Session Co-Chairs

Emily Ho, PhD

Professor

Endowed Director of Moore Family Center for Whole Grain Foods, Nutrition and Preventive Health

2015 Whole Grain Summit Co-Chair

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Associate Professor & Extension Nutrition Specialist

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Digital Nutrition Education and Dietary Assessments for Health and Fitness at Our Finger Tips

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Disclosure Information: I have no financial relationship to disclose.

ACT Study AES Projects WAVE Project New

2001

Carol Boushey, PhD, MPH, RD
[Nutr. Epi. & Dietary Assessment]

Kay Hongu, PhD, MEd, RD [Nutrition and Exercise & Sport Sciences]

Jonathon Richter, PhD
[Immersive Learning in the Virtual Space]

Paula Quatromoni, DSc, RD [Nutrition Epidemiology & Edutainment]

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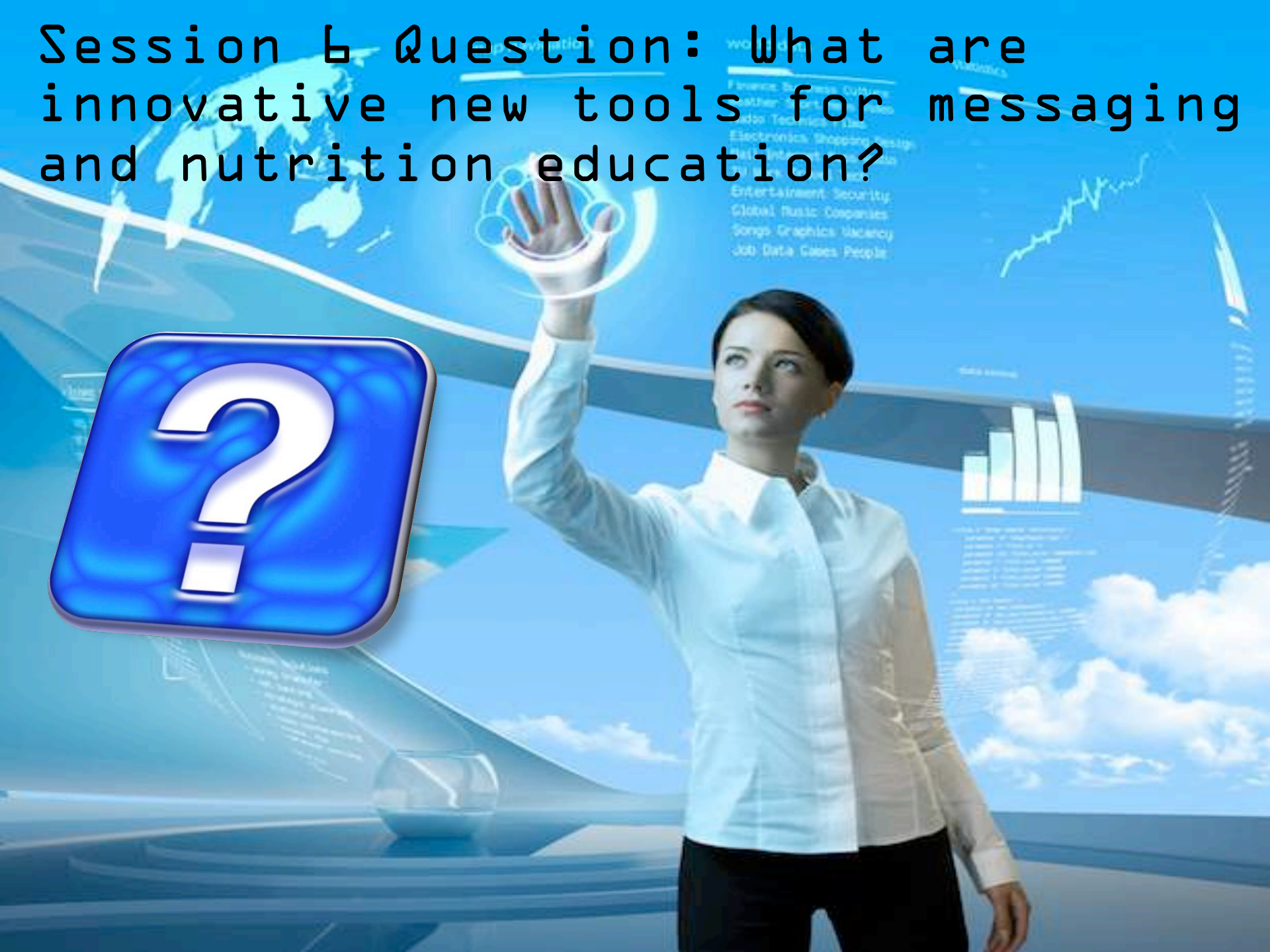
Session 6 Question: What are innovative new tools for messaging and nutrition education?



Digital nutrition education and dietary assessments for health and fitness at our finger tips

Changes and challenges for educators and researchers

College of Public Health and Human Sciences

by Siew Sun Wong, PhD

Changes in Nutrition Education and Dietary Assessments

Physically present in-person

Fully automated

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SO-LO-MO

(Social – Local – Mobile)

Stay connected 24/7

Instant presence with no traveling necessary

Your personalized data follows where you go

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Digital Nutrition Education & Dietary Assessments

Augmentation

Augmented reality garden

Lifelogging (e.g., Fitbit)

External

Intimate

Mirror world of whole grain food restaurants

Exercise fueling quest in the virtual world

Simulation

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Learning Motivation

Content

Profile & Goal Setting

Tracking & Reporting

Assessment

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Social

Reward

Food Composition Database

Data Security & Inter-operabi-lity

Supporting Products & Services

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- **Learn on-demand**
- **Interactive experiential learning including mixed reality** (virtual cooking, gardening, shopping; use of robots for autistic children)

Learning Motivation

Challenges: How can we…

1. Engage users for an extended period?
2. Scale up field testing of technology-aided nutrition education programs?
3. Train more trainers (e.g., Extension educators, volunteers, caregivers, and communities) in cost-effective and sustainable ways?

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Content

- **Readily available** via text, WWW, including pushed info - the information finds us
- **Extension** provides creditable info from **cell to community**
- **Media rich** - Easier to understand interactive 3D, visual, sound, movement through AR, VW, VR, including simulations of consequences before/at point of choice
- **Scalable** quickly in the virtual space

Challenges: How can we…

1. Best simulate content in the virtual space?
2. Design productive screen time?
3. Better respond to emerging public health nutrition needs through Extension and partners in the virtual space?

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Profile
& Goal
Setting

- **Physical- and/or virtual-world** presence

Challenges: How can we…

1. Track and link user's physical-world and virtual-world profiles?

2. Follow through long-term goals and changes in personal health, especially in food intake and physical activity?

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Tracking & Reporting

- **Real-time or convenient monitoring** at individual and environmental levels
- **Wearables** - device, apparel (garment, shoes, +LED)
- **GPS, RFIDs, digital video camera**

Challenges: How can we…

1. Provide affordable real-time, effortless, safe and accurate tracking at personal level?
2. … at the environmental level?
3. Provide seamless mixed-reality tracking?

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- **Real-time or quick personalized feedback, interpretations, and recommendations** from experts or artificial intelligence --> quicker & ongoing behavior change
- **Stealth health** - Smart Plate, hidden scale
- Use **virtual world log server data** to support health and fitness behavior change

Assessment

TADA
technology assisted dietary assessment

Challenge: How can we…

1. Provide low-cost real-time, multi-platform, multi-channel, personalized feedback through artificial intelligence & robots?

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In closing, the Internet of Things, combined with our enthusiasm to improve public health nutrition, will make behavioral changes feel more personalized and persuasive, less explicit and visible, yet more quickly and intelligently!
Big button for joint innovations

Invited Speakers

Paula Quatromoni, DSc, RD

Boston University, Department of Health Sciences

KidsCOOK Productions

Using Entertainment to Educate: KickinNutrition.TV

2:10

Jonathon Richter, PhD

University of Oregon

Director of The Center for Learning in Virtual Environments

Virtual Worlds and Technology in Health Education

2:30

Invited Speakers

Kay Nobuko Hongu, PhD, MEd, RD

Associate Professor & Extension Specialist

University of Arizona

Social Media and Mobile Devices in Nutrition Education

2 : 50

Carol Boushey, PhD, MPH, RD

Professor

University of Hawaii

Director of Nutrition Support Shared Resource at the U. of Hawaii Cancer Center

Innovative Tools for Dietary Assessment

3 : 10