SRI Education

Building a Data Catalog

Presented to Clay County and Jackson County

Date TBD

REL APPALACHIA
Regional Educational Laboratory
At SRI International

Welcome

Agenda

9:00 a.m.	Welcome, introductions, overview of goals & objectives
9:15 a.m.	What we know and where we are going
9:50 a.m.	Building a data catalog
10:45 a.m.	**Break**
11:00 a.m.	Action ideas
11:50 a.m.	Wrap up & next steps
12:00 p.m.	**Adjourn**

REL AP staff will meet with staff from individual districts in the afternoon to begin building the data catalog.

Introductions

Please share your:

- Name
- Affiliation
- Role
- Favorite data source

Regional Educational Laboratory (REL) Program

Serve the needs of 10 designated regions, helping them improve education through evidence-based practice.

Administered by the U.S. Department of Education, Institute of Education Sciences (IES).

Key Outcomes of the REL Program

- Sustain partnerships that use research to address high-leverage issues.
- Complete coherent and cumulative research agendas.
- Provide credible research and support.
- Increase capacity to access, understand, interpret, apply, and conduct research.
- Increase use of research findings in education decision-making.

Goals & Objectives

Overall Goals of Workshop Series

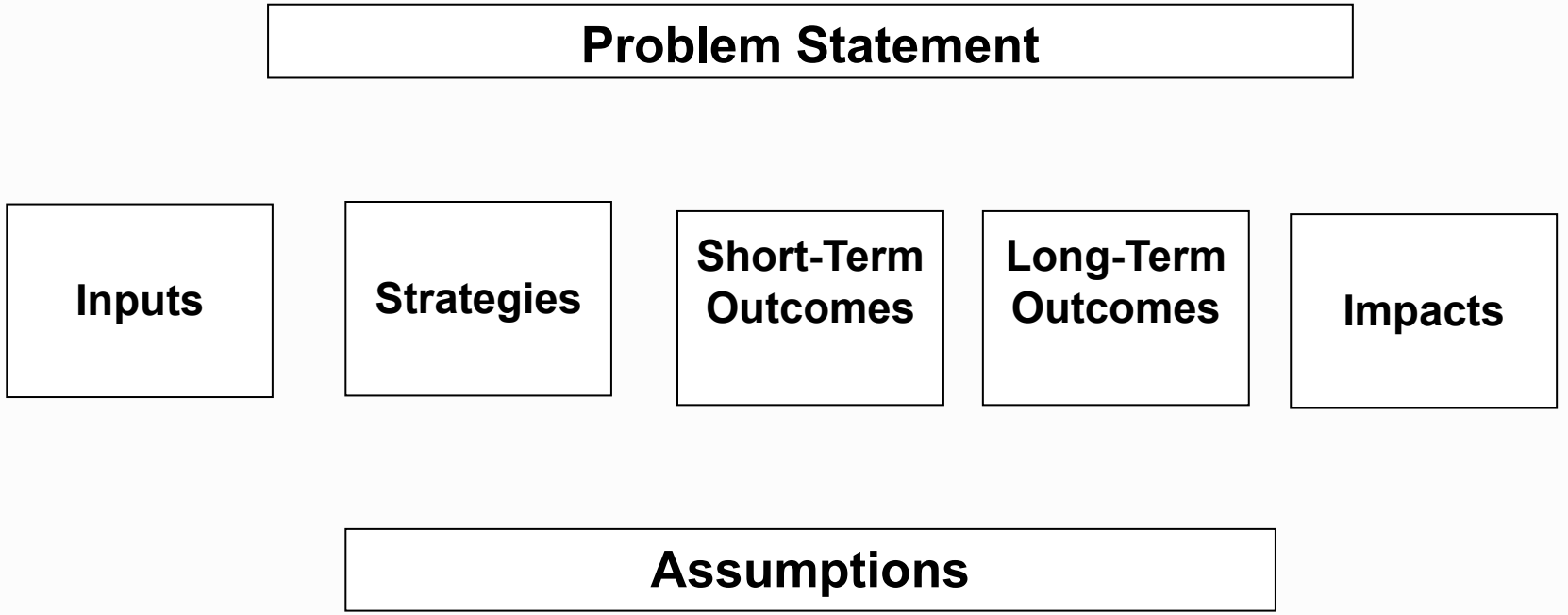
- Define a common logic model related to college and career readiness and success.
- Develop a clear, coherent agenda for applied research, technical assistance, and dissemination activities.
- Determine the types of data available to address the questions of interest, as well as any gaps in the data, across the participating districts.

Data Catalog Workshop Objectives

- Review the research agenda.
- Describe the features of a data catalog and its uses.
- Identify data related to the questions in the research agenda.
- Identify activities the REL can support in implementing the research agenda.

What We Know and Where We are Going

Elements of a logic model



Problem Statement

Students in rural eastern Kentucky lack exposure to models of college and career success, lack confidence to pursue opportunities for college and career success, and have low college graduation rates and problems obtaining gainful employment.

INPUTS	STRATEGIES	SHORT-TERM OUTCOMES	LONG-TERM OUTCOMES	IMPACTS
		Students' academic preparedness increases.		
	Ensure students are academically prepared	The percentages of students applying to college, completing financial aid applications, and enrolling in college increases.		
Funding Federal grant programs KEES (tuition support) **People and Time** District staff Teachers **Community Resources** Area Technical Centers Higher education partnerships Community-based services Youth Service Center **Curriculum and Materials**	Engage students in learning about college opportunities, college application, and the college experience.	The percentage of students believing that college is a viable option increases and their college aspirations increase.	The percentage of students obtaining 2- or 4- year degrees increases, or obtaining an industry certificate increases.	Our region has improved economic prospects and a strengthened community.
	Engage students in learning about careers and the skills that are necessary for employment.	Students' social and cultural preparedness increases, and they understand the norms of postsecondary education.	The proportion of students obtaining employment that provides a living wage (including military) increases.	Our community believes in and expects that students will achieve academic and career success.
	Ensure students have sufficient supports to transition to postsecondary education and the workforce, including authentic experiences.	Students' academic and nonacademic skills are sufficient to obtain employment that provides a living wage.		

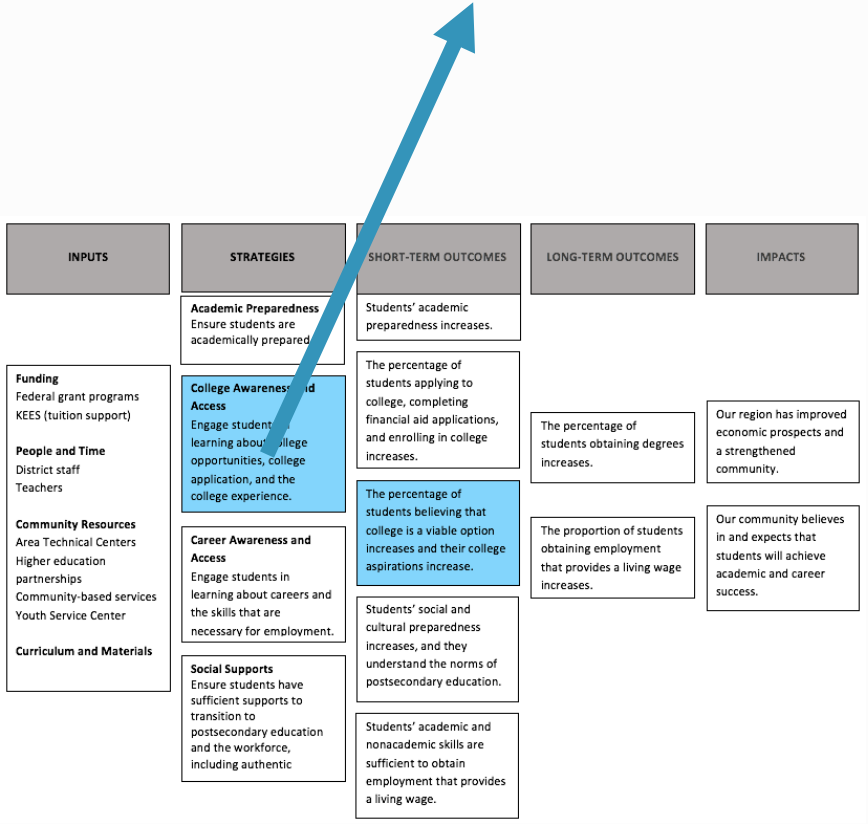
STRATEGY

College Awareness and Access

Engage students in learning about college opportunities, college application, and the college experience.

SHORT-TERM OUTCOME

The percentage of students believing that college is a viable option increases and their college aspirations increase.



INPUTS	STRATEGIES	SHORT-TERM OUTCOMES	LONG-TERM OUTCOMES	IMPACTS
Funding Federal grant programs KEES (tuition support) **People and Time** District staff Teachers **Community Resources** Area Technical Centers Higher education partnerships Community-based services Youth Service Center **Curriculum and Materials**	**Academic Preparedness** Ensure students are academically prepared.	Students' academic preparedness increases.		
	College Awareness and Access Engage students in learning about college opportunities, college application, and the college experience.	The percentage of students applying to college, completing financial aid applications, and enrolling in college increases.	The percentage of students obtaining degrees increases.	Our region has improved economic prospects and a strengthened community.
	Career Awareness and Access Engage students in learning about careers and the skills that are necessary for employment.	The percentage of students believing that college is a viable option increases and their college aspirations increase.	The proportion of students obtaining employment that provides a living wage increases.	Our community believes in and expects that students will achieve academic and career success.
	Social Supports Ensure students have sufficient supports to transition to postsecondary education and the workforce, including authentic	Students' social and cultural preparedness increases, and they understand the norms of postsecondary education.		
		Students' academic and nonacademic skills are sufficient to obtain employment that provides a living wage.		

Research Agenda

Topic: College opportunities and awareness

Subtopic: Viability of college	Subtopic: Applying to college
What activities and experiences help students believe that college is a viable option for them?	How many and what types of colleges do students apply to?

Research Agenda

Topic	Subtopic	Questions
College awareness and access	Activities to encourage enrollment & success	Q9. Which interventions provided by higher education institutions (e.g., college fairs, peer mentoring) can increase high school students' likelihood of enrolling and later persisting in college? Q10. What is the relationship between exposure to authentic experiences and college enrollment?
	Non-academic skills & competencies	Q11. What soft skills (e.g., attendance), are associated with persistence in college? Q12. What activities in K-12 provide students with life skills needed to complete a college degree?

Research Agenda into Actionable Activities

Topic	Subtopic	Questions	Data	Potential study design and/or TCTS activity
College awareness and access	Activities to encourage enrollment & success	Q9. Which interventions provided by higher education institutions (e.g., college fairs, peer mentoring) can increase high school students' likelihood of enrolling and later persisting in college?		
		Q10. What is the relationship between exposure to authentic experiences and college enrollment?		
	Non-academic skills and competencies	Q11. What skills (e.g., attendance), are associated with persistence in college?		
		Q12. What activities in K-12 provide students with life skills needed to complete a college degree?		

Research Agenda into Actionable Activities

Topic	Subtopic	Questions	Data	Potential study design and/or TCTS activity
College opportunities and awareness	Activities to encourage enrollment & success	Q9. Which interventions provided by higher education institutions (e.g., college fairs, peer mentoring) can increase high school students' likelihood of enrolling and later persisting in college?	-campus tour attendance -student survey -student focus groups	-support development of graduate student survey -help create tracking systems for student participation
		Q10. What is the relationship between exposure to authentic experiences and college enrollment?		
	Non-academic skills & competencies	Q11. What skills (e.g., attendance), are associated with persistence in college?	-attendance data -college enrollment and persistence data	Literature review of soft skills associated with persistence for rural students
		Q12. What activities in K-12 provide students with life skills needed to complete a college degree?		

Building a Data Catalog

A data catalog is . . .

- an inventory of existing data related to a particular concept or topic.
- a way of capturing the characteristics (completeness, validity, accuracy, consistency, availability and timeliness) of these data.
- displayed in a spreadsheet

A data catalog is not . . .

- a database containing real data.
  - Does not contain school- or student-level information.
  - Does not include the data for each variable, only a description of the variable.
- a complete picture of all data collected in a district.
  - Does not include information that is unrelated to our topic of interest.

Why create a data catalog?

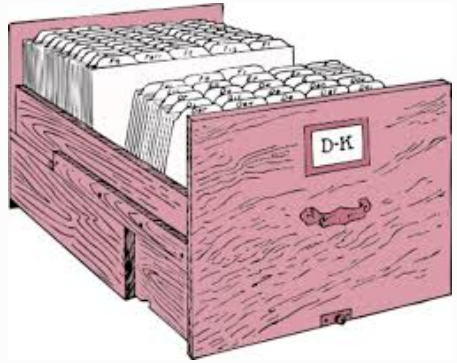
1) Help determine whether there are sufficient data to undertake a research study.

2) Identify what additional data should be collected to support investigation of questions of interest.

3) Support you in understanding and selecting data that best address your questions.

Creating a data catalog

1) Identify your **topic** of interest.
2) Organize the related concepts: **topics and subtopics.**
3) Identify **measures** and **data elements** that quantify the measure.
4) Describe **data characteristics.**



Organization of the data catalog

Topics and subtopics

- Provide varying levels of specificity when needed; there are often multiple subtopics within a topic.

Measures

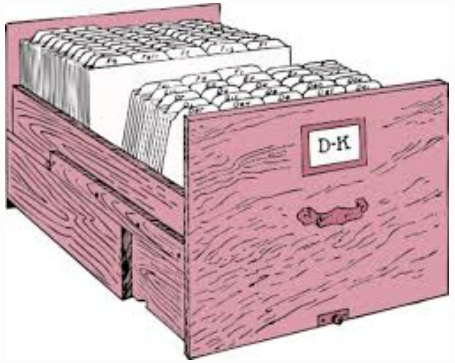
- Data elements that are associated with and inform the subtopics.

Data elements

- Specifies the measure.

Data Characteristics

- Specific qualities of the data, which inform its use.



Sample format and definitions

Topic/ subtopic	Data		
	Measures	**Data elements**	**Data characteristics**
Identifies the subtopic area and associated research question for this subtopic	Types of data that provide evidence	Definition of the thing being measured and tracked	Specific qualities of the data, which inform its use
	An example could be standardized test scores		An example could be
			- data source.
			- self-reported.
			- frequency of collection.

An example

Topic/Subtopic	Data	
	Measures	Data elements
High school academic performance and engagement		

An example

Topic/Subtopic	Data	
	Measures	Data elements
High school academic performance and engagement	Attendance	
	ACT score	

An example

Topic/Subtopic	Data	
	Measures	Data elements
High school academic performance and engagement	Attendance	Absences
		Tardies
	ACT score	ACT math score
		ACT English score
		Met ACT math score benchmark
		Met ACT English score benchmark

Identifying Available Data

Data can be formal and informal.

- Formal: Attendance records.
- Informal: Meeting notes.

Data can be collected centrally or locally.

- Centrally: District student information system, state-level data.
- Local: Counselor spreadsheet with college visit attendance records.

Identifying measures: Your turn

Subtopics	Measure	Data elements
Note to reviewers:		
These will be added prior to the presentation and will represent the subtopics created in the research agenda workshops in December.		

Data characteristics

Measure	Data element	Years available	Level of data	Can data be linked to other data?	Have metrics changed over time?	Response categories
Attendance	Absences	2000–2017	Student	Yes	No	Present, Absent, Missing
	Tardies	2000–2017	Student	Yes	No	Present, Late, Missing
ACT score	ACT math score	2013–2016	School	Yes	No	1–36, Exempt, Missing
	ACT Math Benchmark	2013–2016	School	Yes	Yes. Benchmark pass rate changed from 18 to 19 in 2014.	Meet, Did not meet, Missing

An example

Topic/Subtopic	Data		
	Measures	Data elements	Data characteristics
High school academic performance and engagement	Attendance	Absences	
		Tardies	
	ACT score	ACT math score	
		ACT English score	
		Met ACT math score benchmark	
		Met ACT English score benchmark	

Break

Action Ideas

Research agenda into actionable activities

Topic	Subtopic	Questions	Data	Potential study design and/or TCTS activity
College opportunities and awareness	Activities to encourage enrollment & success	Q9. Which interventions provided by higher education institutions (e.g., college fairs, peer mentoring) can increase high school students' likelihood of enrolling and later persisting in college?	-campus tour attendance -student survey -student focus groups	-support development of graduate student survey -help create tracking systems for student participation
		Q10. What is the relationship between exposure to authentic experiences and college enrollment?		
	Non-academic skills & competencies	Q11. What skills (e.g., attendance), are associated with persistence in college?	-attendance data -college enrollment and persistence data	Literature review of soft skills associated with persistence for rural students
		Q12. What activities in K-12 provide students with life skills needed to complete a college degree?		

Three REL activities

Training, coaching and technical support	Applied research	Dissemination of research findings

• Training on logic modeling and research agendas.
• Technical support to assist with research design, data collection, and/or analysis plans.
• Informal evidence reviews (e.g., using ESSA standards).
• Ask-A-REL responses.
	• Descriptive or correlational analyses or extant data.
	• Literature reviews.
	• Effectiveness studies.
	• Technical reports on analytic methods.
	• Empirical studies of communication strategies.
	• Just-in-Time research.
		• REL website.
		• Light-touch outreach.
		  • Newsletters.
		  • Social media.
		  • Infographics.
		  • Webinars.
		  • Short videos.
		  • Blog posts.

Suggestions

REL AP WILL ADD A TABLE OF SUGGESTIONS HERE, BASED ON INFORMATION GATHERED DURING THE RESEARCH AGENDA WORKSHOP

Sample suggestions include:

- Supporting development of a student survey.
- Creating tracking systems for student participation in programs or activities.
- Developing an analysis plan for correlating student participation with college application, attendance, or persistence.
- Providing more information on strategies for improving student social skills.

Partnership activities: Your turn

Training, coaching and technical support	Applied research	Dissemination of research findings

Next Steps

Upcoming activities

- January-February 2018
  - Identify the data needed to answer the research questions articulated in the research agenda and launch the development of a data catalog.
  - Work with staff in each district to identify the uses of state-level data and to locate local data.
- March 2018
  - Review the data catalog, highlighting the data available (and the new data collection required) to answer key research questions across partnership districts.

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Thank you for your participation!

How did we do?

Ashley Campbell,
Lydotta Taylor, and CJ Park
REL Appalachia