Global Collaboration Project

Nutrition Action Challenge

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Overview

The “Nutrition Action Challenge” collaboration is an annex to an existing unit in Lifecycle Nutrition. Prior to this assignment, students learn about the physiological development that occurs during childhood, beginning in infancy through adolescence, along with the nutritional needs that accompany these developmental phases. At the beginning of this unit, students engage with nutritional issues that can occur at these delicate life stages through the exploration of childhood malnutrition including feeding practices that can increase risk of obesity.

Completing this assignment requires students to develop a short (five minutes or less) video that describes an actionable challenge for a middle school student to accomplish in one day at home or school. The videos are compiled and sent to a middle school where students select one of the challenges, completes the call-to-action explored in the video, and uploads a response back. The Lifecycle students reflect on how well the execution of their challenge went and what was the most important thing they've learned through the completion of this assignment.

Authenticity: The Nutrition Action Challenge allows students to actively engage with the issues addressed in the child malnutrition unit by creating a simple, actionable, solution that a child could implement on their own. Students are putting their acquired knowledge into practice by creating a valuable experience for a child through the teaching and modeling of good lifestyle practices.

The child malnutrition unit invokes a lot of emotion, mainly negative feelings. The societal conditions that perpetuate childhood obesity are not easy to bear, particularly when students feel as if their are part of a broken system that is challenging to repair. This can bring on feelings of hopelessness, anger, despair, sadness at our current societal state. However, by completing this assignment, students are also learning ways to channel the negative emotions into something productive. They learn that they can be part of the solution, and although they can't solve the larger, systemic issues, they are empowered to do something meaningful to them.

Standards

Applicable Learning Outcomes

The following learning outcomes are extracted from the course syllabus. The "Nutrition Action Challenge" collaboration and the previous lessons address the following:

#1. *Identify and understand the major physiological factors that influence nutrient requirements during pregnancy, lactation, infancy, childhood, adolescence and for senior adults*. (KRDN 1.1, 1.2)

#2. *Interpret clinical, social, anthropometric and other relevant information to identify unique nutrition, feeding and eating concerns, and health issues in the life span and provide appropriate nutrition and lifestyle recommendations for these issues.* (KRDN 1.3, 3.1)

*KRDNs are content competencies required for the dietetic accreditation. The numbers indicate which competencies are being addressed in this course.

Academic Rigor: Though most of the students who are required to take Lifecycle nutrition are Food and Nutrition Majors, Individual and Family Development, and Nursing majors, in addition to Psychology and Women's Studies minors may also take this course. Students who take this course must have taken a previous nutrition course (Human Nutrition) which takes a scientific approach addressing how nutrients are digested, absorbed, and metabolized by the body. With this background information, students use that knowledge in new application with various lifecycle stages.

The Childhood Nutrition unit is designed so that students go through the entirely of Bloom's Taxonomy (See Figure 1) for higher order thinking. Students begin this unit by *remembering* previous information about the physiological need for certain nutrients required for proper bodily function. They learn new information that allows them to *understand* how the nutrients play a role in growth and development. This new information is then *applied* to skill-building activities such as interpretation of growth charts so that they can later *analyze* and *evaluate* existing malnutrition situations that contribute to the development of childhood obesity. The "Nutrition Action Challenge" assignment allows students to *create* a solution to the issues addressed in the malnutrition unit.

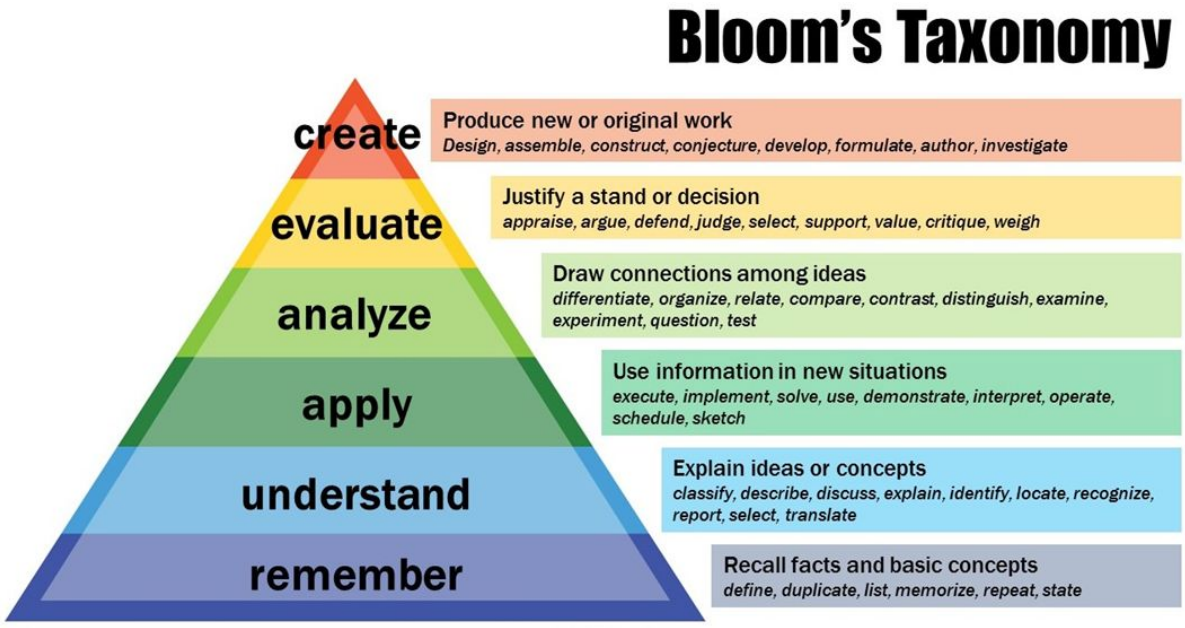

Figure 1: Bloom's Taxonomy. (source: Creative Commons)

Resources and Preparation

Preparation for Student Thinking

In order to prepare students to engage in higher order thinking such as *create*, students must first engage in the lower thinking skills to help build understanding and value to the assignments. Table 1 outlines the lessons that predicate the "Nutrition Action Challenge."

Table 1: Summary of Childhood Nutrition Unit- Existing Lesson Plans

Lesson	Explanation
Childhood Growth Patterns with Growth Chart Plotting	*The lesson begins with an introduction and review of the typical height/weight patterns experienced in infancy and childhood (excludes adolescence). *Professor models growth chart plotting by projecting growth chart via powerpoint and using whiteboard. Professor also explains how to interpret growth data, including conditions that would indicate malnutrition. *Students are given 2 case studies (one infant, one toddler) to plot and assess growth pattern. *Professor facilitates discussion of the interpretation of growth in both cases.
FITS Article Response and Discussion	*For homework students read the *Feeding Infants and Toddlers Follow-Up Study* and answer guiding questions. The expectation is that students bring the prepared questions to facilitate discussion in class. *In Class professor facilitates discussion on child nutrition and the issues brought up by the article. Professor provides information on the original study conducted in 2002 while students compare and contrast the findings. *Students are asked to reflect upon the state of child malnutrition and share one take-home message they've learned.
***Weight of the Nation* Movie with Response and Discussion**	*For homework students watch Part 3 of the HBO series *Weight of the Nation* and answer guiding questions. The prepared questions are then brought to class to facilitate discussion. *In class the professor facilitates discussion on the issues brought by the movie including: impacts on late childhood/adolescence health, emotional well-being, and family dynamics.

	*Students are asked to reflect upon their responses. * Professor sets up their homework by giving a prompt to have them think about what they would do if they could create a solution to one of the issues brought up by the video that would empower a child or adolescent.

Preparation for Assignment

The collaboration project is designed for both classes to work asynchronously. The Lifecycle students create and upload their action video while the middle school students work independently to implement the call-to-action and later create and upload their response video.

Adult Connection: In order to prepare for the implementation of the assignment, connection with a middle or high school teacher must first be established. Ideally, the two instructors meet either face-to-face or connect through phone or digital calling technology to create an implementation plan discussing ideas for implementation in each class, timeline, and evaluation criteria.

Unfortunately, due to communication barriers, this step was never addressed during the development of this project. Each instructor developed assignment and evaluation criteria separately. The timeline was not well established as all conversation was limited to email. Students were not actively involved in the collaboration process because the collaboration between the two instructors was minimal. However, collaborative efforts did explore using Flipgrid to share video for both classes.

Assessment Practice: For the higher education class, the following steps need to be completed prior to implementation:

#1. Provide adequate background information. The above lesson plans must first be executed to prepare students to complete the assignment. Explanation should be given into the reasons for exploring each new topic and how each topic builds upon one another.

#2. Create assignment resource hub. The educator should create a LMS module compiling all of the necessary materials for students. The resources should include: assignment directions, directions for video creation, assignment submission details, and resource links. Figure 2 outlines LMS modules for previous lesson plans and the resources gathered for the *Nutrition Action Project.*

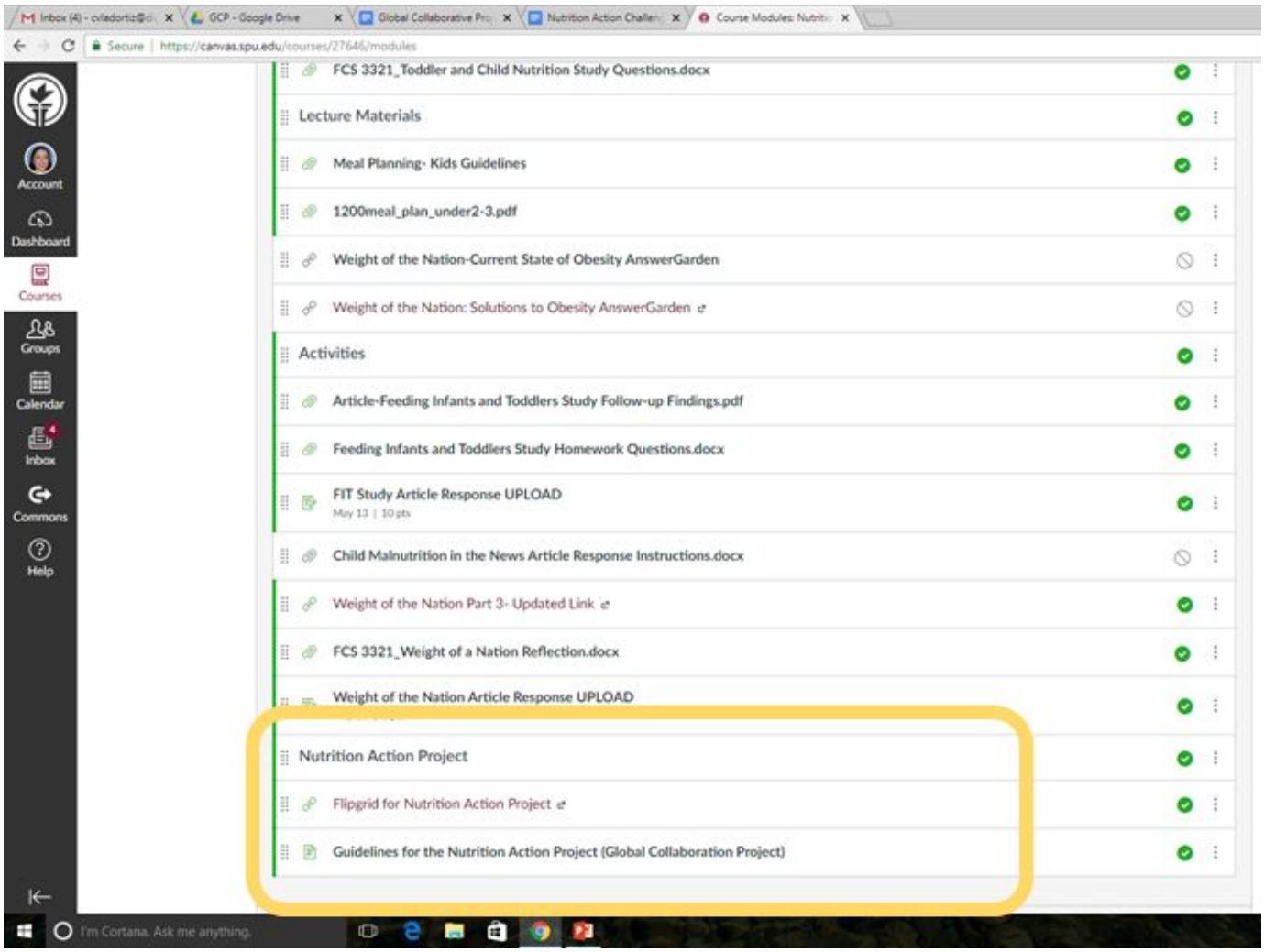

Figure 2: LMS Module Design Example

#3. Formalize assignment criteria. The assignment criteria for this assignment highlights not only video recording of the nutrition call-to-action, but creates an verbal outline to explaining why the

chosen call to action is important along with a demonstration (model) of the skill or task.

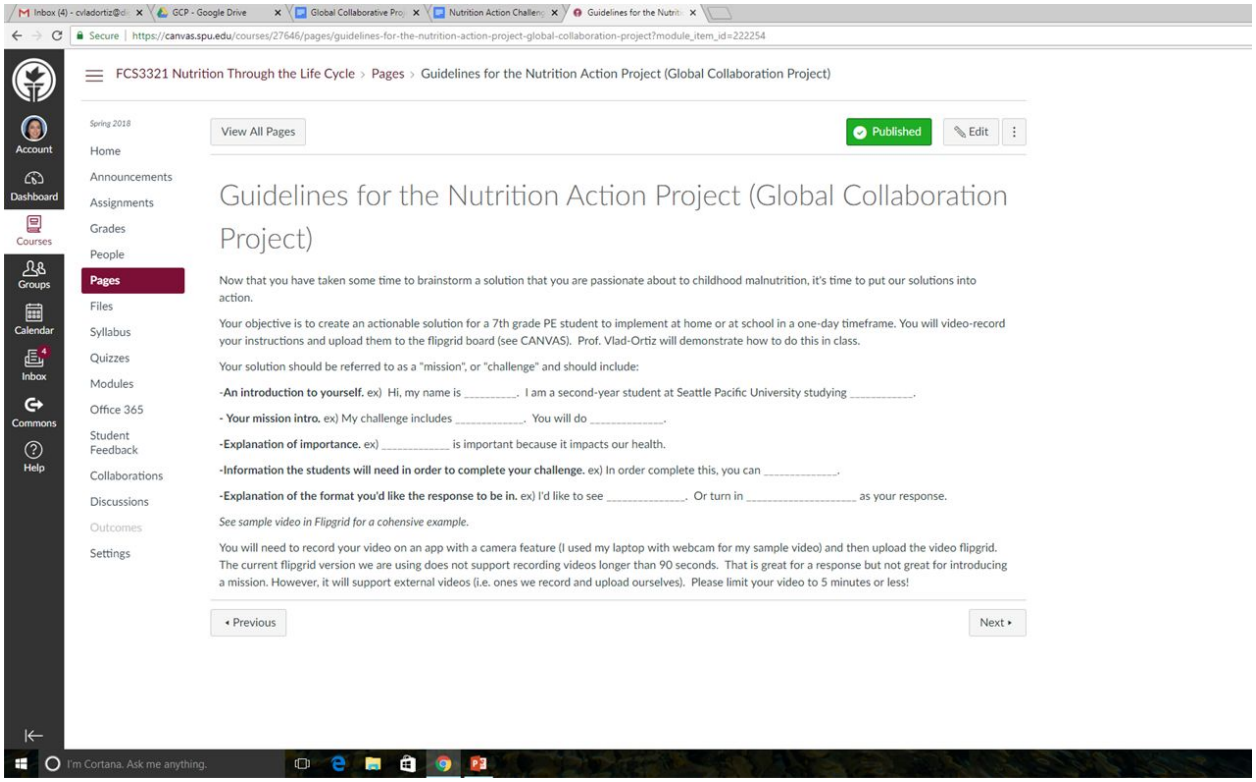

Figure 3. LMS Example of Assignment Criteria

This is the assignment criteria chosen for this project:

“Now that you have taken some time to brainstorm a solution that you are passionate about to childhood malnutrition, it's time to put our solutions into action.

Your objective is to create an actionable solution for a 7th grade PE student to implement at home or at school in a one-day timeframe. You will video-record your instructions and upload them to the flipgrid board (see CANVAS). Prof. Vlad-Ortiz will demonstrate how to do this in class.

Your solution should be referred to as a "mission", or "challenge" and should include:

-**An introduction to yourself.** ex) Hi, my name is _____. I am a second-year student at Seattle Pacific University studying _____.

- Your mission intro. ex) My challenge includes _____. You will do _____.

-Explanation of importance. ex) _____ is important because it impacts our health.

-Information the students will need in order to complete your challenge. ex) In order complete this, you can _____.

-Explanation of the format you'd like the response to be in. ex) I'd like to see _____. Or turn in _____ as your response.

See sample video in Flipgrid for a cohesive example.

You will need to record your video on an app with a camera feature (I used my laptop with webcam for my sample video) and then upload the video flipgrid. The current flipgrid version we are using does not support recording videos longer than 90 seconds. That is great for a response but not great for introducing a mission. However, it will support external videos (i.e. ones we record and upload ourselves). Please limit your video to 5 minutes or less!"

#4. Formulize evaluation criteria. Evaluation criteria involves both self-evaluation and self-reflection. Because the assignment required higher order thinking, it would be fitting for students to compare their work to that of the "professional" clinications (aka Prof. Vlad-Ortiz's video example) in explanation of the importance of the topic, clear instruction on how to complete the challenge, and appropriate demonstration for the age level. Self-reflection would include a narrative describing the the comparison between the student's work to that of the others, description of what worked well, followed by a description for future improvement. All assessment would include the RISE model.

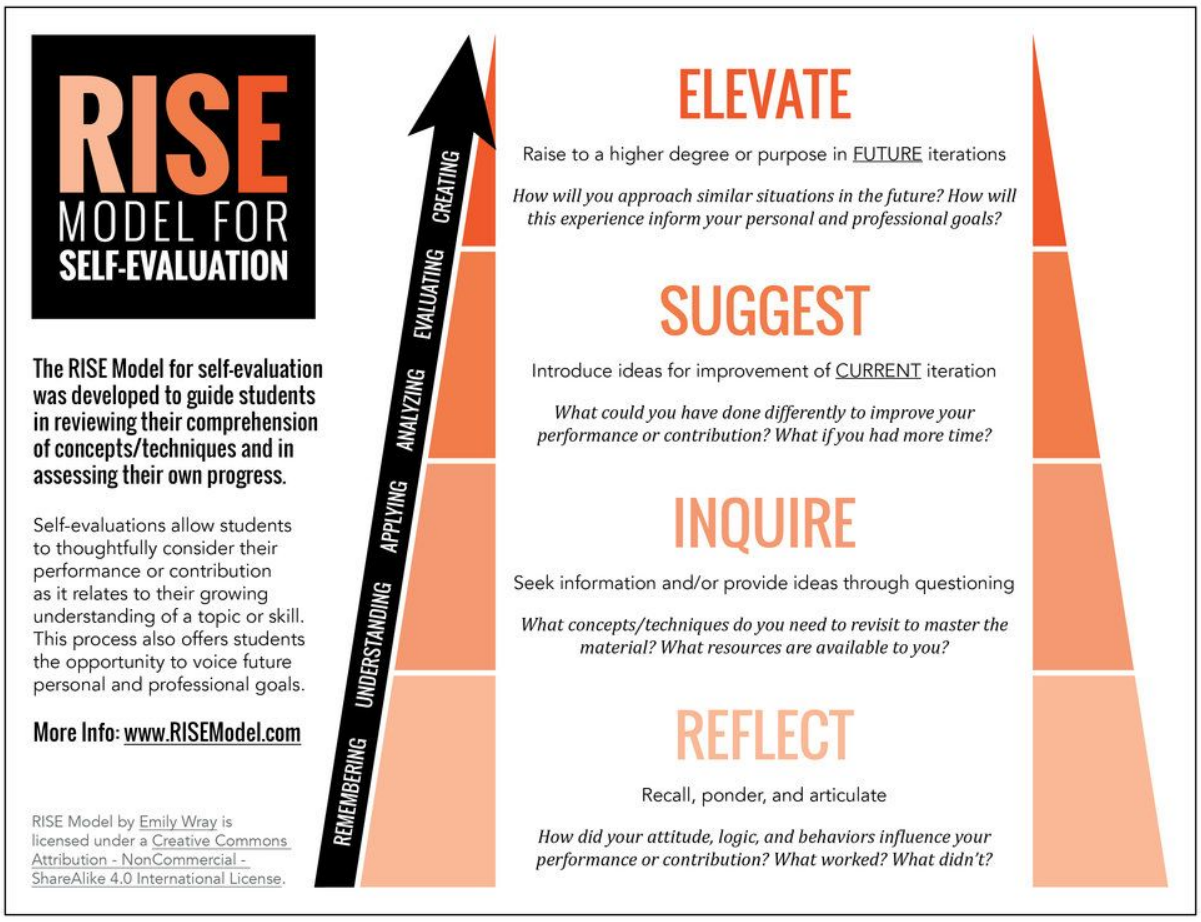

Figure 4: Emily Wray's RISE Model for Self Assessment

*Please note: Due to timing, the higher education students did not complete this self-assessment piece.

#5. Set-up technology. In addition to the LMS to set-up assignment resources (our university uses CANVAS), the collaborative tool chosen for the project is Flipgrid. This technology was chosen as a means to collect and distribute multiple videos easily and at a low cost (free!).

Some issues occurred during this phase of project set-up. Once the grid was created, it was important to test out the technology by recording a "modeling" video for students. It was here that I learned that the free version of Flipgrid only supports 90 seconds of record time. However, after some investigation, I learned that the free version supports uploaded videos up to 5 minutes. The video model will help students better conceptualize how the assignment criteria and objectives can be addressed. Once the video model was created and successfully

uploaded, the flipgrid page was complete. Figure 4 is a screenshot of the completed flipgrid page.

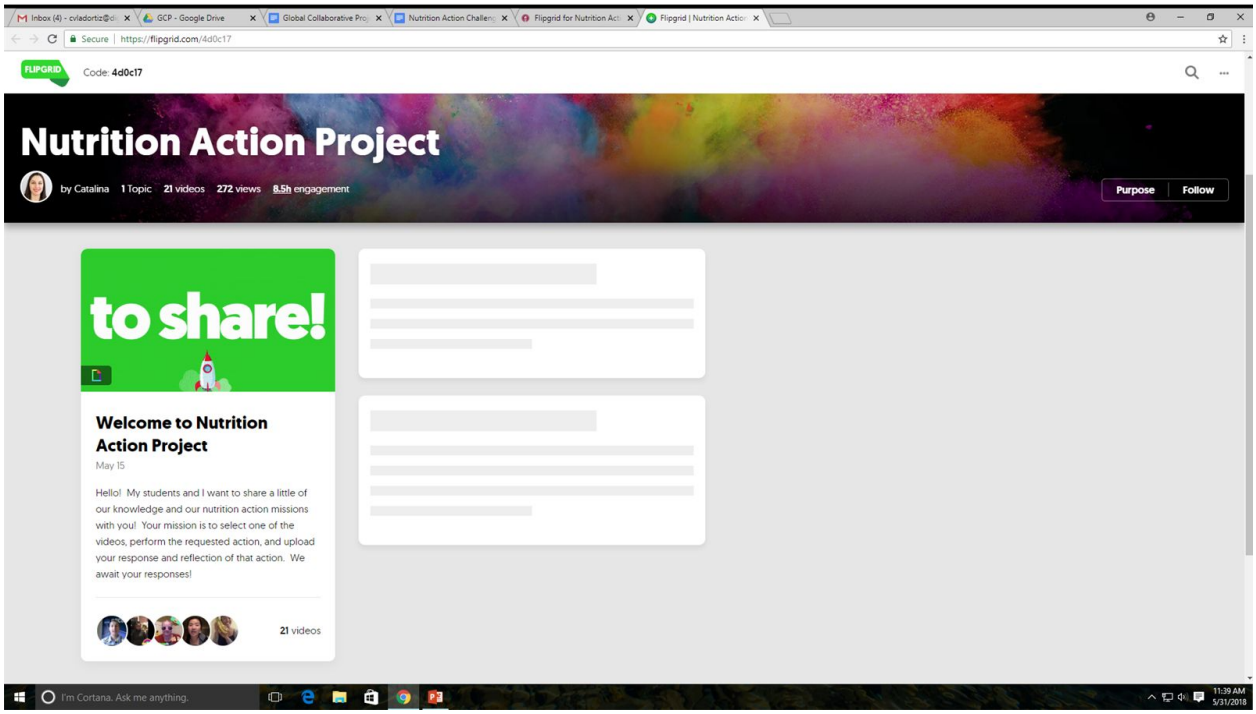

Figure 4: Nutrition Action Project Flipgrid Page.

Lesson Plan- Project Implementation

Active Exploration and Applied Learning: To summarize the preparation above, Students were required to complete homework prior to this classroom exploring and investigating a topic of childhood malnutrition that was important to them. They were encouraged but not limited to explore topics in their major but needed to include lifestyle factors. At the beginning of the lesson, the instructor communicated that by completing this assignment they are utilizing 21st century skills they can apply to future careers and as clinicians, they may be challenged or called to apply solutions similar to this in the real-world.

Lesson Plan Outline:

a. Welcome- establish purpose and importance of assignment. Discuss application to real life.
b. Assignment Instruction-
    a. Show location of assignment hub in CANVAS.
    b. Go through each criteria item. Assess for clarity

c. Discuss video criteria, demonstrate upload process, explain troubleshooting with video upload
d. Show model video (Prof. Vlad-Ortiz's Fiber Mini-Challenge)- See Video Model in Preparation Section.

c. Share ideas- have each student present their ideas and offer opportunities to ask questions and/or brainstorm with rest of class. Students receive verbal revisions.
d. Independant time- The timeline and assignment submission instructions are reviewed. Students are then given the rest of the class period to work on their video script or request one-on-one conferences with professor.

Next Steps

Once the project has been implemented, and upon successful video upload, the professor will send the flipgrid link to the collaborating instructor. The collaborating instructor will then implement the project and send the completed flipgrid link back to the originating instructor.

Here is the link to the complete Flipgrid Videos from the Lifecycle Class:
https://flipgrid.com/4d0c17

Reflection

Project Updates

As of right now (6/03/2018) the project is still in the implementation phase. The "Nutrition Challenge Videos" have been completed and sent to the collaborating instructor. I am still currently awaiting response back. Given that the class as already ended barring a final exam, I can not perform the self-reflection/self-evaluation. My students are disappointed that they were not able to hear back from their 7th grade cohorts.

Process Reflection

The biggest challenge for me throughout the creation and implementation of this project has been communication with the collaborating instructor. I had an inkling this would be an issue when I first learned about this project at the beginning of the quarter. I have had similar collaboration issues with the other professionals I collaborate with throughout the school year. Each quarter I collaborate with food scientists, farmers, photographers, and dietitians from the Washington Dairy Council. From experience, I know collaborations can sometimes take months to plan because busy and sometime conflicting schedules can make planning and implementing even an one-hour presentation challenging.

After deeper reflection, I believe establishing rapport with the co-teacher is important. I had not met the collaborating instructor before beginning the project which I think impacted the outcome. As others in our cohort mentioned, establishing at least one face-to-face or google hangout

contact helps to build context into the nature of the shared project and creates a connection with the co-teacher. I had intended to design the project with the co-teacher but weeks went by before receiving a brief email response. If I could do this project again, I would have insisted on at least a phone contact to reach the co-teacher rather than relying on email contact. Because of the lengthy response time in between emails, I ended up designing the project based on the needs of my students only and sent instructions on how to implement from the collaborating side via email. I am disappointed that this was not a true collaboration effort, particularly since I had investigated the benefits of co-teaching and was truly excited to experiment with the concept.

Thoughts on Future Projects

Despite the fact that this project did not turn out as intended, I am still excited at the prospect of a successful collaboration. I love the collaboration assignment created for the project and what it means for my students. The assignment is powerful and impactful. It builds on real-world problems and challenges students to create a real-world solutions, giving them just a little taste of the challenges facing them when they become clinicians. Because I know that the fast-paced nature of the quarter system and the busy and conflicting schedules of co-teachers are barriers, I would like to begin seeking out a collaboration partner at least one quarter in advance of the Lifecycle class next year.