

Swivl and GoPro: The use of Video Recorders in the Dale Bumpers College of Agricultural,
Food and Life Sciences to Enhance Student Learning

Olivia Caillouet
Graduate Assistant
University of Arkansas
occaillo@uark.edu

Kathleen Jogan
Instructor in Animal Science
University of Arkansas
kjogan@uark.edu

Leslie D. Edgar
Professor and Assistant Dean of Student Programs
Dale Bumpers College of Agricultural, Food and Life Sciences
University of Arkansas
AFLS E221 Fayetteville, AR 72701
(479)575-6770
ledgar@uark.edu

Catherine 'Katie' Dobbins
Graduate Assistant
University of Arkansas

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Introduction

Both technology and online communications are dominant forces in students' lives (Greenwood, 2007). As information technologies have evolved, they have added new environments for teaching and learning while also gaining in popularity (Zhang, Zhou, Briggs, & Nunamaker, 2006). Educational materials are no longer limited to static text due to the use of multimedia materials that harness learner attention and interest (Chen & Sun, 2012). Cornish and Jenkins (2012) stated that teachers who engage in regular critical reflection shape their own development and this self-assessment has led to improved teacher quality. The Center for Teaching Innovation (2017) at Cornell University stated benefits to video usage that included a) stimulate student interest, b) capture geographically distant places, c) connect complex topics to real-world examples, d) accommodate a variety of learning styles, and e) engage students with content outside of the classroom. Furthermore, learners must be engaged in the process of learning by understanding the relevance of information (Edgar, 2012). Video recording usage for students and teachers aims to engage them through the use of technology and also provide relevant information. The Dale Bumpers College of Agricultural, Food and Life Sciences (Bumpers College) seeks to prepare graduates who are intellectually enriched as well as technically competent. Bumpers College has worked for five years to increase international education participation to keep up with the University of Arkansas' goal of 25% international participation by 2020. Yet, the Bumpers College has maintained about 5% international experience participation rate. The utilization of video could aid faculty in agricultural course development and educate students about international opportunities at the Bumpers College.

Methodology

Dr. Kathleen Jogan, an animal science (ANSC) instructor in Bumpers College, implemented the use of Swivl® and GoPro® technology with students in Kentucky (KY), New Zealand (NZ), and Australia (AUS). Dr. Jogan focused on ANSC studies during these faculty-led trips and used Swivl technology in KY and GoPro technology while in NZ and AUS. Upper classman visited KY as an optional learning component for a Thoroughbred Horse Industry course (ANSC 4173). NZ and AUS were visited during a January intersession study abroad course with a focus on indigenous and livestock animal interactions.

Video and voice recordings were made using Swivl. While at the Keeneland racetrack in KY and a horse breeding farm, students introduced themselves and spoke about where they were and what they were doing. A total of six students were recorded for about three minutes each. The purpose of these recordings were 1) to allow students an opportunity to reflect on what was learned, 2) to give future students a chance to hear what their peers learned, and 3) to learn more about Swivl technology. Video recordings in NZ and AUS used two GoPros during a 2017 program. Footage included student involvement (15 students on the program), study abroad excursions, travel, and the countries landscapes. The objectives of these video recordings were 1) to use for study abroad recruitment and 2) to learn more about GoPro technology.

Results and Implications

Video recordings were used by Dr. Jogan for program recruitment and electronic student portfolios if students were interested. Dr. Jogan visited three Bumpers College courses where she

presented the video recordings from the NZ and AUS study abroad program for a total of 3.5 minutes of footage prior to a question and answer session about the program. Furthermore, the use of Swivl and GoPro technology in KY, NZ, and AUS provided the instructor and students with the opportunity to learn skills that align with the Bumpers College mission to teach students to be technically competent.

Future Plans

The use of Swivl and GoPro technologies have the opportunity to expand the understanding of study abroad opportunities, improve agricultural classes, and allow teachers and students to document these experiences in digital formats that can be easily added to electronic platforms. GoPro and Swivl technology has the potential to be critical tools used in engaging students in study abroad opportunities at colleges. Videos could also be used in multimedia presentations alongside flyers, PowerPoint presentations, and study abroad information sessions to utilize what Greenwood (2007) stated to be a dominate force in students' lives. Swivl recordings were used in KY to capture student perceptions of their hands-on learning experience. However, there are more ways to utilize this tool. Portable video recording devices like Swivl and GoPro could be used in diverse settings (barn, field, etc.) to make course lectures, discussions, and tours available for students with excused absences, allowing everyone an equal opportunity to educational content. Additionally, the use of video capturing devices has become more affordable and accessible, however, more needs to be learned about the most effective ways to use these tools to teach agricultural students.

Costs and Resources Needed

The materials and cost of Swivl and GoPro technology depends on how educators plan to use the devices. However, for the purpose of course recordings and study abroad documentation the following are recommended for Swivl and GoPro technology. The necessary software depends on the use of the devices, but free services are available.

The introductory cost of Swivl technology includes the robot, marker lanyard, floor stand, and capturing device (Swivl, 2017). The Swivl C1 robot includes: robotic motion and tracking, a carrying case, primary marker used for tracking an individual, a USB Marker charger, and iOS/Android Cables. The total cost of the C1 Robot package is \$599. Additional markers for hands-free tracking are available for \$179 each or the C3 (3 markers total) or C5 (5 markers total) upgrades are recommended for \$799 and \$999 respectively. The neck lanyard allows for ease of marker device usage and is \$15 per lanyard. The floor stand helps the user find unobstructed space in your room for smooth operation, comes with built in cable management clips, and is .91-1.6 meters (m) for \$99. Compatible capturing devices must be IOS 9+ devices such as: iPhone 7, 7 Plus, 6s Plus, 6 Plus, 6s, 6i, and iPad Pro, Air 2, Air, mini 4, mini 3, and mini 2. The total cost for the Swivl items listed (C1 model, neck lanyard, floor stand, and no capturing device) is \$713.

Items and cost of the introductory GoPro technology includes the HERO 5 or 6 Black Edition, rechargeable battery, SanDisk memory card, standard GoPro case, and a 3-way-pole (GoPro, 2017). HERO 5 and 6 Black Editions are \$399 and \$499 respectively. The rechargeable battery is \$19 and useful for extending the usage time of the recorder. The SanDisk memory card (32GB) is \$29.99, while the standard waterproof GoPro case is \$49.99. Last, the 3-way-pole can be used as mono-pod or self-supporting camera mount for hands-free recording at \$69.99 each. The total cost for all GoPro items listed (using the HERO 5 model) is \$567.97.

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