Developing iPhone Apps to Support Student Learning

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Todd Shoepe, EdD, Health and Human Sciences
Stephanie August, PhD, Electrical Engineering and Computer Science
Significance

American adult obesity was 34% in 2008
  Flegal, et al., 2010

Those who are successful at weight loss track calories, record fat, and measure food portions
  Kruger, et. Al., 2006

Multimodal educational experiences that integrate multiple learning modalities can improve learning
  Gellevi, et al., 2002
iEnergy
iEnergy

LMU|LA  Loyola Marymount University
iEnergy

Meal List

Gdyh
Lunch
1/16/13, 9:16 PM

Baja Cantina
Dinner
8/15/12, 9:42 PM

Mmmmmm
Dinner
8/1/12, 8:36 PM

Soup
Lunch
8/1/12, 1:02 PM

Costco
Lunch

210 lbs (0%) 210 ➔ 200

New Meal

Meal
Description

Type

Before
After

add photo
add photo

Meal
Home meal

Before
After

Dinner

add photo
add photo
iEnergy

User Name: research
Password: ********

Login

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Meal Administration

This section allows you to review meals submitted by iEnergy users. You can also use this section to segment newly finished meals.

**tshoep@lmu.edu's Meal Information**

- **Meal Type**: Dinner
- **Start Time**: 1/17/2013 6:11 PM
- **End Time**: 1/17/2013 6:13 PM
- **Confirmed Time**: 1/17/2013 6:22 PM
- **Total Plates**: 1

**Meal Photos** (for larger images click photos)

- **Before Top**
- **Before Side**
- **After Top**
- **After Side**

**User Supplied Notes**
iEnergy
User Supplied Notes:
Two hamburger patties extra lean grilled. Mashed potatoes with tbsp butter, salt, pepper. Broccoli. Whole wheat toast.

Enter Nutritional Information Here

0.5 cup broccoli, std 22
0.5 cup Mashed Potatoes, prep/recipe w/whole milk & butter (USDA 119
4.0 oz Beef, ground, hamburger patty, pan bried, 10% fat (USDA SR- 231
1.0 each Bread, whole wheat, slice (USDA SR-21) 69
Day Total 441
iEnergy

Meal List

Home meal
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Lunch

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Review Meal

Before

After

Nutritional Information

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0.5 cup Mashed Potatoes, prep f/recipe w/whole milk & butter (USDA 119

Notes

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Developing technology for the classroom is time consuming

- Develop prototype: 3.5 months
  - Local data storage
  - Remote data storage
  - Researcher and developer views (back-end)
  - User interface

But not
  - Communication between local and remote databases…

- Convert prototype to operational system: 18 more months
- Find someone to do the job: 9 months
- Manage the project
- Administer and maintain the system
Developing technology requires professional resources

• Students are here to *learn* the skills required to
  Produce the desired product
  On time
  Within budget
• Full-time faculty lack the resources needed to produce a commercial product
• Grants are set up to provide faculty with money and goods
  Not (professional) programming support
But it can be done... sort of

- Teambuilding + university resources + lobbying + perseverance
  = innovative systems to support students’ educational experience
- iEnergy application went live July 23, 2013!
- iOS 6.01 was released November 1, 2013
  Three months after product release
  iEnergy mobile app does not work on iPhones with the update
What can be done?

• Collaborate, cooperate, pool knowledge and resources
• Plan for administration, maintenance, complexity
• Find time, make time
• Be persistent, resourceful
• Share results
• Hope that technologists develop adaptive systems
  Servers that publish their changes
  Clients that know how to adapt to those changes
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