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#### Using Art to Study Science: Assessment of Creative Assignments in Student Success

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Using art to study science: assessment of creative assignments in student success

REBECCA KRUSE DR. ANYA GOLDINA CAROL COSTA OUIMET

## How it all started...

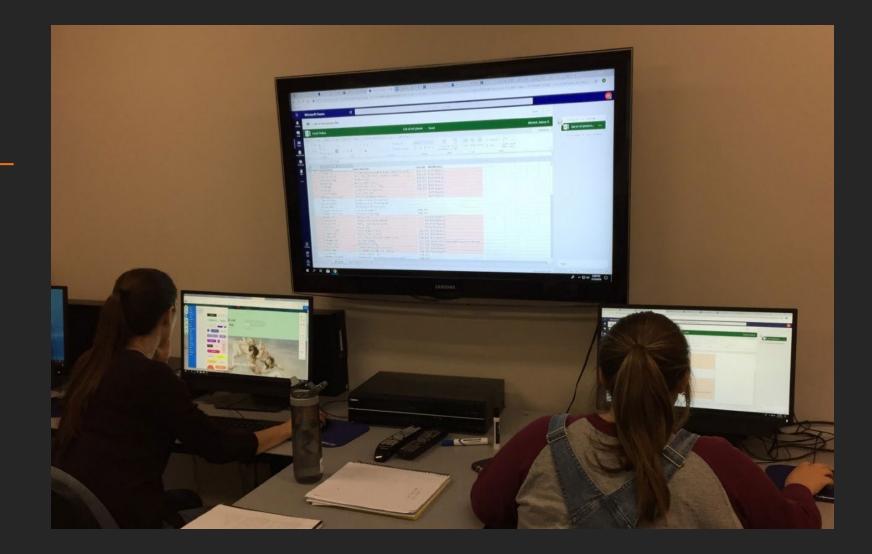


## Extra Credit Project (ECP):

- Students may complete 1 project from each category
  - Category 1 reflective/analytical
    - Review of current A&P research
    - Myth buster
    - Personal reflection
  - Category 2 creative
    - Children's story book / poems
    - Artistic creation
    - Musical piece (song, dance, skit)

## SCARP 1 2019

- Catalog and digitize artwork
- Create a platform to display artwork
- Show physical items to the public



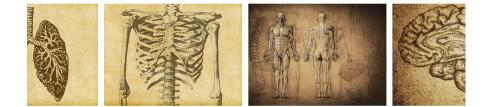
## SCARP 2 2020

- Create and send survey
- Collect and analyze results
- Edit and update website
- Catalog more art





#### Choose a system to explore the collection!

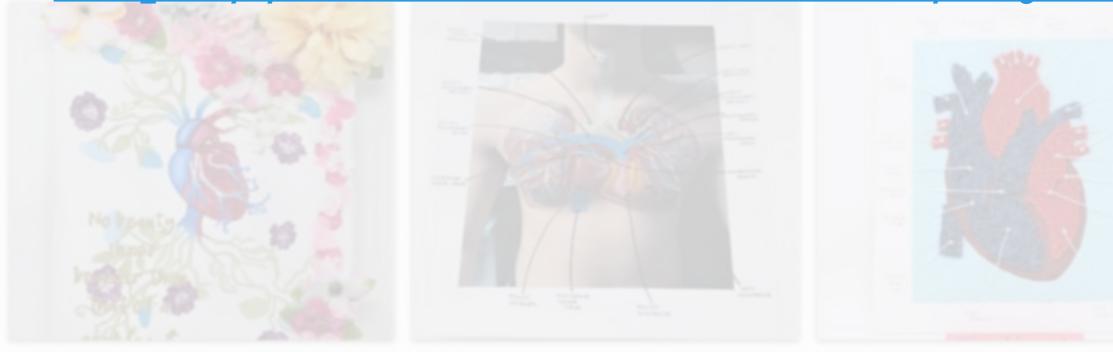


## Website Design

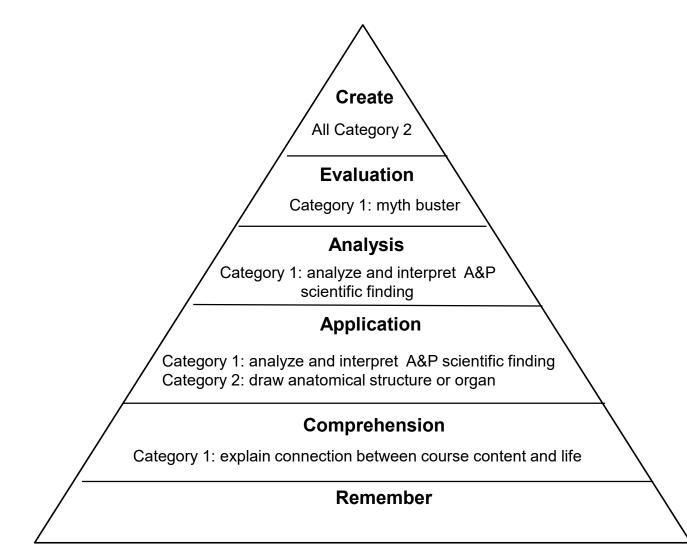
- Using WIX for site development
- Available resources
- Future developments

## HOME is where the HEART IS

## https://kruser68.wixsite.com/mysite



## According to Dr. Goldina



# Do students feel the same way?

## (i.e. Is Dr. Goldina off?)

## Surveying Students



Alumni Association

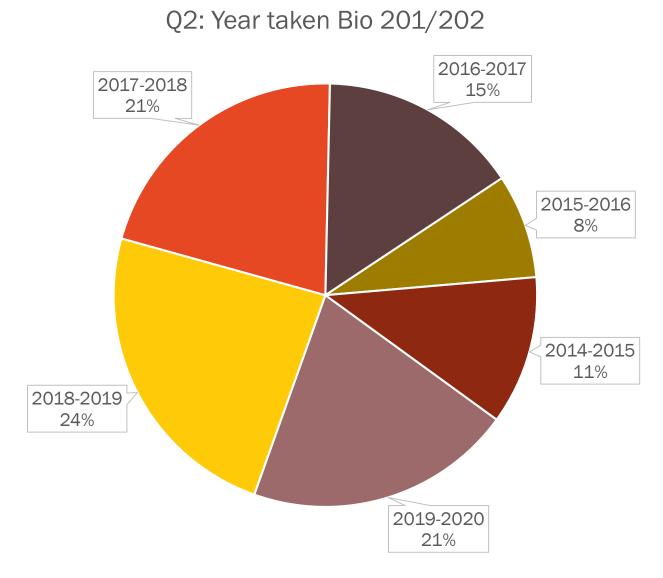
## 2 parts and 1,000,000 details

#### CREATING THE SURVEY

- Main ideas to convey
- Wording
- Formatting
- Legal disclosure
- IRB approval

#### GATHERING RESPONSES

- Spreadsheet format
- New answers
- Sending and resending
- Graphing



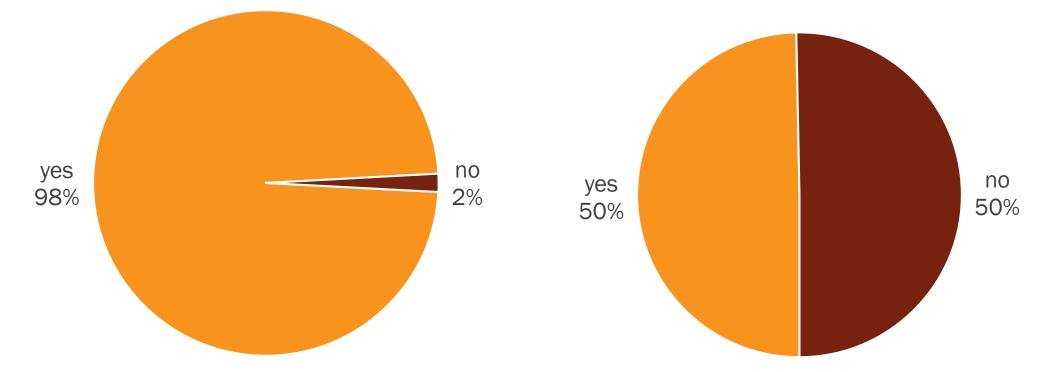
## Responders by year

## Findings

## 1.Most students complete the extra credit project

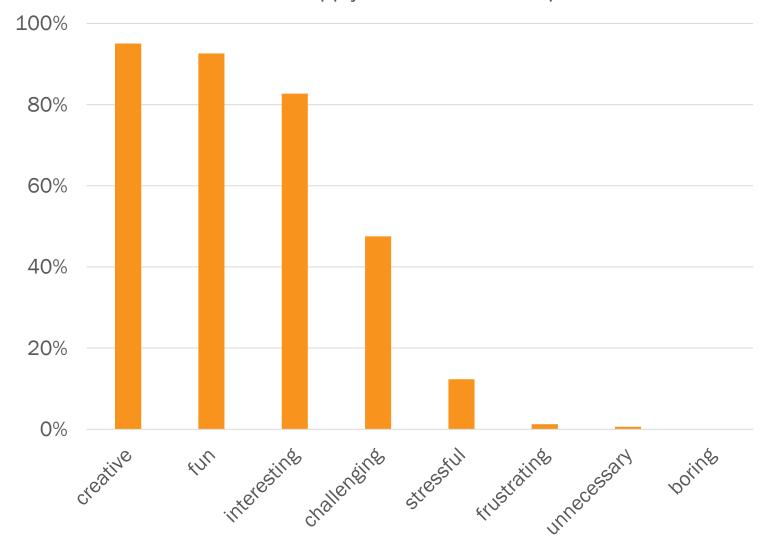
Did you complete the extra credit project?

Did you have any background in art/dance/music/craft that helped you complete your extra credit project?



#### 1. Student complete ECP

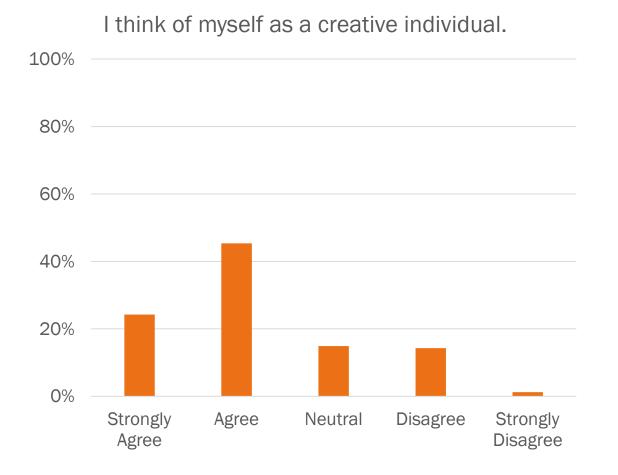
# 2. Extra credit project increased student enjoyment of the course



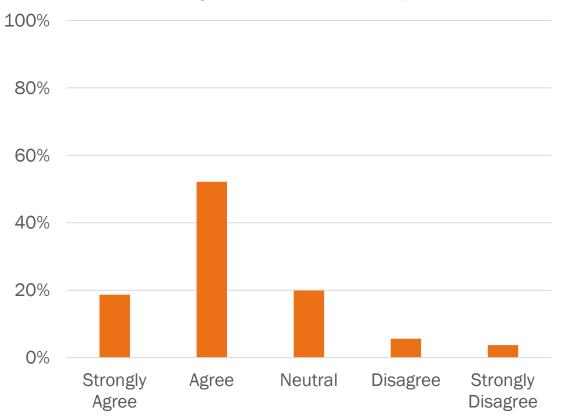
Please select all that apply: The extra credit options were...

#### 2. ECP increased student enjoyment

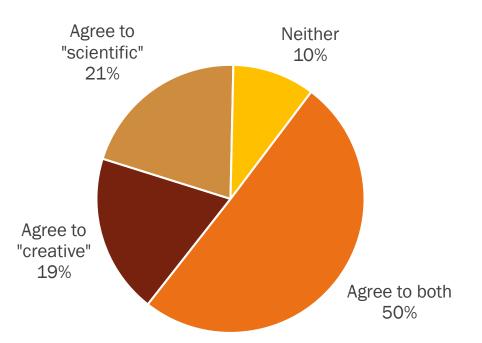
# 3. The project inspires students to connect art and science.



#### I think of myself as a "science" person.

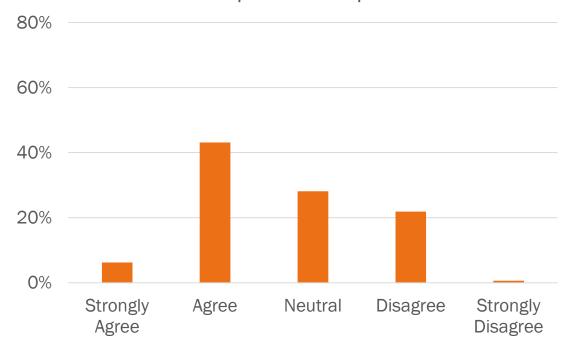


#### 3. ECP inspires students to connect art and science



### What percentage of students think they are artistic, creative, both, or neither?

### Applying my creative abilities to a science concept was unexpected.



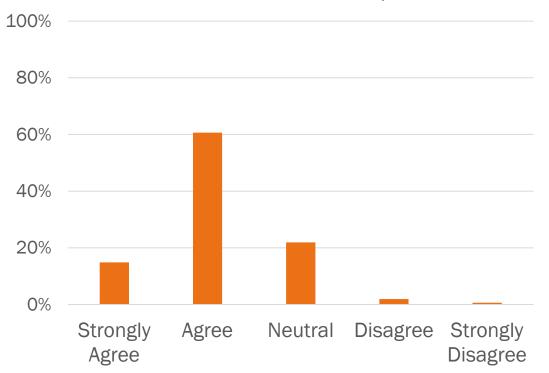
#### 3. ECP inspires students to connect art and science



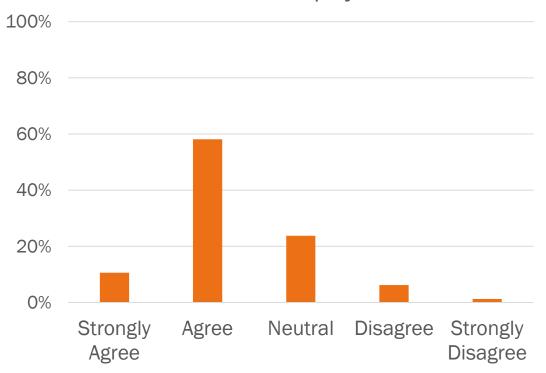
Responder 20: "When you have to take a hard-to-understand concept and apply it to something seemingly unrelated, like art, it helps you form connections and understand that concept better."

## 4. The project influenced student learning

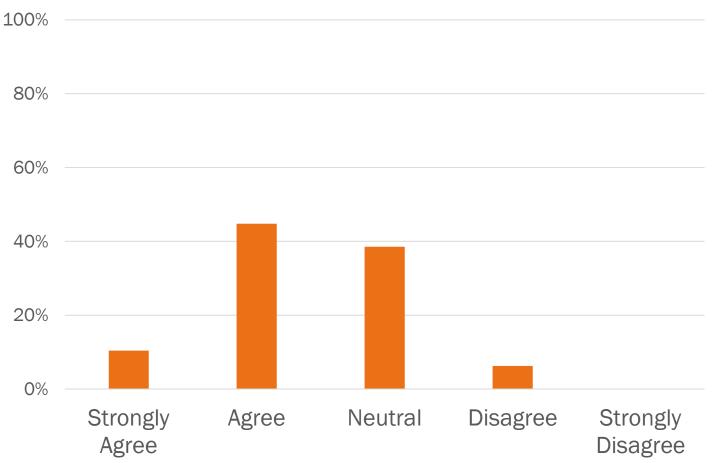
I feel that completing this project made me understand the scientific concepts better.



I recognized my potential to understand sophisticated scientific concepts through the extra credit project.



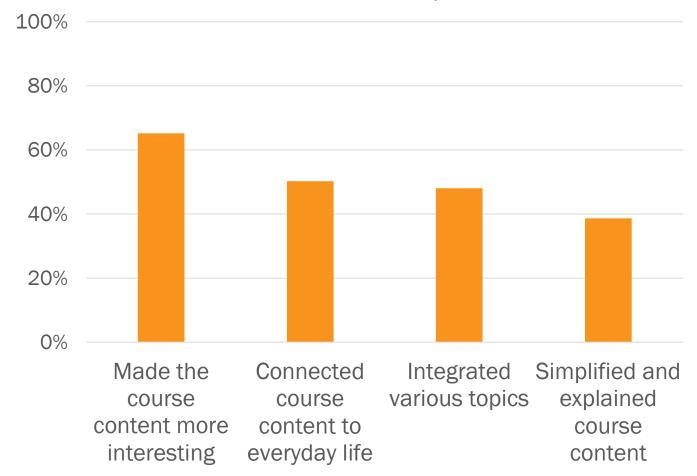
## Completing the extra credit project made me think about the material differently.



Responder 67: "The creativity behind the extra credit assignment allows a person to develop their own understanding of the topic because they have to view it through a different mindset".

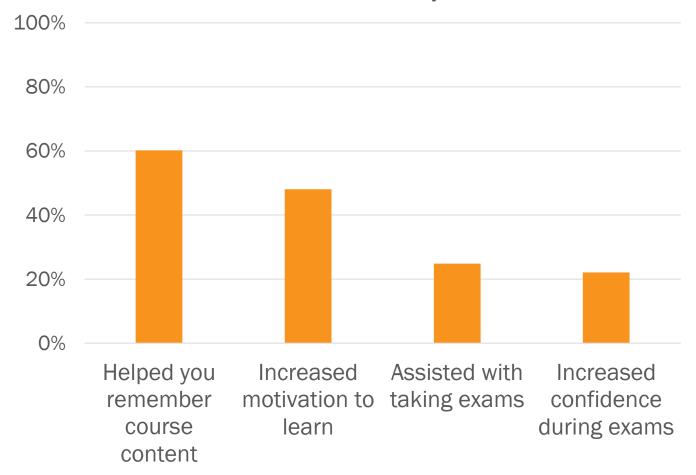
Responder 116: "I was able to understand the concepts thoroughly while also using the fun, enjoyable, and creative aspects to view the information with a different and more educated perspective."

## With regards to course content, did you feel that the extra credit activity:



### With regards to course content, did you feel that the extra credit activity:

Responder 16: "I can look back on and know that it is engrained in my memory because I took extra time and care to complete it".



# STEM to STEAM

Science | Technology | Engineering | [+ART] | Mathematics

## The "A" in STEAM

 Responder 35: "Transferring what we learned in a science aspect to a more artistic aspect helped me understand how beautiful the human body can be".

 Responder 142: "Creating something with my own hands activated other parts of my mind and interwove them together. It really helped me connect more to the course,"



## Summary

- 1. Most students complete the extra credit project
- 2. Extra credit project increased student enjoyment of the course
- 3. The project inspires students to connect art and science.
- 4. The project influenced student learning
- 5. (Bonus) Dr. Goldina is not completely off her rocker



## **Future Studies**

- Application in students' careers
- Analysis of open-ended questions
- Publishing and presenting current findings
- Continuing website improvements and accessibility
- Developing marketing strategy



## Thank you!