



DESIGN

# Island Style on Global Warming: A Connectivism Approach to Learning the Direct Effects of Global Warming in Hawaii

Through a connectivism theory, undergraduate students

of Environmental Studies at the University of Hawaii at Manoa, will use the interactive learning strategy with the online learning tool of Zaption to demonstrate understanding of Global Warming and its direct effects in Hawaii presented on Canvas and Blackboard Collaborate.

Original design by Megan Gamel



Created on June 25th, 2016

 EDIT YOUR DESIGN

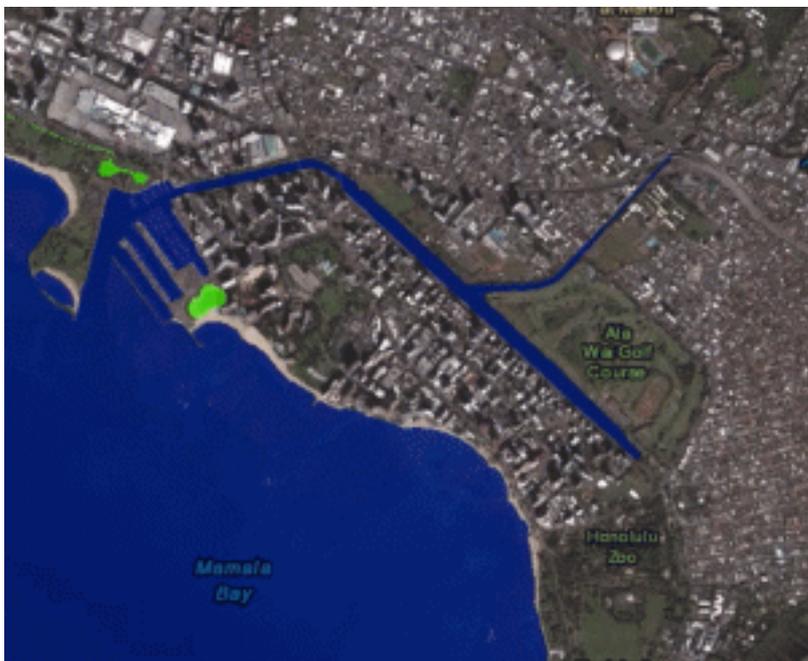
ADULT LEARNING, CONNECTIVISM, DISTANCE EDUCATION, HIGHER EDUCATION, INFORMATION TECHNOLOGY, MOOC

## SYNTHESIS

## BACKGROUND:

## WHY IS THIS INTERVENTION NEEDED?

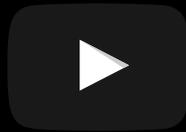
Global warming has increasingly become a global concern. Recently, the Hawaiian islands have had



direct climate changes that have been damaging land, livelihoods, and the health of people. Lack of knowledge, belief, and practices for more sustainable ways have all been contributing factors to the damaging results occurring in the world.

From Mai tai's to sunsets, culture to luau's, vacation to everyday life, the beautiful Hawaiian Islands have a lot to lose to global warming. With it's near perfect weather, variety of landscapes, and plethora of tourism and natural resource businesses, communities in Hawaii are in impending trouble as

global warming and water levels rises. The Huffington Post indicates climate change will ruin Hawaii ([Cave, n.d.](#)).



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## WHO ARE THE LEARNERS?

Today's generation is known as the Information era. Thus, E learning is important to appeal to the new learners of the generation. This statement is supported by Marc Prensky, a famous speaker and writer on education and technology. He states, " *Our students have changed radically. Today's students are no longer the people our education system was designed to teach.*"

Undergraduate students involved in [Environmental Studies at the University of Hawaii](#) (UHM) have a great impact in Hawaii due to their interest in Environmental Studies. Undergraduates in



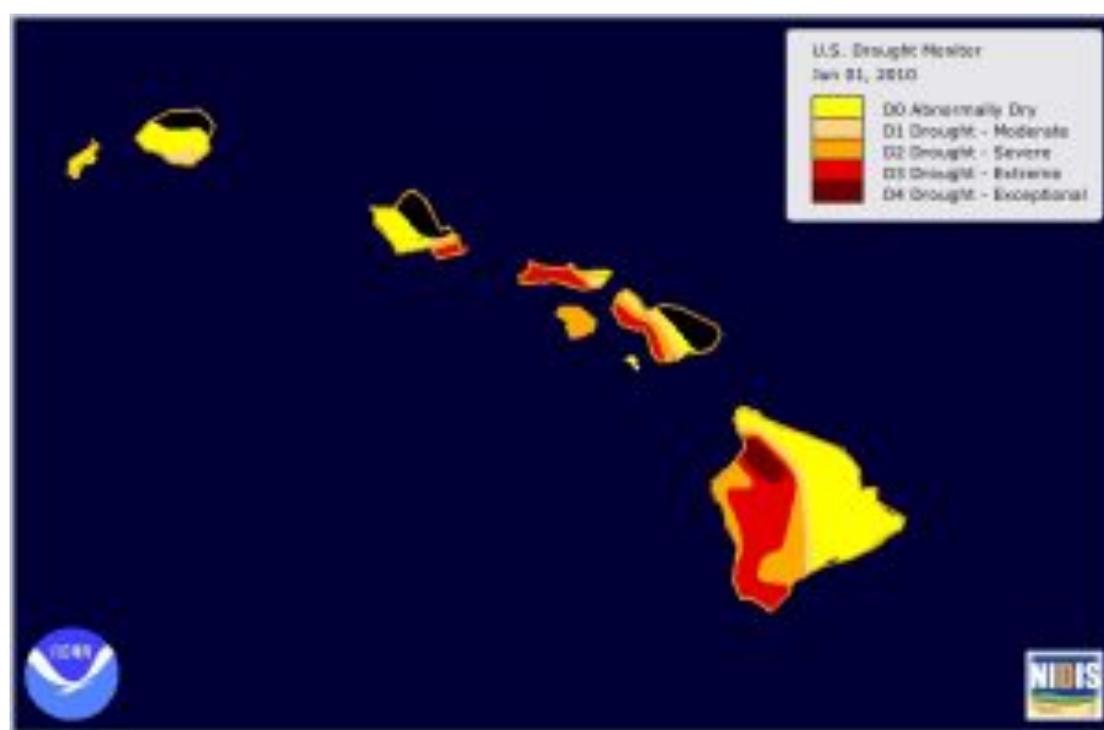
Environmental Studies carry a huge impact on the world due to their presence in new potential in careers, the progression of Environmental efforts, creation of new families, and exiting families. They have a great potential to change habits of older generations, and pass on new practices to the next generation in order to ensure the health of our world. Due to their presence in Hawaii these undergraduates have the greatest influence on the environmental factors on the islands due to their ability to accept and pass on new studies

and information to the Hawaiian community.

## BACKGROUND:

Thus with the background knowledge previous stated, in order to further inform the various communities of Hawaii about Global Warming an online learning module [Canvas](#) with Synchronous online classes available via [BlackBoard](#) Collaborate will be created to educate the undergraduate students of Environment Studies at UHM. Here students and instructors will guide the direction of class lessons and material understandings of Global Warming in Hawaii.

This e-learning design would involve a connectivism approach of learning by creating an online learning course in Canvas that provides detailed modules describing the direct impacts of global warming in Hawaii. Canvas will work alongside BlackBoard collaborate for synchronous classes and asynchronous materials and assignments in modules.



This Global Warming Island Style, Direct Impacts in Hawaii course could cover the following modules: (1) Global Warming heat waves on land and sea, (2) Living aloha and the rise of global warming increases in cost of living, (3) Changing climate changing health, (4) One step at a time, training plans to prevent global warming, (5) Camera, lights, [Zaption!](#) Your input on ideas of the course materials and your suggestions for Hawaii and global warming.

Supported resources for materials in modules:

[https://www.youtube.com/watch?v=SWPzGo\\_C010](https://www.youtube.com/watch?v=SWPzGo_C010)

[http://www.huffingtonpost.com/2014/08/28/climate-change-study-hawaii\\_n\\_5731956.html](http://www.huffingtonpost.com/2014/08/28/climate-change-study-hawaii_n_5731956.html)

<http://nca2014.globalchange.gov/highlights/regions/hawaii>

<https://www.cooleffect.org/?gclid=CP-OkaCt080CFZSCfgod5lkGkA>

As an introductory course for undergraduate students enrolled in Environmental Health at UHM, each area presented in the modules could then be further developed into its own. Materials, scholarly articles, videos, module core content, online class discussions, assignments, BlackBoard class discussions and core content, along with online interactive tools such as [Zaption](#), to increase interactive learning strategies within this course. Once modules are created and inputted, a thorough evaluation by the teacher and course designer will review the content and will add or decrease content as needed. Future edits can be made through this same process.

This link provides users a basic overview of Canvas infrastructure.

<https://www.youtube.com/user/CanvasLMS>

This link provides users a basic tutorial to Blackboard Collaborate.

<https://www.youtube.com/watch?v=lhQKJa8e09o>

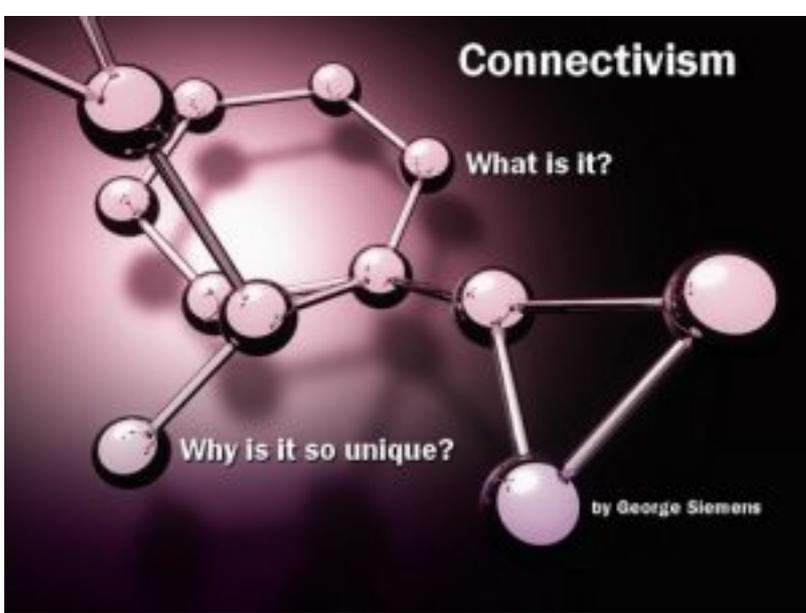
This link provides users a basic overview of online learning tool Zaption.

<https://www.youtube.com/watch?v=sPqGfk6wt60>

Each design in Canvas will contain the same layout:

1. Synchronous BlackBoard class meetings occur at a time most achievable to attend by the students and instructor. This class time will be used to reiterate main points of the modules and answer any questions, concerns, or needs from students or instructors. Further description of synchronous class is provided further in the module.
2. An introductory portion welcoming students to the module and outline the course details.
3. Course content will delve deeper into the details of the module. Several pictures will be used to enhance understanding of materials.
4. Attached scholarly articles, websites, and supplemental videos will be provided to show as a source of reference for content matter.
5. A space provided or link to a place for students to have a discussion. Students will work to record their questions they had on the materials. They are also welcome to provide their insight and experiences to the discussion board. Students then will be required to reply to two posts.
6. Assignment space which would provide a link to detailed expectations and descriptions of tasks necessary to complete.

Each module contains the same need for an understanding of each topic, why it specifically impacts Hawaii, what type of action can/needs to be done, and how to address necessary means of change. Connectivism is seen with the outline showing, "... integration of principles explored by chaos,



network, and complexity and self-organization theories” ([Connectivism, n.d.](#)). Students will have synchronous meeting space with BlackBoard Collaborate, assignments, interactive learning, and discussions to view each other’s work, critique it, build upon it, and further improve the progression of Environmental Studies and global warming in Hawaii.

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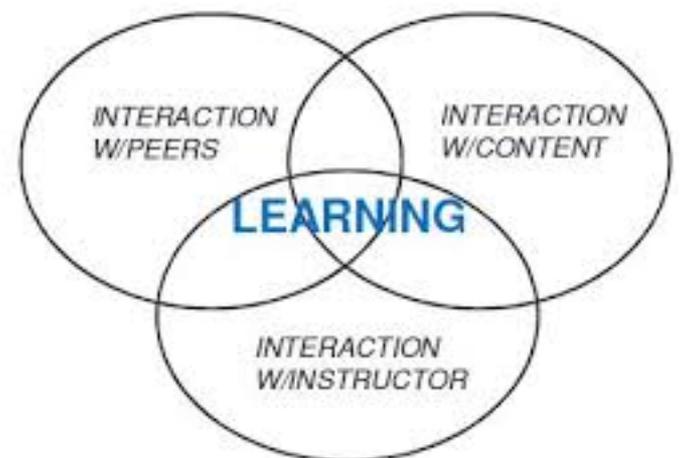
C (ontent) A (synchronous) S (ynchronous) A (ssessment)

## CONTENT:

Essential content for the learners includes information about global warming effects directly impacted in Hawaii. Content also includes pertinent information on how global warming in Hawaii pose a threat to citizens lives by damaging land, livelihoods, and the health of people.

Content will be presented through online learning center Canvas. Synchronous classes will be presented through BlackBoard Collaborate. Throughout the various modules and topics, students will be required to read various scholarly articles, websites, videos, and participate in the interactive learning online tool Zaption to present students understanding and suggestions based on materials presented in Canvas and BlackBoard Collaborate.

The designer in this case will be the instructor but can be a separate entity in different



circumstances. The designer will use the online learning center Canvas and BlackBoard Collaborate to provide articles, induce discussion, and summarize materials. An interactive online tool Zaption will be used to create an online video in the perspective of the students on key points they learned and ideas students may have to increase Global Warming awareness. The Designer will be responsible for organizing materials and linking appropriate articles/videos, BlackBoard sessions, place for students to have their online discussions, along with a place for students to be informed about homework requirements along with submission process. The instructor will find tutorials and videos and the designer will input this data around the available information.

The instructor is the teacher or professor who will support the content from their own research/resources found through scholarly articles, websites, and presentations/videos inputted and organized by the designer on the online learning center Canvas. Instructor must be available at the agreed time of students and instructor schedules. Synchronous class will be using BlackBoard Collaborate.

Throughout the course the Instructor must be available for Q&A in the form of email, during synchronous BlackBoard Collaborate sessions, along with providing feedback during online discussion questions, and assignments. Throughout the class the instructor will have to appropriate time to evaluate homework assignments, prepare materials for synchronous classes, and evaluate the final project done through Zaption.

An evaluation of class experience and tips on materials presented will assess the online learning course Global Warming Island Style, Direct Impacts in Hawaii. This will be presented through a [google survey](#) that contains questions on likert scale on effectiveness, materials, and understanding of course. This survey will also have open ended question for students to expand on the class experience.

Research/standards will include scholarly articles, websites, and presentations/videos (multimodal learning) on global warming, climate changes in Hawaii, and economic changes and health risks to the Hawaiian islands. More information will be available throughout Canvas and in references of this MOOC.

Standards will include research that is up to date and applicable to the various key points of Global Warming climate changes in Hawaii, livelihoods of residents on the islands, along with health risks that impose on Hawaiian citizens. Up to date research will be determined by the instructor and designer depending on information displayed.

Standards will also include Environmental Studies course standards set by the UHM directors and

boards. Since the course is provided online [ISTE](#) and various standards for distance education will have to be considered when creating the course.

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## ASYNCHRONOUS:

The learner will experience online tutorials in both text and video materials on Canvas. Zaption will work with students as an interactive learning tool to express their understanding of materials along as make suggestions, or shared experiences evoked from the materials. This will act as the final project for the class and will encourage the applied learning.



Discussions, responses, and assignments are done asynchronously but do have a due date in order to control the flow of the class. Discussions and responses about course materials increases the value of peer to peer learning and allow more opportunities for success in the course.

Designers will incorporate materials approved by the Instructor in Canvas. Designer will focus on page layout, introduction of modules, input visuals, links to online websites and documents about the module, provide space for students to have online discussions/responses, space for assignment details, syllabus, instructors email for Q&A about course, details on how to access BlackBoard Collaborate for the synchronous meeting, and space within Canvas to discuss the Zaption final project. As importing these documents, the designer will have to know how to make content compatible in other forms, such as pdf, word, or make files file downloadable, so all parties can access the materials that some students may not have access to through their OS or computer compatibility.

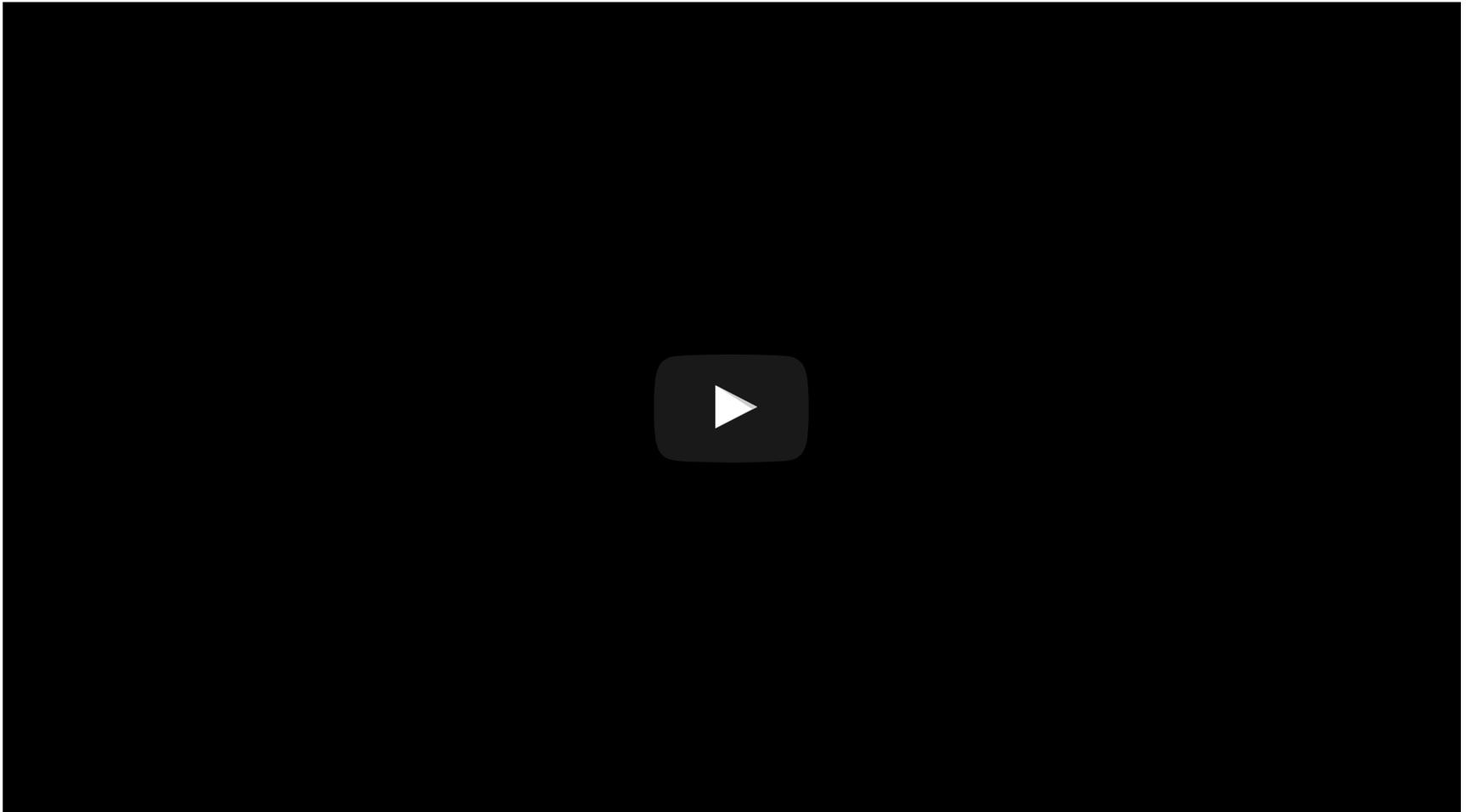
Designer will consider amount of time, materials, and expectations needed to complete objective of the lesson. With projects/lessons, the designer will determine, with the aid of the instructor, the detailed guidelines explaining roles of group members or self. The same documents will express detailed tasks for students to achieve in order to complete the assignment. Designer will also provide space on the online environment for discussion of lessons and feedback from instructor and students.

The instructor will use the asynchronous environment in Canvas through various class discussions, class responses, via email for personal questions or requests, and assignment submissions for grades. Instructors will take responses and submissions from students to determine content understanding of the course.



The instructor will also use asynchronous time for students to develop their Zaption videos. This will act as the courses final project and assess the students displayed content to the content presented in the course.

Research/Standards will contain online learning practices, connectivism theory, interactive strategies, interactive learning tools such as Zaption, and qualifying articles and websites determined useful by the instructor.



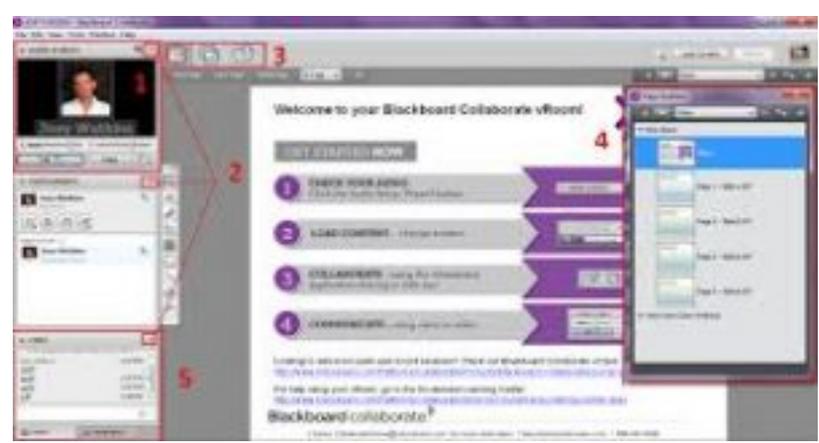
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## SYNCHRONOUS:

Synchronous classes will be for a 2 hour set of continuous time once a week. This will be determined by a google survey email sent out to all the students created by the designer to determine best 2 hour slot of time for the majority of the class to synchronously meet. Ex Monday 5p-7p. For those instances that students could not attend the class at that time, the instructor will record the session and provide the link on Canvas. Students and the Instructor will attend the course through BlackBoard Collaborate. Instructions for how to access BlackBoard will be available on Canvas under the Syllabus provided at the top of the Canvas webpage. This will be implemented by the course designer.

Synchronous classes will follow the generalized format each week created and monitored by the course instructor:

1. Welcome/Introduction of Course Content
2. Brief Overview of Class
3. Briefly go over key concepts of module
4. Q&A
5. Class discussion led by Instructor
6. Class activity with online tool (Kahoots to quiz class on content)
7. Sum up the contents
8. Introduce next week's module
9. Set out Assignment/discussion dates
10. Last Q&A
11. Goodnight



As the instructor goes through the main points of the module, certain prompts will be created by the instructor and provoke in-class discussion. A requirement for all students to talk at least once in response to the prompt set by the instructor. The instructor will be responsible for guiding and developing the discussion about a course point. The instructor can use this time to have students work in groups to try out various online tools such as Kahoots! Here, instructors will set questions about course materials in particular modules along with review materials of previous course modules. The instructor can have the class create teams to create a game show type of environment where teams/individual students will answer the questions. Various online tools can be used in order to continue the interactive experience and attention of students in class.

After discussion and games the instructor will sum up the evening learnings, introduce the next week's materials, and express assignment and due dates. Before ending the class the instructor will allow students another opportunity for Q&A. Synchronous classes meet once a week in BlackBoard for the remainder of the term.

Some synchronous strategies learners will experience in the synchronous online class on BlackBoard Collaborate. Interactive learning is achieved with the various online tools and activities instructors create for the synchronous class. During synchronous BlackBoard Collaborate class students will be expected to participate, ask questions, listen, and be a captive audience. This is important for instructors in order to understand if students are understanding the materials and lessons.

The designer will ensure directions for BlackBoard Collaborate are available via Canvas.

Instructions may have a step by step visual guide to help students and instructors ensure access. The designer will assist the instructor in any areas that may require BlackBoard/Canvas troubleshooting in order to ensure ease of use and further course success.

The designer will also send students and instructors google survey on availability to have class time. Majority time slot will be the determined time to meet once a week until course is over. Designer will assist Instructor in finding online tools to help instructor create activities for the class.

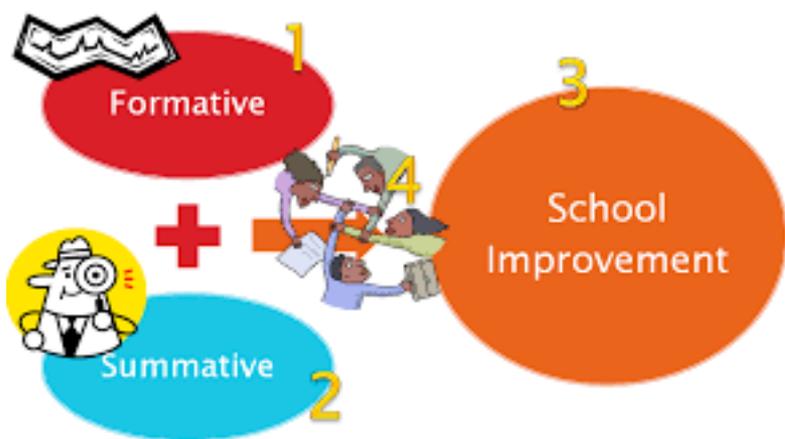
The Instructor will be in the driver's seat during these synchronous classes. For it will be the instructor that will be monitoring and directing the flow of the classroom. The above outline steps 1- 11 will all be directed and expressed through the instructor. The instructor will consider time frame, materials, and objectives of the synchronous class and favor Q&A time over all other activities.

The instructor will make clear descriptions to the students of expectations and participation in the BlackBoard Collaboration course. This will be addressed in the course syllabus and at the beginning of the first class. Students are expected to share with the class at least once through Q&A time, discussion, and activity. So by the end of the synchronous event the student should speak a minimum of three times. Students who cannot attend classes will be required to submit a one page summation of the course when they viewed the recording along with any other questions they had regarding the course materials.

Research/Standards in synchronous designs provides the class more opportunities to create more of a sense of community and "...allows meaningful interaction among the professor and students comparable to an in person classroom" (Boies, 2016). Synchronous in general indicates the instant feedback between communication. Various online communities involve asynchronous learning , but the necessity of instant real time feedback is important in learning as well. Thus the research/standards involved in the synchronous design are supported by articles in order to, "... enhance communication, collaboration, and interaction between the learner and the educator" (Akarasriworn & Heng-Yu, 2013). The synchronous application that is used in this course is [BlackBoard Collaborate](#).



## ASSESSMENT:



For the learners, summative assessments of the course will take place in each of the modules, discussions, Zaption final project. These evaluations exist in the form of reviews from the instructor, at least two classmates.

The summative assessment of the modules will take place during synchronous session class activities done by the instructor in reference to the students responses and input to discussions and activities. This assessment will also be carried on through other students with their input regarding class questions and discussion in the synchronous Blackboard classes.

During asynchronous formats available on Canvas, summative assessments of class discussion regarding course questions and responses from at least two classmates and/or instructor. Lastly

summative evaluation will be done through observation and response of Zaption project content and responses from other classmates and/or instructor. Summative evaluations will be based on what content is understood, explained from various points of view or adapted into examples of students world, and shown through clarification of questions in synchronous blackboard class activities, discussions, and asynchronous discussion forums, assignments, and Zaption project. The final evaluation will be determined by the observations of the instructor.

A final formative evaluation of the Global Warming Island Style, Direct Impacts in Hawaii course on Canvas and Blackboard collaborative course will be completed in the form of a google survey using likert scale formula for course. This will be determined by the students. The end of the survey will allow open ended questions for students to provide more insight to things they liked/ did not like about the course. Students will not be complete the course until this formative evaluation is completed.

### Example of Likert Scale

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

Open ended questions often begin with these questions:



The designer will have to consider a value to measure summative assessment of tutorials (discussions, Zaption) in order for the instructor to keep track of summative assessment of the course within particular students. This may be done through a simple key form 1-5 point scale key determining if students completed assignments, regained understanding or materials, and provided discussion in asynchronous and synchronous formats.

The Designer will create the formative evaluation on a likert scale and open ended questions on a google survey and provide the link to students to complete in order to complete the course. A

reflection of the course may also be included in this survey. When all surveys are returned and completed, the designer will be responsible for compiling all data and reporting results to the instructor to collaborate together on necessary changes for the course.

The instructor will have to use the designers 1-5 point scale key throughout the entire course to designate summative evaluations of modules throughout synchronous discussions, activities, and asynchronous discussions, assignments, and class responses for each student.

The instructor will then also submit a google survey response created by the designer and collaborate with the designer with changes the course may need according to the formative survey results.

Research and Standards will be assessed through group collaboration, interactive learning, online tools, and lesson discussions (summative evaluation). These evaluations will be created by designer and appointed by the instructor after each module of the course. The formative evaluation will be created by the designer through google survey using likert scale based questions, open ended questions, and reflection of the overall course and materials.

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## References

Akarasriworn, C., & Heng-Yu, K. (2013). GRADUATE STUDENTS' KNOWLEDGE CONSTRUCTION AND ATTITUDES TOWARD ONLINE SYNCHRONOUS VIDEOCONFERENCING COLLABORATIVE LEARNING ENVIRONMENTS. *Quarterly Review Of Distance Education*, 14(1), 35-48.

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Connectivism. (n.d.). Retrieved June 26, 2016, from <http://education-2020.wikispaces.com/Connectivism>

National Climate Assessment. (n.d.). Retrieved June 20, 2016, from

Small actions ignite planet-sized change. (n.d.). Retrieved June 16, 2016, from <https://www.cooleffect.org/?gclid=CP-OkaCt080CFZSCfgod5lkGkA>

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## RELATED THEORIES, STRATEGIES AND TOOLS



### THEORY

Theory: Connectivism in the Classroom



### STRATEGY

Strategy: Interactive Learning at the Work Place



### TOOL

Zaption



### TOOL

Tool: Google Docs



### TOOL

Tool: Kahoot!



CREATE A NEW COMPONENT

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## ATTACHMENTS



ADD A NEW ATTACHMENT

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## REFERENCES



GRADUATE STUDENTS' KNOWLEDGE CONSTRUCTION AND ATTITUDES TOWARD

## ONLINE SYNCHRONOUS VIDEOCONFERENCING

Akarasriworn, C., & Heng-Yu, K. (2013). GRADUATE STUDENTS' KNOWLEDGE CONSTRUCTION AND ATTITUDES TOWARD ONLINE SYNCHRONOUS VIDEOCONFERENCING COLLABORATIVE LEARNING ENVIRONMENTS. *Quarterly Review Of Distance Education*, 14(1), 35-48.

<http://web.a.ebscohost.com.eres.library.manoa.hawaii.edu/ehost/pdfviewer/pdfviewer?sid=5627bb73-54d3-4bdf-ab8a-123368232011%40sessionmgr4002&vid=7&hid=4207>

### Promoting Diversity in Public Health Law through Online Education

Boies, K. C. (2016). Promoting Diversity in Public Health Law through Online Education. *Journal Of Law, Medicine & Ethics*, 4424-29. doi:10.1177/1073110516644223

<http://web.b.ebscohost.com.eres.library.manoa.hawaii.edu/ehost/pdfviewer/pdfviewer?vid=6&sid=e1f9b82e-6034-4f72-a9d8-f4fa379596ce%40sessionmgr107&hid=118>

### Climate Change Will Ruin Hawaii, New Study Suggests

Cave, J. (n.d.). Climate Change Will Ruin Hawaii, New Study Suggests.

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### National Climate Assessment

National Climate Assessment. (n.d.).

<http://nca2014.globalchange.gov/highlights/regions/hawaii>

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Small actions ignite planet-sized change. (n.d.).

<https://www.cooleffect.org/?gclid=CP-OkaCt080CFZSCfgod5lkGkA>

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