Teaching Oceanography with Comics

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Rationale:
- Science communication is becoming increasingly more important in order to relay information to students and the general public because students can learn through a new medium (Sellars, 2017).
- Science comics are a great tool to use to communicate to all audiences because they are: motivational, visual, permanent, intermediary, and popular (Tribull, 2017).
- In oceanography courses, primary production is a topic that learners struggle with because they have to integrate concepts that are explored throughout the term of the course, like seasonal changes in sunlight and water column stratification, nutrient supply and cycling, ocean circulation and mixing, and predator-prey dynamics.

Methods:
- Studied oceanography texts and course materials to identify concepts that learners (or students) struggle with. The seasonal cycle of primary production was selected as it integrates many basic oceanographic concepts and is fundamentally important in understanding how the ocean works.
- Interviewed scientific communication professionals with a specialty in oceanography to gain knowledge on what makes a good video/comic strip.
- Explored animation and comic presentation format for communicating these processes.
- Storyboarded, animated, scripted and drafted comic strips for review by oceanography instructors or oceanographers.

Applications:
- The goal is to get any audience to understand science
- Integrating comics into the oceanography curriculum to engage students and facilitate learning
  - Comics are a powerful tool for organizing new information and useful assessment indicators for instructors
  - Comics can be used to introduce and explore oceanographic (or scientific) concepts
  - Using these comics along with or to replace lectures and readings benefits introductory students who struggle with these topics

Future Work:
- Integrate comics into Ocean Observatory Initiatives (OOI) Data Lab activities for introductory students and introductory courses
- Create a book out of the individual comics (with relevant background resources?) that can be distributed in print and electronically to instructors and learners of all backgrounds
- Further, explore animation tools to make comics live
- Animate a video on seasonal cycles of primary production in the ocean and post to YouTube

Educational Products:

Educational Products:

Educational Products:

References:


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