

20 | **ON TRACK**
24 | *with Federal Programs*

Federal Programs Institute

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Academic Return on Investment (A-ROI)

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Federal Programs and Oversight



2024 Federal Programs Institute:
ON TRACK with Federal Programs



Agenda

- A-ROI Overview
- A-ROI System Steps
- Resources and Contacts



A-ROI Overview

Return on Investment Definition (Business and Industry)

Return on investment describes the expected gains (i.e., returns) per unit of cost (i.e., investment) of a variety of potential actions.



Return on Investment Definition (Academic)

Ensuring alignment of school system resources to strategic priorities so that every school succeeds for every student



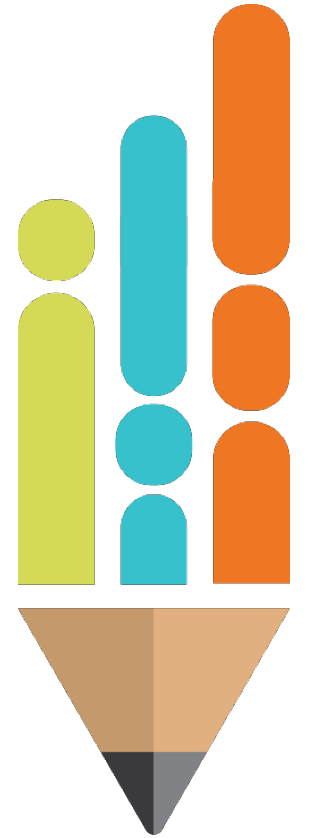
A Consolidated Definition

A-ROI is a conscious and collaborative process by which system resources (i.e., educational investments) are identified and weighed in cost and effectiveness for stronger alignment to strategic goals for maximum outcomes.

System Strategy A-ROI: Five Key Steps

- **Identify the core need**
 - What fundamental student performance needs are we focusing on, and what's our theory of change for addressing it?
- **Consider a broad range of investment options**
 - What are the investments we currently make to address this need, and what else could we do?
 - What does the evidence state?
- **Define ROI metrics and gather data**
 - What are the relative returns (costs weighed against benefits) to the set of current/potential options?
- **Weigh investment options**
 - What other factors do we need to consider, in order to select from among the options?
- **Make investment decisions**
 - How can we free resources to do what we want to do?

Source: Frank and Hovey, 2014





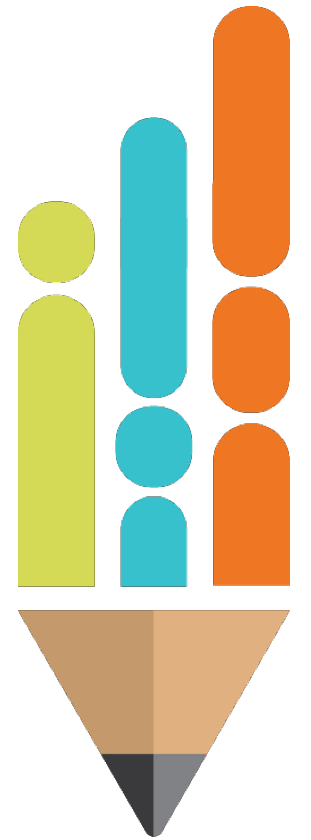
General Budgeting Categories

- **Personnel**
 - Salaries and fringe
 - Retention investments – increased pay for extra duties, etc.
- **Professional Development**
 - Meeting local educational agency (LEA) planning and school improvement initiatives
 - Professional development (PD) that weaves within all other PDs
- **Equipment, Supplies, and Materials**
 - Consider the expenditures and complementary
- **Infrastructure and Capital Gains**



The Formula (Scale for Weighing):

$$\text{A-ROI} = \frac{(\text{Increase in Student Learning}) \times (\text{Number of Students Helped})}{\$ \text{ Spent}}$$





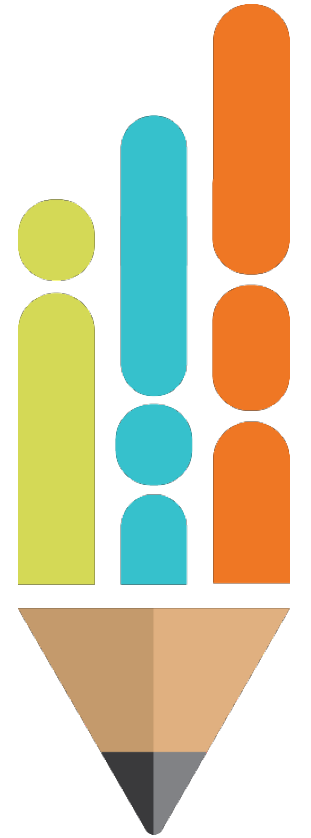
A-ROI: Get Started by Identifying the Team

- **Suggested members include:**
 - Data analyst
 - Academic supervisor
 - Fiscal director/fiscal professional
 - Program or lead teacher
 - School board members and/or other community stakeholders (consider their skills)
 - Team leader and communicator



A-ROI: Questions to Consider...

- What is our system's spending culture?
- Do we commit to traditional expenditures from year to year?
- Are the school board and school system's spending culture truly devoted to student-centered decisions?
- What does the culture value?



A-ROI System Steps

Step 1- Identify a Core Need

A-ROI: Identify the Core Need

Step 1

- **Identify a program and performance target:**
 - Start with one program.
 - What is the need?
 - What is the theory of action?



A-ROI System Steps

Step 2- Range of Investments (Interventions)

A-ROI: Range of Investment Options

Step 2

- **Identify current strategies (investment options) that are actively supporting the program:**
 - Identify all current strategies and program resources.
 - Collect current available data related to the program.
 - Align current available data to each strategy.
 - Identify new strategies or investments.



A-ROI: Range of Investment Options

Step 2

- **Be creative and be open to *new strategies* and new ways of supporting the program:**
 - Review the identified root causes of the need.
 - Are there strategies already employed under other programs in the LEA?
 - Review ESSA evidence (Do your research!)
 - Gather ideas from natural collaborations with other LEAs and state-sponsored events.
 - Revise or improve upon past strategies that are no longer employed.



A-ROI System Steps

Step 3- Defining the Metrics / Data

The Formula (Scale for Weighing)

$$\text{A-ROI} = \frac{\text{(Increase in Student Learning)} \times \text{(Number of Students Helped)}}{\$ \text{ Spent}}$$





A-ROI: Define ROI Metrics and Gather Data

Step 3

- **Effectiveness and Impact of a Strategy:**
 - When gathering and applying data to weigh a strategy, consider the following:
 - Is the data valid for this strategy?
 - If exploring data for a new strategy, can fidelity be replicated in your LEA?



A-ROI: Define ROI Metrics and Gather Data (Effectiveness and Impact of a Strategy)

- Sources of data for weighing strategies (i.e., investment options):
 - Teacher effectiveness data
 - Math and English Language Arts (ELA) benchmark data
 - Report card data
 - Graduation rates data
 - Non-cognitive data (e.g., attendance, disciplinary data)
 - Early Post-Secondary Opportunities (EPSOs)
 - Qualitative data (e.g., surveys, professional learning community (PLC) notes, focus groups minutes)



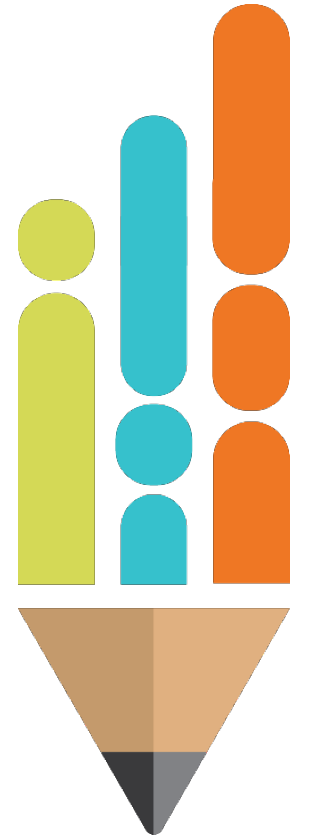


Four Places to Find Effective Data

- **Natural or Engineered Controlled Tests**
 - Example: compare co-teaching courses against courses that are individually taught by pre- and post-test data.
- **Evidence Pockets:**
 - Use current data sources to isolate new variables.
 - Example: Use available reading data to find teachers who are successful; then, interview and observe their methods.
- **Common Formative Assessments:**
 - Example: LEA- and state-made assessments, benchmark assessments, etc.
- **ESSA evidence research/educational research**
 - May provide data ideas.
- ***Important:* Never assume the success of a strategy; test it.**

The Formula (Scale for Weighing)

$$\text{A-ROI} = \frac{(\text{Increase in Student Learning}) \times (\text{Number of Students Helped})}{\$ \text{ Spent}}$$



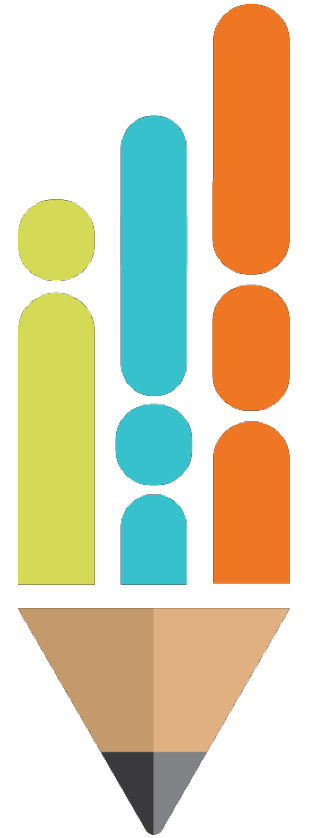
A-ROI: Define ROI Metrics and Gather Data

- **How many students are impacted or expected to be impacted by the strategy?**
 - Student subgroups impacted directly by the strategy.
 - Student subgroups impacted indirectly by the strategy.



The Formula (Scale for Weighing)

$$\text{A-ROI} = \frac{(\text{Increase in Student Learning}) \times (\text{Number of Students Helped})}{\text{\$ Spent}}$$



A-ROI: Budgetary Data Collection

- **How much does the strategy cost?**
 - Unthread budgets and budget cost lines to apply the total cost of a strategy.
 - Per pupil cost will be beneficial.



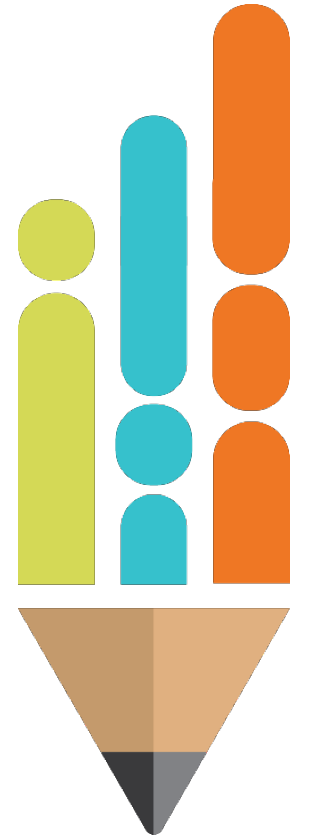
A-ROI System Steps

Step 4- Weigh Investment Options;
Do the math!



The Formula (Scale for Weighing)

$$\rightarrow \text{A-ROI} = \frac{(\text{Increase in Student Learning}) \times (\text{Number of Students Helped})}{\$ \text{ Spent}}$$





Weigh Investment Options

Step 4

- As the ROI is calculated for each strategy and is ranked in order from highest to lowest, consider the following:
 - If precise numbers are not available for the formula, the ROI team can discern the likeliness of strategy effectiveness by agreeing on the strategy as a high, medium, or low returner.
 - Consider unintended consequences, conflicts, or costs of ranked strategies.
 - Consider the interactivity and symmetry of the strategies.
 - Evaluate the consistency of the alignment of identified strategies with the overall theory of action.

Example 1

$$\text{A-ROI} = \frac{(\text{Increase in Student Learning}) \times (\text{Number of Students Helped})}{\$ \text{ Spent}}$$

Strategy #1: Push-in model

- An Educational Assistant (EA) serves 5 classrooms per day, helping a total of 15 students.
 - EA costs \$20,000 per year
 - 15 students are impacted
 - Increase in student learning is at a **constant** (100%)
 - **0.075%** = 100% x 15 / 20,000.00 (**Note:** A-ROI was multiplied by 100 for percentage conversion)

Strategy #2 Pull-out model

- The same EA could serve 5 students per period through a pull-out strategy.
 - EA costs \$20,000 per year
 - 25 students are impacted
 - Increase in student learning is at a **constant** (100%)
 - **0.125%** = 100% x 25 / 20,000 (**Note:** A-ROI was multiplied by 100 for percentage conversion)





Example 2

Strategy #1: LynnXL math on-line program strategy

- Cost: \$ 6,000/year
- Students impacted: 120
- Student learning data (correlative): 20% increase in math scores
- A-ROI = **.40%** = $20\% \times 120 / 6,000$ (multiplied by 100)

Strategy #2: HenryMathforFun

- Cost: \$ 5,500/year
- Students impacted: 240
- Student learning data: (ESSA evidence 10%, overall increase in math)
- A-ROI = **.44%** = $10\% \times 240 / 5,500$ (multiplied by 100)



Return on Investment

Return on Investment

| Area <i>How did you spend your money?</i> | Alignment to Goals/Focus <i>What SIP goal did this support? What was the reason for this support?</i> | Actual Cost | Data Sources and Results <i>What data did you use to support the SIP goals? What were the results? Is there any proof that any implementation's impact on data? If programs / practices were purchased, what is the evidence-based tier?</i> | Reflections <i>Based on SIP goals and for data collected, what are the implications for future planning? Did this work? Why or why not? Is this still a viable purchase?</i> |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personnel | | | | |
| Supplies and Materials | | | | |
| Professional Development | | | | |
| Programs | | | | |
| Equipment | | | | |
| Contracted Services | | | | |

A-ROI System Steps

Step 5 – Make Investment Decisions

Make Investment Decisions

Step 5

- **Develop a Program Plan of Action:**
 - Consider overall savings of identified program strategies.
 - Consider unintended consequences, conflicts, or costs of ranked strategies.
 - Consider the interactivity and symmetry of the strategies.
 - Evaluate the consistency of the alignment of identified strategies with the overall theory of action.





Going Forward and Onward...

- Conduct new A-ROI on all programs.
- Continue to review and update program costs.
- Programs that are **expensive** are prime targets.
- Create clear rules/processes to guide the “where, how, and why” of the flow of dollars in the LEA and school budgets.

Resources and Contacts



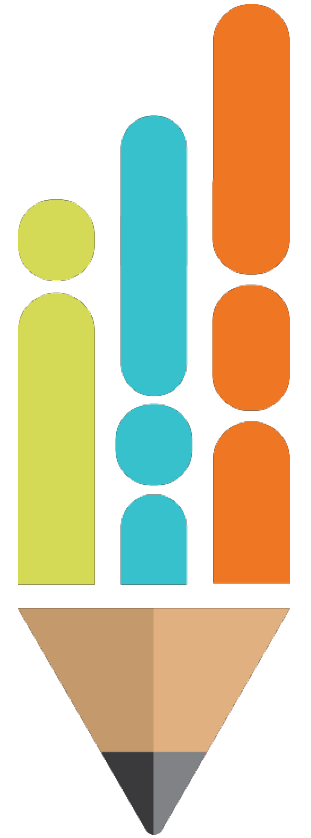
Resources

- [Academic ROI: What Does the Most Good?](#)
- [ERIC: an online library of education research and information and a platform to research various topics on the A-ROI process](#)
- [Issues around Using Academic Return on Investment \(A-ROI\) for Informing and Improving Decisions. Part I: Validity](#)
- [Non-Regulatory Guidance: Using Evidence to Strengthen Education Investments](#)
- [Return on Investment in Education: A “System-Strategy” Approach – Frank and Hovey, 2014](#)
- [Spending Money Wisely: Getting the Most from School District Budgets](#)
- [What Works Clearinghouse](#)



FPO Contacts

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Thank You!

Contact Info or Questions?

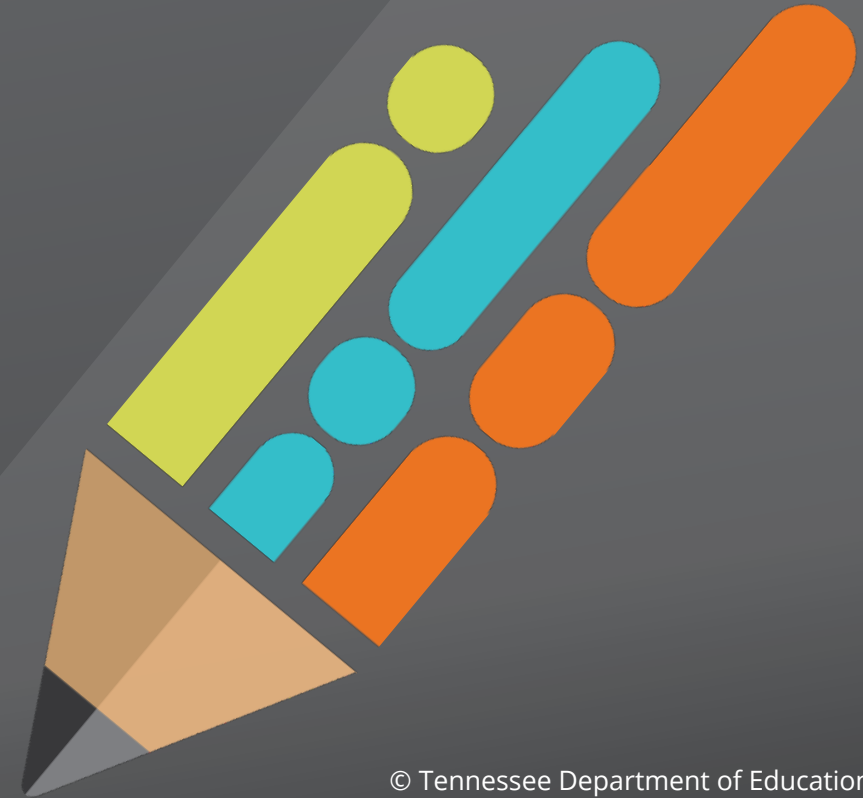
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You may access the survey by navigating here:

https://stateoftennessee.formstack.com/forms/2024_federal_programs_institute_presentation_survey



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