Students as Creators: Project-based Learning with Media Assignments

Yale-NUS College, Centre for Teaching and Learning

Nancy Gleason, PhD
Senior Lecturer, Global Affairs
Associate Director, Centre for Teaching and Learning
Yale-NUS College
Session Goals

- Explore project-based learning strategies using media to achieve desired student learning outcomes
- Showcase examples of successful student media projects implemented across various disciplines
- Provide best practices, instructional scaffolding, and formative assessment tools that can be used to improve student performance
- Connect faculty with resources/support available at Yale-NUS for media-based project assignments
Teaching Challenges

What are some of the learning challenges you have in your classrooms?

Examples: Participation or Information retention
Video Projects here at Yale-NUS already

- How many of you are using media in your assignments already?

- What has the outcome been thus far?
Learning Outcomes

Bloom's Taxonomy of Educational Objectives (published in 1956 and revised in 2001) gives you a way to express learning outcomes in a way that reflects cognitive skills.
Bloom’s Taxonomy

- **Remember**: Recall facts and basic concepts
  - define, duplicate, list, memorize, repeat, state

- **Understand**: Explain ideas or concepts
  - classify, describe, discuss, explain, identify, locate, recognize, report, select, translate

- **Apply**: Use information in new situations
  - execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch

- **Analyze**: Draw connections among ideas
  - differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test

- **Evaluate**: Justify a stand or decision
  - appraise, argue, defend, judge, select, support, value, critique, weigh

- **Create**: Produce new or original work
  - design, assemble, construct, conjecture, develop, formulate, author, investigate
Project-based Learning: A method for developing higher order thinking and engaging students in the learning process
Project-Based Learning

PBL, involves using authentic, real-world projects, based on a highly motivating and engaging questions, task, or problem, to teach students academic content in the context of working cooperatively to solve the problem (Barell, 2007, 2010; Baron 2011; Grant, 2010).

The use of multimedia is a dynamic new form of communication. The merging of project-based learning and multimedia represents a powerful teaching strategy.

Results:

- More motivated (Drake & Long, 2009; Maloney 2010)
- Higher levels of engagement with academic content (Grant, 2010, Larner and Mergendoller, 2010: Marzano, 2007).
Project-Based Learning

“Project-based learning (PBL) is an instructional model based on having students confront real-world issues and problems that they find meaningful, determine how to address them, and then act in a collaborative fashion to create problem solutions.”

(Barell, 2010; Baron, 2011; Belland, French, & Ertmer, 2009; Larmer & Mergendoller, 2010).

Source: William N. Bender, *Project-Based Learning: Differentiating Instruction for the 21st Century*
Project Example:
PS138 Conflict & Natural Resources (Tufts)

- We be the Niger Delta
- Changing the Kimberly Process
- Love Canal - science and pollution
Assignment Details

Digital Video Project Assignment: 40%

Students will work in groups of 5 to create a 3-4 minute video about conflict related to either DIAMONDS or PETROLEUM. Each group will present to a specific audience:

- Consumers of resources
- Industry producers of resources
- People in the conflict
- Prevention workers

In total 8 videos produced, 4 on each resource that respectively addresses the above 4 stakeholder groups.
Assignment Details

Student Roles: Each group member is responsible for video content, but there are also separate responsibilities for each group member to take on. For example:

- Production manager – coordinate schedules, book technology needed etc
- Artistic director – compile images, tasteful theme, scholarship quality
- Writer role – craft script, manage inputs from classmates on content
- Technical experts – iMovie guru, editing lead
- Content supervisor – manage content collection and organization of group members and technology

Note that you need a minimum of 25 sources in your bibliography - 5 from each team member
Assignment Details: Learning Objectives

Students will be able to:

- Assemble social science research data to depict how natural resources can be a catalyst for conflict
- Evaluate the perspective of different stakeholders in the conflict
- Evaluate the distinctions between different kinds of resources and the conflicts that can ignite in their presence
- Difference between policy tool options available given a specific context of conflict
- Conduct higher-order research and produce appropriate citations of digital resources
- Develop teamwork skills
- Develop digital literacy skills
Video Assignment Scaffolding

Deadlines
Thursday September 20th – Groups and topics finalized
Thursday September 27th Class Held in DDS, 3rd Floor Tisch Library
Tuesday October 25th – Storyboard and bibliography due (15% grade)
  This initiates the productions stage, where students will create images and sounds, identify images and sounds, record narration or a script of some sort to present your research.
November 6th – 7-9pm DDS blocked out for your use
November 13th 7-9pm block out for your use. ROUGH CUT DUE (15%)
November 27th – Final Video Projects Due (10%)
Thursday November 29th, Video Viewing in Tisch 304 Theatre – 3rd Floor
Tuesday December 4th, Group Discussion and Analysis of the Videos
“Prosumer” projects

Tactical media

Visualizing data

Digital storytelling & ethnographies

Presentations 2.0

More reading:
Made Not Only in Words: Composition in a New Key. Kathleen Blake Yancey. College Composition and Communication; Dec 2004; 56, 2; ProQuest Direct Complete. https://www.msu.edu/~webbsuza/110-SUMMER-12/CompositionInANewKey.pdf
Media assignments with Bloom’s Taxonomy

- **Create**
  - Produce new or original work
  - Design, assemble, construct, develop, formulate, author, investigate

- **Evaluate**
  - Justify a stand or decision
  - Appraise, argue, defend, judge, select, support, value, critique, weigh

- **Analyze**
  - Draw connections among ideas
  - Differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test

- **Apply**
  - Use information in new situations
  - Execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch

- **Understand**
  - Explain ideas or concepts
  - Classify, describe, discuss, explain, identify, locate, recognize, report, select, translate

- **Remember**
  - Recall facts and basic concepts
  - Define, duplicate, list, memorize, repeat, state

**Original Short Videos / Podcasts**

- **Remixing**

- **Critique**

- **Video Analysis**

- **Podcast Interviews**

- **Presenting**

- **Video Annotating**

- **Reflection Podcast**
Podcasts (audio)

**About:** easier to produce (compared with video); team participation; less intimidating medium

- **Simple:** one-time audio (interview, group discussion)
- **Complex:** episodic broadcasting (sequential, developmental)

**Examples:** “The Naked Scientists”; PodAcademy

**Resources:** Podcasts as an Assessment Tool; sample podcast rubric

**Research:**

Video narratives

About: multimodal and multidimensional; technical skill development; significant time investment

- Simple: photo stories; video analysis/explanation
- Complex: tactical media; remixes; animations

Examples: JOVE; Bio7, Physics13, His48, PS138, Multimedia Lab Reports; 50+ Web Ways to Tell a Story; 15 Camera Ideas for Science

Research:


Interactive media

**About:** Participatory; simulates dynamic environment

**Data-based**

- Infographics, visualizations, calculators (resource: Bamboo D.I.R.T.)

**Map-based**

- Literary maps, concept maps, GIS maps

**Others**

- Games, timelines (TimelineJS, TikiToki), http://assignments.ds106.us/, http://docs.emorydomains.org/teaching_a_class/assignments/assignment_ideas
Assignment planning

### 1. Planning for Multimedia Assignments

**Consider the best medium for the assignment, based on the time required and desired learning outcomes.**

**Example Ideas and Time Requirements**

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Medium</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 weeks or less</td>
<td>single audio podcast/audio essay</td>
<td>Students record and upload an original audio essay or interview.</td>
</tr>
<tr>
<td>3-6 weeks</td>
<td>short video</td>
<td>Students create a short video showcasing their project.</td>
</tr>
<tr>
<td>8+ weeks</td>
<td>digital narrative (video)</td>
<td>Students produce a 5-10 minute stand-alone movie that combines stories, music, and other multimedia elements.</td>
</tr>
</tbody>
</table>

**Notes on Video Projects**
- On average, students will need at least 4 hours of production/ editing time for every minute of finished video.

**Best Practices**
- Provide students with grading/assessment criteria upfront.
- Assign mid-project deliverables to allow for formative feedback.
- Ensure students are aware of all support options available to them.
- Especially for video projects, grouping students often improves the overall quality of the finished product.
- Limit the finished duration of video projects to 3:50 minutes.

### 2. Determine which mid-project deliverables/milestones you will require of students.

- Topic Proposal/Treatment Plan
- Annotated Bibliography of Research Sources
- Outline
- Written Script
- Storyboard
- Format/Peer Critique
- Rough Cut
- Final Version

### 3. Identify the necessary student training and support needs.

- Identifying research/souce material
- Storyboarding
- Video/audio editing
- Scriptwriting
- Camcorder operation
- Citing sources
- Public speaking skills (via Arc)

### 4. Determine the final published format that students will ultimately submit for grading.

- Web-video (uploaded to YouTube or Vimeo)
- Webpage
- Re-uploaded to Trunk (non-video)
- Live presentation
- Other

### Planning Timeline

<table>
<thead>
<tr>
<th>Date</th>
<th>R</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>F</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 2018</td>
<td></td>
<td></td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>Feb 2018</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>Mar 2018</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td>31</td>
</tr>
<tr>
<td>Apr 2018</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>May 2018</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>

Use this area to plot milestones and mid-project deliverable deadlines.

---

**Digital Design Studio**

Consultation

In any circumstances, instructors are welcome to schedule an initial consultation with the digital media technician (bryan@nyscf.edu) for guidance on scopeing and implementing multimedia assignments.

Support

- The Digital Design Studio (DDS) offers tiered support for course-based multimedia assignments as follows:
  - **Basic Support**
    - Offers support for students in Arts, Science, or Engineering courses.
    - Troubleshooting assistance by student staff in the lab.
  - **Custom Support**
    - Offers limited number of courses per semester.
    - May include collaborative workshops, video hosting for projects, and ongoing technical support from the digital media technologists.
    - Instructor must submit a proposal in advance to be considered, and unfortunately, not every course can be accommodated.

---

https://app.box.com/s/67558a124df8d359a5a
## Time and scope of assignments

<table>
<thead>
<tr>
<th>Time</th>
<th>Assignments</th>
</tr>
</thead>
</table>
| 3 weeks or less | **single audio podcast/audio essay**  
students record and upload an original audio essay or interview  
**annotated slideshow/Prezi/Powerpoint**  
students gather/create images and sequence them as a visual narrative or analysis |
| 3-8 weeks   | **short video**  
students create brief original video content (demonstrations, skits, discussions) for peer sharing  
**infographic creation**  
students use graphic design tools (e.g., Photoshop, Illustrator) to create engaging visual representations of data sets for a specified audience |
| 8+ weeks    | **digital narrative (video)**  
students produce a short 3-5 minute stand-alone movie combining research, photographs, video, animation, sound, music, text, and often a voiceover; purpose can be expository/analytical, persuasive, or reflective  
**animation (video)**  
students design and animate original motion graphics to demonstrate a concept or process |

*On average, students will need at least 4 hours of production/editing time for every minute of finished video.*
## Unpacking larger assignments

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outline</strong></td>
<td>key concepts, overall vision or approach, cast and roles, 3rd party media needed</td>
<td>Early, before any production</td>
</tr>
<tr>
<td><strong>Script</strong></td>
<td>dialogue, listed by speaker, can be rough (talking points) or verbose (to be read directly)</td>
<td>25% into project timeframe</td>
</tr>
<tr>
<td><strong>Storyboard</strong></td>
<td>sequential list of shots, sketches, direction</td>
<td>25-50% into project timeframe</td>
</tr>
<tr>
<td><strong>Rough Cut</strong></td>
<td>unfinished audio/video edit</td>
<td>75% into project timeframe</td>
</tr>
</tbody>
</table>

Adapted from http://mediacommmons.psu.edu/faculty/instructors-guide-to-media-activities/
## Menu of milestones as formative assessments

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Example/Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team contract</td>
<td>example, example</td>
</tr>
<tr>
<td>Content proposal</td>
<td>example</td>
</tr>
<tr>
<td>Annotated bibliography</td>
<td>example</td>
</tr>
<tr>
<td>Treatment plan/outline</td>
<td>example, example, example</td>
</tr>
<tr>
<td><strong>Script</strong></td>
<td>guide</td>
</tr>
<tr>
<td><strong>Storyboard</strong></td>
<td>storyboard, storyboard rubric</td>
</tr>
<tr>
<td><strong>Rough cut</strong></td>
<td>example</td>
</tr>
<tr>
<td>Final cut</td>
<td>gallery</td>
</tr>
<tr>
<td>Outreach report</td>
<td>strategy guide</td>
</tr>
<tr>
<td>Team assessment</td>
<td>example</td>
</tr>
<tr>
<td>Reflection</td>
<td>example</td>
</tr>
</tbody>
</table>

- “Unpacking” the assignment
- Many low-stakes opportunities for students to receive feedback
- Evidence of progressing toward student learning outcomes
Best practices for undergraduate team video projects

- Video project length is best limited to 5-7 minutes. Rule of thumb: 1 min final length = 4 hours production time
- Project teams are often best limited to 4-5. Each should have defined role (e.g., lead writer, artistic director, lead editor/technical, producer)
- Require formative deliverables.
- Collaborate with academic support partners (educational technologists, librarians, writing tutors, etc.) Coordinate technical training/resources for all (software, hardware, copyright help, databases).
- Decide on a target platform for finished products.
## Free Media Sources

<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Commons Search</td>
<td>aggregated CC multimedia search across Google Images, Fotopedia, Jamendo, Flickr and more.</td>
<td>Image, audio, video</td>
</tr>
<tr>
<td>McCoy Productions</td>
<td>curated list of &gt;30 CC music sources</td>
<td>audio</td>
</tr>
<tr>
<td>Jamendo</td>
<td>The world’s biggest free music library; thousands of free MP3s, all with CC licenses</td>
<td>audio</td>
</tr>
<tr>
<td>Internet Archive: Moving Image</td>
<td>Free movies, films, videos for download</td>
<td>video</td>
</tr>
<tr>
<td>Open Video Project</td>
<td>Shared video repositories</td>
<td>video</td>
</tr>
<tr>
<td>Compfight</td>
<td>Flickr search engine</td>
<td>image</td>
</tr>
</tbody>
</table>
1. Who/What “real world” audience might students in my course engage with?
2. What materials/content/data do I wish students would explore more fully?
3. What presentation modalities are important in my discipline?
4. What aspect of implementing this would I need the most help with?
Assessing and grading media assignments

- Assessing student media projects will be easier if the goals and objectives for each element of the assignment are clear, specific, and measurable.

- Assessment should include evaluation of the process, not just the product, in order to emphasizing the learning process, and not just the end product.
Scaffolding Grading

Apply criteria of quality that characterize each level of accomplishment

1. evaluation during the design process,
2. evaluation during the development process,
3. and evaluation after the project is completed

Educators, such as Barrett (2006), Ohler (2008), and Teehan (2007-08), have developed rubrics that educators can use to assess digital stories created by students.
Rubrics

- Prepare rubrics as guides students can use to build on current knowledge.
- Consider rubrics as part of your planning time, not as an additional time commitment to your preparation.
- Teachers can increase the quality of their direct instruction by providing focus, emphasis, and attention to particular details as a model for students.
- Students have explicit guidelines regarding teacher expectations.
- Students can use rubrics as a tool to develop their abilities.

++Your handout has a sample Storyboard Rubric and Peer Feedback Rubric for your reference