Experiential Learning: Taking knowledge from the teacher’s minds and putting it into the student’s hands.

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Introduction

• Successful agriculture careers require applying base knowledge
Introduction

• Difficult to learn strictly from ideas
• Experiential Learning is active rather than passive
  (Gentry, 1990)

• Hands-on encourages critical thinking – critical thinking calls on students to evaluate their own thought process in decision making.
  (Kalman, 2002)
History of Experiential dates back to 4th century B.C.

“Using the language of knowledge is no proof that they possess it.”

–Aristotle
Experiential Learning Process

Experience → Share → Generalize → Process → Apply

Diagram Courtesy of: UC Davis
Objective

• **Objective:** Determine student perception of multiple types of experiential learning.

• Our main focus – Their perceived importance of hands-on learning
Methods

• Research conducted on two courses
  – Horse Production
  – Beef Production

• Both utilized hands-on tasks in laboratory settings

• Labs scored based on amount of hands-on activity.
  – Minimum (MIN)
  – Moderate (MOD)
  – Completely (COMP)
Methods

• Three Horse Production labs
  – Leg wrapping
  – Nutrition
  – Collecting a stallion and processing

• Two Beef Production labs
  – Branding
  – Carcass evaluation and processing
Example of a MIN Lab
MOD and COMP Lab examples
Methods

• 49 Students (69% Female) were surveyed with a post-then-pre instrument

• Rated Before (BEF) and After (AFT) perception of each lab topic in 4 categories
  – Familiarity
  – Satisfaction
  – Performance
  – Importance

• Scale: 1 (not at all) to 5 (very much).

• Data were analyzed using the GLM procedure of SAS
Methods

- **Familiarity** – Students reported their before and after knowledge of lab topics.
- **Satisfaction** – Indicated their contentedness with the opportunity to learn techniques.
- **Performance** – Their ability to perform each task before and after learning.
- **Importance** – Indicated their perception of how important it was to learn the techniques.
## Methods

<table>
<thead>
<tr>
<th>Familiarity</th>
<th>BEFORE ANSC 426 Lab</th>
<th></th>
<th>AFTER ANSC 426 Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not At All</td>
<td>Very Much</td>
<td>Not At All</td>
</tr>
<tr>
<td>Laws regarding branding</td>
<td>1 2 3 4 5</td>
<td></td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Brandline</td>
<td>1 2 3 4 5</td>
<td></td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Branding procedure</td>
<td>1 2 3 4 5</td>
<td></td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Actual hot brand of an animal</td>
<td>1 2 3 4 5</td>
<td></td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

Comments:
Results

• Students indicated prior experience with:
  – Wrapping horse legs
  – Hot branding

• Indicated least experience with:
  – Collecting a stallion
  – Carcass evaluation

• Increased their ability to perform and satisfaction through hands-on learning techniques
Before & After Averages for all Labs

*Means differ significantly ($P < 0.001$)
Means with different letters differ significantly \((P \leq 0.017)\)
Average Change for MIN, MOD and COMP Labs

Means with different letters differ significantly ($P < 0.001$)
Discussion

• They place more value and retain more through hands-on components of coursework
Discussion

• Students are better equipped for future agriculture employment

• Students appreciate and desire hands-on learning opportunities in college
Conclusion

• Experiential Learning is time consuming and costly to institutions

• No utilization of hands-on class components is a disservice to industry and to students

• Students applying base knowledge under supervision aid in producing more well rounded employees
Questions?