

**MINING THE FIELD:
THE BUILDING INFORMAL SCIENCE
EDUCATION (BISE) PROJECT**

AISL PI Meeting 2014

A NSF-funded partnership:
University of Pittsburgh
Science Museum of Minnesota
Visitor Studies Association

In what ways might we use a collection of evaluation reports to generate useful new knowledge about the field of informal science education?

caise | center for advancement of informal science education

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INFORMALSCIENCE PROJECTS RESEARCH EVALUATION PERSPECTIVES COMMUNITY

**WELCOME TO
INFORMALSCIENCE.ORG**

Newly rebuilt to collect and share informal science education projects, evaluation, and research resources.

[Read our welcome message.](#) ⓘ

521 Evaluation Reports!

ABOUT OUR SAMPLE

The best sample to date of evaluation in informal science education.

Includes all evaluation reports posted to informal-science.org through May 2013

Provides insight into the field we wouldn't otherwise have.

Access to a wide range of evaluation practices, methods, and findings.

How did we make sense of what was in the reports?

THE BISE CODING FRAMEWORK

Coding Categories

Below are the overarching coding categories in the BISE Coding Framework. The following pages include the codes under each category and corresponding definitions. The coding categories with an asterisk (*) are report level codes that were coded in both NVivo and an Excel spreadsheet. Coding categories without an asterisk were only coded within NVivo

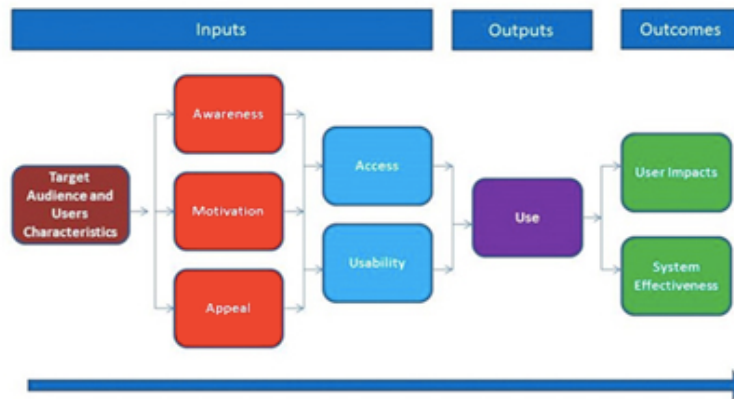
REPORT NUMBER*	EVALUATION TYPE*	INTERVIEW PROTOCOL PROVIDED*
INTERNAL FOLDER*	EVALUATION PURPOSE/QUESTIONS	SURVEY INSTRUMENT PROVIDED*
TITLE*	PROJECT SETTING*	OBSERVATION INSTRUMENT PROVIDED*
YEAR OF WRITTEN REPORT*	SAMPLE SIZE*	TIMING & TRACKING INSTRUMENT PROVIDED*
AUTHOR*	SAMPLE FOR THE EVALUATION	FOCUS GROUP PROTOCOL PROVIDED*
EVALUATION ORGANIZATION*	AGE OF INDIVIDUALS SAMPLED	OTHER INSTRUMENTS PROVIDED*
EVALUATOR TYPE*	SPECIAL TYPES OF ADULTS SAMPLED	PRE/ POST MEASURES
NSF NUMBER*	SAMPLED A SCHOOL GROUP	FOLLOW UP
OTHER FUNDING SOURCE*	ACCESSIBILITY ISSUES*	STATISTICAL TEST*
FUNDING START DATE*	LANGUAGE TRANSLATION*	RECOMMENDATIONS
FUNDING EXPIRATION DATE*	DATA COLLECTION METHODS	SYNTHESIS SAMPLE*
EVALUAND*	INSTRUMENTS PROVIDED*	

What did we learn from our project?

BISE BLOG & SYNTHESIS PAPERS



POSTS IN THE BUILDING INFORMAL SCIENCE EDUCATION CATEGORY



Building A Guiding Framework For Website Evaluation Design Using The BISE Database

Posted on May 18, 2014 by Carey Tisdal in Building Informal Science Education | General

The aim of this study was to develop a heuristic, or theoretical model, to guide my own thinking and to use in discussions with stakeholders (e.g. web designers, program developers, audiences) that could help define comprehensive and useful evaluation questions for framing website evaluation studies. [...]

LATEST POSTS



Welcome To InformalScience.Org

Hello.

April 21, 2014

A Research Agenda For Learning In Natural History Settings



June 26, 2014

Small Matters



June 19, 2014

CATEGORIES

Building Informal Science Education





Visitor Studies Association

Conference

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Resources

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Overview

CAISE

Evaluator Competencies

BISE

Building Informal Science Education

Building Informal Science Education (BISE) is an NSF funded project that hopes to build and advance evaluation in informal science. Focusing on evaluation reports posted to informalscience.org, the team is exploring what the field might learn as we begin to look across different informal learning projects. These projects include a wide variety of media, including among many others, film and broadcast projects, science center and museum exhibitions, programs in zoos and aquariums, afterschool programs in community based organizations.

The team has analyzed different subsets of these reports, and is working to create a number of white papers to document its findings. In addition, the project hopes to build evaluative capacity in the field, creating a database for project teams to find evaluators (and examples of their work) for their new projects more easily. Find the database [here](#).

This project helps VSA to address its core mission to build and share a research base in informal learning and use evaluation outcomes to improve informal learning.

White Papers

Below, please find, over the next few months, the presentation of three white papers written by VSA members and informal science evaluators and researchers. These papers represent the authors' analysis at synthesizing some area of the BISE database, testing whether anything can be learned from conducting "secondary analysis and syntheses of the existing evaluation findings in the database" ([Crowley blog](#)). While informalscience.org was originally intended as a way for NSF-funded projects to share their summative reports, the informal learning field saw the potential for such a resource for all informal environments. The full set of reports in the informalscience.org database now includes front-end, formative, remedial, and summative evaluations as well as audience studies and studies where the type of evaluation is unclear.

Websites: A Guiding Framework for Focusing Website Evaluations

Carey Tisdal

The aim of this study was to explore 22 Web site evaluation reports, or sections of larger evaluation reports centering on a Web site, to identify, define, and provide examples of the range of evaluation focus areas to inform the design of Web site evaluation studies. The sample included a group of reports contributed to the Informalscience.org online database. Prior to this study, staff members at the Science Museum of Minnesota organized and coded the database of evaluation reports as part of the Building Informal Science Education (BISE) project funded by the National Science Foundation (NSF). In this analysis, grounded theory methodology and the constant comparative method (Glaser & Strauss, 2009)

SYNTHESIS PAPERS

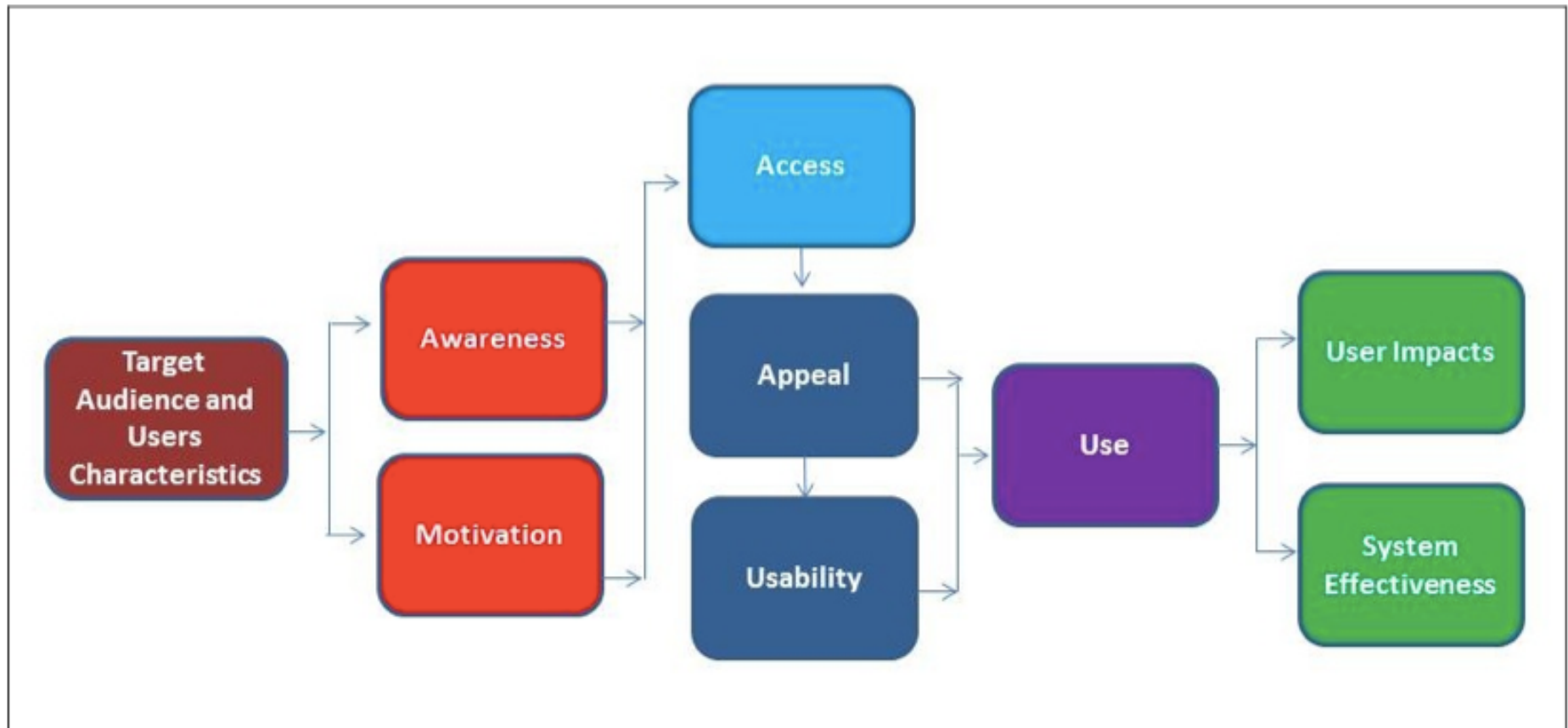
How are media projects typically evaluated and how do they show changes in design, knowledge outcomes, and increases in interest and engagement in STEM?

What recommendations and advice are provided through summative evaluations of exhibitions?

Museums are increasingly engaging with their communities in understanding and addressing the complex questions of our society. How is this effort manifested in museum practice, and what is the impact of this work?

FRAMEWORK FOR WEB SITE EVALUATION

Across the website-related reports in the BISE database, what was the range of evaluation focus areas?



GUIDING QUESTIONS FOR REPORTING

Have I identified the **type of evaluation**?

Is the **purpose of the evaluation** clear?

If I used **evaluation questions** as part of my evaluation process, have I included them in the report?

Have I described the **data collection methods**? If possible, can I include **data collection instruments** in the report?

Do I provide sufficient information about the **sample characteristics**?

Have I reported **sample size** for each of my data collection methods?

If I provided **recommendations** to the client, did I include them in the report?

How can I explore the reports myself?

PROJECT RESOURCES

COLLECTION OF REPORTS

Final Informalscience.org Reports

Huntington Botanical Gardens
Summative Evaluation
Conservatory for Botanical Science

105.pdf

Name	Date Modified	Size	Kind
88.pdf			
90.PDF	Oct 31, 2013, 8:02 AM	717 KB	PDF Document
91.PDF	Oct 31, 2013, 8:02 AM	1 MB	PDF Document
92.PDF	Oct 31, 2013, 8:02 AM	907 KB	PDF Document
93.PDF	Oct 31, 2013, 8:02 AM	1.2 MB	PDF Document
94.PDF	Oct 31, 2013, 8:02 AM	416 KB	PDF Document
95	Jul 2, 2014, 6:03 PM	511 KB	PDF Document
96.docx	Jul 2, 2014, 9:53 AM	109 KB	Micros...ument
97.docx	Oct 31, 2013, 8:02 AM	164 KB	Micros...ument
98.PDF	Oct 31, 2013, 8:02 AM	380 KB	PDF Document
99.pdf	Oct 31, 2013, 8:02 AM	1.9 MB	PDF Document
100.PDF	Oct 31, 2013, 8:02 AM	1.5 MB	PDF Document
101.PDF	Oct 31, 2013, 8:02 AM	4.3 MB	PDF Document
102.pdf	Oct 31, 2013, 8:02 AM	348 KB	PDF Document
103.pdf	Oct 31, 2013, 8:02 AM	487 KB	PDF Document
104.PDF	Oct 31, 2013, 8:02 AM	5.3 MB	PDF Document

Macintosh HD > Users > Amy > Desktop > BISE FOR VSA > Final Informalscience.org Reports > 105.pdf

1 of 521 selected, 5.64 GB available

EXCEL FILE & NVIVO DATABASE

The screenshot displays the NVivo software interface for a database named 'BISE NVivo Database for PC Nvivo 10.nvp'. The 'View' tab is active, showing a search for 'Out-of-school Time Program'. The search results table is as follows:

Name	Nodes	References	Created On	Created By	Modified On	Modified By
100	16	28	3/2/2012 9:25 AM	ag	7/6/2014 10:59 AM	ALGN
208	19	50	3/2/2012 9:25 AM	ag	7/6/2014 10:59 AM	ALGN
219	20	81	3/2/2012 9:25 AM	ag	7/6/2014 10:59 AM	ALGN
222	22	54	3/2/2012 9:25 AM	ag	7/6/2014 10:59 AM	ALGN
231	22	57	3/2/2012 9:25 AM	ag	7/6/2014 10:59 AM	ALGN
242	23	69	3/2/2012 9:25 AM	ag	7/6/2014 10:59 AM	ALGN
256	15	21	3/2/2012 9:25 AM	ag	7/6/2014 10:59 AM	ALGN
284	18	75	3/2/2012 9:25 AM	ag	7/6/2014 10:59 AM	ALGN
295	14	36	3/2/2012 9:25 AM	ag	7/6/2014 10:59 AM	ALGN

The detailed view for node 256 shows the following text:

interviews were undertaken with a sub-set of survey respondents in order to obtain detailed, information on specific impacts attributed to the program.

Survey

Based on the evaluation priorities set with the SCL Program staff, ILI developed a structured questionnaire to be administered to alumni as a web-based survey. The questionnaire consisted of primarily closed-ended and scale questions, with some open-ended questions to gather feedback in the participants' own words. Additional demographic information about the participants, their roles within the SCL, and their length of participation were collected for comparative analysis and trend identification. (See Appendix A for survey questions.)

The 2002 retrospective study was administered using a mail-back paper survey. The present study, however, used a web-based questionnaire. In addition, it used a three-pronged recruitment strategy in an effort to increase the response rate and reach of the survey. Invitations were sent

The interface also shows a 'Sources' list on the left, a 'Look for:' field with 'Out-of-school Time Program', and a 'View' tab with various options like 'Navigation View', 'Find', 'Quick Coding', 'Dock All', 'Undock All', 'Close All', 'Close', 'List View', 'Coding Stripes', 'Highlight', 'Annotations', 'See Also Links', 'Relationships', 'Links', 'Node', 'Node Matrix', 'Report', 'Framework Matrix', 'Classification', 'Reference', and 'Color Scheme'. The status bar at the bottom indicates '33 Items', 'Nodes: 15', 'References: 21', 'Read-Only', and 'Page: 1'.

WAYS TO USE THE RESOURCES

Understand how evaluations are carried out for various types of ISE projects

Inform the development of an evaluation

Learn from similar types of projects – recommendations, improvements, impacts