e-ARTinED Background Report

Using New Media Arts
To Teach Curricular Subjects

ARTinED online: A new approach to education using the arts

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e-ARTinED

Introduction

New media arts employ new media technologies including digital art, computer graphics, computer animation, virtual art, Internet art, interactive art, video games, computer robotics, 3D printing, cyborg art and art as biotechnology ("New media arts", 2016).

Learning in new media arts involves digital technologies and cross-disciplinary art forms.

The role of new media arts in education is to enable students to understand, analyse and actively participate in the modern media culture, develop skills to work in a plethora of forms and styles, reflect on consuming, produce and evaluate new media artworks while developing aesthetic understanding.

Learning in new media arts and constructionism

Peppler (2010) stresses that learning in new media arts is closely related to:

- Active engagement in the learning process.
- Students' personal connection to their work, which inspires a general love of learning and builds   upon their prior experiences.
- The creation of projects that are of value to a larger community.

Media art pedagogy can be linked to constructionism.

Constructionism places the students in the role of producers of artifacts for a larger community beyond their traditional passive role of "consumers" of information.

Students as consumers and producers of new media artworks

Students are producers using a variety of new media artworks and are consumers who find and evaluate appropriate devices and software tools within the media culture.

In both consumption and production there are:

- *Key concepts:* media languages, digital technologies, media producers, audiences targeted, and the constructed representations of the world.

- *Technical and symbolic elements*: composition, space, time, movement, sound visual appearance etc.

- *Story principles*: film, documentary, advertisements, digital games and refer to dramatic structure (plot), intent, characters, settings, viewpoints.

The new media creation process

Creation stages: preparatory actions (pre-production), subsequent development (production) of the main materials of the artwork, and final assembly (post-production).

In some cases two more stages are distinguished: (a) development of the general concept or idea of the media artwork (i.e. scriptwriting in film making). (b) distribution or sharing of the media artwork (post-production). For example, a digital video-story distributed via youtube.

Overall, pre-production stage includes some form of storyboarding and or sketching, design, planning and research to identify the important elements to be used.

Production employs capturing devices and techniques as well as coding the interactive behavior of the media artwork. Finally, the post-production may include editing and mixing as well as testing in case of interactive media artworks.

Knowledge and skills promoted by new media arts

Learning in new media develops conceptual knowledge (how media works are constructed) and skills on how new media can be used to communicate and tell stories.

As a consumer, the student analyses media, participates in the new media culture and learn to respect ethical protocol (copyright issues, creative commons, etc.).

Students have the opportunity to learn:

▪ remixing images, sounds, videos and text; video editing, audio and text processing.

▪ using equipment, props, costumes and sets respecting the media artwork and the intention of the creators.

▪ collaborative work in creative teams; analytical and interaction/communication skills; acquisition of techniques and methods from communities of practice

▪ "digital citizenship": knowledge of intellectual property rights and protocols in the media artwork creation.

Learning in new media arts should not be considered as an alternative to learning in traditional arts.

Peppler (2010): "Media arts introduce new tools and reshape some of the fundamentals of artistic practices. Computer programming, in this context, is another tool that has entered the palette for artists."

New Literacies

Learning in media arts is fundamentally connected to the development of new literacies.

The terms "literacy" and "text" were traditionally linked to reading and writing but with the advent of digital technologies the term "text" means many things: social arrangements, tagging, type of dress, singing, drawing, and dancing.

Students' media art projects can be seen as complex forms of multi-modal communication combining visual, audio, animated movement, written, and kinesthetic/interactive modes of communication.

By engaging in media arts students acquire technology fluency and artistic expression, and become more fluent at communicating ideas.

The domain of traditional literacy is extended to include diverse forms of media. The aim is to understand the intended and unintended messages and meanings in media (critical dimension) and be able to craft one's own media (fluency dimension).

Many researchers have documented that game development offers a powerful learning environment promoting effective learning, development of creative skills and learner autonomy (Kafai 2006; Kafai 2001).

Gaming literacy can be considered as an inclusive framework for addressing all major needs of learning in new media arts.

Practical examples of activities on using new media arts to teach curricular subjects are available in the "e-ARTinED Educational Programme for teachers, trainers and artists"

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