



**Enter the Matrix: Building a Rubric for Measuring
Industry Partnerships and Their Impacts**
2019 ATE PI Meeting



Introductions & Session Agenda

Who we are

Mary Slowinski & Rachael Bower
Working Partners Research Project

Lana Rucks & Michael FitzGerald
The Rucks Group

Session agenda

- Background of project, rubric
- Presentation of rubric
- Guided discussion on usefulness, suggested improvements
- Next steps



Working Partners Overview

Working Partners Research Project

- NSF-funded
- Charged with discovering, documenting and disseminating key factors and core practices associated with industry/college partnerships within the ATE Community
- Identified eight partnership models
- Identified challenges, implementation practices and investigated impacts

Partnership Rubric

Created in response to the lack of tools available to quantify the involvement of external partners.



Enter the Matrix: Building a Rubric for Industry Partnerships and Their Impact

The Context
 To achieve outlined objectives, funded initial partnerships are critical to programmatic internship opportunities. Identifying instructors that appropriately measure these relationships is difficult within the limited available instruments designed to measure relationship building around technological development (Koklauskas et al., 2018). In response to the dearth of appropriate measures, The Rucks Group and the National Science Foundation (Rucks & Clasen, 2017). Essentially, the Partnership Rubric was developed to measure the involvement of those partnerships and the level of involvement of those partnerships in key areas. While the instrument was useful in quantifying changes that it lacked validation.

Beginning in 2018, The Rucks Group and the National Science Foundation (Rucks & Clasen, 2017). Working Partners research project teams began collaborative efforts to ultimately widen the dissemination of the tool. As context, the research project employs a mixed-methods approach to document and examine college/industry partnership models, gain a better understanding of how these real-world situations, and gather data about impacts of partnerships. Towards this end, validation efforts led to modifications of the rubric. The purpose of this document is to provide an overview of the current iteration of the Partnership Rubric.

Partner Involvement in Program Development Areas – Year 1

Partner	Advisory Board	Curricular Development/ Review	Faculty Professional Development	Incubation/ Entrepreneurship	Instructional Support	Program Support	Sponsored Research	Workplace-Based Learning
Partner A	1	1	1	1	1	1	1	1
Partner B	1	1	1	1	1	1	1	1
Partner C	1	1	1	1	1	1	1	1
Partner D	1	1	1	1	1	1	1	1
Partner E	1	1	1	1	1	1	1	1
Partner F	1	1	1	1	1	1	1	1
Actual Score	2	1	3	2	4	2	2	4
Max Score	8	4	4	4	4	4	4	4
(Total Sum/Total Max) (10/30)								

Partner Involvement in Program Development Areas – Year 2

Partner	Advisory Board	Curricular Development/ Review	Faculty Professional Development	Incubation/ Entrepreneurship	Instructional Support	Program Support	Sponsored Research	Workplace-Based Learning
Partner A	1	1	1	1	1	1	1	1
Partner B	1	1	1	1	1	1	1	1
Partner C	1	1	1	1	1	1	1	1
Partner D	1	1	1	1	1	1	1	1
Partner E	1	1	1	1	1	1	1	1
Partner F	1	1	1	1	1	1	1	1
Actual Score	5	2	4	4	2	2	2	2
Max Score	8	4	4	4	4	4	4	4
(Total Sum/Total Max) (19/30)								

Partner Involvement in Program Development Areas – Year 3

Partner	Advisory Board	Curricular Development/ Review	Faculty Professional Development	Incubation/ Entrepreneurship	Instructional Support	Program Support	Sponsored Research	Workplace-Based Learning
Partner A	1	1	1	1	1	1	1	1
Partner B	1	1	1	1	1	1	1	1
Partner C	1	1	1	1	1	1	1	1
Partner D	1	1	1	1	1	1	1	1
Partner E	1	1	1	1	1	1	1	1
Partner F	1	1	1	1	1	1	1	1
Actual Score	4	3	4	4	2	3	2	4
Max Score	8	4	4	4	4	4	4	4
(Total Sum/Total Max) (22/30)								

Figure 1. Example Project using the Partnership Rubric to Generate a Partnership Score Across Three Years of a Grant

Figure 2. Partnership Rubric scoring legend.

Color	Points
Grey	N/A
Red	0
Yellow	1
Green	2



Using the Partnership Rubric

Step 2: Determine level of involvement

N/A = No involvement sought



0 = Not or minimally involved



1 = Somewhat involved



2 = Fully involved





Using the Partnership Rubric

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N/A = No involvement sought



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Using the Partnership Rubric

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2 = Fully involved 





Using the Partnership Rubric

Step 2: Determine level of involvement

N/A = No involvement sought

0 = Not or minimally involved 0

1 = Somewhat involved 1

2 = Fully involved 2





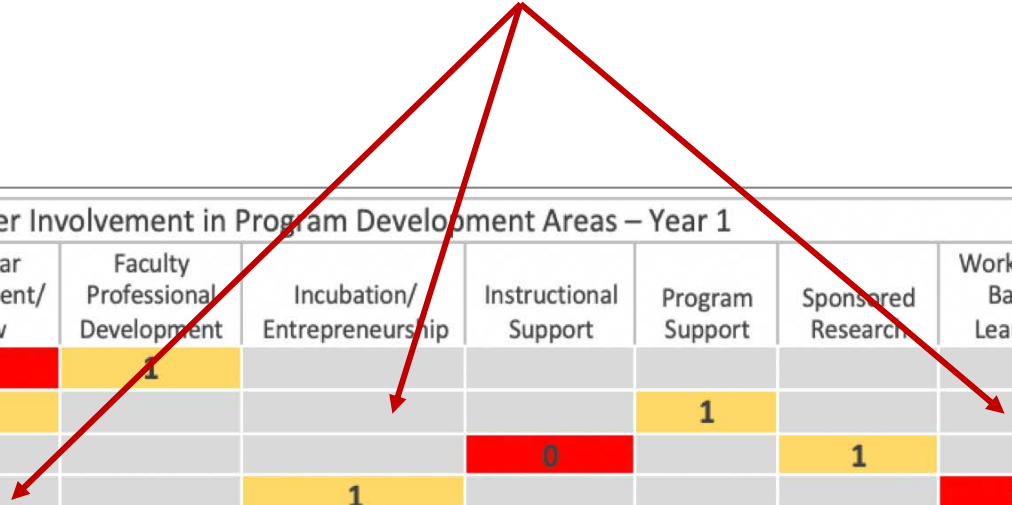
Using the Partnership Rubric

Step 2: Determine level of involvement

- N/A = No involvement sought
- 0 = Not or minimally involved **0**
- 1 = Somewhat involved **1**
- 2 = Fully involved **2**

N/A = No involvement sought

Partner Involvement in Program Development Areas – Year 1								
Partner	Advisory Board	Curricular Development/ Review	Faculty Professional Development	Incubation/ Entrepreneurship	Instructional Support	Program Support	Sponsored Research	Workplace-Based Learning
Partner A	0	0	1					
Partner B		1				1		
Partner C	0				0		1	
Partner D	1			1				0
Partner E	1							1
Partner F			2		0			





Using the Partnership Rubric

Step 2: Determine level of involvement

- N/A = No involvement sought
- 0 = Not or minimally involved **0**
- 1 = Somewhat involved **1**
- 2 = Fully involved **2**

0 = Not or minimally involved

Partner Involvement in Program Development Areas – Year 1								
Partner	Advisory Board	Curricular Development/ Review	Faculty Professional Development	Incubation/ Entrepreneurship	Instructional Support	Program Support	Sponsored Research	Workplace-Based Learning
Partner A	0	0	1					
Partner B		1				1		
Partner C	0				0		1	
Partner D	1			1				0
Partner E	1							1
Partner F			2		0			



Using the Partnership Rubric

Step 2: Determine level of involvement

- N/A = No involvement sought
- 0 = Not or minimally involved **0**
- 1 = Somewhat involved **1**
- 2 = Fully involved **2**

1 = Somewhat involved

Partner Involvement in Program Development Areas – Year 1								
Partner	Advisory Board	Curricular Development/ Review	Faculty Professional Development	Incubation/ Entrepreneurship	Instructional Support	Program Support	Sponsored Research	Workplace-Based Learning
Partner A	0	0	1					
Partner B		1				1		
Partner C	0				0		1	
Partner D	1			1				0
Partner E	1							1
Partner F			2		0			



Using the Partnership Rubric

Step 2: Determine level of involvement

- N/A = No involvement sought
- 0 = Not or minimally involved **0**
- 1 = Somewhat involved **1**
- 2 = Fully involved **2**

2 = Fully involved

Partner Involvement in Program Development Areas – Year 1								
Partner	Advisory Board	Curricular Development/ Review	Faculty Professional Development	Incubation/ Entrepreneurship	Instructional Support	Program Support	Sponsored Research	Workplace-Based Learning
Partner A	0	0	1					
Partner B		1				1		
Partner C	0				0		1	
Partner D	1			1				0
Partner E	1							1
Partner F			2		0			



Using the Partnership Rubric

Step 3: Calculate Actual Score

Actual Score = sum across the domains

1. Sum down each column

2. Sum across

Partner Involvement in Program Development Areas – Year 1								
Partner	Advisory Board	Curricular Development/ Review	Faculty Professional Development	Incubation/ Entrepreneurship	Instructional Support	Program Support	Sponsored Research	Workplace-Based Learning
Partner A	0	0	1					
Partner B		1				1		
Partner C	0				0		1	
Partner D	1			1				0
Partner E	1							1
Partner F			2		0			
Actual Score	2	1	3	1	0	1	1	1
Max Score	8	4	4	2	4	2	2	4
							%	33%
						(Total Sum/Total Max)		(10/30)

Example Actual Score=10



Using the Partnership Rubric

Step 4: Calculate Maximum Score

Maximum Score = number of entries x 2 (max possible score)

1. Calculate # of column entries, multiply by 2

2. Sum across

Partner Involvement in Program Development Areas – Year 1								
Partner	Advisory Board	Curricular Development/ Review	Faculty Professional Development	Incubation/ Entrepreneurship	Instructional Support	Program Support	Sponsored Research	Workplace-Based Learning
Partner A	0	0	1					
Partner B		1				1		
Partner C	0				0		1	
Partner D	1			1				0
Partner E	1							1
Partner F			2		0			
Actual Score	2	1	3	1	0	1	1	1
Max Score	8	4	4	2	4	2	2	4
							%	33%
						(Total Sum/Total Max)		(10/30)

Example Maximum Score=30



Using the Partnership Rubric

Step 5: Calculate Partnership Score

$$\frac{\text{Actual Score}}{\text{Max Score}} = \text{Partnership Score}$$

Example:

$$\frac{10}{30} = 33\%$$

Partner Involvement in Program Development Areas – Year 1									
Partner	Advisory Board	Curricular Development/ Review	Faculty Professional Development	Incubation/ Entrepreneurship	Instructional Support	Program Support	Sponsored Research	Workplace-Based Learning	
Partner A	0	0	1						
Partner B		1				1			
Partner C	0				0		1		
Partner D	1			1				0	
Partner E	1							1	
Partner F			2		0				
Actual Score	2	1	3	1	0	1	1	1	
Max Score	8	4	4	2	4	2	2	4	
								%	33%
								(Total Sum/Total Max)	(10/30)



Rubric Introduction – Questions?

Any questions regarding rubric purpose, background, design before guided discussion?



Discussion Question #1

What is one thing about the rubric that will be useful in your work?



Discussion Question #2

What is one thing that could be improved upon or is missing from the rubric?



Next Steps

Continued Rubric Development

- Iterative design, feedback loops
 - *Input from HITEC attendees (completed July 2019)*
 - Feedback from the evaluation community
 - Input from ATE PI conference attendees
- Piloting with evaluators/educators
- Use in upcoming workshops



Next Steps

We want your input!

- Talk with us during the PI meeting
 - Thursday: ATE Central Booth #001
 - Friday: WP breakfast roundtable - table #16
 - Anytime you see us!
- Leave feedback online
- Pilot the rubric
- Spread the word!





Thank You!

Provide rubric feedback online:

<http://bit.ly/PartnershipRubricFeedback>



Email

info@workingpartnersproject.org

Web

<http://workingpartnersproject.org>