Design + Nursing + Business
Solving Healthcare Problems from the Grassroots
Design + Nursing + Business

American Public Health Association
October 2012 Annual Meeting
Undergraduate Public Health Education Panel
Roberta Lee, RN, MSN, MPH
Steven Doehler, BFA, MA
Bhavik Joshi, BE, MBA, MS
Being “practice” disciplines, Nursing and Design are natural collaborators.

**Similar goals:**
Nursing is focused on helping people maximize their function and wellbeing.

**Ultimate goal** - helping people live their best lives.

Design is focused on creating products and services that make living better.

**Ultimate goal** - making lives better.
Who makes it work

DAAP
• Steven Doehler: Asst. Professor Industrial Design

College of Nursing
• Evelyn Fitzwater: Asst. Professor Industrial Design
• Robin Lee:
• Charles Puchta
• Bonnie J. Brehm, PhD, RD, LD
• Yin Xu, PhD, RN
How a topic is selected

- Community Health Issues
- What areas need a product/service solution to foster change
- What topic area meet the pedagogical needs for design and nursing students

Where do the ideas come from
- Undergraduate Capstone research
- The Center of Aging with Dignity
- Community health partners
- Faculty research

Pre-Course Development
- Will the topic stand on its own or will it need to be altered
- How will the topic maximize the students experience
How a topic is selected

We start in the College of Nursing

Where do the ideas come from?

Pre-Course Development
Common Processes

**Design**

- **Research**
  - User centered research, task analysis
  - Literature reviews, interviews and observations

- **Conceptualization** (Identify)
  - Develop concepts / create, design

- **Validation** of concepts:
  - Validate with interviewees, end users, experts (faculty, advisors)

- **Implement** plan (Prototype)

- **Critique/Evaluate** product/service design protocol

- **Refine** Consistently iterating and refining

**Nursing**

- **Assessment** complaints, symptoms, problems, etc.

- **Identify** problem (conceptualize)
  - Plan Intervention (develop/create)

- **Validate** with patient (expert)

- **Implement** plan (put nursing care plan (intervention) into practice)

- **Evaluate** (critique) outcome of intervention

- **Refine** intervention plan as needed

- **Re-Evaluate**

- **Finalize** revised plan
**Business + Marketing**

**Research**
- **Assess:** target audience, market potential, competitive landscape

**Conceptualization**
- **Identify:** new growth opportunities
- **Develop:** positioning strategies

**Validate**
- **Validate:** unique value propositions with target audience

**Implement**
- **Implement:** test business plan & marketing prototypes in pilot market
- **Evaluate:** sales in pilot market
- **Critique:** decision variables

**Refine**
- **Refine:** business & marketing variables

**Re-Evaluate**
- **Re-Evaluate**

**Finalize**
- **Finalize:** strategic business & marketing plan for the year
Research-Role Play
Research-Results

safe after sixty
QUESTIONNAIRE RESULTS

We reached a population sixteen (16) older adults through a questionnaire designed to understand their current relationships with financial institutions, comfort level with independence and technology, as well as response to being at risk.

safe after sixty
SITUATIONAL PROFILES

highly vulnerable

- THE SELF-NEGLECTED
  Stating that victims who suffer neglect or abuse are often afraid of the consequences, many of these individuals do not seek help or report adverse mental, physical, or emotional abuse. This may mean that they feel unable to seek help or report abuse.

- THE CO-DEPENDENT
  Co-dependent, often, an elderly person who relies on another to manage their finances and health care. This can lead to a lack of independence and autonomy.

- THE SERVICE RELIANT
  Becoming reliant upon professional care services, health organizations, and financial institutions is another form of co-dependence in the management of older adult’s personal life. However, under this situation, the person is in a highly vulnerable state due to their lack of control.

- THE INDEPENDENT
  Independent older adults are vulnerable in a state where they are in control of managing their personal lives and finances. They are not vulnerable, however, are closely monitoring the next stage of their life and the challenges it will bring, making them a stable demographic in an awareness campaign.

safe after sixty
CAMPAIGN IDEAS: CATEGORIZATION

safe after sixty
RIPPLE EFFECT

WITH AN AVERAGE $375 LOSS FROM EACH VICTIM
annually this amounts to:

PNC Bank would lose $2 million in Ohio alone.

$96.2 MILLION in Ohio
Business Results

To understand the entire process of new product development (from research to prototype), specifically the role of business & marketing in:

- Market & competition analysis
- Benchmarking
- Opportunity identification
- Qualitative research
- Positioning
- Validation
How to Use

CONSISTENCY IS KEY™

Use these helpful instructional tools to get started on a simple 3-step process to clear skin. To get the best results use twice daily.

**STEP 1**
Renewing Cleanser

Directions:
- Use twice daily, morning and night.
- Treat whole face. Dampen skin.
- Apply a small amount (dime size) with gentle fingertip massage for 1-2 minutes.
- Rinse thoroughly with warm water. Pat dry.

**STEP 2**
Revitalizing Toner

Directions:
- Use twice daily, morning and night.
- Treat whole face. Apply small amount (dime size) with cotton ball or pad.
- Allow to dry. Do not rinse off.

**STEP 3**
Repairing Treatment

Directions:
- Use twice daily, morning and night.
- Apply small amount (pea size) with fingertips on any affected areas.
- Allow to dry. Do not rinse off.

Note: The active ingredient benzoyl peroxide can bleach color from towels.

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**G SERIES**

G Series fuels your body before, during and after exercise, training or competition. Be fueled to achieve your best every step of the way with the new line of products.
Business: research in-store benchmarking
Community Health as a Partner

The community health nurse partners with **individuals, families, and groups** with the goal of enhancing the health and well-being of populations and aggregates.
Community Health as a Partner

**Mobility Design Project**

291,098 disabled people (U.S. Census)
- 142,405 Men
- 148,693 Women

- 82,069 are ages 25-44

**Prevalence of Disability by Sex and Age - All Races (U.S. Census)**
Conceptualization results
Final Results

TRANSFORMING HEALTHCARE: ASSISTIVE MOBILITY DEVICES
**Design+Health Synergy** Commercialization Model

1. **Initial Selection**
   - Key stakeholders review and select potential projects.

2. **Finalists**
   - Shortlisted candidates present their projects.
   - Decisions made based on feasibility and potential impact.

3. **Commercialization Support**
   - **UC-Design** provides guidance on technical and design aspects.
   - **UC-Nursing** contributes clinical expertise.

4. **Viable Synergy**
   - Teams gain experience in collaborative research.

5. **Collaboration**
   - Companies A, B, C, and D engage with teams.
   - Initial negotiations and agreements are established.

6. **Technology Transfer**
   - Intellectual property is jointly owned by UC and students.
   - UC assists in the licensing process.

7. **Clinical Intervention**
   - Prototypes are fully functional, ready for practical application.

8. **Strategy Development**
   - Plans are established to ensure scalability and sustainability.

9. **Pitch and Demo**
   - Teams travel to showcase their projects.
   - Final presentations to stakeholders.

10. **Connection Made**
    - Partnerships are finalized with companies.
    - Clear agreements on royalties and commercialization rights.

**UC and Student Teams**
- Ownership: UC and students jointly own intellectual property.
- Negotiation: UC can represent students' interests or negotiate on behalf of UC.
- Royalties: UC retains 15% of the consideration earned from licensing agreements.
Key Take Aways

Students and Faculty and program enhancements:

Mutual faculty learning

Idea generation for faculty, graduate and undergraduate research

T2 Translational Research

Both programs are enriched

Design student quote:
“Crossing 2 worlds not only helped me as a designer to work with non-designers and I think it helps the nurses as well”

Nurse student quote: “Really learned community health through this collaborative.”
The Future: $2 + 2 = 5$

Commercialization

Social Marketing

*Use commercial marketing techniques to Persuade people to change their behavior to improve their own lives*
“The only interruption to my Learning was my education”
Albert Einstein

Thank You!