face-to-face' or '*seeing a familiar face'* or '*it featured my professor'* are strong endorsements of the personal connection that students considered to be important in viewing the videos. One student even connected it further by referring to '*my grade'* as a distinguishing benefit to having their professor also appear in the video. Students could possibly value the video content even more if they were to consider that the material could form part of their class assessment at some point in the semester.

H_5: *Students, who have the same professor-of-record in class that appears in the videos, will perform more effectively in a knowledge quiz than students taught by another professor who does not appear in the videos.*

To test H5, a one-way between groups analysis of variance was conducted to explore the impact of the professor appearing in the video on the performance of students taking the quiz. As suggested there was a significant differences at the p < .05 level. For the three Groups: F (1, 182) = 38.992, p < .001. The effect size calculated with η^2 was .31. Post hoc comparison using the Tukey HSD test indicated that the mean score of Group 1 (M = 9.16, SD = 1.29) was different than the mean score of Group 2 (M = 8.21, SD = 1.92), and Group 3 (M = 6.18, SD = 2.21). The mean score of Group 2 was different than the mean score of Group 3 and the mean score of Group 1. As the results suggested this hypothesis is supported

Table 4. Descriptive Statistics for H4 and H5

Hypothesis	Groups	n	M	SD	Std. Error	95% Confidence Interval for Mean		Min.	Max.
						Lower Bound	Upper Bound		
H4	1	59	1.50	.65	.086	1.33	1.67	1	3
	2	66	1.69	.74	.087	1.51	1.86	1	4
	3	59	2.59	1.00	.14	2.31	2.87	1	5
	Total	182	1.88	.91	.07	1.74	2.01	1	5
H5	1	57	9.16	1.29	.17	8.81	9.50	4	10
	2	66	8.21	1.92	.24	7.74	8.68	2	10
	3	59	6.19	2.22	.29	5.61	6.76	2	10
	Total	182	7.85	2.22	.16	7.53	8.17	2	10

*168 students answered they watched both videos

DISCUSSION

As the literature suggests the digital revolution is getting closer to bringing about significant change in the classroom (Prensky, 2001). The pace of this change has affected the student's ability to embrace and successfully engage these new technologies into the education setting. However the potential for success is also heavily dependent on the teaching profession enabling these new technologies to become part of the learning process. It is this question that prompted the research to examine how professors could adapt their teaching style to educate the future generations of digital natives in the future. The hypotheses examined how professors could benefit by adopting personalized videos available on YouTube as one of those new innovations advancing the learning experiences in classrooms.

Firstly we established whether students would embrace the concept of personalized videos as an effective platform for the delivery of course materials. The students responded overwhelmingly that they supported the adoption of videos as a means of enhancing their learning experiences. Digging deeper into the results, and analyzing the difference between students taking the online (high tech) and traditional face-to-face (high touch) teaching modalities (Fortune et al, 2006), it was evident that online students have a more positive opinion about videos than traditional face-to-face students. There is reason to believe that online class students view videos as a more integral part of their educational platform as they do not attend classes in the traditional sense. Nonetheless, both sets of students positively welcomed the use of videos as a delivery platform for course material.

But to what extent could viewing the video be valuable in expanding their knowledge of the subject material? This question was key in understanding how effective the personalized video format could be in enhancing the student's learning experience. Overall the students supported this premise and endorsed the video concept as a medium that expanded their knowledge of the class material. Breaking out the results between online and face-to-face students, the evidence supported that online class students were more prone to the adoption of class videos as a platform for expanding their actual knowledge of the class material than those students sitting in the classroom.

The research also explored how much value the students placed on the time they spent reading as against the time spent watching the videos, especially if the video covered class-specific material. It was important to break out the data between the face-to-face students and the online students as the results provided a significant and different outcome. Online students relied more heavily on the textbook to guide them in taking the course and this was supported by the data. However a significant number of face-to-face students reported that they did not read the textbook. And for those face-to-face students who did read the textbook, it was noted that a significant percentage of them read for 30 minutes or less. The results for this question were not as positive but still displayed a clear majority of students believed that time spent viewing the video was more valuable to their business education than reading the textbook.

A key objective of the research sought to better understand how important students valued that the professor-of-record actually appeared in the class video. In part 2 of the research, it is evident the student's learning experience was enhanced by having the same professor teach the class and appear in the videos. Students referred in their comments to the '*familiar face*' or "*It featured 'my teacher*'" as a positive contribution to their learning experience. We wished to explore if students who had the professor appear in the video in both platforms (online and face-to-face) view videos differently than students in a traditional face-to-face environment whose professor did not appear in the video. The students in the class where the professor did not appear in the video reported that they did not believe as strongly that having the professor-of-record appear in the video would enhance their learning experience. Thus H4 was supported. The results suggest that students' class experiences may be enhanced if universities encouraged professors to make their own videos, rather then using outsourced material, as some already do by suggesting students register for MOOCs. By

producing videos, students' classroom experience will deepen and thus positively affect their performance. In order to analyze the aforementioned assumption, we concluded the study by analyzing students' performance after viewing the videos. The research sought to establish whether personalized videos affected a student's academic performance and, if they did, in what ways.

Students from each class were required to take a 10-question quiz based on the video material after the video access was taken down. The recorded scores suggested that students watching the videos performed better on the test. However the students from the classes in which the professor-of-record did not appear in the video recorded the lowest score, i.e. Group 3. All differences were statistically significant, thus offering support for our last hypothesis. This outcome supports our thesis that Universities need to understand that their professors are still the most valuable asset they possess. Accordingly, University administrators might be better served providing adequate resources to professors and encouraging faculty to develop their teaching styles. Facilitating the production of personalized videos that enable a deeper learning experience for their students, as one example, may be more beneficial for their institutions than going in the direction of blindly scheduling MOOCs.

LIMITATIONS AND FUTURE RESEARCH

One limitation of this study was the sample size (n=182). The size of the university in which the research was undertaken was a contributing factor as the average class size of 18 students is small and limits the researcher's ability to recruit from larger classes. This will be addressed in the next phase of the research by collaborating with faculty from other universities. The sample was also restricted to students taking marketing classes. A follow on study could look at students taking other business classes or include students from Colleges, such as Arts and Sciences. Finally, a study could focus on how students envision the development of digital videos being deployed in classes as part of the learning environment. This could provide faculty with a valuable insight about how students are best facilitated with the tools to learn effectively.

CONCLUSION

The results of the study provide initial evidence that the use of personalized digital videos enhances the learning experience for students in both online and face-to-face classroom settings. The results have several implications in regards to the current topic and the popularity of MOOCs. Although MOOC's, due to their ease of access and nonexistent or low cost may look attractive, our study suggests a key element students desire in their education; an enhanced relationship with their professors than transcends the classroom into the digital world. Students aspire to a stronger and more personal relationship with their professors and MOOC's are not able to offer students this level of engagement.

Furthermore, a message that could be interpreted from this research is an early-warning signal for professors; if they do not advance their teaching skills to attend to the new demands of digital natives, students may consider alternative forms of education to stimulate them. Dennis Abbot, an EU Commission spokesperson on education policy, states the challenge very effectively:

"*There is a revolution out there (in education) at the moment; we cannot afford to be left behind."* (Schuetze, 2013).

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Appendix 1
Attitude related questions from Questionnaire

Please indicate you how much you agree with each of the following statements:

	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Was it easy to gain access to the video?	○	○	○	○	○
Do you think the video is an effective platform for the delivery of course material for students?	○	○	○	○	○
Considering only the learning experience, do you think watching the video expand your knowledge on the subject?	○	○	○	○	○
Do you believe having a SHU professor appear in the video enhances the learning experience?	○	○	○	○	○
If faculty produced such videos for every chapter in a course, would the videos enhance your ability to study the material?	○	○	○	○	○
Do you believe the video material link to the learning experience in the classroom?	○	○	○	○	○
How likely is it that the videos could replace textbook chapter readings for class preparation?	○	○	○	○	○
Do you consider the time spent watching the videos to be more valuable to your business education than reading the textbook?	○	○	○	○	○

Appendix 2
Student Quiz

Q1: What port is discussed in Video 1 on Distribution?
- ☐ Seattle
- ☐ San Francisco
- ☐ Los Angeles
- ☐ Long Beach

Q2: Where does the US get most of the fresh produce when it is out of season?
- ☐ Mexico
- ☐ Latin America
- ☐ Africa
- ☐ Hawaii

Q3: What is the largest port in the world?
- ☐ Hong Kong
- ☐ Los Angeles
- ☐ Singapore
- ☐ Shanghai

Q4: What is the largest item exported through the Port of Long Beach?
- ☐ Waste paper
- ☐ Petroleum coke
- ☐ Chemicals
- ☐ Scrap Metals

Q5: The video discussed the meaning of 'Empties'. Does this refer to?
- ☐ Empty ships
- ☐ Empty containers
- ☐ Empty ports
- ☐ Empty trains

Q6: What was the value of the trade that passed through the Port of Long Beach in 2012?
- ☐ $250 billion
- ☐ $25 billion
- ☐ $95 billion
- ☐ $155 billion

Q7: Social marketing is primarily used by:
- ☐ International companies
- ☐ Not-for-profits organizations
- ☐ Governments
- ☐ High tech companies

Q8: In 2013, it is forecast the USA will spend 'how much' in advertising?
- ☐ $166 billion
- ☐ $85 billion
- ☐ $35 billion
- ☐ $518 billion

Q9: The primary purpose of Linkedin is:
- ☐ 'Spend time'
- ☐ 'Invest time'
- ☐ 'Make money'
- ☐ 'Have fun'

Q10: Social media is widely adopted for different uses and this can depend on each country! People in India use social media primarily for:
- ☐ Socializing
- ☐ Meeting friends
- ☐ Chatting online
- ☐ Searching for work