

**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)



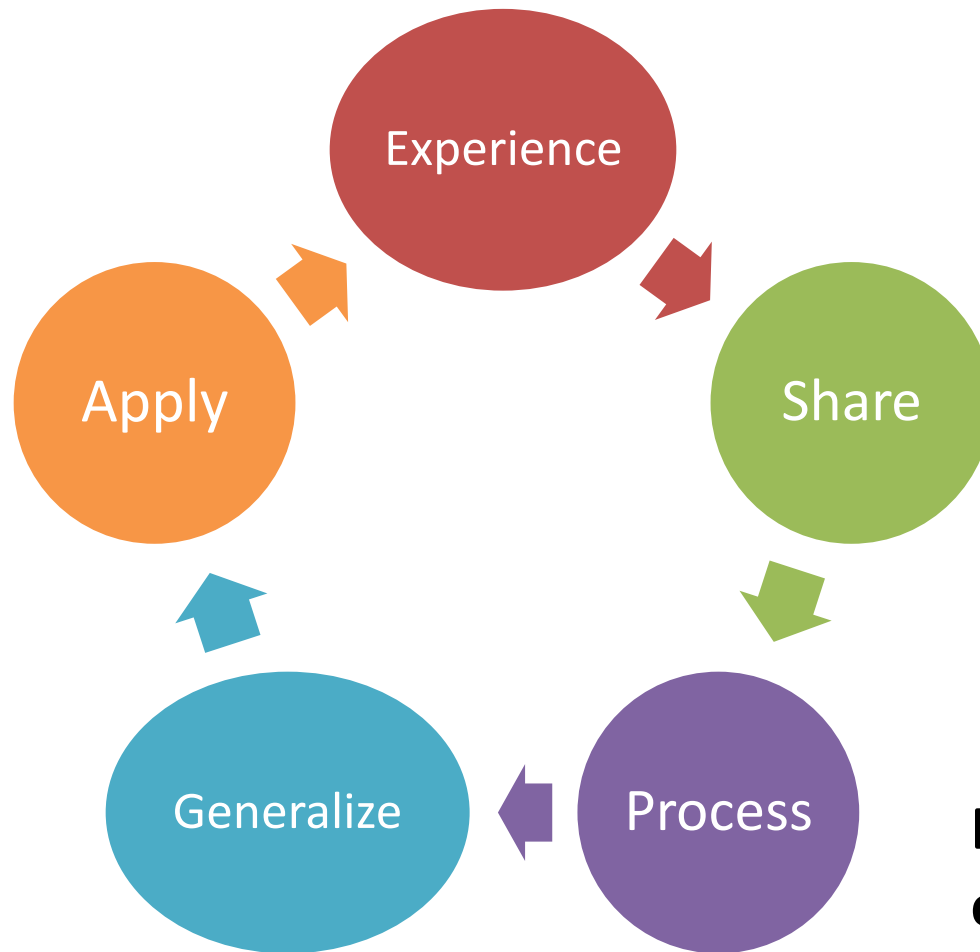
History of Experiential dates back to 4<sup>th</sup>  
century B.C.

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

-Aristotle



# Experiential Learning Process



**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

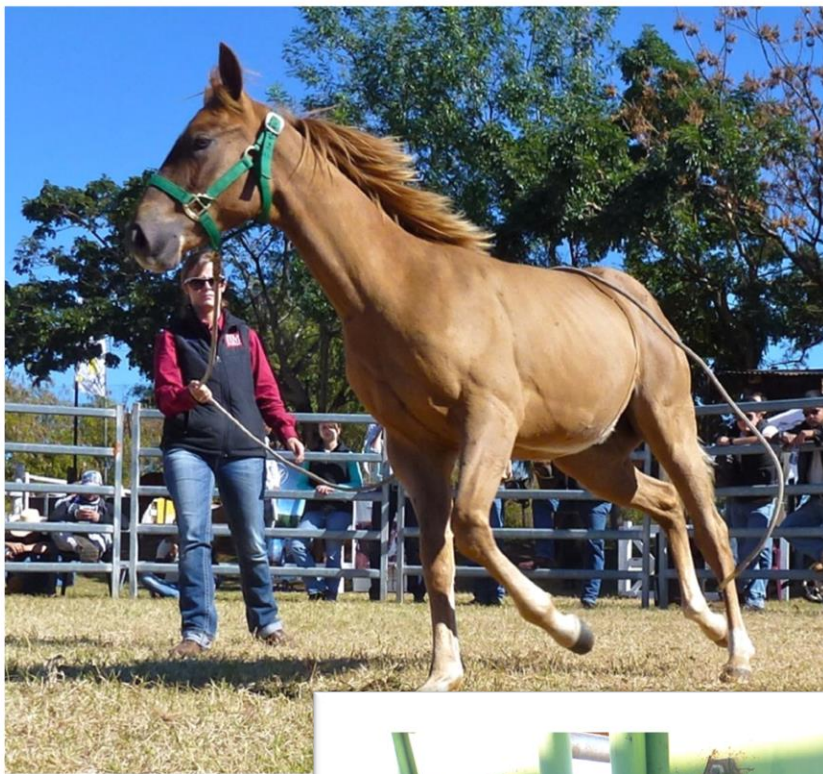
- Three Horse Production labs
  - Leg wrapping
  - Nutrition
  - Collecting a stallion and processing
- Two Beef Production labs
  - Branding
  - Carcass evaluation and processing







**Example of a MIN  
Lab**



**NM**  
**STATE**

**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

Familiarity	<b><i>BEFORE</i></b> ANSC 426 Lab					<b><i>AFTER</i></b> ANSC 426 Lab				
	<i>Not At All</i> → <i>Very Much</i>					<i>Not At All</i> → <i>Very Much</i>				
Laws regarding branding	1	2	3	4	5	1	2	3	4	5
<u>Brandline</u>	1	2	3	4	5	1	2	3	4	5
Branding procedure	1	2	3	4	5	1	2	3	4	5
Actual hot brand of an animal	1	2	3	4	5	1	2	3	4	5
<b>Comments:</b>										

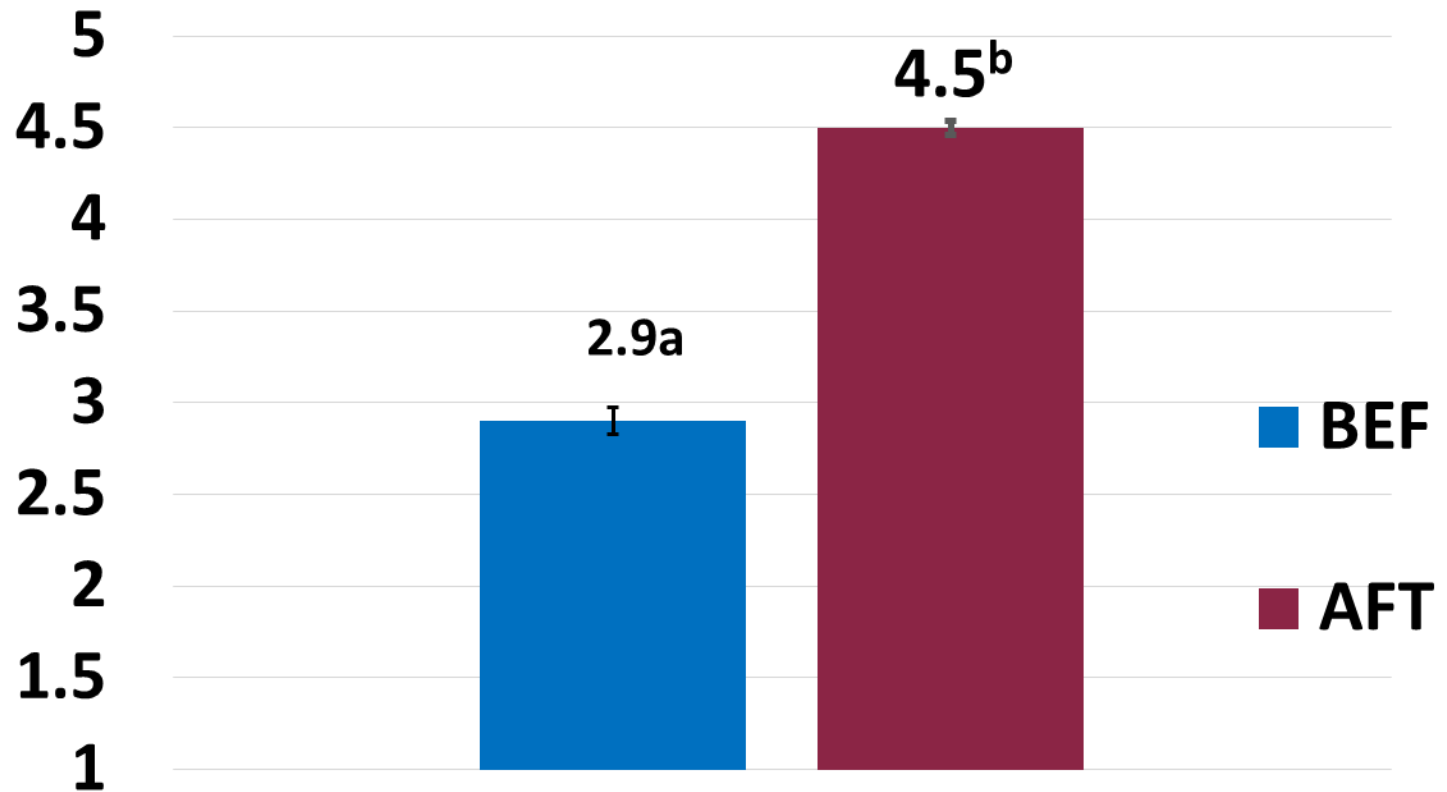


# Results

- 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

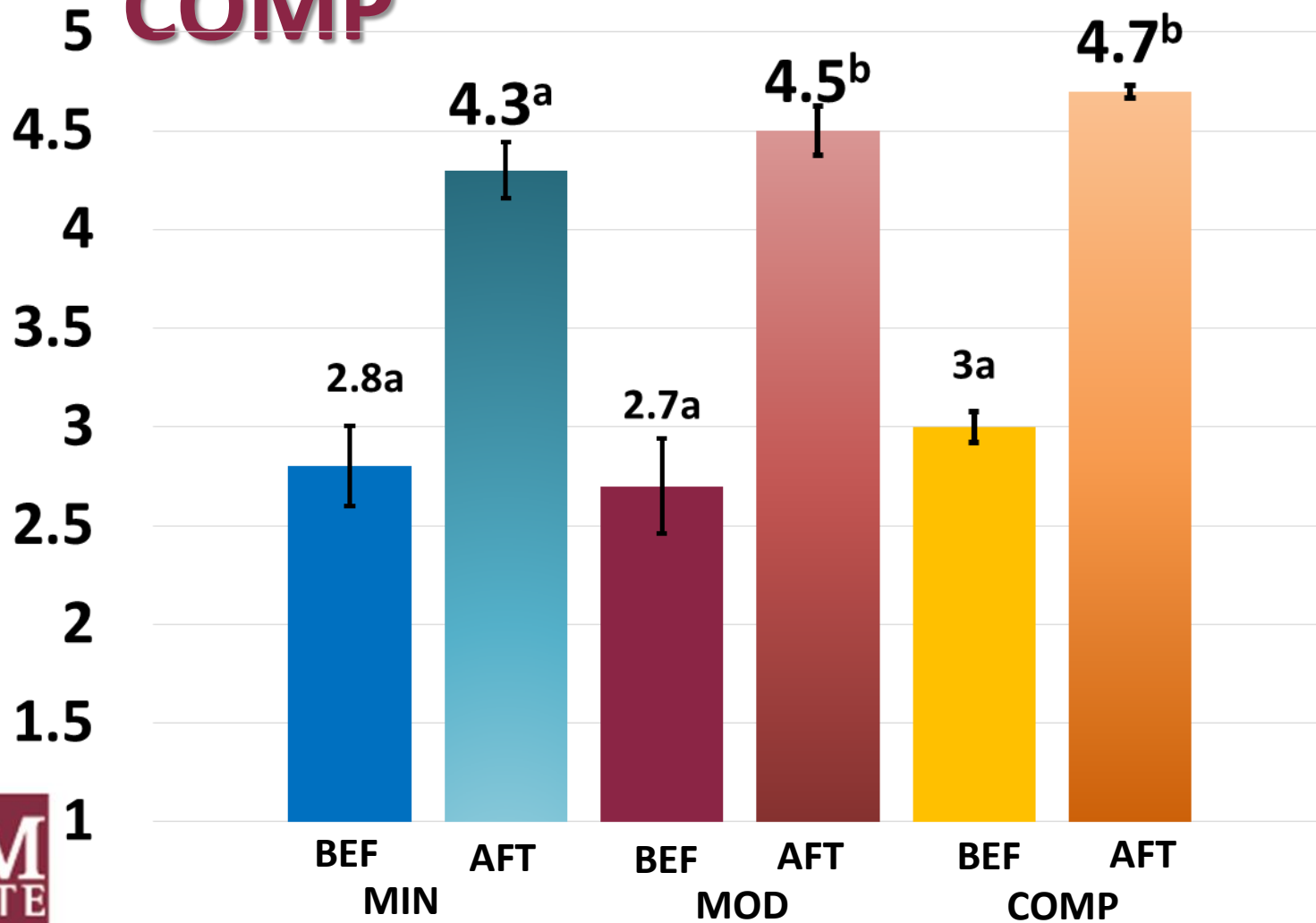


# Before & After Averages for all Labs



\*Means differ significantly ( $P < 0.001$ )

# Before & After for MIN, MOD, & COMP

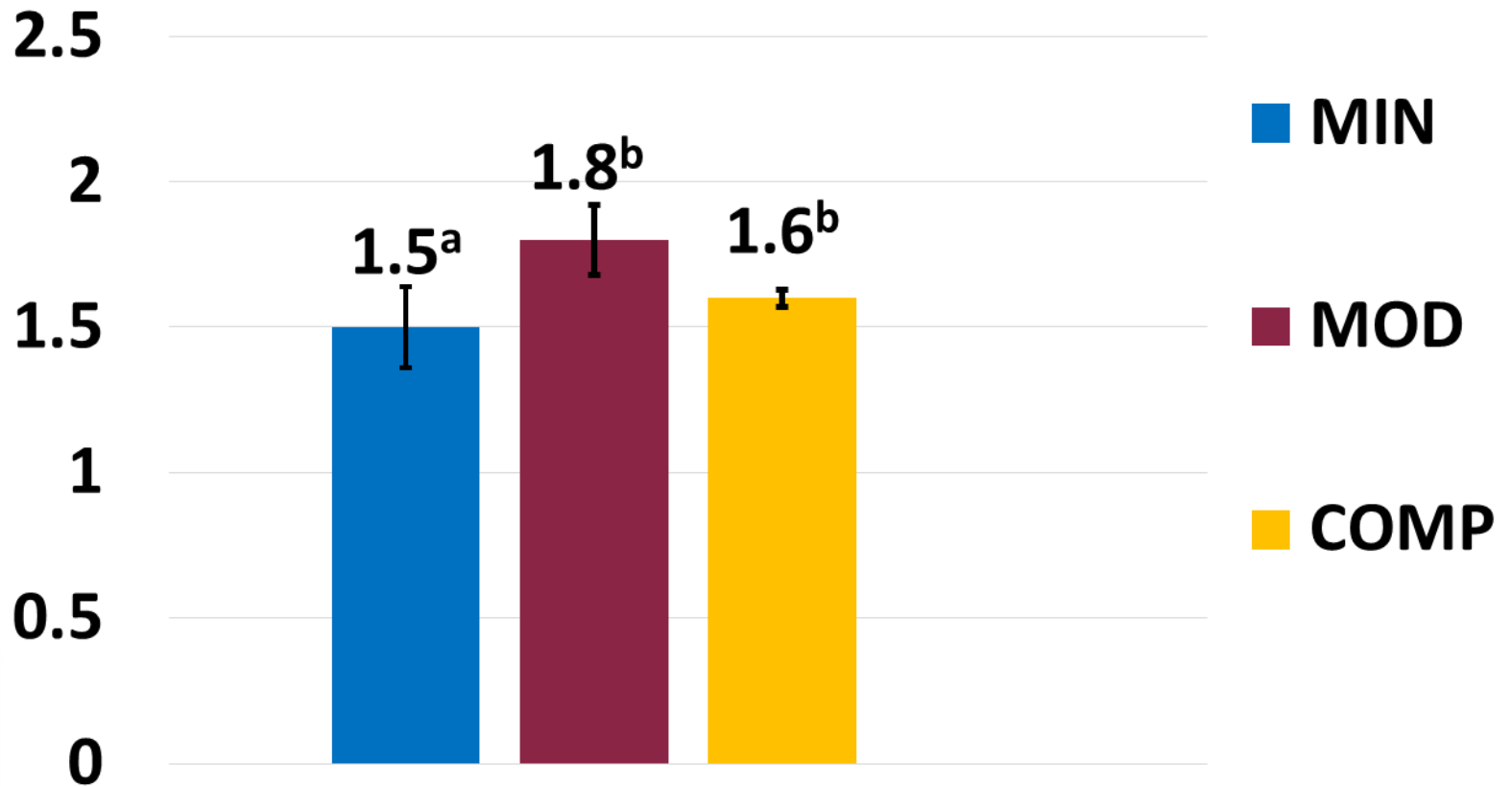


a,b Means with different letters differ significantly ( $P \leq 0.017$ )





# Average Change for MIN, MOD and COMP Labs



<sup>a,b</sup> 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?**

