STUDENT-CREATED VIDEOS IN BUSINESS EDUCATION: TOWARDS A CONSTRUCTIVIST FRAMEWORK OF BEST PRACTICES

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ABSTRACT

Research and practice suggest that student-created videos—structured, well-defined course assignments that have a video created by a student or group of students as the outcome product or deliverable—uphold constructivist goals for higher education while meeting student engagement and universal learning design objectives. A natural progression of the technological revolution in education, student-created videos can be leveraged to provide universal design for learning, transform the learning experience, and improve student learning outcomes. This paper synthesizes relevant research with professional perspective from professors with years of experience assigning student-created videos in college business courses. A theoretical framework, a series of best practices, and avenues for potential future research are outlined in this paper.

INTRODUCTION

Much has been written about the dynamic impact technology has had on every industry, including in higher education. Technology is now considered fundamental infrastructure in the design, delivery, and consumption of learning. Nothing could make this clearer than the coping mechanisms enacted during the COVID-19 pandemic. As the threat of global pandemic mounted, universities around the globe quickly transitioned to delivering all their courses and most of their student services online. While there was a wide range in the efficacy of this effort, students were able to finish their courses, instructors were able to remain employed, and universities were able to continue their missions due to solid technological infrastructures. Now that we accept technology as a permanent and critical tool in our lives as educators, it is time to give more thought to its proper utilization in achieving student learning outcomes.

An aspect of educational technology that has been, as of yet, under-explored, is the use of student-created videos as assignments given to undergraduate business students. The skills necessary to appear on, design, and edit video have quickly become crucial for managers and decision-makers. Businesses use videos to educate customers, train employees, communicate decisions, and market products. Of specific interest in this paper is the traditional notion of videos which the Oxford University Press (2019) defines as "a recording of moving visual images made digitally or on videotape."

We are focusing specifically on *student-created videos* which have been defined as "structured, well-defined course assignments that have a video created by a student or group of students as the outcome product or deliverable" (Clemmons & Posey, 2016: pg. 65). Student-created videos are purposefully asynchronous to force students into planning, rehearsing, and revising their work. Greene (2014) credits student-created videos as giving students deeper appreciation of theory and its applications while improving student engagement.

There are numerous other uses of video in business education, including recorded lectures and viewing videos as class assignments. Moreover, virtual meetings and live streaming use video technology to connect people synchronously. While these are prevalent and important in their own right, this paper will focus on the enhanced engagement and learning that results from student-created videos.

Not only are video skills quite "in demand" by businesses today, but creating videos provides a quality learning experience that enhances student understanding, critical thinking, and creativity. Following Piaget's recommendations for a constructivism approach (1950), student-created videos encourage learning that is built upon prior knowledge—that is an active process, and is socially constructed (Rovegno & Dolly, 2006). Moreover, student-created videos reinforce many of the most valuable employability skills identified in the World Economic Forum's most recent *The Future of Jobs* report (2018), such as creativity, technology design, critical thinking, complex problem-solving, and active learning.

The purpose of this conceptual paper is to synthesize the constructivist perspective, instructional design, and business education literature together with the authors' extensive firsthand experiences to deliver recommendations for pedagogical use of student-created videos. First, we establish the ability to create quality video content as an important job skill in the current economy. Second, we review the perspectives on learning with particular focus on how constructivism informs the utility of student-created videos. Third, we recommend best practices for and recognize limitations of student-created videos. Finally, we present several avenues for future research into this important pedagogical tool.

THEORETICAL REVIEW

Importance of Video Skills

Video content has become so prevalent and expected that YouTube is ranked as the second most popular search engine in the world (Davies, 2021) with over 2 billion logged-in users each month (Tankovska, 2021). Companies are using video as part of their strategies to market to new customers, to recruit new employees, and to train existing employees. Increasingly, video is viewed as a vital tool in an organization's overall strategic communications toolkit. As you might expect, social media managers and content creators are explicitly hired, in part, based on their ability to generate video content (Brumberger & Lauer, 2015). Others who work in training and development or media relations might also expect that video skills will be essential. These are important for sure, but we believe that workers in most every type of job, at most every level, and across most every industry should have basic capability and willingness to create and edit, or at least participate in, videos when called upon

by their work. Videos permeate organizational communications with both internal and external stakeholders, ranging from instructional videos showing customers how to use a product to spotlight videos recognizing award-winning employees. As social media platforms that rely heavily on video over text and images, such as Tik Tok and Snapchat, soar in popularity, we expect companies to move quickly to leverage these communication streams to reach customers and employees.

The digital revolution has created an economy that demands a wide rage of technical and social skills. Being able to create, capture, and edit videos, as well as having a propensity for appearing comfortable and professional on camera, will help business graduates be competitive on the job market. Companies seek employees who can balance synchronous and asynchronous communications that include images, videos, written copy, and audio across numerous platforms and channels (Brumberger & Lauer, 2015). To this end, video resumes are increasingly common (Goel & Awasthy, 2020; Tong et al. 2020). Altogether, the proliferation of videos in business clearly signals the need for business students to develop their video skills.

Perspectives on Learning

The theoretical review for this investigation focuses on three well established modern learning theories, or perspectives on learning, in use today by educators: Behaviorism, Cognitivism, and Constructivism. Each of these learning theories attempts to provide a solution to the question of how knowledge is cultivated in individuals (Ertmer & Newby, 2013). Specifically, each perspective on learning has a different viewpoint for which factors influence learning, and how the application of new knowledge, or transfer, occurs (Schunk, 1991).

Behaviorism

Behaviorism is a modern perspective on learning that builds upon the ideologies of classical conditioning and operant conditioning. Behaviorist maintain that learning takes place when an environmental stimulus induces an appropriate response from the learner (Parton & Bailey, 2008). Classroom lectures, fact recall, applying explanations and reward systems are all learning activities associated with behavioral learning theory (Clark, 2018a).

Behaviorist ideologies are often seen as traditional classroom methods, and may be considered out of date in view of the needs of today's learners. Opponents of behaviorism might argue that lecture, memorization, and Pavlovian reward systems fail to encourage a deeper connection to the content sought by modern educators. Although there is still a place for behaviorist techniques in the contemporary classroom, it is appropriate to consider other perspectives on learning.

Cognitivism

One such perspective is cognitivism. Cognitivism shifts the emphasis from manipulating stimulus to achieve a specific performance, to promoting mental processing (Parton & Bailey, 2008). Cognitivism emphasizes making instruction meaningful by helping learners relate new

information to existing knowledge, thereby promoting knowledge retention. Discussions, demonstrations, real-world problem solving, and concept mapping are learning activities associated with the cognitivist approach (Clark, 2018b).

Like behaviorism, cognitivism has found its place in the contemporary educator's classroom. Also, like behaviorism, cognitivism alone may not provide modern learners with an opportunity to master the content taught. To fill the void left by behaviorism and cognitivism, educators turn to the constructivist perspective on learning.

Constructivism

The constructivist perspective on learning is built upon the work of Lev Vygotsky and his social development theory (David, 2014). Specifically, Vygotsky's zones of proximal development stipulate that knowledge is created while a learner is performing a task that requires guidance from an instructor or peer (1980). The task is not so easy that the learner can complete it on their own, but not so difficult that they cannot complete it at all. A constructivist approach assumes that knowledge is created through the completion of these authentic tasks (Parton & Bailey, 2008).

Although there is some variation across literature, a constructivist approach to teaching and learning is often built upon the following principles (Amarin, & Ghishan, 2013):

1.   Knowledge is created or constructed, not discovered.
This principle of constructivism places the responsibility of knowledge creation more squarely on the learner. While the instructor should facilitate the learning activity through the use of assignment guidelines and rubrics, the learner will bear the obligation to create the knowledge. This characteristic of constructivism implies that the learner should have the autonomy to be creative within the activity in order to connect the activity to the learning objective.
2.   Knowledge is created by connections made with prior knowledge.
Following in line with the previous characteristic of constructivism, this principle requires of the student some level of prior knowledge with which to connect the new knowledge. This knowledge could come from a previous lecture, learning activity, or course. Again, the learning activity should give students the autonomy to make these connections for themselves.
3.   Learning is an active cognitive process.
Constructivist learning should require students to actively engage with the learning, not passively absorb the content. Constructivist learning activities will often include the use of various technologies, for this reason. Requiring learners to actively interact with technology is an effective way to place the burden of knowledge creation on the learner.
4.   Learning is best fostered by a practical challenge.
A constructivist learning activity should be practical and challenging to the learner. Following this principle guides the learner to construct the knowledge with the real-world application in full perspective. The use of technology can enhance the practical connection for learners.

Educators using a constructivist approach should attempt to develop learning activities that encourage learners to work in the optimum zone of proximal development. Learning activities such as analyzing case studies, research projects, student-created lessons, and student presentations are reflective of a constructivist perspective on learning (Clark, 2018c). While it is clear that a well-rounded classroom should contain components of all of the modern perspectives on learning discussed here, this study will focus on the development of a learning activity from the constructivist perspective.

Student-Created Videos

Student-created video assignments epitomize the constructivist approach to learning. Student-created videos encourage learners to build their own understanding of the content and take charge of the transmission of knowledge. This aligns with a core tenant of constructivism, which is placing more of the responsibility to learn on the learner themselves (Applefield, Huber, & Moallem, 2000). However, review of literature concerning student-created videos reveals that knowledge transmission is just one of the many benefits of this constructivist learning activity.

Student-created videos have been shown to develop a multitude of skill sets in learners. Sullivan (2012) explained how student-created videos impacted religious studies students' development of 21st century skills, or skills that foster success in the workforce. Among English language learners, student-created videos promoted active learning by giving students an authentic task involving direct meaningful interaction with the content (Anas, 2019). Digital storytelling is another way to implement student-created videos into curriculum. Kortegast and Davis (2017) reported that engaging in digital storytelling allowed students in education programs to apply theories of student development to their personal experiences. Student-created videos can be also used as a means of authentic assessment by transforming classroom assessment into learning experiences (Clemmons & Posey, 2016). A tangible way to apply the constructivist perspective in business education is to assign student-created videos.

The literature reveals that student-created videos are a good example of constructivism, so long as the assignments are developed from that perspective. To develop student-created videos from the constructivist perspective, practitioners should seek to produce authentic assessments that put the learner at the helm. Doing so will facilitate experiences wherein the learner stays in the appropriate zone of proximal development. Given these conditions, some students may report that "they to a higher extent felt the need to reflect upon the accurateness of the content covered" compared to writing a traditional paper (Liljeström et al., 2017, p. 324). Student-created videos draw on the constructivist perspective to drive assessments that are more engaging, more impactful, and put the learner in control.

BEST PRACTICES FOR STUDENT-CREATED VIDEOS

The use of video aligns with employer demands, while aiding students' project management, research, information literacy, organizational, presentation, and communication skills (Holtzblatt & Tschakert, 2011). When implementing student created videos, technology is a useful tool and the professor is still integral in making the learning experience meaningful

(Cope & Ward, 2002; Somekh, 2008). As such, we draw on our own attempts and the student feedback that we have received, as well as conclusions from previous research, to present a series of best practices for instructors implementing student-created videos in business education.

Engage All Learners

In higher education it is important to include a variety of activities and assessments that create a productive curriculum accessible to all learners (Hitchcock, Meyer & Rose, 2002). A curriculum that provides this diversity in instructional activities follows universal design for learning principles. Universal design for learning (UDL) is a scientifically-driven framework that guides curriculum development to be inclusive for all learners (Rose & Gravel, 2010). UDL supports recognition learning when *what* we teach is presented in flexible formats. UDL supports affective learning by keeping students engaged with the *why* of learning (Rose & Meyer, 2002). In 2008, UDL was codified into the Higher Education Opportunity Act as a guiding educational practice that "reduces barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who are limited English proficient" (HEOA: Public Law 110-315, August 14, 2008). Student-created videos follow UDL principles to engage all types of learners.

Student-created videos assignments follow the first tenant of universal design for learning by providing flexibility in the way that students demonstrate knowledge and skills, as well as in the way students are engaged. Student-created videos also follow the second tenant of universal design for learning by maintaining high expectations for all students while giving the instructor ample opportunity to accommodate for specific student needs.

In addition, by encouraging inclusion and reducing barriers through technology, student-created video assignments help to satisfy goal four of the United Nation's Sustainable Development Goals (SDGs). The seventeen SDGs emerged from the 2030 Agenda for Sustainable Development and include varied outcomes, including affordable and clean energy, reduced inequalities, responsible consumption and production, and most pertinent to this discussion – quality education. Specifically, goal four of the SDGs seeks to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. One indicator towards realizing this objective is to promote information and communications technology (ICT) skills for youth and adults. Successful implementation of ICT rejects the traditional notion of a teacher-centered approach and instead shifts the focus to the student, allowing flexibility in completing the materials (Assar, 2015). While it may be reasonable to assume that ICTs are developed by individuals regardless of educational intervention due to their increased use in contemporary society, research seems to indicate that it still varies considerably among demographics, and even among homogeneous populations (see Verhoeven, Heerwegh, & De Wit, 2014 for a comprehensive review of these variables). Developing ICTs are crucial for obtaining a quality job after graduation (Picatoste, Pérez-Ortiz, Ruesga-Benito, 2017) and increase future wages (Falcka, Heimisch-Roeckerb, & Wiederholdc, 2020). Passive use of ICTs are not sufficient to create learning – teachers need to integrate it into their learning process and feel comfortable engaging students through the technology (Singh & Chan, 2014). Approaching

student-created video assignment implementation with UDL principles in mind will ensure that the activity is accessible and productive for all students and contributes towards this SDG.

Use a Rubric

Rubrics are forms that include evaluation criteria, detailed definitions of those criteria, and a scoring structure given that criteria (Popham, 1997). The evaluation criteria reflect the instructor's thoughts about the aspects that are important in the assignment. The definitions articulate the requirements that satisfy demonstration of different competency levels inside that criterion. For example, an instructor may include the evaluation criterion of 'references' in a student assignment and in their detailed definition, describe how the references are properly structured, how they include a minimum quantity, and how they are used in-text. Different columns articulate scenarios where the student did not fully meet all those expectations, and each column reflects a scoring strategy. At its simplest form, an established rubric helps with the evaluation of student work (Campbell, 2005; Tuñón & Brydges, 2006). While some instructors are resistant, rubrics have been shown to increase consistency across students, increase inter- and intra-rater reliability, and assist with efficiency in grading, while reducing grading conflicts and limiting the validity of grade appeals (Bolton, 2006; Campbell, 2005; Reddy & Andrade, 2010).

Moving beyond the instructor's efficiency, rubrics "give students a performance outline and an understanding of the factors that an instructor considers important. This allows the student to concentrate on critical areas and reduces uncertainty associated with unclear instructions" (Bolton, 2006, p. 5). Research indicates that students who have access to rubrics tend to perform better since they provide clear expectations and reduce uncertainty (Andrade & Du, 2005; Petkov & Petkova, 2006; Reitmeier, Svendsen, & Vrchota, 2004). This means that instructors must seriously consider their criteria when designing their rubrics because students will use it as a signal of the important qualities of student-created videos (Bolton, 2006). Rubrics for student-created videos might specify such criteria as content (e.g., correctly answered posed questions, sufficient depth in answers), reference use (if applicable), presentation skills (e.g., audible speaking, clarity of phrasing), and creativity. While choosing these criteria may be challenging (Tierney & Simon, 2004), considering course goals and specific learning objectives is essential for designing a valid rubric (Reddy & Andrade, 2010). Rubrics should reflect the instructor's learning goals and include specifications about whether students must physically appear in the video, time limits, and other relevant expectations.

Include Peer Assessments

A best practice for student-created videos is to encourage students to view one another's completed videos and provide peer evaluation or assessment. Peer assessment has been defined as "an arrangement in which individuals consider the amount, level, value, worth, quality, or success of the products or outcomes of learning of peers of similar status" (Topping, 1998: 250). While some students may enjoy instructor feedback over peer assessment, students still have positive attitudes towards receiving peer assessments (Huang, 2004) and effects on their attitudes and achievement can be identical or even better to instructor feedback (Topping, 1998). Research

has documented the use of peer assessment in a large variety of disciplines across myriad assignment categories, including video (Topping, 1998). An expectation of peer viewing causes students to work harder to learn the material and present it in an understandable format (Nisly, Cecire, Friesen, & Sensenig, 2015). Anticipation of peer assessment increases student motivation and students benefit from an opportunity to discuss the assignment with others (Brindley & Scoffield, 1998).

One of the benefits of using a rubric in the previous best practice tip is that it provides structure. As students tend to take a prescriptive stance when they peer assess, where students expect the content to follow a specific form (Mangelsdorf & Schlumberger, 1992), successful peer assessments will require successful execution in the rubric to maximize results. Do note that while rubrics enhance inter-rater reliability (Reddy & Andrade, 2010) and results are generally positive for presentations and media creations (Freeman, 1995) and therefore seem a natural fit with peer assessments, Stellmack et al. (2009) indicated that perfect inter-rater agreement only occurred 37 percent of the time after careful design and refinement of their rubric. Therefore, while students should be advised to use the rubric in peer assessment, an expectation of complete agreement should not be anticipated. Rather, the rubric will serve to guide student evaluations and minimize the variability between raters. Instructors can make a variety of choices regarding peer assessment as there is significant variation in assessment directionality (unidirectional, reciprocal, mutual), privacy/anonymity of the assessor/assessee, the value of the evaluation in the context of the final grade, time (in/out of class), and place (in/out of class) (Topping, 1998). Finally, while peer evaluation can be helpful, instructors should not see it as a substitute for providing feedback and assistance as students may be unwilling to accept responsibility for assisting their fellow classmates in certain situations (Falchikov, 1995).

Guide Students toward Useful Technology

While students tend to own advanced technology and are reasonably capable of deploying it (Williamson & Muckle, 2018), students may not be as comfortable with technology as many instructors assume (O'Connell & Dyment, 2016). The level of comfort with technology may vary between generations (Linnes & Metcalf, 2017), particularly affecting non-traditional students. When technical issues arise with student-created videos, the instructor will become the troubleshooter. Students may be critical if a recommended platform does not work, undermining trust (Bennett, Dawson, Bearman, Molloy, & Boud, 2017). Additionally, as a single platform may become problematic, instructors should have a back-up plan for anticipated technical issues (Jorgensen et al., 2018). Therefore, we advise that the instructor develop fluency with a couple of video project tools and provide directions to students on those platforms. The instructor may consider creating or providing access to walkthroughs on how to use the selected tools to create student-created videos to assuage concerns from individuals who are new to the technology. Advise students that using software beyond those tools is acceptable, but that choosing an option beyond those specified will require that they be proficient with the tool and able to troubleshoot issues themselves. In step with previous best practice tips, reward students who go beyond the minimum threshold in learning and utilizing the technology.

When instructors are better practiced and trained in the available technology, they are more likely to integrate it and have confidence in utilizing it (Afshari, Bakar, Luan, Samah, &

Fooi, 2009; Buabeng-Andoh, 2012). While many successful instructors who use technology are self-taught through trial-and-error, support staff can also assist (Jorgensen et al., 2018). We recommend that instructors partner with the instructional design and information technology personnel of their university to learn which video production tools are recommended. Additionally, university librarians are expanding their roles to include assistance with online learning and course management systems (Ducas, Michaud-Oystryk, & Speare, 2020) and can provide tools and expertise to the instructors on these technologies as well (Oluwatobi, 2017). Instructors should consider providing the librarian's and information technology center's contact information to students to reduce the instructor's need for detailed technological expertise. Partnering with instructional designers, information technologists, or librarians may result in assistance with instructor software training, student support, or even rubric development.

Encourage Autonomy and Creativity

While maintaining similarity between deliverables by the rubrics and standards we have proposed, still allow students to have some autonomy when it comes to actual content and allow them to express the decision for that choice. For example, an assignment may require a student to assess a federal law. The questions may be the same for each student – perhaps a history of the law, the actual wording of the law, and even an example of when the law has been enforced. The professor may provide a list of laws that the students can choose from and encourage them, in their student-created video, to express why they chose that law. Students are receptive towards having flexibility or choice in their assignments (Hanewicz, Platt, & Arendt, 2017; Nisly et al., 2015) and autonomy support has been linked with perceived competence for students (Deci, Nezlek, & Sheinman, 1981), increased student persistence, curiosity, and a greater general enjoyment of the work (Miserandino, 1996). Additionally, choices for students increases engagement levels (Romaniuk & Miltenberger, 2001), intrinsic motivation (Patall, Cooper, & Wynn, 2010), and the likelihood that assignments are completed (Croge, 2009). This approach also allows other students to review their peers' student-created videos which extends and deepens their learning of the content.

Second, returning to the example, students may discuss how the law has or will affect them in their real-life apart from the presentation, creating increased significance for them and the students who are observing. Research indicates that clarifying "the relevance of schoolwork for students involve educators' actions that help students to grasp the contribution of schoolwork to the realization of their personal goals, interests, and values" (Assor, Kaplan, & Roth, 2002: 262). Students learn best when they are emotionally invested in the learning that they are helping create (Dabrowski & Marshall, 2018).

Finally, from a practical standpoint, allowing some student discretion in choice has benefits as well. It reduces monotony of grading for the instructor by being able to review unique, but similar, content and it reduces the ability for students to act unethically by sharing answers as content is inherently unique between individuals. When implementing, it is important that the number of choices does not become unreasonable as it will create unclear boundaries for students (Dabrowski & Marshall, 2018). Allowing students to choose between differing assignments with vastly different options may result in students choosing an assignment based

on point values or ease (Fulton & Schweitzer, 2011; Hawthorn-Embree, Skinner, Parkhurst, O'Neil, & Conley, 2010), rather than an actual interest in the material. Finally, although choice may be offered, if the student does not find the task relevant, the positive effect of choice may be minimized (Assor et al, 2002).

DIRECTIONS FOR FUTURE RESEARCH

A final contribution of this paper is to pose some fruitful avenues for future research centered on student-created videos in business education. We have reviewed numerous studies that support student-created videos as impactful, engaging, pedagogically sound, and universally accessible. However, we recognize that there are many important elements of student-created videos that deserve more detailed, empirical analysis. We propose a couple of avenues below that may spur further investigation.

First, in light of the Covid-19 pandemic, empirical investigation of the adoption of student-created videos in business education is required. According to the IAU Global Survey Report (Marinoni, Van't Land, & Jensen, 2020), almost all higher education institutions reported that Covid-19 affected teaching and learning, with the few exceptions being education facilities that had shuttered their doors or were already fully online. Although the pandemic is by nature temporary, there is reasonable argumentation to conclude that the disruption will inspire long-term changes, with business schools paving the process for universities as a whole (Krishnamurthy, 2020).

Because of the sudden emergency digitalization caused by Covid-19, there is reasonable concern that the shift to distance learning may affect pedagogy (Marinoni, Van't Land, & Jensen, 2020). Given the global impact of the Covid-19 pandemic, it should not be surprising that a flurry of articles have proposed both implications and future research avenues to examine short-term and long-term effects (e.g., Ali, 2020; Bao, 2020; Crawford et al., 2020; Toquero, 2020). These articles often have commonalities in their suggestions and we believe that those can be applied to the specific context of student-created videos in business education as well. For example, Toquero (2020) proposes that higher education institutions have a need and opportunity to improve the quality of training provided to instructors for online teaching. In examining adoption of student-created videos at the individual-level (instructors), it may be fruitful to discern the availability of university-sanctioned training material as a precursor to utilization. While this in itself may be relatively simplistic, a further elaboration would be to examine the likelihood of instructors engaging in successful training transfer.

Training transfer refers to the "use of trained knowledge and skill back on the job" and consists of three broad factors – "learning characteristics, intervention design and delivery, and work environment influences" (Burke & Hutchins, 2007, p. 264-265). Specifically, while many universities, articles, and even governments are providing online training and best practices to instructors (Ali, 2020; Mahmood, 2020; McGowan, 2018; Zhu & Liu, 2020), some instructors still report that a lack of computer skills limit their effectiveness (Nambiar, 2020). That is, simply having access to available training and technology is insufficient if instructors do not have the appropriate confidence in their ability to implement the training (e.g., Huang & Liaw,

2005; Yuen & Ma, 2002). To that end, future research should examine how learner characteristics, such as cognitive ability, self-efficacy, motivation, personality, perceived utility, and locus of control (Burke & Hutchins, 2007) affect an instructor's willingness to transfer the training material offered by these various sources into actionable student-created video projects. A mixed-methods format may prove most fruitful in this investigation as while many variables are able to be analyzed via survey instruments (e.g. locus of control, personality), others may be best analyzed through qualitative interviews or short-form questionnaires (e.g., perceived utility).

Next, in the transition to online delivery spurred by Covid-19 (Marinoni, Van't Land, & Jensen, 2020), instructors using student-created video assignments may be replacing a traditional group presentation. Individuals tend to manage impressions differently in online environments (DeAndrea & Walther, 2011) and may alter the content they present to mimic others (Stern, 2015). Especially in the context of asynchronous student-created videos as described in this manuscript, students are unable to ascertain reactions from their peers or professor in real-time as compared to in-person presentations. Since the content is asynchronous, the ability for the student to ascertain whether their ideas are being communicated effectively or address confusion is inherently limited, as is the case for any online presentation (Murali et al., 2021). Research that identifies solutions to these issues may be worthwhile and one avenue we propose may be increased research into peer tutoring where students conduct inquiry in self-directed groups (Kemery, 2000). Studies seem to suggest that students are capable of working together online and do so relatively frequently, but that tutoring and feedback is relatively limited in online environments (Robinson & Hullinger, 2008). Peer tutoring has been shown to increase student learning for both the tutor and tutee (Annis, 1983). However, in order for such tutoring to be effective, appropriate support and opportunities are necessary (Topping, Dehkinet, Blanch, Corcelles, & Duran, 2012). Expecting significant success from participants without specification and training in skills related to peer tutoring is unlikely (McLuckie & Topping, 2004). Future research should investigate how to best prepare peers for appropriate tutoring in this context.

Similarly, a pitfall of asynchronous student-created videos may be a limit on the extent of peer to peer student interaction. Previous investigations suggest breaking students into smaller groups, rather than interacting with the entire class (Arbaugh & Rau, 2004) to mitigate this issue and increase perceptions of perceived learning. Examining the validity of this conclusion for student-created videos could be reasonably completed through altering the submission system and viewing audience across multiple sections of a given class.

It would be useful to investigate how student-created videos in group form compare and contrast from traditional group presentations. A better understanding of videos created by student groups would include investigations of team dynamics and structure, leadership, and the impact of technology. Team dynamics, such as cohesiveness and cooperation, as well as team structure, such as in-person or virtual meetings and synchronous or asynchronous communications, could impact the learning experience for students creating video assignments in teams. We also expect leadership dynamics to be impacted for student teams creating videos. Specifically, students may present themselves differently on video than during in-person presentations. Researchers might hone in on the personality traits, technology savviness, and other dispositional factors that could affect leader emergence for student-created video teams.

We propose that future research should more carefully consider the learning outcomes associated with student-created videos. Research might examine whether student-created videos result in longer-term knowledge retention of the assigned content or whether learner knowledge gains occur more quickly. Also of importance would be to consider whether the clarity of ideas, presentation skills, and demonstrated learning in student-created videos meets or exceeds the quality of other types of deliverables or assessments covering the same content. Another consideration that deserves empirical evaluation is whether student-created videos are more appropriate for use as formative assessments, which occur in-line during academic progress, or as cumulative assessments, such as those often given at mid-term or as finals. To better understand student-created videos, instructor and student perceptions should be gauged, especially satisfaction with this type of deliverable, as compared with papers, group presentations, exams, or other assessments.

While we have posited that student-created videos uphold the principles of universal design for learning, it would be useful to better understand the mechanisms by which varied learning needs and abilities are served. Future research could identify populations of students who are less likely to be fluent with video creation technology or more likely to have discomfort with student-created video assignments. Research might also examine the dispositional, situational, or even demographic factors that predict which learners prefer student-created videos. In doing so, pedagogy would be informed by the creation of data-driven strategies to accommodate all students' learning without compromising the rigor or impact of the student-created video learning objectives.

Another line of research would be to examine how learner creativity activates during the creation of videos. Creativity is widely considered an important employability skill (World Economic Forum, 2018), and there is more to learn about how student-created videos extend and reinforce learner creativity. It seems likely that some combination of extrinsic motivating factors, such as extra credit or specified rubric criteria, and intrinsic factors, such as social recognition from peers, would predict learner creativity. Further research could determine if and how forcing creativity in business course assignments translates to creativity among the workforce by examining the longer-term effects of student-created videos.

CONCLUSION

It is clear that the pedagogical path forward will include deeper and more seamless integration of technology into business education. We posit that student-created videos are an, as of yet, underutilized tool that can put students in control of their learning and meet the constructivist perspective on learning. Students of all abilities and levels of technical skill can expand their technical expertise while demonstrating content mastery by creating videos. Following the best practices set forth can boost student engagement and creativity in business education. While we know from experience that student-created videos are impactful, there are myriad related research questions worthy of pursuit.

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