

# Curriculum Design Pattern

Global Learning by Design

## Name of Pattern

**Aurasma Augmented Reality**

## Date

December 2014

## Abstract

Technology and its rapid advancement with regards to visually rich interactive content provides an opportunity to supplement and enhance staff delivery of education and engage students by superimposing video, 3D models, animation and images over reality through through the use of a smartphone or tablet.

The Aurasma app allows you to turn objects, locations and images into new opportunities for engagement by using augmented reality.

## Learning Context

This pattern is applicable to any course that uses paper based learning materials, or demonstrates procedures and processes, and has a need to communicate concepts through the use of video, images, audio, animation, weblinks and 3D.

This can include adding digital content to:

- images
- locations
- objects

Augmented reality can be used by students for learning a procedure or process, or as a way to access targeted supplemental digital content by way of their smartphone or tablet.

## Rationale/Aim

Many concepts and ideas presented in textbooks and paper based learning materials are static, 'text heavy' and largely uninspiring.

Demonstrating engineering, health, science and design concepts can be sometimes be tricky using 2D images and text alone. Students can also miss out on crucial information when a process or procedure is demonstrated to them.

Digital educational resources can be added to existing printed materials or custom created materials.

As an example, a student can use their device to look at an image on the printed page that will trigger targeted video, 3D constructs or further artefacts and knowledge that reside on the web.

Another example is to reduce the amount of technical or procedural training by staff to students. In the case of preparing a sample for viewing under a microscope, or the use of a microscope, the device camera is pointed at an image or piece of equipment, triggering the activation of a video that clearly demonstrates the processes and procedures. This reduces the need for staff to repeat training in a face to face mode.

## Learning Design

The pattern aims to not only provide students with targeted, value added learning materials and on demand instruction but also reduce the need for staff to repeat procedural and process driven concepts to students.

## Conditions

- For staff, augmented reality has to be easy to implement and flexible so that interactive enhancements can be easily incorporated or changed.
- For students, the augmented reality needs to be easy to use and cutting edge in presentation and delivery. Content must not be 'gimmicky' but rather supplement and enhance existing training materials.
- Setting up an account is free while student tracking and analytics can be employed by using a paid account.
- The ability to use image and film editing software is advantageous, as it will allow staff to create their own content.

- Images used to trigger the activation of digital content need to be of sufficient complexity so as to appear unique.

**Note:** This technology is best suited to video and images, the 3D aspect is 'gimmicky' at best.

## Resources/Technology

- Smart phone or tablet that have a built in camera
- Aurasma app installed onto smartphone or tablet
- Registration with Aurasma studio website using a dedicated email account. This email account is set up purely to create an Aurasma Studio account and any correspondence with Aurasma should go through this account.
- Ability to use design software such as Adobe Photoshop, Premier or 3D Max or similar software for the creation of content. This is not crucial, as there are departments within RMIT that can supply these skills.
- <https://studio.aurasma.com/> is used for the creation of the augmented reality experience.
- Students and staff will need the Aurasma app installed on their device in order to view augmented reality.
- IOS systems  
<https://itunes.apple.com/au/app/aurasma/id432526396?mt=8>
- Android systems  
<https://play.google.com/store/apps/details?id=com.aurasma.aurasma&hl=en>
- Demo of Aurasma  
<https://www.youtube.com/watch?v=RZPBF-n0vhc>
- How to create an Aurasma aura  
<https://www.youtube.com/watch?v=ccvx0yzjbZE>
- Instructions for accessing existing Aurasma account  
[https://docs.google.com/document/d/19lf\\_nAw3R9Ploh7XK58PChoa9WpLp2Zf2l-pM5Kjqy4/edit#](https://docs.google.com/document/d/19lf_nAw3R9Ploh7XK58PChoa9WpLp2Zf2l-pM5Kjqy4/edit#)

## Outcomes

- Reduction of the need to constantly demonstrate and repeat processes and procedures.
- Student is engaged by interacting with their environment to call up interactive educational content which is viewed through their device on demand.

## Keywords

AR, Augmented reality, Aurasma