

# Evaluating Partnerships in Climate Change Education: Lessons from CLiPSE

James K. L. Hammerman, Director  
STEM Education Evaluation Center (SEEC)  
TERC, Cambridge, MA

Lesley Strawderman, Assistant Professor  
Mississippi State University, Starkville, MS



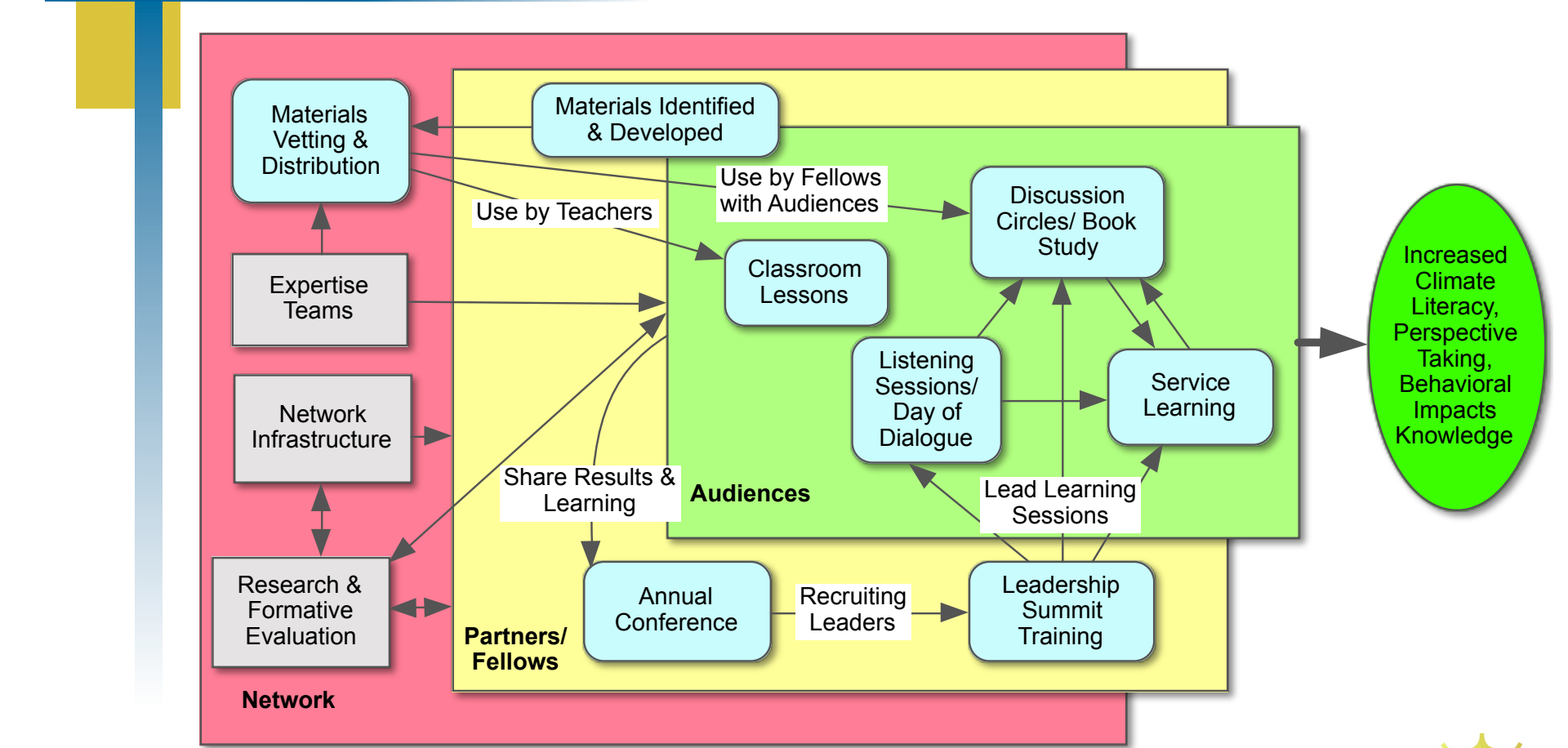
# What is CLiPSE?

- Climate Literacy Partnership in the SouthEast
- NSF-funded CCEP Phase I project
- Climate change education addressing unique regional demographic, cultural, values context
  - Religion and faith
  - Race and ethnicity
  - Economic factors (agriculture, fossil fuels)
  - Leisure activities

# What is CLiPSE?

- Network of organizations
- Develop climate education leaders
  - Bank of climate education resources
  - Regular training
- Community education events
  - Dialog sessions
  - Book or study groups
  - Service learning

# What is CLiPSE?



# Opportunities & Barriers

- Opportunities

- K-12 and Higher Ed contexts, but more
- Meet people where they already are –  
E.g., community groups, church groups
- Relationships matter

- Barriers

- Difficulty/ time to build trust in relationships
- Different assumptions about need for evidence and what counts as evidence

# Intersecting Levels of Analysis

- Organizational Partnerships...
  - ... are made of Individual relationships
- Individual Values/ Capacities...
  - ... create Organizational values/capacities...
  - ...which affect Individual behaviors
- Organizational activities...
  - ...impact larger Communities...
  - ...and increase Organizational membership

# Partner Outcomes

- For Partners
  - Robust, growing, self-sustaining network
  - Increased collaboration/ synergistic exchange
  - Increased capacity to reach the public
  - Increased capacity to produce resources
  - Resources used by broader community
- What evidence needed to demonstrate these outcomes?
  - Change requires longitudinal data

# Audience Outcomes

- For Target Audiences
  - Engagement/ interest in climate change
  - Deeper understanding of climate change and its impacts
  - Increased critical thinking
  - Understanding of others' perspectives
  - Change in attitudes or beliefs or actions
- What evidence needed to demonstrate these outcomes?
  - Change requires longitudinal data



# Impact: Distant or Indirect Outcomes

- Looking for evidence of CLiPSE's impact beyond those directly reached
  - Who else do participants talk to?  
How are they affected?
  - How do CLiPSE events affect the ongoing conversation in groups reached and their non-CLiPSE associates?
  - How does public understanding of climate change and its impacts change in SE US?
  - Other impacts?

# Network Focus: Many Approaches/ Metrics

- For Phase I & II
  - Commitment to the partnership
  - Partner connections (Social Network Analysis)
  - Vibrancy/ participation
  - Sector dispersion
  - Geographic dispersion
  - Beliefs about organizational integration
- For Phase II
  - Demographic representativeness
  - Level of climate education activities
  - Self-sustaining

# Knowledge & Commitment

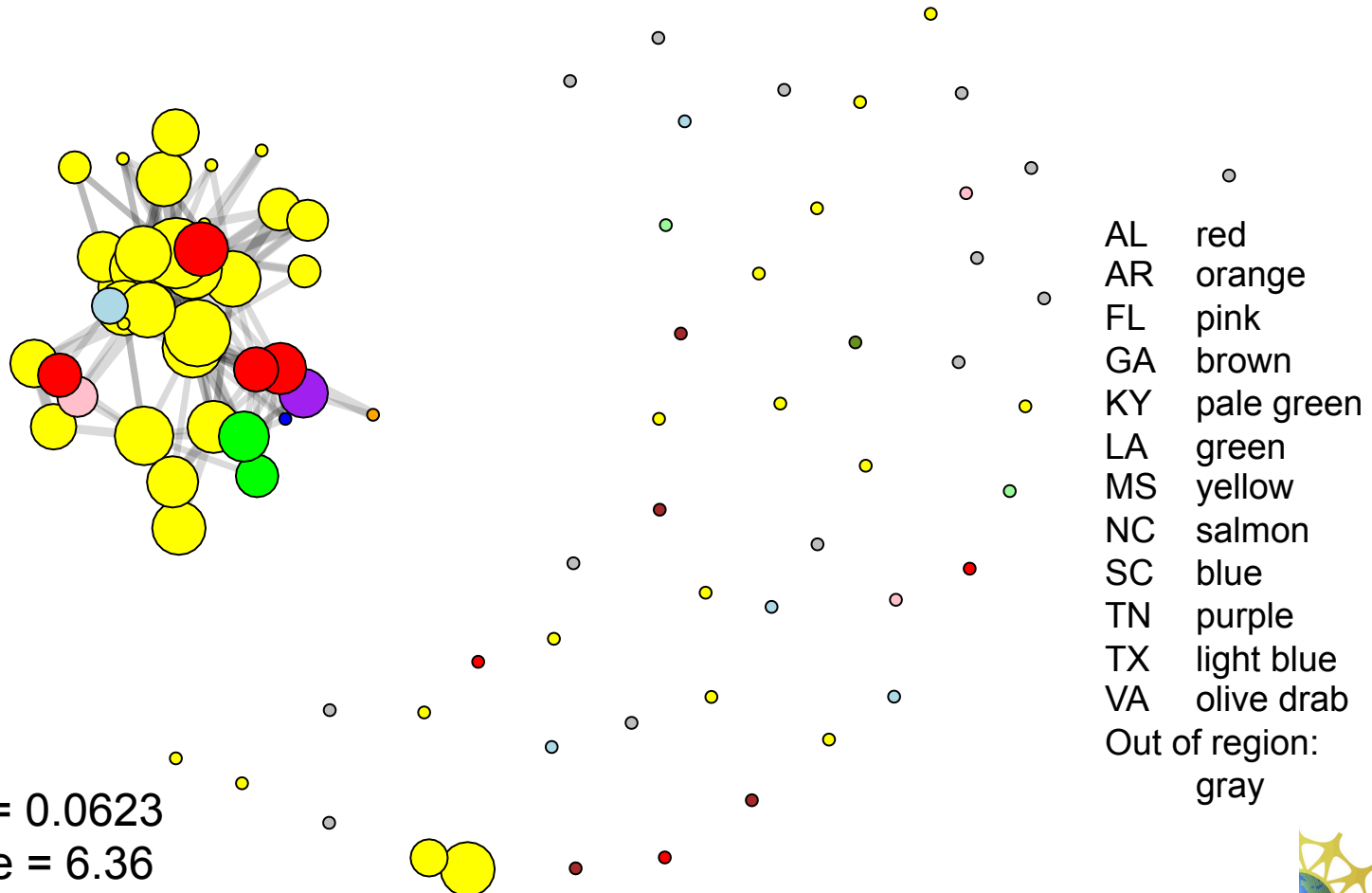
- Participants became more committed

Item	Kick-off (N=37)	Spring 2012 (N=28)
I understand what CLiPSE is	4.11 (.614)	4.57 (.414)
I know how I can be a part of CLiPSE	3.97 (.897)	4.45 (.680)
I feel ready to participate in CLiPSE	4.19 (.967)	4.52 (.598)
I am excited about participating in CLiPSE	4.41 (.762)	4.59 (.492)
I believe CLiPSE can make a difference	4.14 (.855)	4.52 (.625)

**Note:** Scores on a 5 point scale. All differences statistically significant at  $p < 0.005$ .

- Organizational commitment (Spring '12)
  - Ratings of 4.72 on 5 point scale

# SNA: Feb 2011 Network



Net Density = 0.0623

Mean Degree = 6.36

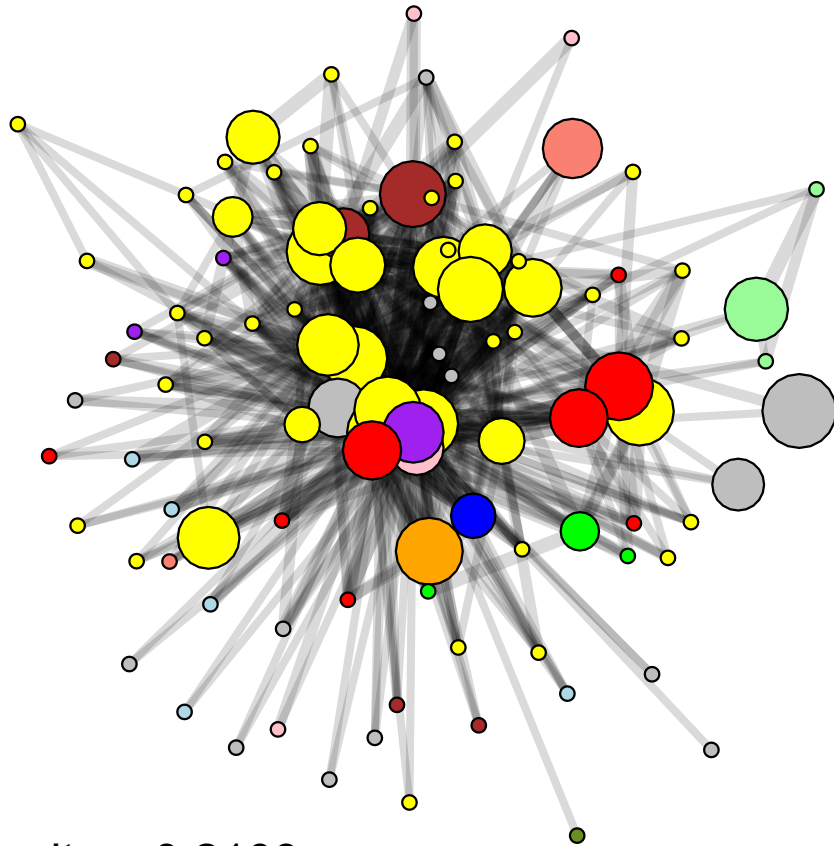
Mean Betweenness = 14.32



TERC



# SNA: Feb 2012 Network



AL	red
AR	orange
FL	pink
GA	brown
KY	pale green
LA	green
MS	yellow
NC	salmon
SC	blue
TN	purple
TX	light blue
VA	olive drab
Out of region:	gray

Net Density = 0.2103

Mean Degree = 21.43

Mean Betweenness = 25.13

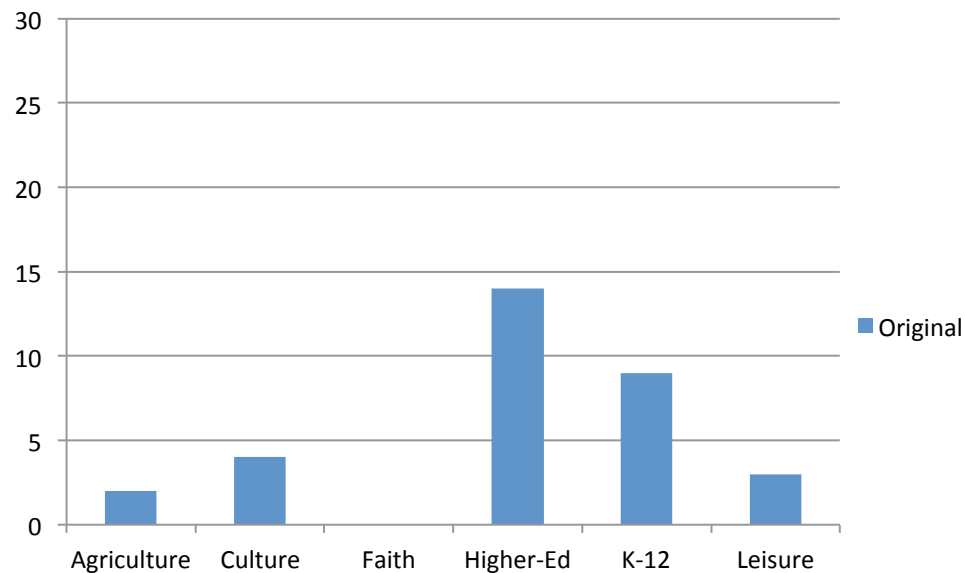


# Network Vibrancy

- CLiPSE held 7 webinars & 2 workshops
  - Average of 9 partners attend webinars
  - Average of 35 partners attend workshops
- High participation
  - 62% of partners attend 1 or more webinars
  - 85% of partners attend 1 or more workshops
- Online network community
  - 60 members
  - Online book study group
  - Not much other regular activity

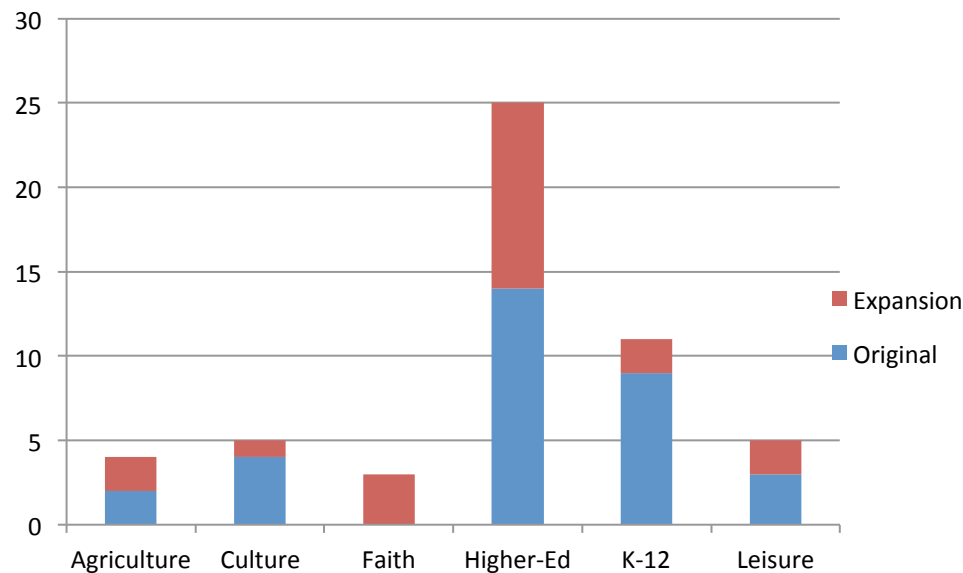
# Network Sector Dispersion

- Increase from 32...



# Network Sector Dispersion

- Increase from 32...to 53 partners

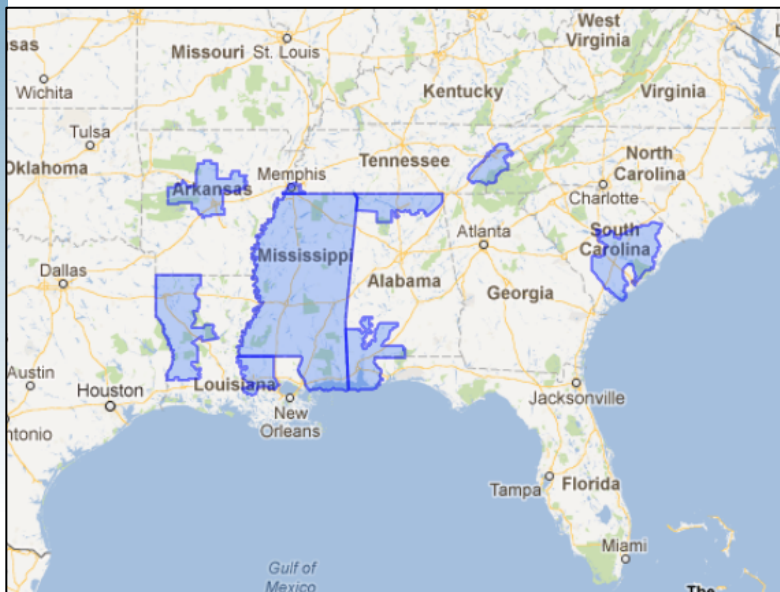


- New Faith communities
- Still disproportionately Higher Ed



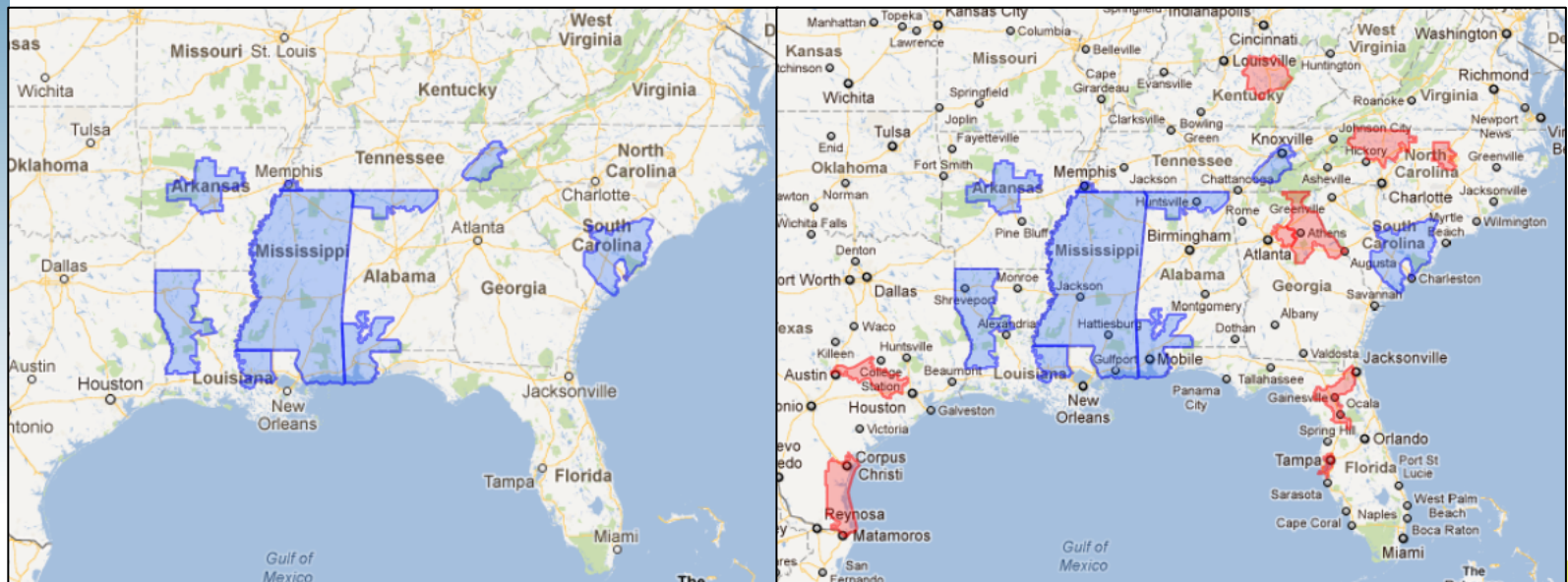
# Geographical Dispersion

- Percent of 133 SE Congressional Districts with at least 1 CLiPSE partner
  - Increased from 13...



# Geographical Dispersion

- Percent of 133 SE Congressional Districts with at least 1 CLiPSE partner
  - Increased from 13...to 22



# Organizational Integration

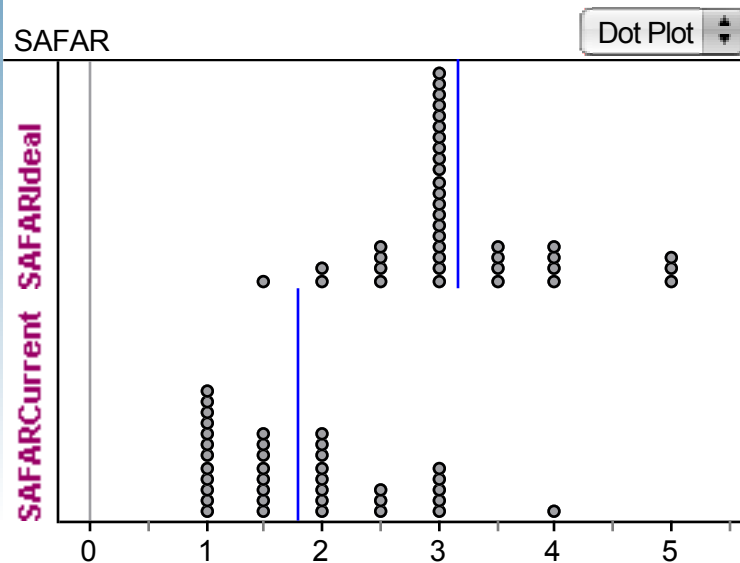
- Using Strategic Alliance Formative Assessment Rubric (SAFAR)
  - 1 Networking
  - 2 Cooperating
  - 3 Partnering
  - 4 Merging
  - 5 Unifying
- Participants asked (Spring, 2012) to assess *Current* and *Ideal* level of organizational integration

# Strategic Alliance Formative Assessment Rubric (SAFAR)

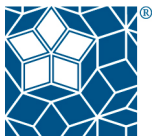
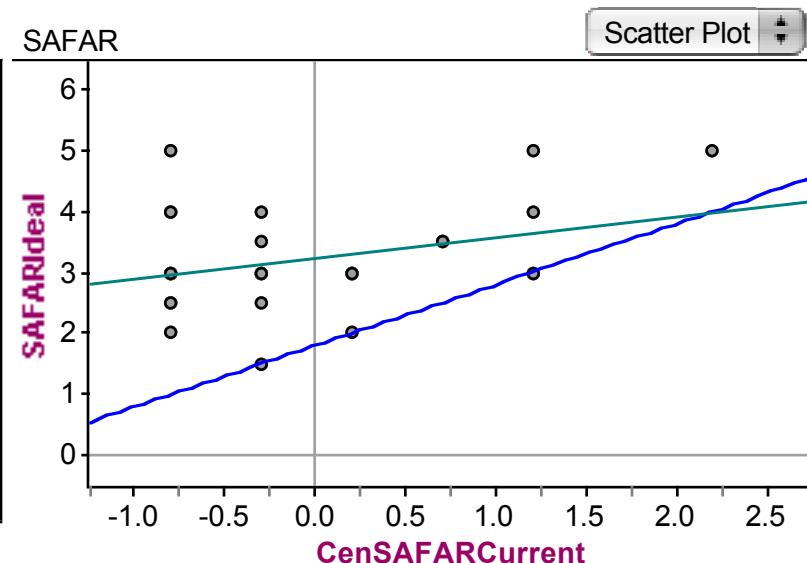
Level of Integration	Purpose	Strategies & Tasks	Leadership & Decision-Making	Interpersonal & Communication
<b>1</b> <b>Networking</b>	<ul style="list-style-type: none"> <li>• Create a web of communication</li> <li>• Identify and create a base of support</li> <li>• Explore interests</li> </ul>	<ul style="list-style-type: none"> <li>• Loose or no structure</li> <li>• Flexible, roles not defined</li> <li>• Few if any defined tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Non-hierarchical</li> <li>• Flexible</li> <li>• Minimal or no group decision making</li> </ul>	<ul style="list-style-type: none"> <li>• Very little interpersonal conflict</li> <li>• Communication among all members infrequent or absent</li> </ul>
<b>2</b> <b>Cooperating</b>	<ul style="list-style-type: none"> <li>• Work together to ensure tasks are done</li> <li>• Leverage or raise money</li> <li>• Identify mutual needs, but maintain separate identities</li> </ul>	<ul style="list-style-type: none"> <li>• Member links are advisory</li> <li>• Minimal structure</li> <li>• Some strategies and tasks identified</li> </ul>	<ul style="list-style-type: none"> <li>• Non-hierarchical, decisions tend to be low stakes</li> <li>• Facilitative leaders, usually voluntary</li> <li>• Several people form “go-to” hub</li> </ul>	<ul style="list-style-type: none"> <li>• Some degree of personal commitment and investment</li> <li>• Minimal interpersonal conflict</li> <li>• Communication among members clear, but may be informal</li> </ul>
<b>3</b> <b>Partnering</b>	<ul style="list-style-type: none"> <li>• Share resources to address common issues</li> <li>• Organizations remain autonomous but support something new to reach mutual goals together</li> </ul>	<ul style="list-style-type: none"> <li>• Strategies and tasks are developed and maintained</li> <li>• Central body of people, who have specific tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Autonomous leadership</li> <li>• Alliance members share equally in the decision making</li> <li>• Decision making mechanisms are in place</li> </ul>	<ul style="list-style-type: none"> <li>• Some interpersonal conflict</li> <li>• Communication system and formal information channels developed</li> <li>• Evidence of problem solving and productivity</li> </ul>
<b>4</b> <b>Merging</b>	<ul style="list-style-type: none"> <li>• Merge resources to create or support something new</li> <li>• Extract money from existing systems/ members</li> <li>• Commitment for a long period of time to achieve short and long-term outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• Formal structure to support strategies and tasks is apparent</li> <li>• Specific and complex strategies and tasks identified</li> <li>• Committees and sub-committees formed</li> </ul>	<ul style="list-style-type: none"> <li>• Strong, visible leadership</li> <li>• Sharing and delegation of roles and responsibilities</li> <li>• Leadership capitalizes upon diversity and organizational strengths</li> </ul>	<ul style="list-style-type: none"> <li>• High degree of commitment and investment</li> <li>• Possibility of interpersonal conflict high</li> <li>• Communication is clear, frequent, and prioritized</li> <li>• High degree of problem solving and productivity</li> </ul>
<b>5</b> <b>Unifying</b>	<ul style="list-style-type: none"> <li>• Unification or acquisition to form a single structure</li> <li>• Relinquishment of autonomy to support surviving organization</li> </ul>	<ul style="list-style-type: none"> <li>• Highly formal, legally complex</li> <li>• Permanent re-organization of strategies and tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Central, typically hierarchical leadership</li> <li>• Leadership capitalizes on diversity and organizational strengths</li> </ul>	<ul style="list-style-type: none"> <li>• Possibility of interpersonal conflict very high</li> <li>• Communication is clear, frequent, prioritized, formal and informal</li> </ul>

# SAFAR Results

- Current: 1.8; Ideal: 3.2  
Avg diff = 1.4 ( $t_{\text{diff}}=9.6$ ,  $df=36$ ,  $p<.0001$ )
- All want same or more integration;  $r=.35$



| mean ( ) = 2.49333



# Other Network Issues

- Online network
  - Didn't take off as a vibrant community
  - Online book study had similar issues
  - Design of website to facilitate community
  - Ongoing social community-building
- Moving beyond existing relationships
  - Takes concerted effort and time
  - Especially across differences

# Network – Audience Impact

- Logic of Change: Network expansion supports broader impacts
  - Need evidence from both to test
- Direct effect on target audiences
  - Participation easier to assess
    - E.g. online resource access, event attendance
  - Change in knowledge/ attitudes harder
- Population impact measures much more difficult

# Conclusion

- Thoughts or Questions?

- Contact info:

Jim Hammerman

[jim\\_hammerman@terc.edu](mailto:jim_hammerman@terc.edu)

<http://evaluation.terc.edu>