Measuring Inspiration

Planning for NASA Education's Performance Measurement and Evaluation
Authors

Dr. Patricia Moore Shaffer, Evaluation Manager- Office of Education Infrastructure Division-National Aeronautics and Space Administration, patricia.a.shaffer@nasa.gov

Dr. Vivian W. Whitney, Senior Director Program Evaluation - Ohio Aerospace Institute, vivianwhitney@oai.org; Office of Education Infrastructure Division; National Aeronautics and Space Administration - One Stop Shopping Initiative (OSSI) - Coordinator Implementation Process Documentation

Dr. Lisa E. Wills, Education Research Manager - Office of Education Infrastructure Division -National Aeronautics and Space Administration, lisa.e.wills@nasa.gov

Ms. Fatima Senghore, Office of Education Infrastructure Division - National Aeronautics and Space Administration fatima.senghore@nasa.gov

Dr. Mabel. J. Matthews, Director Office of Education Infrastructure Division - National Aeronautics and Space Administration, mabel.j.matthews@nasa.gov
Overview

I. Introduction

II. STEM Education and NASA’s Approach

III. The OEID

IV. Performance Measurement and Evaluation

V. Process Documentation

VI. Performance Measurement: Current Concerns
Life-Cycle Sources of Data to Inform Evidence-Based Decisions

Performance Process Scalable
Measurement + Documentation = Sustainable and Evaluation Replicable
STEM Education at NASA

Inspire

Engage

Educate

Employ
NASA Approach to STEM Education

- Restructure into a consolidated education program: the Office of Education Infrastructure Division (OEID).

- Prioritize activities that support Agency education goals via *lines of business model*:
  1) Internships, Fellowships and Scholarships;
  2) Educator Professional Development;
  3) STEM Engagement and
  4) Institutional Engagement.

- Focus on *evidence-based* project activities.

- Align STEM education investments with the *CoSTEM 5-Year Strategic Plan*. 
OEID is an umbrella organization made up of 5 components, called *functional areas*:
- Communications & Operations
- Information Technology Systems
- Dissemination & Web Services
- Special Projects
- *Performance Assessment*, which includes responsibilities for program design support, assurance of compliance for information collections, process documentation & evaluation, performance measurement, and outcome/impact evaluation.

OEID goals for serving the NASA Office of Education:
- provide *unified communications*, and
- *information and technology structure*. 
Life-Cycle Sources of Data

to Inform Evidence-Based Decisions

Performance + Process + Scalable
Measurement + Documentation = Sustainable
and Evaluation Replicable
Facilitated by OEID assessment team in accordance with specific Government Auditing Standards and involved LOB team members.

Development of a logic model for each LOB to involve:

- **Training session/guidance** for agency-wide line of business teams
- **Facilitation** of logic modeling process upon request
- **Review and recommendations** for logic models to ensure incorporation of evidence-based practice

Identification of outputs and short-term outcomes from logic models for *performance indicators* across portfolio.

Development of **reliable and valid data collection instruments** based on performance indicators from the LOBs.
Life-Cycle Sources of Data to Inform Evidence-Based Decisions

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and Evaluation Replicable
Process Documentation
Charting the Path

Building a workforce pipeline for students engaged in NASA mission-related research, education and space exploration

Nationally brand NASA’s student opportunities

STEM workforce development processes

From Concept...

Recruit, retain and develop
Mentors, Funding Source Coordinators, Broker-Facilitator Corps and Students

Select, place and mentor
Mentors, Funding Source Managers/Coordinators, Center Panels and Students

Workforce entry
Funding Source Managers/Coordinators, Human Capital Staff

Longitudinal study
Office of Education Performance Measurement System Staff, Alumni Pool

Key OSSI Partners: OSSI Business Management Organization, OSSI Broker-Facilitator Corps, NASA Education Offices (HQ/Center), NASA Office of Human Capital Management (HQ/Center), NASA Office of Diversity and Equal Opportunity (HQ/Center), OSSI System Administrator

Key Student Advocate: NASA Student Ambassadors
Theoretical Frameworks incorporated within the Data Capture Matrix

- Logic Model
- Process & Replicability Indices
- Cross-Project Documentation & Assessment
- Action Research
- Indicator-Defined
Use of process documentation to inform evidence-based decisions:

Why
Is it scalable?
Is it sustainable?
Is it replicable?

What

Where & $$$

When

How
Life-Cycle Sources of Data to Inform Evidence-Based Decisions

Performance Process
Measurement + Documentation = Sustainable
and Evaluation Replicable

Scalable
Performance Measurement: Sources for Current Concerns


