

# PLANT CONSERVATION:

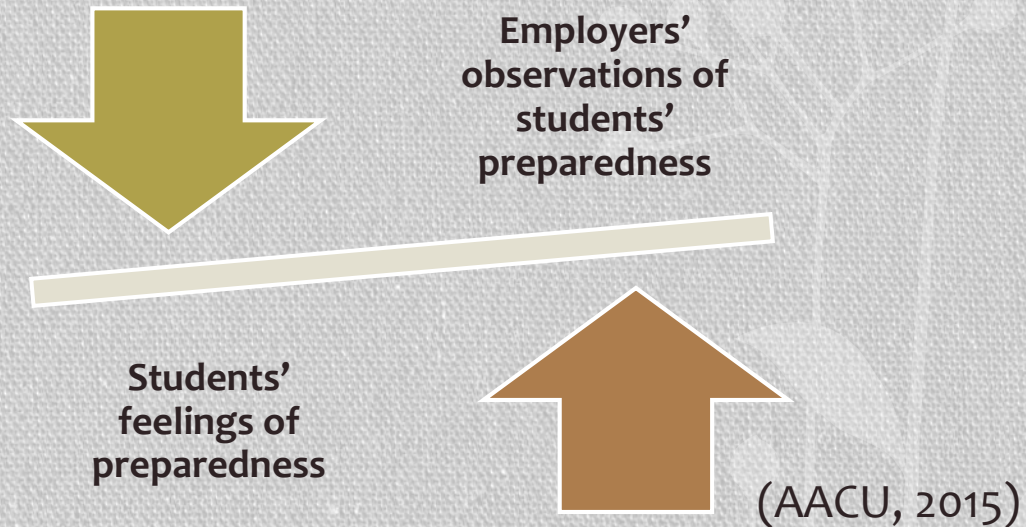
**What's Taught Versus What's Sought**

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# What We Know and Don't Know

- Soft skills (communication, teamwork, problem-solving, etc.) are **needed** by industry, but **lacking** in undergraduate students (Brooks et al., 2008; Moore, 2017; Morgan, Marsh, & Fuhrman, 2014)



- Little is known about whether plant conservation industry needs are being addressed through effective teaching

# Objectives

## 1. **What's Taught**

- Compare plant conservation-related college syllabi from schools in different U.S. geographic regions...

## 2. **What's Sought**

- ...with needs assessment findings from industry professionals

## 3. Recommend curricular changes to best prepare graduates

# Methods, Data Collection, and Analysis: What's Taught

- Syllabus collection and review (N = 51)
  - Content analysis procedures used to summarize...
  - Course material/Learning objectives
  - Assignments/Assessments informing student grades



Wildland Firefighting course, UGA

Prescribed fire is an invaluable tool to restore many rare plant communities

# Methods, Data Collection, and Analysis: What's Sought

- Online Delphi Study - Plant Conservation Professionals (N = 31)
  - Round 1: Opening question...
    - If you were teaching a university-level class to produce a hireable plant conservation professional, please generate a list of the competencies, expertise, skills, abilities, and knowledge that you think an individual should possess by the end of the course.
  - Round 2: Consolidate and rate previously shared responses
  - Round 3: Rank topic areas and curriculum recommendations



The Georgia Plant Conservation Alliance (GPCA)

# Results: What's Taught - Syllabus Analysis

- Most common content:

1. (61%) Ecology & Biodiversity Loss (Tied)
2. (55%) Natural Communities
3. (53%) Evaluating Scientific Literature
4. (51%) Problem-solving and Conservation Policy & Plant Species Biology (Tied)

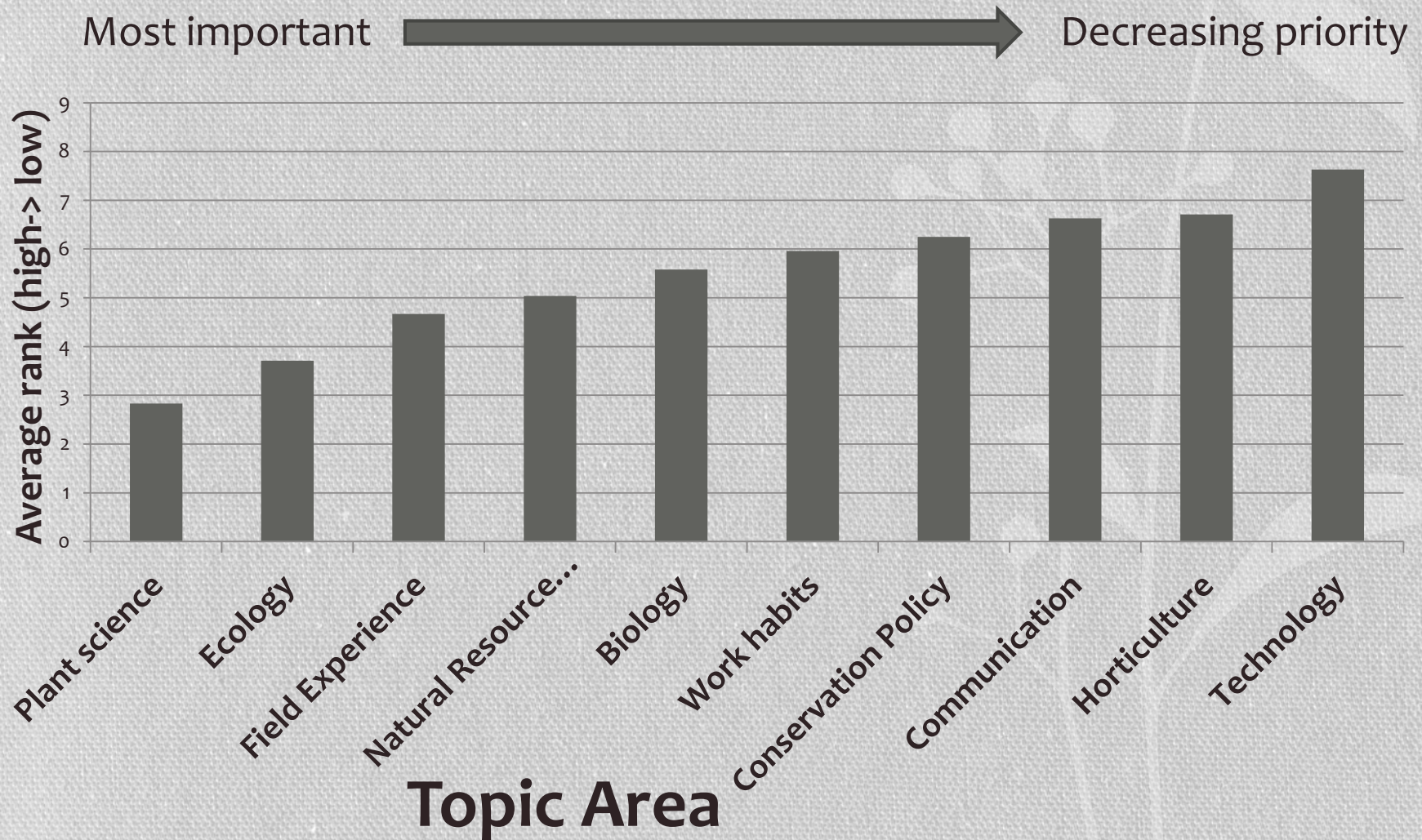
- Most common assessment types:

1. (76%) Exams
2. (53%) Participation
3. (49%) Writing Assignments (class paper)
4. (47%) Labs & Discussion (Tied)
5. (45%) Class Presentation
6. (35%) Group Work (often preparing the class presentation)

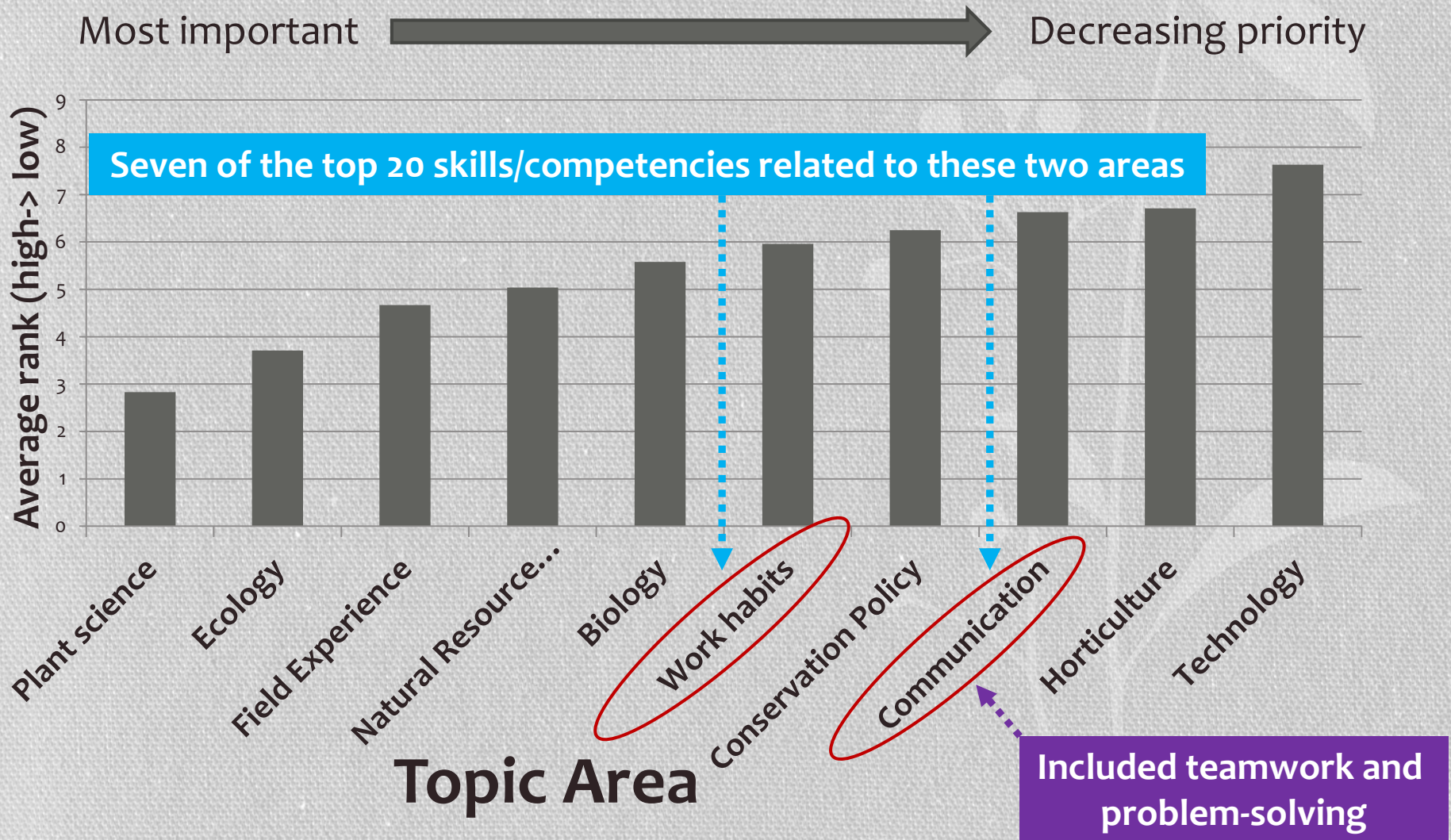


A “word cloud” of syllabus themes

# Results: What's Sought - Delphi Study



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# Conclusions

- **What's Taught**

- Ecology, Biodiversity, Research Methods, and Conservation Policy
- Formal exams, Participation points, and Class papers are used to evaluate learning most often

- **What's Sought**

- Science content knowledge still a priority
- Top 10 skills/competencies being sought included soft skills (ranked 6<sup>th</sup> and 8<sup>th</sup>, respectively)

# Recommendations

- **For the Classroom**

- Service-learning and industry partnerships may help (Cooke et al., 2015; Franek, 2017; Perrin, 2014)
- Content does not have to be compromised
- Be explicit about what soft skills will be gained through assignments

- **For Further Research**

- Follow-up with faculty on specific teaching procedures being used
- Further compare course content and assignments by geographic region
- Longitudinally follow-up with industry professionals

