

# The Teaching – Research Nexus: Exploring New Synergies



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**SOUTHERN REGION ACADEMIC PROGRAMS AND  
EXPERIMENT STATION DIRECTORS JOINT MEETING  
SEPTEMBER 10 – 11, 2013  
ATLANTA, GA**

# Objectives



Exploring new synergies, regional collaborations, multi-institutional sharing, barriers to collaborations between institutions and states (ex. tuition, credit hours, teaching credit funding, technicians, access to research facilities)

Format:

Introductions and Panel Discussion

# Benefits of Integration



- The sum of Teaching, Research and Extension is greater than the parts. Each land-grant mission has value beyond its separate function in our universities.
- Research and Extension add value to teaching, while teaching and Extension add value to research.
- These synergies are an integral part of the land-grant missions in colleges or agricultural and related sciences.
- At the university level, these synergies were best articulated by Ernest Boyer as the scholarship of discovery, integration, application and teaching.

# Successful Integration



- Central to the integration of the land grant missions are structure, incentives and rewards.
- Collaboration works best when the administrative structure is in place, when faculty (and administrators) have incentives to collaborate and when faculty are rewarded for their efforts.

# Barriers to Integration



- Academic disciplines as gate-keepers to P&T
- The limitations of interdisciplinary research
- The lack of indirect costs to non-research
- Incidence of costs and benefits

# Teaching - Research Nexus



## Research informed teaching (RIT)

- Bringing applied disciplinary research into the classroom and undergraduate research experience
- Research on pedagogy or teaching techniques (not as relevant to this panel). May not be enough to satisfy the P&T of agricultural sciences

## Teaching informed research (TIR)

- Research designed with social impacts activities
- Designing research for grad students
- Designing research for undergraduates and pre-collegiates

# The Role of Experiment Stations in Teaching?



## Contribute To:

Design and integrate research for students (RIT)

Give students a comparative advantage in career advancement  
(engaged learning)

## Benefit From:

Students assist with research activities (labor)

Students better understand & value experiment station research  
(citizen advocates)

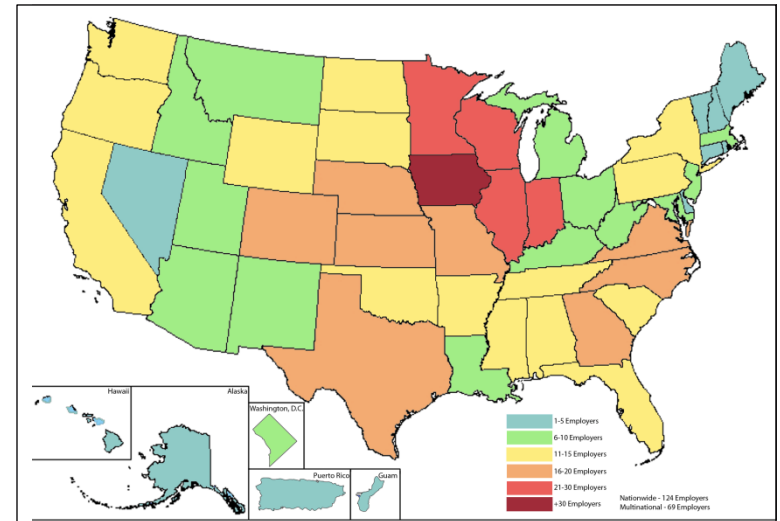
Potential to recruit students in careers in experiment station research  
(future researchers)

# APLU - APS Soft Skills Survey

- Survey Monkey™  
March 21 – July 3, 2011
- Nationwide survey
  - 31 Universities
  - 2,700 students
  - 4,000 alumni
  - 900 faculty
  - 282 Employers
- Total of over 8,000 respondents
- Findings reported at:
  - AgCareers Round Table (August 2011)
  - APLU Summit (August 2011)
  - UIC Fall Meeting (October 2011)



Universities

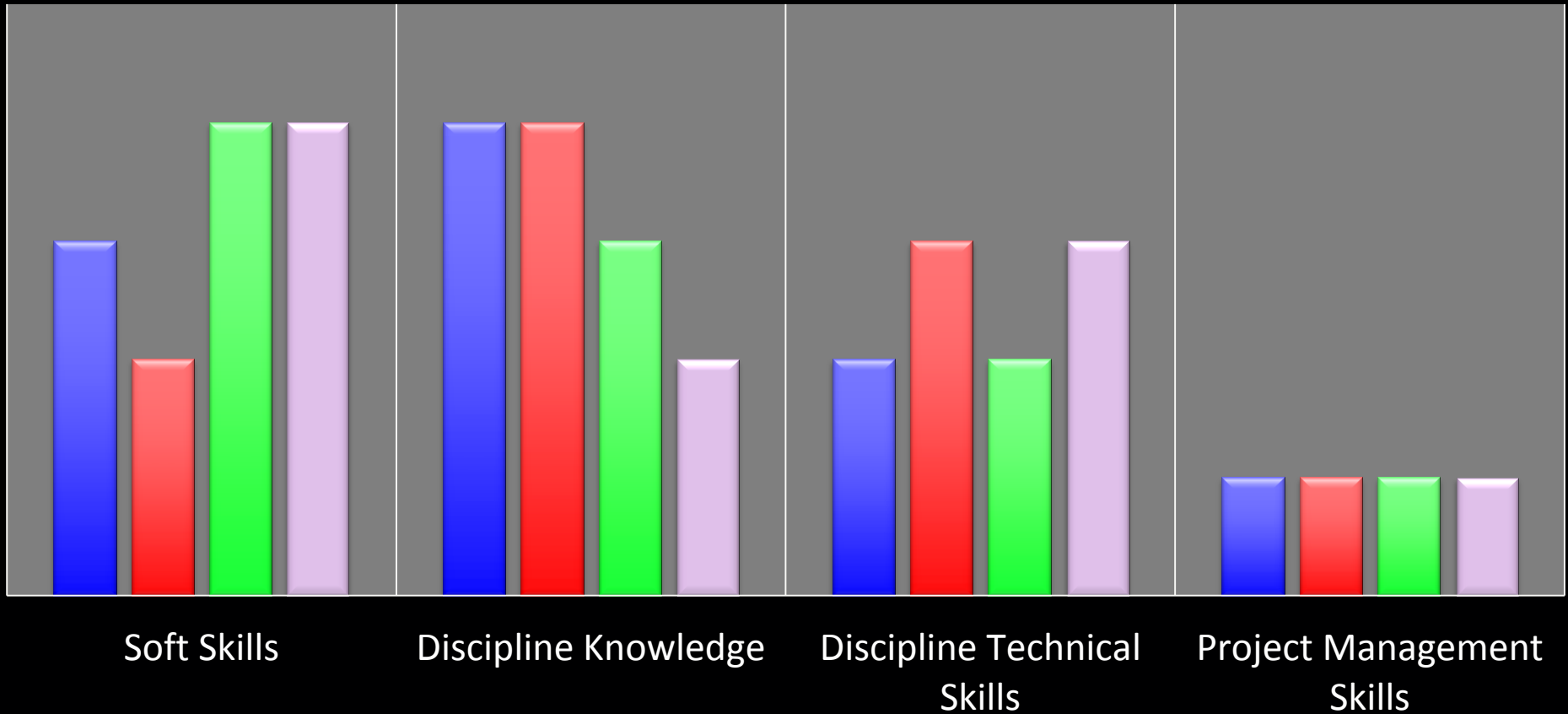


Employers



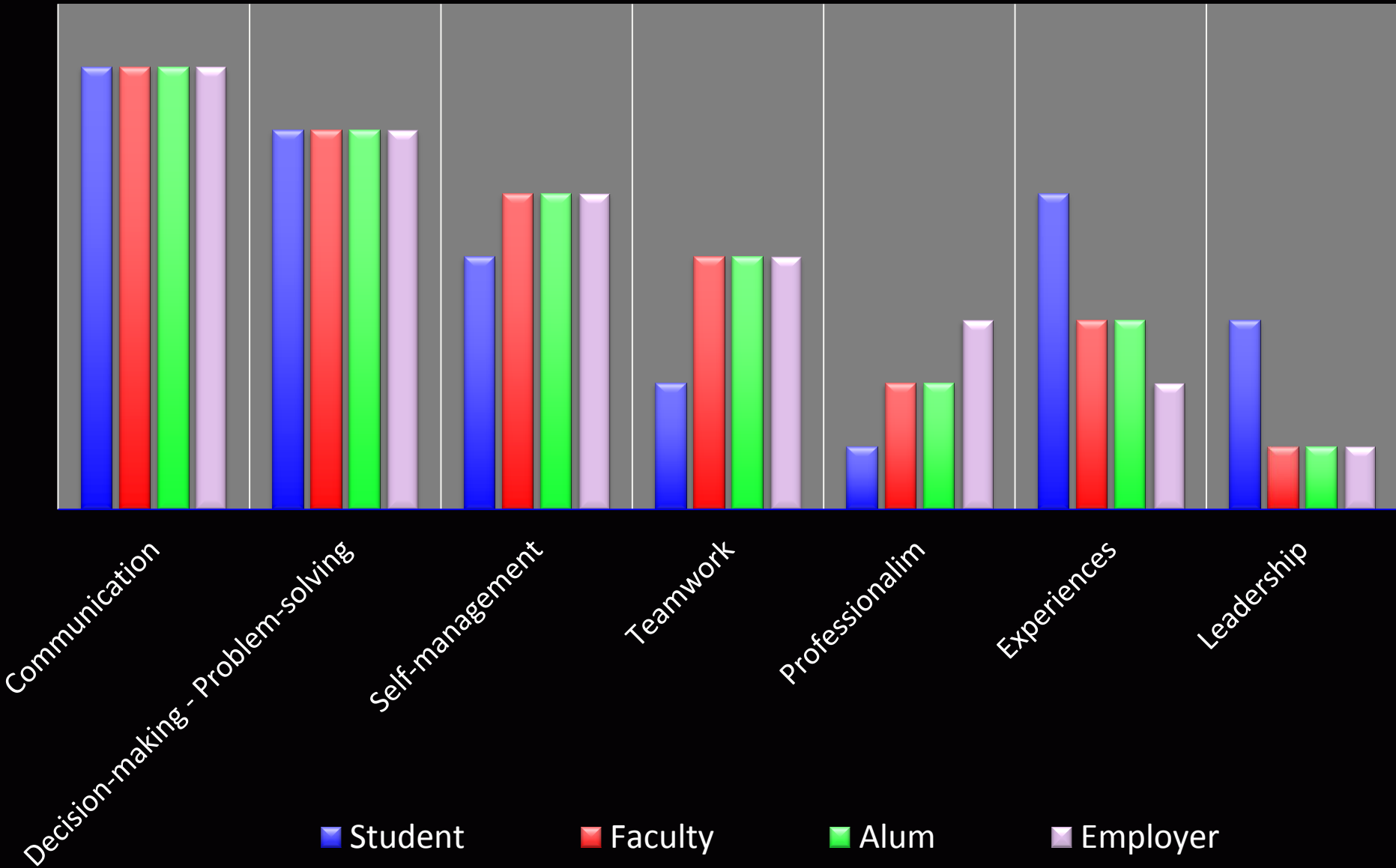
# Importance of Skills

Forced Rank Order: 4 to 1, with 4 most important

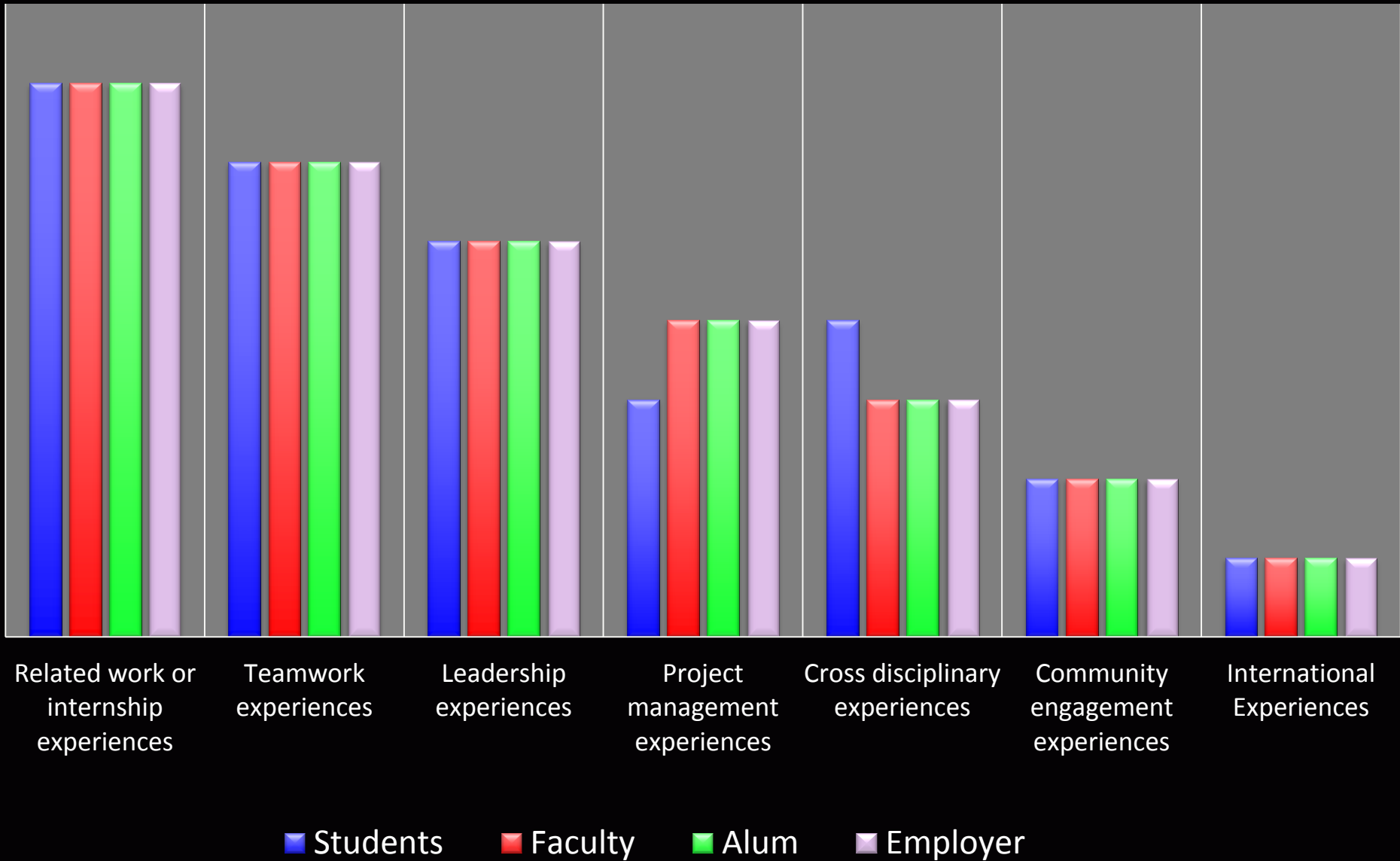


■ Student   ■ Faculty   ■ Alum   ■ Employer

# Soft Skill Clusters Importance



# Experience Cluster



# Inter-institutional Collaboration



## Update on AG\*IDEA

Agricultural Education

Agricultural and Environmental Law

Agricultural Systems Management Technology

Bioenergy and Sustainable Technology

Food Safety and Defense

Grassland Management

Horticulture

Soil, Water and Environmental Science

Swine Science Online

Animal Science (pending)

# Great Plains IDEA - AG\*IDEA



Table 3. List of Institutions that Participate in Great Plains IDEA and its affiliate AG\*IDEA

University of Arkansas	Michigan State University
Auburn University	University of Missouri
California State University, Chico	Montana State University
Clemson University	University of Nebraska-Lincoln
Colorado State University	North Carolina State University
Iowa State University	North Dakota State University
University of Florida	The Ohio State University
University of Georgia	Oklahoma State University
Kansas State University	South Dakota State University
University of Kentucky	Texas Tech University

Source: Great Plains IDEA website.<sup>69</sup>

# AG\*IDEA – Progress Report

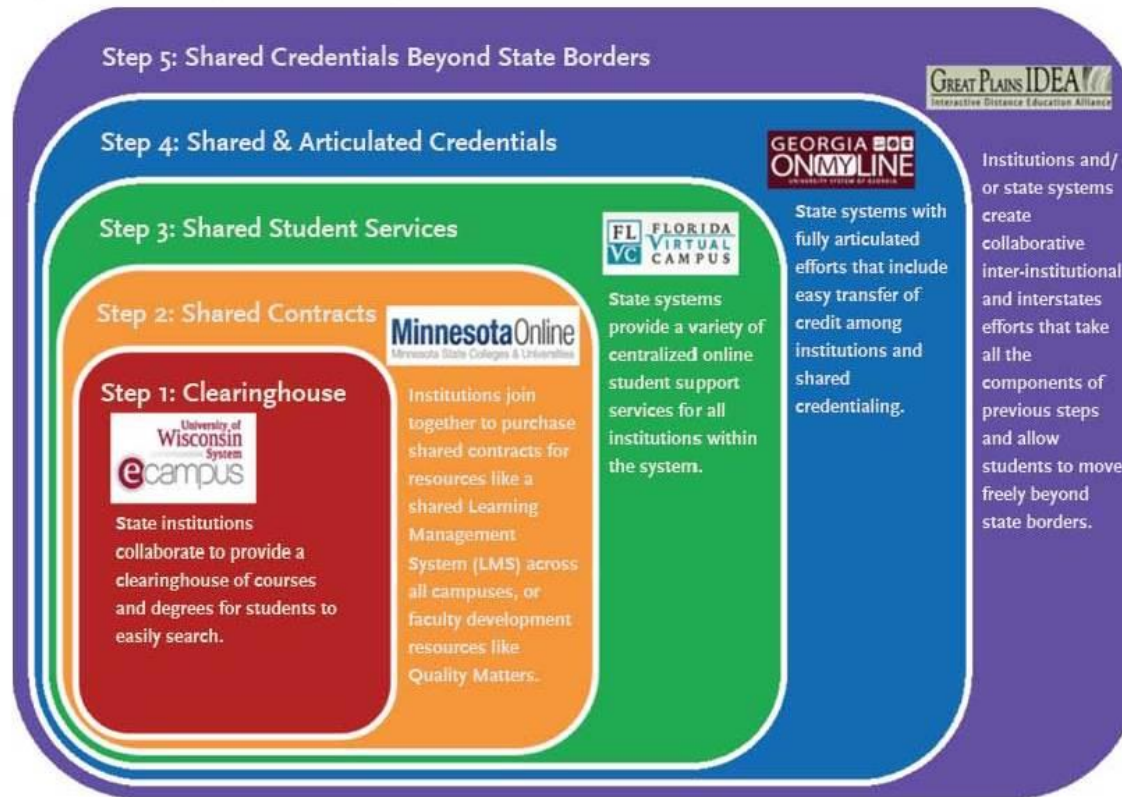


- Programs have been slow to be approved and adopted at the Department, College, University and State
- Why: Educators think in narrowly defined boxes. That is, courses are either transcribed or transferred. Faculty have academic homes, are certified and credentialed in departments , institutions and states.
- Problems arise (or challenges arise) when faculty, courses and programs cross state lines. While the AG\*IDEA platform has resolved these issues,(at least conceptually) faculty and institutions have been slow to adopt.

# AG\*IDEA - Perspective



Figure 1: The Steps of Online System Collaboration



# Teaching – Research Collaboration



## The Mississippi State University Experience

- Student farm concept
- Undergraduate research program



# Discussion Questions



Do your colleges or universities have mechanisms to recover fees from student use of the experiment stations?

Do your experiment stations have student farms or gardens to engage students in experiment station research?

Do you have formalized programs of undergraduate research or internships associated with or funded by your budgets?

Do you have graduate student recruitment, professional development and career placement programs?

Do you charge user fees to departments and others units that use your facilities?

Have you implemented successful cost sharing / cost saving measures at your experiment stations?