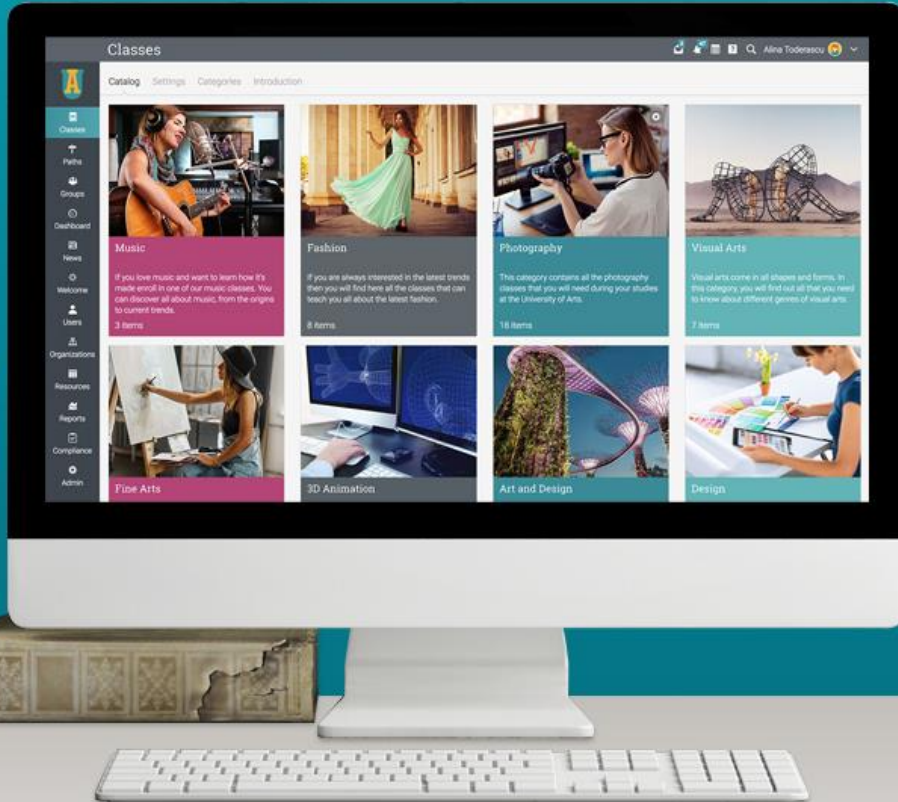


Micro-learning in online distance environment



Jen Padernal

PeLS Board of Director

Global eLearning Director, Cypher Learning

What is
micro-
learning?





- Bite-size approach to learning
- Bite-sized exercises
- Bite-sized content
- Learning nuggets
- Duration is short (3 to 10 minutes)

Jen Padernal
Hobbies:
Road trips
Camping

baking



What do you do when
you have a new gadget?





Each student is unique

They learn differently

They create differently

A young girl with blonde hair is holding two brown eggs over her eyes, effectively blindfolding herself. She is wearing a light green sweater. The background is a plain, light-colored wall. A green rectangular text box is overlaid on the image, containing the text "Different styles and ways to learn".

Different styles and ways to learn

Long lectures, long classes, long modules, long training



stressed

Burnout

Heartburn

Too hard to digest

Micro-learning helps



Types of micro-learning content

- Text (short phrase or paragraph)
- Images (infographic, illustrations)
- Interactive Activities (quizzes, gamification)
- Audio
- Video



A group of diverse students in a classroom setting, with a teal overlay and the text "Why Micro-learning?". The students are gathered around a table, looking at a tablet or laptop. The background is a blurred classroom scene with a teacher and other students.

Why Micro-learning?

Benefits of Micro-learning in an online distance environment

- Fast delivery
- Wide variety of catalog of content
- Engaging
- Easy to digest
- Easy to absorb
- Increase retention
- More focused
- Reduces reading fatigue
- Supports learning on demand



Future-ready skills

Collaboration

Creativity

Computational Thinking

Real world problem solving

Creative communicator

INCLUSION

Digital citizenship



Industry Trends in employee training

- eLearning for employee engagement
- eTraining
- **Gamification**
- Mobile learning
- **Video-based training**
- **Micro learning**
- Personalized employee learning
- **Learning on Demand**





How to get started
with Micro-learning?

Start with a PIE



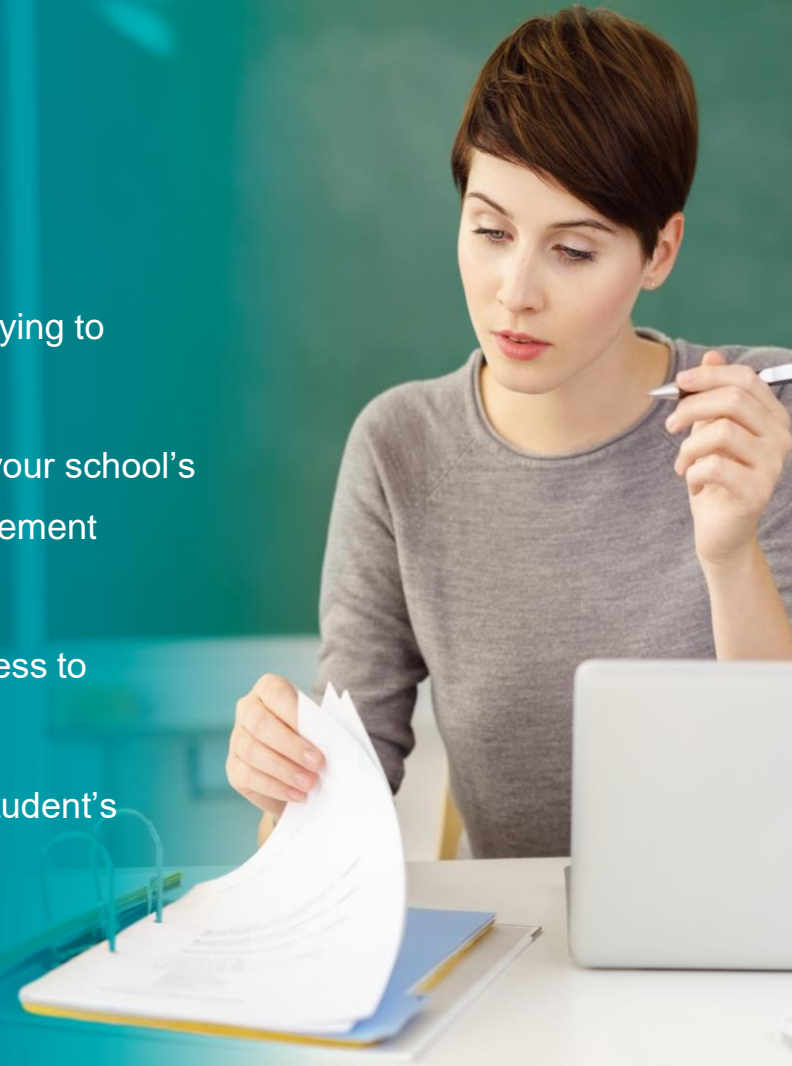
PLAN

IMPLEMENT

EVALUATE

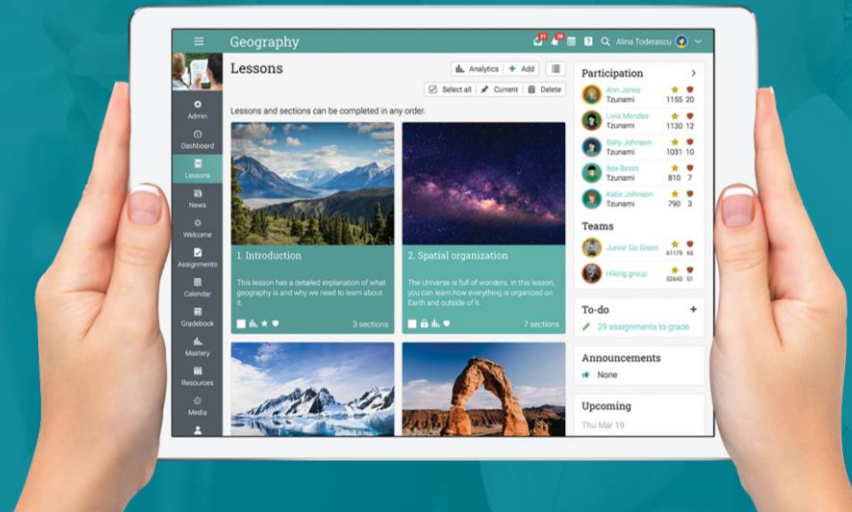
Planning

- **Clear objectives** – what are your goals and what are you trying to achieve
- **Assess your school's capability** – it's important to know your school's technological and pedagogical capability to deliver and implement micro-learning approach to teaching.
- **Identify barriers and constraints** – consider learners' access to technology and internet access at home.
- **Get to know your students** – it's important to know your student's learning styles so you can develop the right approach.
- **Teacher readiness** – capacity building for teachers on the use of technology that aligns with pedagogy and content.



Implement

- **CONTENT AVAILABILITY** – Make sure that your content is readily available and accessible to students in the digital platform that you are using. It also helps when your content aligns with your technology and pedagogy. For example, if you are offering micro-learning learning, you need to have digital platforms that supports this type of instruction.



Evaluate for Success!



GUIDE



MONITOR



ADJUST

Tips to a successful Micro-learning

- Have clear goals and objectives
- Identify barriers
- Innovate, recreate, redesign your content
- Create media-rich content
- Utilize gamification to boost engagement
- Assess and track student progress using short assessment (e.g. pop-up quizzes)
- Create concise content
- Should be learner centric
- Consider accessibility
- Choose the right tool

Remember our role as educators



Facilitators of learning



Spark Ideas



Share Knowledge



Guide



Prepare our
students' for
the future

Thank you!

Jen Padernal
Global Director eLearning Integration, CYPHER LEARNING
Board of Director, PeLS

References:

<https://elearningindustry.com/what-is-microlearning-benefits-best-practices>





The Dr. Mariano Lao Webinar Series on Online Distance Teaching and Learning
Organized by the Dr. Mariano Lao Innovation, Creation, & Invention Laboratory, Silliman University
18 July 2020

Teaching and Learning of a Professional Course Online: Some Lessons Learned in the Context of Microlearning


ALVYN KLEIN A. MANA-AY, MPH, MSc, RND
Assistant Professor, HE-Nutrition & Dietetics Department
College of Education, Silliman University

Outline

- Background
- Overview of an Evaluation of an ODL-delivered Professional Course
 - “What we did RIGHT”
 - “What we could have done BETTER”
- A Few Takeaways

Background

ND 14 (Basic Nutrition)

 Change cover image

CONTENTS



Course Introduction

Progress: 0 / 4

Unit 1: Introduction to Nutrition

Progress: 0 / 16

GOOGLE MEET SESSION

Progress: 0 / 1

Unit 3: Energy Balance, Metabolism, and Body

Composition

Progress: 0 / 2

Unit 4: Basic Tools in Nutrition

Progress: 0 / 9

MIDTERM EXAM - LECTURE

Progress: 0 / 1

POST-MIDTERM UNIT EXAMS

Progress: 0 / 2

Online Distance Learning

Course Introduction

Welcome to ND 14 - Basic Nutrition summer class. This course will be delivered fully online primarily using Silliman's Learning Management System known as SOUL (Silliman Online University Learning).

The course centers on the fundamentals of nutrition science as they relate to human life and growth. It includes the study of nutrients – their nature, functions, interrelationships, and utilization in the body, food sources, requirements and deficiencies. Laboratory experience includes use of dietary tools in the planning of nutritionally adequate, economical, safe, and aesthetically pleasing meals.

[Edit section](#)

OPEN FORUM

[Announcements](#)



Recently accessed courses



ND 14 (Basic Nutrition)



Learning S
mySOUL

Private files

Calendar

Timeline

Next 30 days



Course Introduction

Welcome to ND 14 - Basic Nutrition summer class. This course will be delivered fully online primarily using Silliman's Learning Management System known as SOUL (Silliman Online University Learning).

The course centers on the fundamentals of nutrition science as they relate to human life and growth. It includes the study of nutrients – their nature, functions, interrelationships, and utilization in the body, food sources, requirements and deficiencies. Laboratory experience includes use of dietary tools in the planning of nutritionally adequate, economical, safe, and aesthetically pleasing meals.

Announcements

ND 14 (Summer) Online

Pre-midterm Topics:

LECTURE					LABORATORY				
Content	Teaching – Learning Strategy		Assessment Strategy		Content	Teaching – Learning Strategy		Assessment Strategy	
	Activity	Online Method	Task	Online Method		Activity	Online Method	Task	Online Method
Introduction 1. Course Objectives 2. Definitions of Basic Terms 3. History of Nutrition 4. The Philippine Nutrition Situation 5. The Philippine Plan of Action for Nutrition c/o A.K.A.M. April 20, 3-6PM Review discussion on ADME (focus: Anatomy and Physiology of the GIT)	<ul style="list-style-type: none"> - Lecture-discussion (enhanced) - Individual Seatwork - Literature review 	<ul style="list-style-type: none"> - Video-con - Upload guide question - Upload article for review (PPAN 2017-2022) including guide questions 	<ul style="list-style-type: none"> - Completion of Activity Sheet on Definitions - Answer guide questions - Completion of Question-guided Paper on PPAN 2017-2022 	<ul style="list-style-type: none"> - Submission of activity sheets (PDF) - Upload answers to guide questions (PDF) - Upload answers to guide questions (PDF) <p style="text-align: right;">Deadline: April 21 at 12NN</p>	Introduction 1. Course Objectives 2. Laboratory Procedures and Requirements Exercise on the Determinants of food Eating Habits and Preferences of an Individual April 21 1-4PM: introduction, instructions for individual work 6-9PM: individual work	<ul style="list-style-type: none"> - Discussion - Individual Learning/ Work 	<ul style="list-style-type: none"> - Video-con - Upload exercise sheets (upload before April 21) 	<ul style="list-style-type: none"> - Individual completion of Exercise Sheets - Individual completion of Reflection Paper 	<ul style="list-style-type: none"> - Upload Exercise Sheets (PDF) - Upload Reflecti on Paper (PDF) <p style="text-align: right;">Due for both: 10PM</p>

Quiz/Exam/Deadlines (APRIL)

04/21/2020 (Deadline for Submission)

12:00 NN - Completion of (1) Activity Sheet on Definitions and (2) Question-guided paper on PPAN

10:00 PM – (1) Lab Exercise Sheets on Determinants of Food Eating Habits and (2) Reflection Paper

04/22/2020

11:00 – 12:00 NN: Quiz on Basic Concepts (After Discussion)

04/23/2020 (Deadline for Submission)

6:00 PM – (1) Lab Exercise Sheet on Qualitative Dietary Tools and (2) Reflection Paper

04/24/2020

4:00 – 5:00 PM: Quiz on Energy Balance (After Discussion)

04/25/2020

1:00 – 2:00 PM - UNIT EXAM: Energy Balance

4:00 – 5:00 PM: Quiz on Basic Tools (After Discussion)

11:59 PM – Deadline for Submission of Critique Paper on AND's Article in PDF

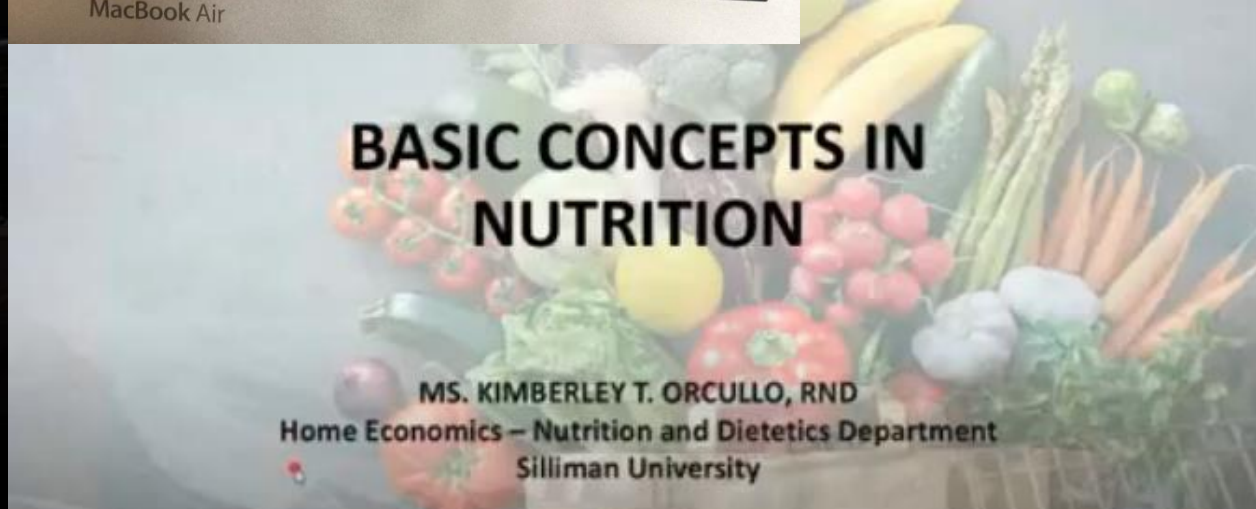
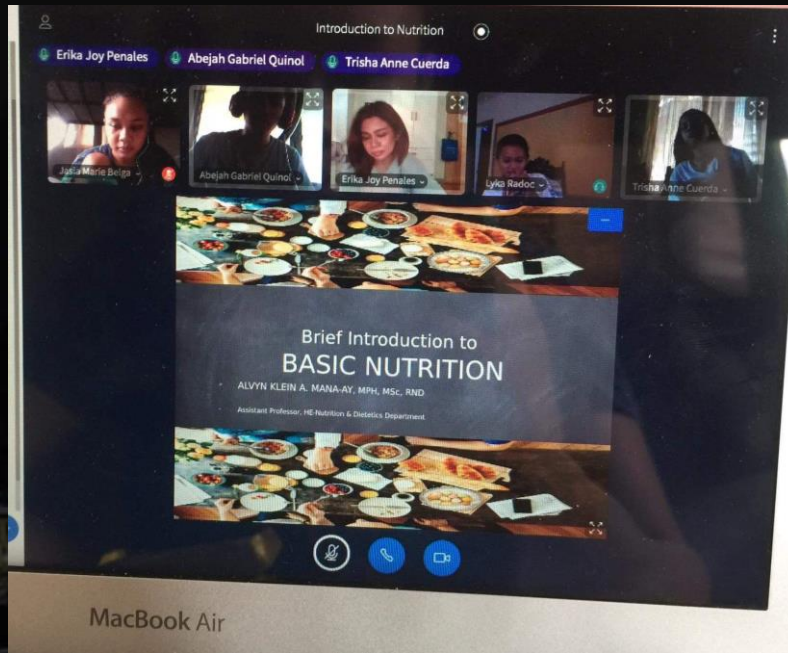
04/30/2020

12:00 NN – Deadline for Submission of Computations (Using themselves as subject)

4:00 – 5:00 PM – Quiz on CHO (After Discussion)

MAY 2020						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	1	2
					LEC: Protein (9:00 – 12:00 NN) LAB: Determining CHON Content in Foods (2:00 – 5:00 PM)	LEC: Fat (2:00 – 5:00 NN) LAB: Determining Fat Content in Foods (6:00 – 9:00 PM)
3	4	5	6	7	8	9
		LAB MIDTERM EXAM (1:00 PM)	LEC MIDTERM EXAM (2:00 PM)	LAB: Cooking Vlog	LEC: Fat-Soluble Vitamins (9:00 – 12:00 NN)	
10	11	12	13	14	15	16
	LEC: Individual Report on Water-soluble Vitamin (9:00 – 12:00 NN) LEC: Minerals (2:00 – 5:00 PM)	LAB: Planning of a meal rich in vitamins and minerals (2:00 – 5:00 PM) LAB: Individual Work (6-9PM)	LAB: Preparation, and evaluation of a meal rich in Vitamins and Minerals (Cooking Vlog)	LEC: Water and Electrolyte Balance (9:00 – 12:00 NN) LAB: Discussion (2:00 – 5:00 PM) LAB: Individual Work (6-9PM)	LEC: Nutrient Utilization and Interrelationships (2:00 – 5:00 PM)	LAB: Digestive Process (9:00 – 12:00 NN and 1:00-4:00 PM)
17	18	19	20	21	22	23
	LEC: Discussion					

Video-Conferencing Platforms



Overview of an Evaluation of an ODL-delivered Professional Course

On Students' Level of Satisfaction on ODL

■ Highly Satisfied ■ Satisfied ■ Dissatisfied ■ Highly Dissatisfied



F2F vs. ODL: Learner's Interactions with Classmates

- 100% for Face-to-face
- *“Easier to ask classmates”*
- *“Face-to-face allows for proper communication; knowledge-sharing is more effective”*
- *“Face-to-face interactions makes you more focused and finish assigned work faster”*
- *“Interactions on ODL isn't the same”*
- *“Personal collaborative work more advantageous”*

F2F vs. ODL: Learner's Interactions with Instructors

- 100% for Face-to-face
- *“Connectivity is an issue”*
- *“Communication is more effective in face-to-face learning”*
- *“Face-to-face more personal”*
- *“Facial expressions and other gestures will help instructors determine the learners' state of interest and sincerity”*

F2F vs. ODL: Learner's Level of Engagement

- 100% for Face-to-face
- *“ODL was challenging; connectivity is an issue; instructors provided opportunities for clarifications through chat”*
- *“Easier to understand difficult lessons in face-to-face; connectivity is an issue”*
- *“Level of disinterest with ODL; hard to stay focused in front of a screen”*
- *“High level of engagement in face-to-face”*

F2F vs. ODL: On Ease of Completing Coursework

- Majority for Face-to-face
- *“Takes much of your time; exposed to devices longer”*
- *“I’m tempted to check social media than doing coursework”*
- *“Easier when done face-to-face with others”*
- *“Instructor’s guidance in completing work more convenient face-to-face”*
- Some found both to be equal or the same

“What do you like BEST in ODL?”

- “The whole thing was the best.”*
- “I like how the course has been delivered. PPT are organized.”*
- “I like that despite the struggle, the whole class was cooperative.”*
- “Instructors gave their best.”*
- “The meetings. I retained information easier.”*
- “Advantage of organized and readily available learning materials; easy access of data.”*

“What do you like LEAST in ODL?”

- *“Long hours; you lose focus, and it’s stressful.”*
- *“Short period to finish case studies.”*
- *“Unstable connection.”*
- *“Unstable internet and lack of resources.”*
- *“Pacing of the lessons. I wish there had been more time for elaboration.”*
- *“We are sometimes hesitant to interact with our instructors.”*

Some notes from the Instructors:

- Learners' independent learning more pronounced
- Creativity more manifested
- Professional development for instructors very important
- Guidance and support from the Administration is critical
- Organizational skills are key success drivers for teachers
 - Set up an “office” at home
 - Plotting work schedules
 - Preparing online materials ahead of time

“What We Did RIGHT”

Sample: Video

LEARNING OBJECTIVES	CONTENTS	TEACHING-LEARNING STRATEGIES	ODL METHOD	INTEGRATED MICROLEARNING
<p>Define and explain the common terms and basic concepts in Nutrition.</p> <p>Discuss and trace the development of Nutrition as a science.</p>	<p>Introduction</p> <ol style="list-style-type: none"> 1. Course Objectives 2. Definitions of Basic Terms 3. History of Nutrition 4. The Philippine Nutrition Situation 5. The Philippine Plan of Action for Nutrition 	<ul style="list-style-type: none"> - Lecture-discussion (enhanced) - Individual Seatwork - Literature review 	<ul style="list-style-type: none"> - Video-con - Upload guide question 	<ul style="list-style-type: none"> - Learners watch the video on the “Evolution of Human Nutrition” (link provided in SOUL) - Learners interact in discussion board

Embedding Videos on SOUL



The video player content is split into two main visual sections. On the left, a line graph titled "Past and projected fibre overnight rates in selected O.E.C.D. countries" plots "Fibre overnight" (y-axis, 20% to 80%) against "Years" (x-axis, 1970 to 2020). The graph shows several data series for different countries, with some showing a steady increase over time. On the right, a large image depicts a modern human figure holding a coffee cup, standing next to a smaller, more primitive-looking human figure holding a spear. Below these images is a horizontal sequence of six figures illustrating the evolution of man from an ape-like ancestor to a modern human.

mySOUL live support



Discussion Board Guide

Silliman Online University Learning

 My Courses

Home / My Courses / ND 14 (Basic Nutrition) / Unit 1: Introduction to Nutrition

ND 14 (Basic Nutrition)

Discussion Board for the Video on: "The Evolution of Human Nutrition"

This chat room is provided specifically to provide us all an avenue to discuss offline your learning insights after watching the video on "Evolution of Human Nutrition."

To jumpstart our discussion, perhaps you can ponder on the following guide questions:

1. What theme/topic/concept/idea did you find interesting? Why do you think this is interesting?
2. Was there anything in the video that you found yourself having a strong feeling for or against? What was it and why did you feel that way?

You are also encouraged to share as much as you can. Feel free to post your comments, ask questions to others' responses, or respond to any response.

Learner-Learner Interactions via Discussion Board

L 22:47: [redacted] has just entered this chat

22:47 [redacted]

That is interesting :) "Ancestral humans had to make a change to a high-quality diet to allow us to evolve to a larger brain size. It was no more complicated than that."

L 22:47 [redacted]

I find it interesting to the idea that there is no person who can live by eating only raw food, the speaker in the video says it is difficult to find evidence that a person can survive by just eating raw food. The idea is interesting because I thought that eating raw is more healthy than cooked, eating raw food has less in calories and can lead to unhealthy weight loss.

22:47 [redacted]

Leslie C. Aiello pointed that out, I found it interesting that evolution was thought to be that way.

22:49 [redacted]

Yup, I found that bit interesting too. And that raw food apparently gives us less energy

22:50 [redacted]

true. it has widen my perception with how cavemen will survive. and i really thought that there were really brutal but i didn't know that they also live like us in their own ways

22:50 [redacted]

caveman has survived*

22:51 [redacted]

Also that chewing cooked food gives us an additional 4 hours to our day lol imagine spending 4 extra hours just chewing

“What We Could Have Done BETTER”

Sample 1: *Short Texts*

LEARNING OBJECTIVES	CONTENTS	TEACHING-LEARNING STRATEGIES	ODL METHOD	INTEGRATED MICROLEARNING
<p>Define and explain the common terms and basic concepts in Nutrition.</p> <p>Appreciate the concepts and principles of human nutrition in sustaining optimal growth and development of individuals.</p>	<p>Basic Concepts in Nutrition</p> <ol style="list-style-type: none"> 1. Various disciplines related to nutrition 2. The role of nutrition in the development of a healthy mind and body 	<ul style="list-style-type: none"> - Lecture-discussion (enhanced) - Literature Review 	<ul style="list-style-type: none"> - Video-con - Upload article 	<ul style="list-style-type: none"> - Abstract of AND's Position Paper on The Role of Nutrition in Health Promotion - Chronic Disease Prevention

Short Texts

FROM THE ACADEMY

Position Paper



Position of the Academy of Nutrition and Dietetics: The Role of Nutrition in Health Promotion and Chronic Disease Prevention

ABSTRACT

It is the position of the Academy of Nutrition and Dietetics that primary prevention is the most effective and affordable method to prevent chronic disease, and that dietary intervention positively impacts health outcomes across the life span. Registered dietitians and dietetic technicians, registered are critical members of health care teams and are essential to delivering nutrition-focused preventive services in clinical and community settings, advocating for policy and programmatic initiatives, and leading research in disease prevention and health promotion. Health-promotion and disease-prevention strategies are effective at reducing morbidity and mortality and improving quality of life, and have a significant impact on the leading causes of disease. By applying these principles within a social ecological theoretical framework, positive influence can be applied across the spectrum of engagement: at intrapersonal, interpersonal, institutional, community, and public policy levels. Through the application of efficacious and cost-effective interventions, registered dietitians and dietetic technicians, registered, can positively impact public health as well as health outcomes for the individuals that they counsel. This position paper supports the "Practice Paper of the Academy of Nutrition and Dietetics: The Role of Nutrition in Health Promotion and Chronic Disease Prevention" published on the Academy's website at: www.eatright.org/positions.

J Acad Nutr Diet. 2013;113:972-979.

POSITION STATEMENT

It is the position of the Academy of Nutrition and Dietetics that primary prevention is the most effective and affordable method to prevent chronic disease, and that dietary intervention positively impacts health outcomes across the life span. Registered dietitians and dietetic technicians, registered, are critical members of health care teams and are essential to delivering nutrition-focused preventive services in clinical and community settings, advocating for policy and programmatic initiatives, and leading research in disease prevention and health promotion.

Sample 2: *Narration thru Vlogging*

LEARNING OBJECTIVES	CONTENTS	TEACHING-LEARNING STRATEGIES	ODL METHOD	INTEGRATED MICROLEARNING
<p>Define and explain the common terms and basic concepts in Nutrition.</p> <p>Identify and explain the uses and functions of the basic tools in Nutrition.</p>	<p>Basic Tools in Nutrition (description, uses, and interpretation)</p> <ol style="list-style-type: none"> 1. Basic Food Guides, Food Pyramids, Dietary Guidelines 2. Philippine Dietary Reference Intakes 3. Food Exchange Lists 4. Food Composition Tables 5. Nutrient Labels 6. Computer Software in Nutrition 	<ul style="list-style-type: none"> - Lecture-discussion (enhanced) 	<ul style="list-style-type: none"> - Video-con - Upload material 	<ul style="list-style-type: none"> - “Bag of Chips” and nutrition facts; instructor-developed vlog (e.g. while in a grocery store)

Micro Vlog

The image shows a screenshot of a Google Drive interface. At the top, the Drive logo and a search bar are visible. The breadcrumb path is "My Drive > Classroom > ND 14 SUMMER 2020 > Cooking Vlog". The left sidebar shows navigation options like "New", "Priority", "My Drive", "Shared drives", "Shared with me", "Recent", "Starred", "Trash", and "Storage" (13.2 GB used). The main area displays a grid of video thumbnails. A large, semi-transparent color calibration chart is overlaid on the center of the grid. The visible thumbnails include:

- Thumbnail 1: "B2D8106F-25DC-4206-A4AC..."
- Thumbnail 2: "Carbohydrate-QUINOL.mp4"
- Thumbnail 3: "Carbohydrates_HD 720p.mp4"
- Thumbnail 4: "Cooking Vlog (May 7, 2020 a..."
- Thumbnail 5: "Cooking Vlog" (with a play button icon)
- Thumbnail 6: "10-AC96-4A6E-9553..."
- Thumbnail 7: "Fat-QUINOL.mp4" (with the text "slice into cubes" overlaid)
- Thumbnail 8: "FATS_HD 720p.mp4"
- Thumbnail 9: "IMG_2569.MOV"
- Thumbnail 10: "IMG_2572.MOV"

At the bottom right, there is a right-hand sidebar with a calendar icon showing "31", a lightbulb icon, a checkmark icon, and a plus sign. The Silliman University logo is visible in the top right corner of the Drive interface.

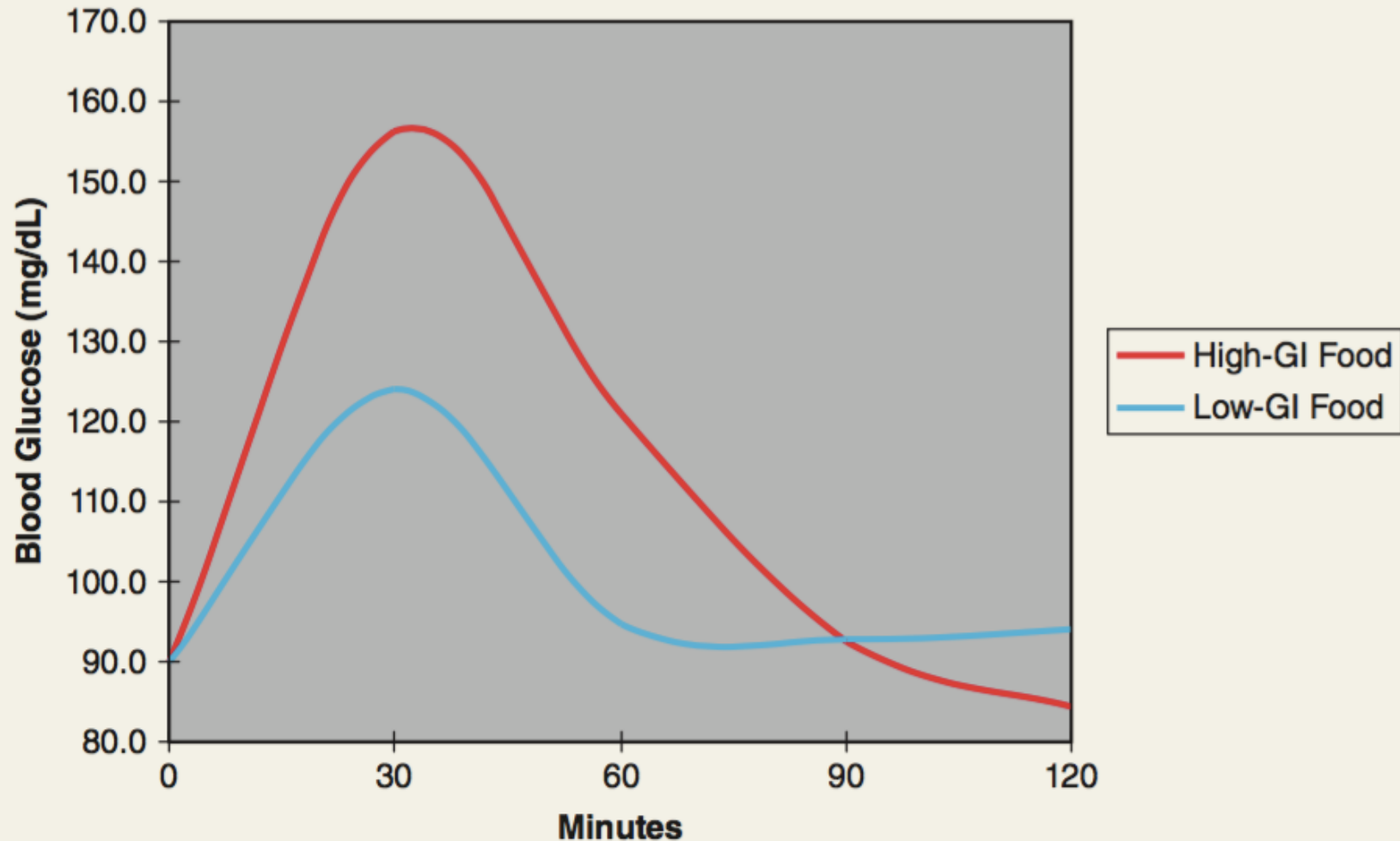
Sample 3: *Single-picture Story*

LEARNING OBJECTIVES	CONTENTS	TEACHING-LEARNING STRATEGIES	ODL METHOD	INTEGRATED MICROLEARNING
<p>Define and explain the common terms and basic concepts in Nutrition.</p> <p>Identify and relate the nutrients according to concentration and structure, essentiality, functions, food sources, symptoms of deficiency and excessive intake.</p> <p>Explain and relate the nutrient interrelationships in terms of digestion, absorption and utilization of food.</p>	<p>The Macronutrients (Carbohydrates, Proteins, Fats)</p> <ol style="list-style-type: none"> 1. Terminology 2. Classifications 3. Functions 4. Food Sources 5. Digestion, Absorption 6. Human Requirements and RNI 7. Effects of Excessive and Deficient Intakes 	<ul style="list-style-type: none"> - Lecture-discussion (enhanced) 	<ul style="list-style-type: none"> - Video-con/Pre-recorded Video - Upload material (before April 30) 	<ul style="list-style-type: none"> - Glycemic Index

Single Picture

FIGURE NP2-1 Blood Glucose Response to High-GI and Low-GI Foods

Foods that are digested slowly have a low glycemic index. These foods cause a gradual and more moderate response in blood glucose than do foods with a high glycemic index.

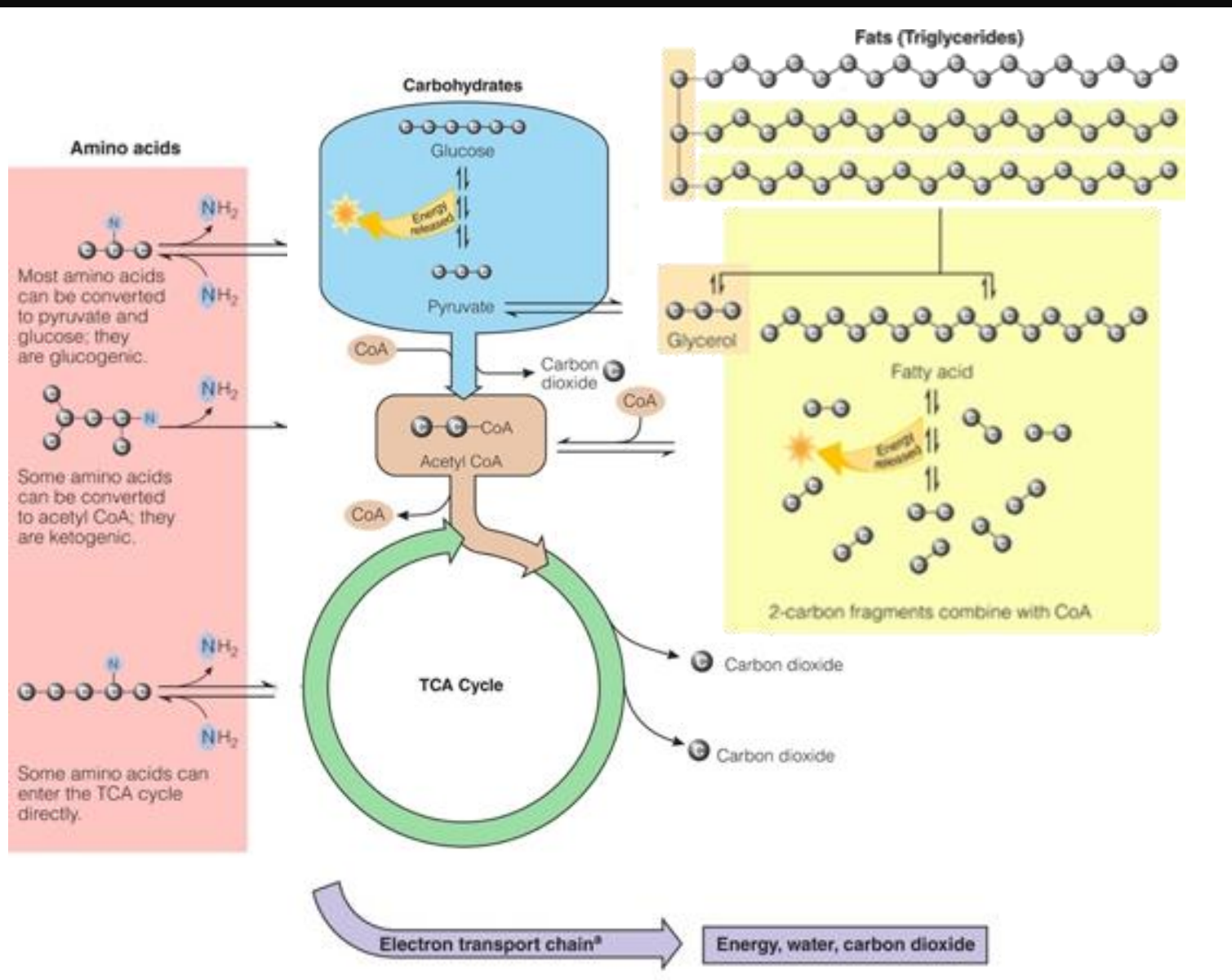


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Sample 4: *Multiple-picture Story*

LEARNING OBJECTIVES	CONTENTS	TEACHING-LEARNING STRATEGIES	ODL METHOD	INTEGRATED MICROLEARNING
<p>Define and explain the common terms and basic concepts in Nutrition.</p> <p>Explain energy metabolism and factors affecting energy requirements.</p>	<p>Energy Balance</p> <ol style="list-style-type: none"> 1. Terminology (energy, calorie, calorimeter, metabolism, basal metabolism, basal metabolic rate) 2. Measurement of Energy Exchange of the body (direct calorimetry, indirect calorimetry) 3. Basal Metabolism Factors 4. Factors Influencing Total Energy Requirements 5. Effects of Energy Imbalance 	<ul style="list-style-type: none"> - Lecture-discussion (enhanced) 	<ul style="list-style-type: none"> - Video-con 	<ul style="list-style-type: none"> - Metabolic pathways of energy-yielding nutrients

Multi-Picture Story



A Few Takeaways

Advantages of Integrating Microlearning

- Does not overwhelm learners that often lead to loss of interest
- Bite-size information allows better understanding
- Overall, increases retention of information

Potential Pitfalls Microlearning

- May not be enough to meet the objectives of a course
- Specific strategies require specific LMS feature/s
- Not all learners are “digitally advantaged”
- Reduces physical interaction between learners



PowerPoint background:

Solis, N.M. (Photographer). (2019). *Silliman campus aerial view*. [Photograph].



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