BRINGING THE WORLD IN: DOCUMENTARY

General Guide........................................................................................................................................... 1

Documentary Example: Dirt! The Movie ........................................................................................................ 5

Documentary Example Assignment: Dirt! The Movie .................................................................................... 9

GENERAL GUIDE

In this experience, students watch a documentary in place of a regular lecture. Documentaries engage all of the senses. Their narrative format immerses students in a place and introduces them to multiple facets of and perspectives on sustainability problems and solutions. Documentaries can evoke empathy and illustrate complex concepts and issues that are difficult to adequately address in class lectures. They also provide real-world cases to practice problem framing and solution evaluation.

“...media have the power both to educate, when people critically reflect on the messages they are getting through the media, and to ‘miseducate,’ when viewers are passive consumers who don’t think much about the images and messages that they are receiving.” - Tisdell, 2008

<table>
<thead>
<tr>
<th>Course</th>
<th>Level: 100; can accommodate group size: 10-100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoyment</td>
<td>Films can be intellectually and emotionally engaging.</td>
</tr>
<tr>
<td>Learning</td>
<td>High when film is coupled with structured discussion and/or a reflective assignment that helps students interacts and/or think critically about film.</td>
</tr>
<tr>
<td>Adjustments</td>
<td>Select a relevant film and create supplementary materials like video questions, integrates easily into existing courses.</td>
</tr>
<tr>
<td>Benefits</td>
<td>Can replace a lecture and supplement teacher’s knowledge and perspective.</td>
</tr>
</tbody>
</table>

LEARNING OBJECTIVES
- Analyze major causes and effects of sustainability problems in the documentary, identifying which stakeholders benefit and are harmed. [SYSTEMS THINKING]
- Recall and describe examples of justice and equity (or lack thereof) in the film. [VALUES THINKING]
- Analyze perspectives of various people presented in the documentary and make an argument for how they align or not with a sustainability perspective. [VALUES THINKING]
- Evaluate solution options presented in the documentary, considering whether or not they adequately address the sustainability problem. [STRATEGIC THINKING]
- Describe how places featured shape the perspectives of those who live in them. [SYSTEMS THINKING]
- Assess whose “truths” are shown in the video and whose are left out. [VALUES THINKING]

ACTIVITIES
The purpose of this experience is to intellectually and emotionally engage students in sustainability topics, concepts, problems, and solutions that are difficult to adequately present through a lecture or reading. Some examples include: characteristics of sustainability problems, multi-scaler impact, trade-offs, feedback loops, human rights, social and environmental justice, and knowledge as place-based and contextual. Because documentaries engage multiple senses and different parts of the brain (Berk, 2009), they can help students develop complex thinking, normative competencies, as well as skills like empathy that are important for interpersonal competence.

The experience consists of reading background material on a place or sustainability issue, watching a documentary or clip on it while considering a set of guiding questions, discussing the documentary in structured groups, and completing reflective assignments (Berk, 2009). The students’ role is to watch actively and engage in reflective discussions and assignments. Since documentaries are usually created to convey a specific message and catalyze specific action, the instructor’s role is to select and present a documentary in a way that helps students understand the content as part but not all of the story of a sustainability problem and solution (Aitkin, 1994).

Before
- Select a film and watch it yourself (for ideas, see resources below).
- Prepare discussion questions that will help students watch critically and structure their discussion and reflective assignments, in order to increase engagement and learning.

During
- Introduce concepts, methods and skills relevant to the learning objectives, also introduce problems, and solutions options. If documentary is accessible online, consider assigning viewing for home-work, leaving class time for a more extensive discussion.
• Introduce the video and why you are showing it (purposeful approach). Discuss link between film content and the learning objectives of the course and activity.
• Stop at or replay important scenes and verbally highlight concepts or dynamics.

After
• Follow the documentary with discussion or reflective assignments that prompt students to think critically about the documentary, either as a class or in small groups (Tisdell, 2008).
• Structure discussion by setting a time limit, providing discussion questions, and asking students to turn in outputs like notes or guides to keep the discussion focused (Ledlow, n.d).
• Make sure to help students think critically about whose perspectives and values are presented in the documentary (Aitkin, 1994).

ASSIGNMENTS AND ASSESSMENT
The assignments below can maximize learning outcomes of the Documentary experience and produce outputs that can be assessed to determine achievement of the learning objectives.

• Read material chosen by instructor before watching the documentary that explores documentary topic, themes, or key concepts relevant to objectives. Output: notes.
• Watch documentary. Complete worksheet during the documentary to turn in or use in discussion or other assignments. Output: worksheet.
• Discuss questions provided by instructor in groups. Output: notes, questions, or diagrams.
• Write reflection, critique, or guided essay. Output: paper.

Use a Likert-scale to determine if students achieved all, most, some, little, or none of the learning objective. Develop a rubric with examples of answers that demonstrate students have achieved all (5), most (4), some (3), little (2), or none (1) of the objective.

TAKE THIS EXPERIENCE TO THE NEXT LEVEL!
• Simulate the world - students design a lesson plan using the documentary to teach about sustainability and reflect on documentary as a teaching and learning tool (Tisdell, 2008).
• Engage the world - students do a group project to develop a solution option for a problem presented in the documentary.

BIBLIOGRAPHY & RESOURCES
• Red Gold Assignment: Mining Perspectives: http://serc.carleton.edu/bioregion/examples/51306.html
• PBS Independent Lens: http://www.pbs.org/independentlens/films/
• ASU’s Films on Demand: http://libguides.asu.edu/content.php?pid=90855&sid=677388
• SOS’s Media Webpage: http://schoolofsustainability.asu.edu/media/video/
• KAET Video Library: http://sustainability.asu.edu/media/video/kaet
• YouTube: http://www.youtube.com/
• Ted-Talks: http://www.ted.com/talks
• Netflix: www.netflix.com
• Hulu: http://www.hulu.com/
• Denver Art Museum, Creativity Resources for Teachers
  (http://creativity.denverartmuseum.org/for-teachers/resources/creativity/)


**DOCUMENTARY EXAMPLE: DIRT! THE MOVIE**

**SUMMARY**
Watch the documentary “Dirt” to replace or supplement a lecture on coupled social-ecological systems, ecosystem services, or soil management, in order to help students develop systems thinking, normative, and interpersonal competencies in sustainability. “DIRT! The Movie...brings to life the environmental, economic, social and political impact that the soil has. It shares the stories of experts from all over the world who study and are able to harness the beauty and power of a respectful and mutually beneficial relationship with soil (Dirt! The Movie, 2012).” 80 minutes.

*The process that turns garbage into a garden is central to our survival. We depend on dirt to purify and heal the systems that sustain us. — Peter Girguis, Dirt (2012)*

<table>
<thead>
<tr>
<th>Course Level: 100; can accommodate group size: 10-100+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoyment Film is intellectually and emotionally engaging</td>
</tr>
<tr>
<td>Learning High when film is coupled with structured discussion and / or a reflective assignment that helps students interacts and / or think critically about film.</td>
</tr>
<tr>
<td>Adjustments Help students make link between film content and activity / course learning objectives, and create supplementary materials like video questions.</td>
</tr>
<tr>
<td>Benefits Can replace a lecture and supplement teacher’s knowledge and perspective.</td>
</tr>
</tbody>
</table>

**LEARNING OBJECTIVES**
- Define “coupled social-ecological system” and “ecosystem services” and give examples of the ecosystem services that dirt provides. [SYSTEMS THINKING]
- Describe how the places that people live as shown in the documentary shape their knowledge and values about dirt and its importance in social-ecological systems. [SYSTEMS THINKING]
- Analyze and critique one of the solution options illustrated that involved working with dirt as a transformative experience that helped the environment and improved people’s lives. [STRATEGIC THINKING]
- Reflect on your own emotional response to experiences of people in the documentary. [INTERPERSONAL COMPETENCIES]

**ACTIVITIES**
The purpose of this experience is to help students visualize the relationship between humans and dirt in order to understand the concepts of coupled social-ecological systems and ecosystem services, appreciate different peoples’ valuations of dirt, and envision sustainability solution options that incorporate interactions with dirt as a transformative experience.
The experience consists of watching DIRT, discussing it, and completing reflective assignments. The students’ role is to watch actively and engage in reflective discussions and assignments which is crucial to learning outcomes. Since documentaries are usually created to convey a specific message and catalyze specific action, the instructor’s role is to select and present a documentary in a way that helps students understand the content as part but not all of the story of sustainability problems and solutions (Aitkin, 1994). To increase engagement and learning, prepare guidelines or discussion questions to help students watch critically. Introduce the video and why you are showing it in this course (purposeful approach). Stop at any scene to highlight a point, or replay to emphasize. Allow time for in-class discussion or assign reflective activity. Guide these activities with specific questions and structure discussion around specific questions in small group (Berk, 2009). Consider assigning viewing for homework, leaving class time for discussion.

Follow the documentary with structured discussion and/or reflective assignments that prompt students to think critically about the documentary (Tisdell, 2008). Make sure to help students think critically about whose perspectives and values are presented in the documentary (Aitkin, 1994). Asking students to complete an assignment based on the documentary will send the message that it is an integral part of the class (not a day to skip or “check out”) and help them focus (Frieden and Clay, 2012). Structuring discussion by setting a time limit, providing discussion questions, and asking for outputs help students keep the discussion focused (Ledlow, n.d).

Timeline

- Select a film that presents a topic, concept, problem, or solution option relevant to your course in a complex, robust way.
- Obtain the documentary or find out how students can do so (see resources section below).
- Watch the documentary and identify key concepts, problems, and solutions options.
- Create assignment prompts and rubrics using learning objectives and assessment ideas.
- Introduce the documentary in class, explain what it is about and why you are showing it.
- Distribute worksheets. Read through worksheet questions out loud. Field questions.
- Show documentary, pause to explain key parts, solicit questions, or replay key sections.
- Facilitate discussion and/or distribute concluding assignment.

Assignments and Assessment

The assignments below that can maximize learning outcomes of the Documentary experience and produce outputs that can be assessed to determine student learning outcomes.
• **Read** "Integrated Approaches to Long-Term Studies of Urban Ecological System" (Grimm, et al., 2000) before watching the documentary. Output: definitions (1 paragraph).
  - Define concepts of “coupled-social ecological system” and “ecosystem services”.

• **Complete worksheet** during the documentary individually, (Frieden and Clay, 2012). Output: worksheet (1 page, front and back).
  - What are the sustainability problems related to dirt mentioned in the movie?
  - What ecosystem services of dirt are mentioned or illustrated in the documentary?
  - Give examples of how different people have different values related to the role of dirt in coupled social and ecological systems.
  - What are some of the solutions described in the movie?
  - Which scene of a particular person or group of people stood out to you the most?

• **Discuss** in groups of 2-4. Use worksheet as a prompt - 15 minutes.
  - Pick a scene of a particular person that stood out to you. Describe the scene and explain your emotional response the person’s experiences. Did it make you happy, sad, concerned, inspired, frustrated, other? Explain why. How are this person’s experiences similar to and different from your own? Add your notes to the worksheet.
  - How do the places where people live shape their knowledge of dirt?

• **Write** reflection on personal experience with dirt and emotional response to documentary Output: Written reflection / essay.
  - Describe an example of a solution to a problem in the documentary that involved working with dirt as a transformative experience that helped the environment and improved peoples lives. Describe the sustainability problem that it addresses, who is positively and negatively impacted, some of the cause and effects of the problem described in the documentary. Describe how the solution addresses aspects of the problem - is it beneficial for humans and the environment? Are there any downsides to the solution? Unintended consequences, short-term thinking, end-of-pipe thinking, perspectives left out?

Use a Likert-scale to determine if students achieved all, most, some, little, or none of the learning objective. Develop a rubric with examples of answers that demonstrate students have achieved all (5), most (4), some (3), little (2), or none (1) of the objective.

**TAKE THIS EXPERIENCE TO THE NEXT LEVEL!**
- **Visit the world** - Take a field trip in groups of 2-4 to Papago Park, The Farm at South Mountain, or ASU Tempe Campus. Find examples of 5 ecosystem services that dirt provides and draw a picture of where you see dirt involved in coupled social-ecological systems.

- **Simulate the world** - Ask students to take on roles of stakeholders in the documentary while developing scenarios, visions, or solution option for problems presented in the film.

- **Engage with the world** - Student groups research or develop a project that explores problems related to dirt in the Phoenix Metro Area and develops creative solutions, considering e.g., stakeholders values and needs, unintended consequences, and equity.

**BIBLIOGRAPHY & RESOURCES**


DOCUMENTARY EXAMPLE ASSIGNMENT: DIRT! THE MOVIE

SUMMARY:
The purpose of this experience is to help you visualize the relationship between humans and dirt in order to understand the concepts of coupled social-ecological systems and ecosystem services, appreciate different peoples’ valuations of dirt, and envision sustainability solution options that incorporate interactions with dirt as a transformative experience. The experience consists of reading an article, watching the documentary and participating in discussion in class, and completing reflective assignments afterwards.

INSTRUCTIONS:
- **Read** "Integrated Approaches to Long-Term Studies of Urban Ecological System" (Grimm, et al., 2010) before watching the documentary. Output: Define “coupled-social ecological system” and “ecosystem services”.
- **Complete the worksheet** during the documentary individually. Output: worksheet
  - What are the sustainability problems related to dirt mentioned in the movie?
  - What ecosystem services of dirt are mentioned or illustrated in the documentary?
  - Give examples of how different people have different values related to the role of dirt in coupled social and ecological systems.
  - What are some of the solutions described in the movie?
  - Which scene of a particular person or group of people stood out to you the most?
- **Discuss** in groups of 2-4. Use worksheet as a prompt and add your notes - 15 minutes.
  - Pick a scene of a particular person that stood out to you. Describe the scene and explain your emotional response the person’s experiences. Did it make you happy, sad, concerned, inspired, frustrated, other? Explain why. How are this person’s experiences similar to and different from your own?
  - How do the places where people live shape their knowledge of dirt?
- **Write** reflection on personal experience with dirt and emotional response to documentary Output: Written reflection / essay.
  - Describe an example of a solution to a problem in the documentary that involved working with dirt as a transformative experience that helped the environment and improved people’s lives.
  - Describe the sustainability problem that it addresses, who is positively and negatively impacted, some of the cause and effects of the problem described in the documentary.
Describe how the solution addresses aspects of the problem - is it beneficial for humans and the environment? Are there any downsides to the solution? Unintended consequences, short-term thinking, end-of-pipe thinking, perspectives left out?

**LEARNING OBJECTIVES:**

- Define “coupled social-ecological system” and “ecosystem services” and give examples of the ecosystem services that dirt provides.
- Describe how the places that people live shape their knowledge and values about dirt and its importance in social-ecological systems.
- Analyze and critique one of the solution options illustrated that involved working with dirt as a transformative experience that helped the environment and improved people’s lives.
- Reflect on emotional response to experiences of people in the documentary.

You will be evaluated on how far your written newspaper article and reflection demonstrate your achievement of these learning objectives.

**REMEMBER:**

Documentaries are usually created as tools for conveying a specific message and catalyzing specific action: *Dirt!* tells part but not all of the story of sustainability problems and solutions related with dirt within social-ecological systems. Think about whose story it tells and whose story or what parts of the story are left out.