

Strategies of Interactive Lecturing

Faculty Sharing

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Today's sharing



Video presentation

- HSCI2006 Physiology and Pathophysiology
- A student group creates a video to discuss a topic related to physiology or disease.
- This serves as a substitute for the traditional oral presentation.



Nutritional controversies

- HSCI7007 Advanced Nutrition and Food Safety (MSc program)
- Students prepare three slides to address controversial topics in nutritional science.
- The lecturer will select and present these slides.



- The traditional oral presentation is often boring and consumes a significant amount of lecture time.
- New generation students might be more interested using multimedia to express their idea.
- Encourage more interaction among students.
- Diversify the course assignments.
- Students can explore scientific topics in depth during their preparation.

Process flow of Video presentation

Student submit the group information and topic selection

Preparation of the video

Upload the video to YuJa

Video viewing

Discussion about the video

HSCI 2006 Video presentation – group information form

** Please fill in the form and send it to Prof. Lee (LTOLee@um.edu.mo) or the T.A. (James; yc37609@connect.um.edu.mo) via email or WeChat on / before 29 Feb (Thursday) **

	Student name	Student I.D.
1.		
2.		
3.		
4.		
5.		

Preferred topics priority:

1. _____
2. _____

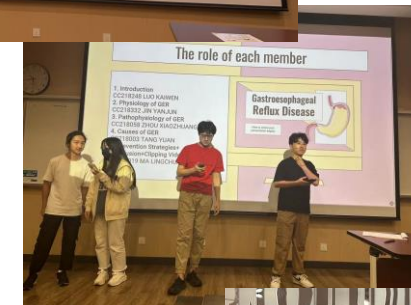
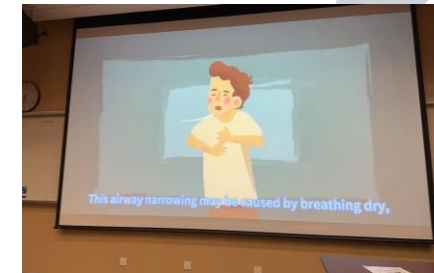
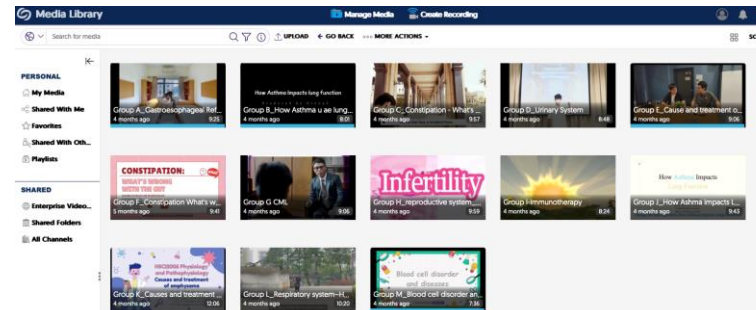
Detail information:

1. Five students per group;
2. Each topic max. can have 2 groups,
3. The form for the group information and selection of the topic should be submitted **on/before 29 Feb**
4. If more than two groups are selected the same topic, TA will arrange the groups to discuss the selection again;
5. The length of the video should be 8-10 minutes;
6. The video must have narration to describe/explain the content (i.e. cannot be a silent video);
7. Students should attend the discussion within the last 3 lessons;
8. Credits to describe the role of each member must be included at the end of the video.
9. Video format: Full HD: 1920 x 1080 (1080p) or higher. Aspect ratio: 16:9, landscape orientation and video file format should be .MP4.
10. The deadline of the video submission is **18 April (23:59)**.



Video presentation

- Video presentation guideline
- video presentation - group information form
- Video presentation available topics
- *** Video submission ***
- Video presentation (YuJa Channel)



Video highlight



Result and feedback

• Positive

- Most groups demonstrated their talent in video making.
- The atmosphere during the viewing and discussion was very good.
- Videos were presented in many different styles (drama, documentary, PowerPoint...).
- Learning soft skills

• Negative

- Sometimes, the videos or discussions do not focus on the scientific topic.
- Students used too much content from public sources.
- Several students reflected that they don't know how to make a decent video and lack skills in video editing.
- Issues with group formation.

• To improve

1. Better support for video filming and editing.
2. Consideration of workload.
3. Decline in interest after going through many videos.



Nutritional Controversies

1

The emphasis is on student-centred discussion into controversial issues and critical analysis of relevant scientific evidence

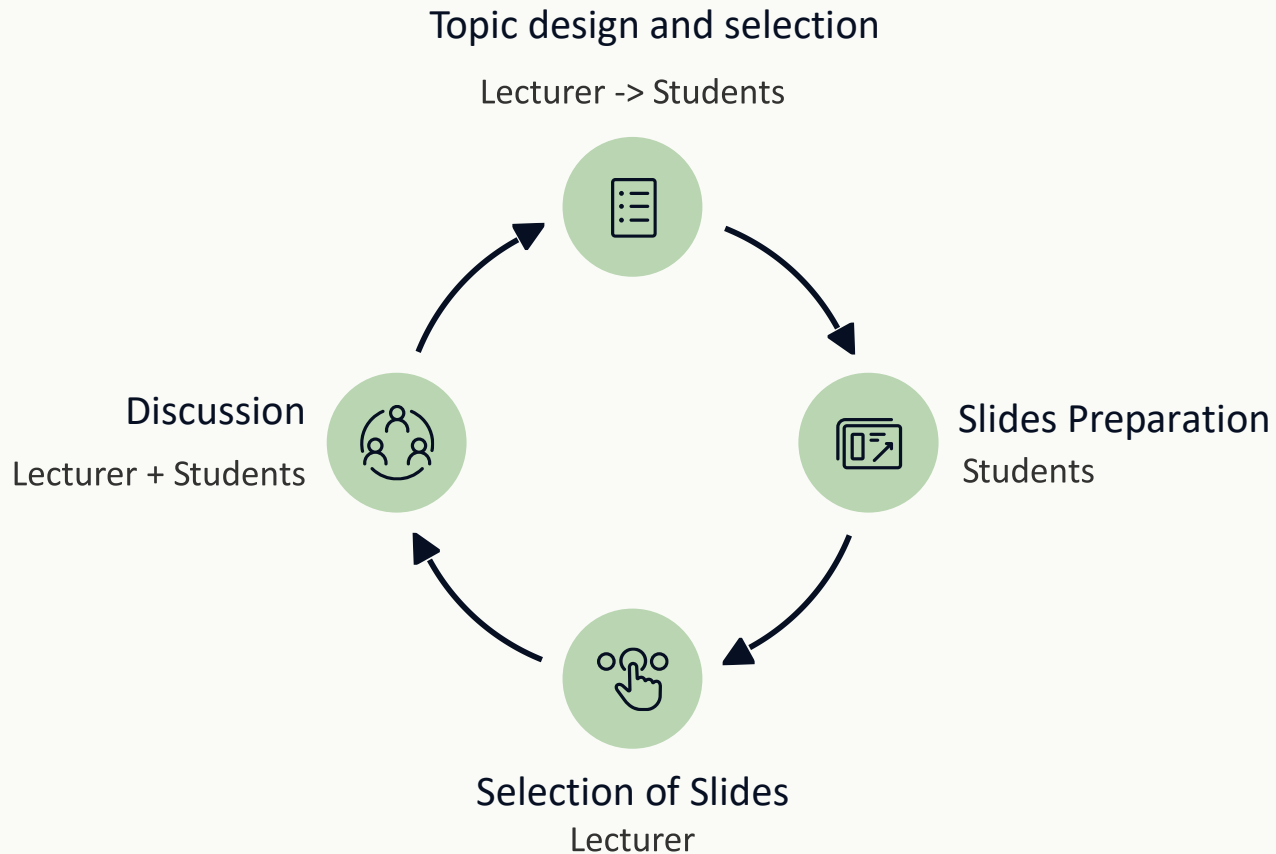
2

Identify more than one scientific opinion on a specified controversial topic on the role of diet in health/disease

3

Demonstrate an ability to initiate discussion and deal with questions in a research setting

Workflow of the “Nutritional controversies”



- 1) Cholesterol – is it bad for our health?
- 2) Coconut oil – is it really a superfood?
- 3) Egg yolk-is it bad for you?
- 4) Are artificial sweeteners all bad?
- 5) Ketogenic diet-is it safe?
- 6) The Microbiome: what are we learning from human studies
- 7) Genetically modified foods. Myths and Realities
- 8) Breakfast is the most important meal of the day for adults for weight loss or metabolic health.
- 9) Is personalized nutrition a controversy?
- 10) Potential of Insects as food in assuring food security.

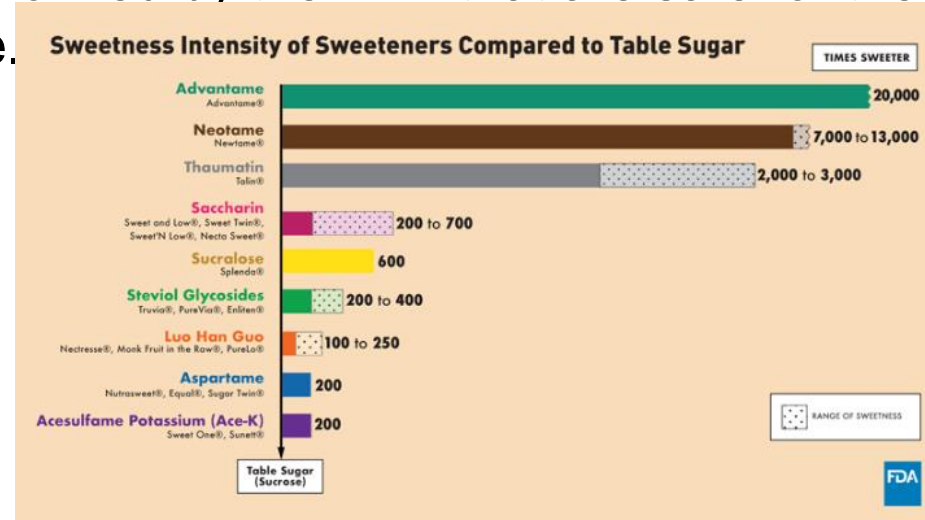
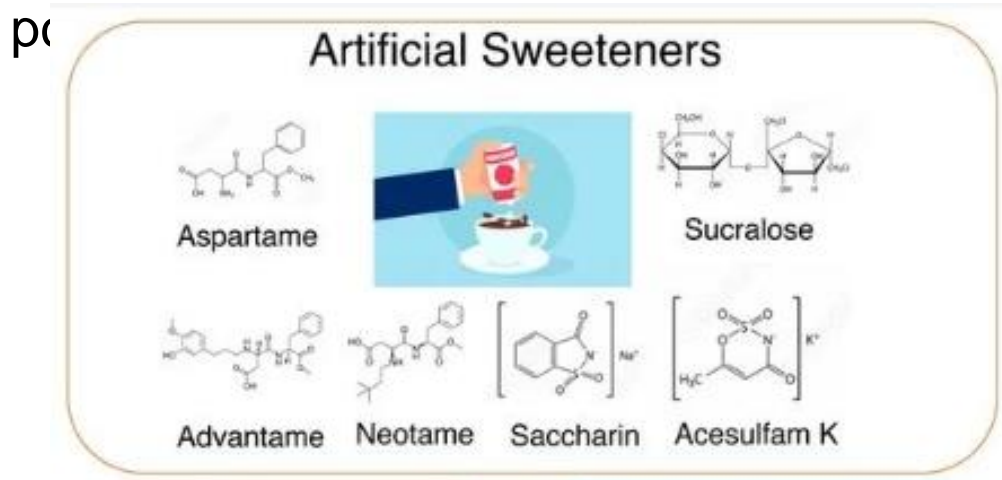
Controversial topics in nutrition (pick one for assignment)

- Allow the use of AI
- Students should be engaged in independent self study for this assignment

Are artificial sweeteners all bad?

Student Name:
Student ID: MC-----

- Artificial sweeteners have been developed as sugar substitutes, which mimics the effect of sugar on taste.
- Food additive listings for six sweeteners authorized by the FDA that are safe for the general population



- Compared to sucrose, artificial sweeteners are hundreds of times sweeter, so the use of various artificial sweeteners together can reduce the amount of sugar used
- Artificial sweeteners contribute only a few or no calories to the diet, e.g. Ace-K & Sucralose, are not metabolized in the human body, thus it provides no calories
- Hence, sweeteners generally will not raise blood sugar levels and become diet choice for populations to control blood sugar levels, such as patients with obesity and diabetes mellitus

Sugar- and artificially sweetened beverages and intrahepatic fat: A randomized controlled trial

- A randomized controlled trial of about 31 healthy subjects with BMI greater than 25 kg/m² and a daily consumption of at least 660 ml SSB were randomized to a 12-week intervention in which they replaced sugar-sweetened beverages (SSBs) with artificially sweetened beverages (ASBs).
- Their **intrahepatocellular lipid concentrations (IHCL)**, visceral adipose tissue (VAT) volume, food intake, and fasting blood concentrations of metabolic markers were measured after a 4-week run-in period and after a 12-week period with ASB or control (CTRL).
- About 27 subjects completed the study. **IHCL was reduced to 74% of the initial values with ASB** (N = 14; P < 0.05) but did not change with CTRL. The decrease in IHCL attained with ASB was more important in subjects with IHCL greater than 60 mmol/l than in subjects with low IHCL.

Conclusion:

In this study, we assessed whether replacing SSB with non-caloric ASB would have potentially beneficial effects on liver lipid metabolism in high-SSB consumers with overweight or obesity. Our results **indicate that replacing SSBs by ASBs significantly decreased IHCL after 12 weeks**. This effect was **most important in subjects with high IHCL**.

Effect of artificial sweeteners on insulin resistance among type-2 diabetes mellitus patients

- A cross-sectional study that was conducted on patients diagnosed with type-2 diabetes mellitus of a tertiary care hospital in Central India. Fasting blood sugar levels and serum insulin levels were measured for all participants.
- All the diabetics that presented in the OPD (Outpatient Department) were divided into 2 groups
 - Group A - The patients who regularly consume artificial sweetening agents
 - Group B - The patients who do not consume artificial sweeteners in any form
- Insulin resistance was calculated for each group using HOMA-IR (Homeostatic Model Assessment for Insulin Resistance) calculator as

Normal Insulin Resistance	Less than 3
Moderate Insulin Resistance	3-5
Severe Insulin Resistance	Above 5

- The HOMAIR values for Group A and B ranged from 0.9–24.33 and 0.12–10.83 with mean values 7.39 and 2.6, respectively

Conclusion:

Group A patients who consumed artificial sweetening agents had higher insulin resistance as compared to group B patients who had no artificial sweeteners based on HOMA-IR. However, further studies are required to conclude a direct correlation of artificial sweeteners with decreased insulin sensitivity.

Pros and Cons



Positive

Review the topic from the student's perspective.

Students can conduct a mini-review review on the topic and explore various opinions.

Good interaction with students during during discussion

Not much effort is required; this is is good for part-time students



Negative

Sometimes, it's difficult to fully understand the content from their slides

Always have a highly preferred topic topic

Points raised repeatedly by different students