

## Snapshots of a Wild Goosechase: Using Virtual Scavenger Hunts for Enhanced Classroom Engagement

### Introduction

The use of information communication technologies (ICTs) is becoming more common in educational settings in attempts to increase engagement, effectiveness, and enjoyment in learning (Arnold et al., 2013; Murphrey et al., 2013; Ratheeswari, 2018; Susanna, 2022). The classroom can be an excellent environment to test creative and engaging learning methods. With a growing need to innovatively communicate information and educate students, agricultural communication courses have numerous resources to draw upon to enhance their educational experiences (Beattie et al., 2020; Krebs et al., 2020; Loizzo et al., 2019; Murphrey et al., 2013). Drawing on such resources, we employed the Goosechase virtual scavenger hunt platform (Goosechase Adventures Inc., Toronto, Canada) in a digital photography lesson with undergraduate agricultural communication students. This ICT provided the opportunity to enhance learning through a competitive and collaborative experience that also lent itself to the visual sharing requirements associated with digital photography. This document provides an overview of Goosechase, describes how it was used in the digital photography section of an agricultural communication course, and provides suggestions on how Goosechase could be used to enhance classroom engagement in courses across colleges of agriculture.

### Procedure

In an undergraduate digital media production course, we designed an immersive learning experience using the Goosechase virtual scavenger hunt platform. Goosechase operates as both a mobile device application and as an online platform. The creator, or “host,” uses the online method to design the “experience” for the students. In each experience, there are “missions,” which operate as tasks to complete the experience. The host designs the mission content, order, and submission type and value (Fig. 1).

**Figure 1**

An example of a Goosechase mission and the options provided to customize missions.

The screenshot displays a mission configuration interface for a mobile application. At the top left, there is a camera icon with a dropdown arrow. The main configuration area is divided into several sections:

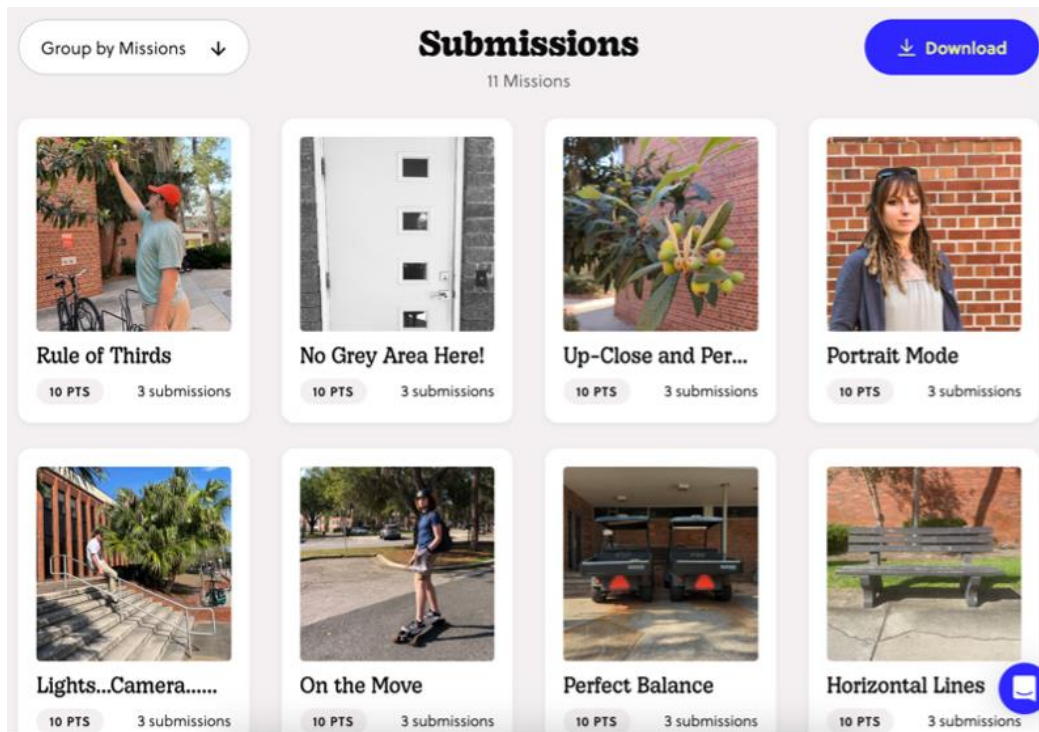
- MISSION NAME:** A text input field containing "Rule of Thirds" with a character count of "14 / 100".
- POINTS:** A rounded button containing "10 Points".
- MISSION DESCRIPTION:** A larger text input field containing "Member 1: Take a photo that follows the Rule of Thirds guidelines!" with a character count of "66 / 2000".
- Actions:** Three buttons: "Add photo", "Add link", and "Advanced settings" (with an upward arrow).
- Visibility and Availability:** Two dropdown menus: "Shown in Feed" (with an eye icon) and "Available" (with a green dot icon).
- ACCEPTED SUBMISSIONS:** A section with the instruction "Select the evidence participants can submit." and a dropdown menu set to "Photos Only" (with a camera icon).
- SUBMISSION SOURCES:** A section with the question "Can participants upload from their photo library?" and a dropdown menu set to "Live Capture & Library" (with a camera icon and a checkmark).
- ADD AUTOMATION:** A section with the instruction "Schedule the change of a Mission's status for all participants." and a button labeled "Add Automation" (with a dropdown arrow).

This activity followed a lecture on photography principles in an agricultural communication course and was designed to enhance student skills through practice and apply learned principles (e.g., composition, framing, leading lines) in a fun, engaging approach. We applied this ICT to assess its potential as a tool for enhancing *engagement*, *creativity*, *learning*, and *enjoyment* in the classroom and to better understand students' perceptions of the activity compared to a traditional lecture period. Students ( $N = 16$ ) were separated into groups.

Students used the mobile application to complete a set of 11 missions designed to reiterate photography terms discussed in the lecture and give them the opportunity to practice the application of these terms and other photography skills, as seen in Figure 2.

**Figure 2**

A screen capture from the Goosechase website of student submissions for a variety of Goosechase missions during the photography activity



Students were tasked with taking two photos per mission, one on their mobile device to submit to Goosechase and one on a digital single-lens reflex (DSLR) camera. This type of digital camera allows for interchangeable lenses and uses a digital sensor. It is commonly used by both amateur and professional photographers. When submitting their photos, students were also given the opportunity to further enhance their creativity and explain their photos by using captions, as demonstrated in Figure 3. The first group to finish was awarded a prize and after all groups were finished, students and instructors analyzed the photos as a class.

Students completed a post-participation survey via Qualtrics to gauge their initial perceptions of the Goosechase experience. First, students were asked to respond to the accuracy of eight statements on a 5-point Likert scale (1 = *completely false*, 5 = *completely true*). The first four items asked about the overall enjoyment of the activity, level of engagement, ability to be creative, and contribution to their learning of class material. We also sought to compare the Goosechase activity with regular class lectures. The next four items asked students to reflect on the *relative* enjoyment, level of engagement, ability to be creative, and contribution to learning, as compared to a normal lecture period. The final item sought to gauge students' perception of the Goosechase activity, where they provided an overall rating from 1 (*horrible*) to 5 (*excellent*). We utilized SPSS software to determine frequencies, means and standard deviations. Any open-

ended feedback was manually documented. It is important to note, that we did not intend to collect data as a means for research, but instead wanted to gauge student interest and feedback because this was the first time we implemented this type of activity in the course.

### Figure 3

*An example of a student submission using a caption for their photo during the photography Goosechase.*



### Preliminary Results

Based on survey feedback, we found students generally enjoyed the experience and felt it helped reinforce photography concepts. In the survey, students agreed the Goosechase activity was fun and engaging, allowed them to be creative, and assisted their learning. Responses also suggested that all students perceived the activities as comparatively more fun, engaging, and beneficial to their learning and creativity than normal lectures. Based on observations in the classroom, students seemed to enjoy discussing the missions after they reconvened. Many sat together in groups rather than returning to their usual seats and engaged in “show and share” of their images, which appeared to inspire broader discussion and class comradery. A common constructive criticism among students was a lack of clarity around the experience, noting that the

assignment was confusing at times. Specifically, students mentioned confusion around whether they should be using their smartphone or the DSLR camera and recommended giving clearer instructions beforehand. Feedback from one student summarized the tone of the responses, saying, “Could have been organized slightly better, but overall [it] was super engaging and helped aid my learning of photography.”

### **Using Goosechase in the Classroom**

Overall, student feedback was generally positive and indicated a desire to participate in these types of activities in the future. Based on this initial feedback, we believe Goosechase virtual scavenger hunts have potential to enhance student engagement, creativity, learning and enjoyment. Given potential complications surrounding the platform, particularly for first-time users, we recommend that instructors familiarize themselves with the app prior to use and provide students with ample instructions, perhaps even a demonstration, before sending them out to complete the experience. We also recommend that instructors create test mission(s) to allow students the chance to practice and ask any questions before beginning.

Based on feedback provided in this round, we will use this ICT again in the same course with the same lecture content and missions, but with a new group of students. Feedback from the prior class will be used to adjust how we present instructions and facilitate the incorporation of the DSLR camera. Instead, we anticipate using another activity in conjunction with this activity to allow students to practice using composition to take photos, operating the DSLR camera, and applying manual settings. In the future, we would also like to assess the effectiveness of the activity to teach specific photography principles.

Because we used the free version of Goosechase, there were limitations to how many students could engage in the platform and the number of missions we could make. The free or “Recreational” plan restricted us to running one live experience at a time. We were also restricted to three teams in team mode, with up to five mobile devices per team. In courses with more than 15 students, the activity could be adapted so that students are placed in pairs or larger collaborative groups, with one designated photographer. This plan is ideal for smaller class sizes (25 to 30) because it still has much of the same functionality as some of the paid plans. For example, we could create unlimited missions, leverage the real-time activity feed, and automatic scoring and leaderboard, and download submissions. For a more comprehensive experience, or for larger classes, we recommend using paid plans. Goosechase also offers a significant discount for verified K-12 educators and higher-level plans.

This document focused on how Goosechase was used in the digital photography section of an agricultural communication course. Students learned about photography composition principles with the Goosechase missions. Other agriculture disciplines could integrate Goosechase in courses to enhance student engagement. For example, a horticultural or wildlife science course could use Goosechase missions for students to identify plants and animals that are being studied

in the course, or a hydrology course could have students use Goosechase to take photos of potential contaminants to water sources. Those in an introductory animal science course could use the platform as a way to identify local livestock breeds. Agricultural economics instructors might use it as a way to introduce the “Global Grocery Bag” and have students document their experience finding imported foods and goods at the store. Of course, any course or student organization could use Goosechase to build teams, having team members engage in a scavenger hunt of landmarks or traditions on university campuses. Goosechase allows instructors to be creative in constructing the scavenger hunt for their needs in their discipline areas. With additional resources or support, the activities could be tailored to complement national or state Agriculture in the Classroom (AIC) curriculum for older middle or high school students.

## References

- Arnold, S. & Taylor, S. (2013). An integrated approach to teach communication skills using educational technologies. *Journal of Applied Communications*, 97(3). <https://doi.org/10.4148/1051-0834.1110>
- Beattie, P., Loizzo, J., Kent, K., Krebs, C. L., Suits, T., & Bunch, J. C. (2020). Leveraging Skype in the classroom for science communication: A Streaming Science- Scientist Online approach. *Journal of Applied Communications*, 104(3). <https://doi.org/10.4148/1051-0834.2328>
- Krebs, C. L., Loizzo, J. L., Crandall, R. M., Bunch, J. C., & Lundy, L. (2021). *Project-based learning impacts on collegiate students' climate change attitudes, nature relatedness, and science communication skills*. Master's thesis, University of Florida. University of Florida Electronic Theses and Dissertations. [https://ufdcimages.uflib.ufl.edu/UF/E0/05/68/84/00001/Krebs\\_C.pdf](https://ufdcimages.uflib.ufl.edu/UF/E0/05/68/84/00001/Krebs_C.pdf)
- Loizzo, J., Harner, M. J., Weitzenkamp, D. J., & Kent, K. (2019). Electronic field trips for science engagement: The Streaming Science model. *Journal of Applied Communications*, 103(4). <https://doi.org/10.4148/1051-0834.2275>
- Murphrey, T. P., Rutherford, T. A., Doerfert, D. L., Edgar, L. D., Edgar, D. W., & Leggette, H. (2013). Chalkboards to virtual environments: Technology's role in expanding the classroom to provide professional development and education for agricultural communicators. *Journal of Applied Communications*, 97(2). <https://doi.org/10.4148/1051-0834.1116>
- Ratheeswari, K. (2018). Information communication technology in education. *Journal of Applied and Advanced Research*, 3(1), 45–47. <https://doi.org/10.21839/jaar.2018.v3iS1.169>
- Susanna, V. (2022). Information and communication technologies in education. *Eurasian Journal of Learning and Academic Teaching*, 6, 89–93. <https://geniusjournals.org/index.php/ejlat/article/view/902>

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