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Identification of Occupational Tasks for Curriculum Development

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Problem

- Void in body of knowledge of what should be taught in (packaging education) curriculum.
- Contributing factors
  - Changing technology
  - Globalization
  - Changing nature of work
- Ramifications of nonperformance never greater

Educational Systems

- Participants
- Stakeholders
- Inputs / Outputs
- Internal and external environments
- Issues / Trends / Problems
- Historical and theoretical Underpinnings

Ocean Metaphor

What Should be Taught?

Tied to Mission

Mission Alignment

Curriculum driven by mission

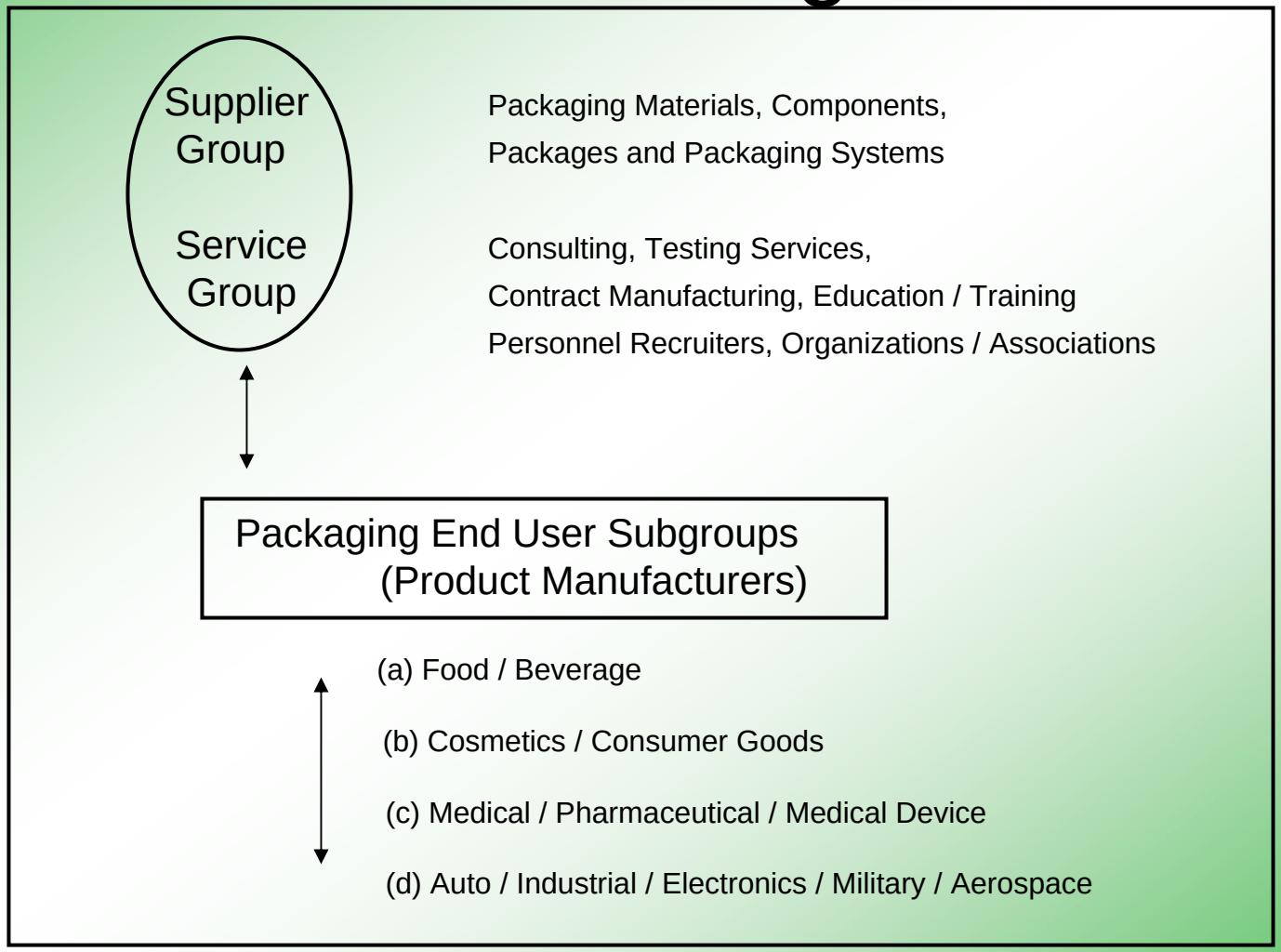
- University
- College
- Department
- Program

Programs don’t exist in isolation

Program Specific

- Define and examine program mission and purpose
- Consider the multiple stakeholders
  - Industry
  - Individual
- “Occupational Cluster” targeted

Packaging Science Occupational Cluster Diagram



What is Taught?

- What has always been taught
- What instructors believe they should teach
- What instructors want to teach

What Should be Taught?

- What the learner needs to know……..
  in what context?

- Supports your educational program mission / purpose

- Associated with learner competence and success in the designated occupational cluster

Voss Dissertation

Tasks Performed by Entry Level Packaging Professionals and Their Importance

Research Questions

1. What are the occupational functions and tasks performed by entry level packaging professionals?

2. What is the level of importance of each task?

3. Does the importance of the tasks differ between the Service and Supplier group, and the Packaging End User Group?

4. Does the importance of the tasks differ among the four Packaging End User subgroups?

What are Your Educational Research Questions?

- What are the functions and tasks performed by …….?
- What is the level of importance of each function or task?
- Who are the different groups internally or externally for which the functions and tasks may differ?

Performance Based Instructional Design, (Pucel 1989)

- Apprenticeships, (psychomotor domain)
- Industrial Revolution
- Mass production
- Military use, (added cognitive domain)
- With theoretical modification,
- Modern Use with affective domain

PBID

SYSTEM

- Program Description
- Content analysis
- Content Selection
- Content Sequencing
- Lesson Structuring
- Lesson Delivery Formatting
- Evaluation and Feedback Procedures Development

Skills Contributing to Tasks and Functions

- Psychomotor skills of manipulating tools and objects
- Cognitive skills of decision-making and mentally processing information
- Affective skills of exhibiting relevant emotional tones toward people, data and things

(Bloom, 1956)

Packaging Science Functions and Tasks

- Show Function and Task List

Data Collection Methodology

- Could use qualitative, quantitative, or mixed methodology
- Online survey was data collection instrument
- Development Process
  - Reliability
  - Validity

Survey Creation

- Show survey creation process

Data Collection Methodology

Participants

- Supervisors of entry level packaging professionals
- Packaging professionals with more than 5 years industry experience

Contact Channels

- Placement offices of packaging education programs
- Institute of Packaging Professionals electronic newsletter
- Opportunistic sample

Data Collection Methodology

- Who would be your survey participants?
- What are the challenges to accessing this population?

Voss Results

- 135 tasks under 17 functions were identified.
- For overall group task ratings were: 25 very important, 77 important, 33 moderately important, none not important
- 48 task ratings were significantly different between Service & Supplier group, and Packaging End User group
- 31 task ratings were significantly different between the Packaging End User subgroups
- Strong, positive rank order correlation between Service & Supplier group, and Packaging End User group
- Strong, positive rank order correlation between all Packaging End User subgroup pairs

Voss Results (cont'd)

- There were tasks that with statistically significant different importance ratings:
  - Between Supplier and Service group, and the Packaging End User group
  - Among the Packaging End User subgroups
- There was substantial agreement on the relative importance and ranking of the tasks.

Conclusions

- There is a set of technical and general tasks that can serve as the basis for curriculum development.
- General or non-technical skills were equal or greater in importance than technical skills.
- The function and task list could be used as curricular content for occupational preparation of packaging professionals entering the defined occupational cluster.

Significance / Use

- Revision and development of packaging education curriculum
- Packaging professional self assessment
- National organization certification exam validation

Additional Research

- Repeat study in the future
- Repeat study in countries other than the United States or globally
- Perform study at a career stage other than entry level.

Questions?

Thank you.