

# Computer Literacy in HE Games Art

## Investigating students' perception of digital technologies



### Introduction

As the global games industry expands, there are growing demands for graduates who have industry-specific software skills, along with the ability to be innovative, adaptable, self-directed, and demonstrate problem-solving skills within an artistic workflow.

Depending on factors such as socio-economic background, some students may find the expected level of study and practical course work demanding due to basic computer requirements, i.e. installing software, saving files, using cloud storage, etc. This research proposal aims to discover the impact that computer literacy has on expected student outcomes with hopes of putting in place systems to improve the technical proficiency of both new and current students.

### Research Questions

How are we currently fostering skills in digital technologies in higher education outside of subject-specific software?

How well do art students with varying degrees of computer skill manage course workloads that are technologically driven?

What is the likelihood of art students struggling with computer-related tasks compared to other non-art courses, and what might be the cause?

### Background

Students enrolling in art-specific higher education courses are typically not measured on having prior knowledge of basic digital technologies.

There is a harmful assumption that younger students born into a more technological infused world are more likely to be accustomed to computers when compared to older generations.

Students with lesser IT abilities undertaking an undergrad in technology-driven art courses are most likely to encounter barriers impacting degree completion and career prospects.

### Research Aims

To measure the discrepancy between self-perception of students' technological abilities and actual ability levels.

Compare and contrast computer related skill level of students across 2-3 years to gauge whether they have improved.

Identify factors that may impede students' abilities to use applied knowledge across different digital platforms and devices.

### Research Methodology

The approach to this research will be a survey to collect specific data from respondents related to prior and subsequent computer proficiency and then statistically analyze it to draw meaningful conclusions.

The survey will utilize a Likert-type scale that involves a series of statements helpful in measuring attitudes, knowledge, perceptions, values, and behavioural changes.

The Likert-scale are easy to understand and quantify for the researcher. It is also beneficial to participants as it typically gives concise questions that allow for varying degrees of response instead of a simple yes or no. The downside to this is that Likert-scale responses can be influenced by internal biases and stress of the participant, making outcomes somewhat irregular.

The survey will be anonymous and ignore demographic data collection related to age, gender, and race. Due to how distinct the current student body is, certain students are prevented from becoming easily identifiable. For instance, only a small percentage of students enrolled on the Games Art course belong to ethnic minority groups, making them discernable from their peers.



### Expected Impact

The data collected from the survey should hopefully encapsulate the students' current skill level with computers.

The data may establish factors specific to students' upbringing that explain a lack of knowledge and understanding of basic computer processes.

The results build off existing research and can be used as a device for other courses to challenge assumptions of students' prior computing knowledge, effectively changing how we teach technologies.

### Next Steps...

Create a list of indicator statements - Specific questions that help conceptualize what this study means to measure

Decide on the response scale to use - Arguably; the most commonly used is the Agree - Disagree scale.

Develop survey iterations as students progress from the start of the university to graduation.

### Literature

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