

Section 3

Chapter 12 - Assessment in Videogames and Educational Apps Based Learning in Upper Secondary and Post Secondary Non-Tertiary Education

Case Scenario 1

Title: Formative assessment of learning on the field trips and excursions using mobile devices

Description:

Students learn the most and are engaged during the learning activities that explore real life situations. Schools tend to organise field trips and excursions to show students how the learning subjects are applied in real life environment. However, such trips are experiential in their nature, that's why it is difficult to evaluate the learning that happens during the trip. Most of the assessments of learning are the reflective discussions or essays produced after experience. Because of this aspect it is hard to justify that such activities are beneficial.

However, technological solution can strengthen the learning during field activities and provide formative assessment possibilities during the excursion, making them more meaningful. Some of the known options are augmented reality mobile applications, that provide additional information and augment the experience of a real world. For example, National Museum of Singapore host a drawing collection about flora and fauna. Visitors use an app, combined with the camera function on their phones, to hunt for and capture various plants and animals within the drawings. Users learn things like an animal's habitat and diet, the rarity of the plant or animal found, and general information about the species. Similar augmented reality applications are installed in Smithsonian National Museum of Natural History and cities of England, where various buildings and monuments come to life with the mobile application. Such applications require visitor



engagement, which strengthens the knowledge integration and is related with higher information retention. Most applications have gamification elements that serve as formative assessment tools: collecting objects, acquiring points, badges, achievements etc. Teacher can gather this information from students and observe their progress during the trip as a form of their learning progress.

Most of the mentioned mobile applications and games are produced and sponsored by museums or municipality initiatives, thus are free of charge for students to use during the visit. Also there are many creative art and technologies initiatives that serve as accelerators for developing such application for cities and communities to engage with the environment. Schools are encouraged to offer ideas and participate in the development process suggesting the type of experience that would be beneficial for students and visitors, as well as suggest formative assessment methods to be included within the games.

For the quick start it is beneficial to explore the technologies available in country museums and city municipality to start planning the trip with interactive learning experience and embedded formative assessment during the excursion.