SeekBeak as an Immersive Tool for Online, In-class, and Emergency Learning

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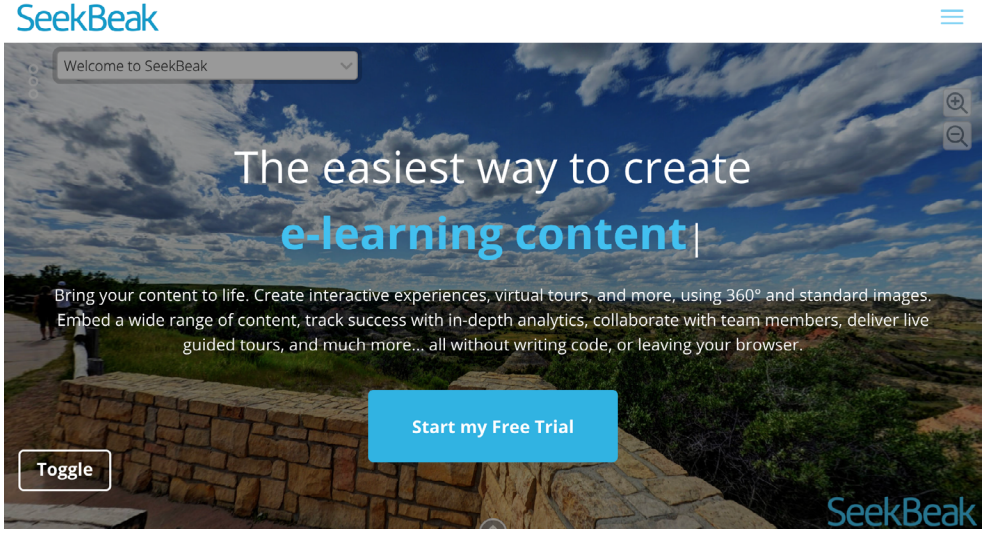
This article highlights the web application SeekBeak as an important digital educational tool for engaging students in online, emergency, and traditional teaching.

Keywords: web application, digital education, engagement, online teaching, digital escape room for education, DERE

Introduction

The COVID pandemic presented educators across the globe with the challenge of finding ways to engage their students in a sudden and forced digital environment. With the lack of knowledge of online learning pedagogy across all educational sectors, many uninitiated teachers were left scrambling to piece together resources in short order, resulting in suboptimal online lesson delivery (Hodges, Moore, Lockee, Trust, & Bond, 2020). A simple solution going forward is to provide knowledge of online resources that can be used in conjunction with videoconferencing, online, and hybrid classes. The SeekBeak.com web application is one such resource which allows users to design a myriad of creative activities that utilize a two-dimensional 360° photo, and objects to explore within the photo.



The technology with examples

Seekbeak.com was designed to be a "virtual experience and interactive tour creator for 360° and flat images" (SeekBeak, 2021, n.p.). The app allows the account holder (teacher) to design an immersive environment where the 360° image envelops the viewer, rotating spherically in all directions around the centrally-fixed point of the viewer's perspective. The cursor can be moved inside the image with a mouse, touch pad, or arrow keys and hover over hotspots (links), which are often located at areas of interest. When the hotspot's icon is clicked, it opens to reveal whatever linked object the teacher has attached. The hotspots can contain links to any number of possible objects, from photos to audio files, external links, phone numbers and texts, to videos, gifs, and even links to other 360° rooms created by the teacher. Examples and directions for how to use the technology are available on the website, and queries through email are promptly answered.

To make the digital environment, the teacher needs to search online or capture a 360° image, upload it as a "snap" (or room), and then add hotspots for the viewer to click on. Currently, high-quality 360° images are widely available for free from sites such as flickr, Shutterstock, and commons.wikimedia. Figure 1 shows an example of a 360° image of a coral reef.

In the following examples, the SeakBeak snap has been designed

to function as a digital escape room for education (DERE), defined as any 2D, immersive, digital escape room environment containing educational content and/or language with the primary objective of teaching and learning, and at least partly designed by the educator. In Figure 2 there is an example of a DERE. Within the DERE there are multiple clickable hotspots represented by animals and deep-sea objects, some of which display only pictures, and others reveal puzzles to solve or locks to open.

Figure 3 shows an example of an educational puzzle that opens when the whale icon hotspot in the room is clicked. The students must solve the puzzle to retrieve a code which unlocks one of the other hotspot items on the reef. Puzzle activities can be created for free through LearningApps.org, where the feedback message can be edited to display a lock code, while locks can be created using the scavenger hunt activity on flippity.net.

To participate in the escape room over Zoom, a group of 3-5 student players elect one person to share their screen showing the Seekbeak room. The students each take turns navigating the room in 5-minute increments, requesting remote control of the screen on their turn. They continue taking turns until the room is solved or the time runs out.

Advantages

Escape Rooms aside, SeekBeak's appeal lies in its ability to let teachers design a realistic immersive educational environment while affording the creative organization of multiple types of media that can be used as lesson components, materials, and activities. Some of SeekBeak's potential educational uses include virtual tours, interactive close readings, scavenger hunts, interactive flipped lessons, educational escape rooms, interactive quizzes, and immersive surveys, polls, and other data collection. An additional bonus of SeekBeak is that it can also be used in face-to-face classrooms across many devices, including desktop computers, laptops, tablets, and smartphones. It is an effective tool to have in cases of "emergency remote learning" (Hodges et. al, 2020), but it is also simply

Figure 1: 360° image of a coral reef, (Source: Dudarev Mikhail, 2021)

Figure 2: A screenshot of the same coral reef with attached hotspots disguised with object cliparts of a shark and a vehicle (source: seekbeak.com, 2021; Charles9127, 2016; Huty9988, 2019; Dudarev Mikhail, 2021)

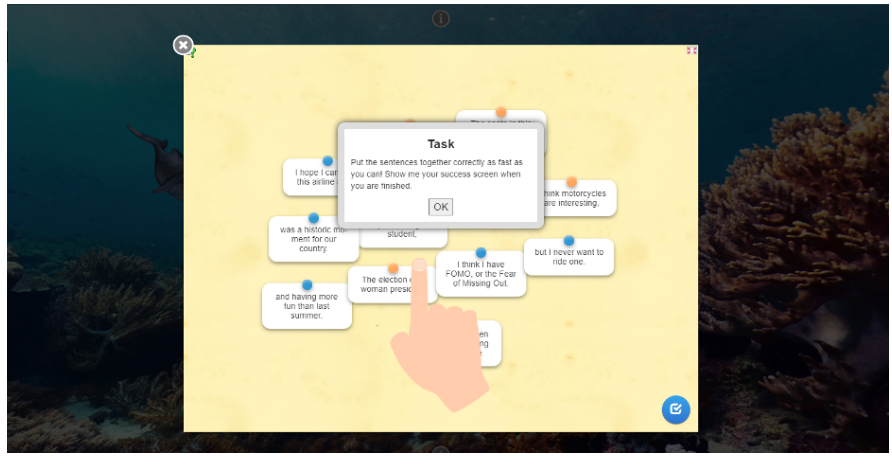


Figure 3: a screenshot of a learningapps.org puzzle with a whale clipart icon hotspot and coral reef in background, in SeekBeak (image source: Elbek, 2021; Charles9127, 2016; Dudarev Mikhail, 2021; seekbeak.com, 2021)

an engaging learning tool to have and use in general. In my ongoing research using this technology, students often reported learning more about their subject from the digital room than from their regular remote learning course. Additionally, Seekbeak snaps/rooms can be designed to suit any language level if time is taken to model the use of the technology for students. Finally, the combination of a realistic environment and inclusion of relevant tasks make for a unique digital experience where students can work with their classmates and learn as they explore the image room.

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