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# THE BUILDING INFORMAL SCIENCE EDUCATION (BISE) PROJECT'S CODING FRAMEWORK

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Developed by the BISE Project Team:  
Science Museum of Minnesota  
University of Pittsburgh, UPCLOSE  
Visitor Studies Association



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Please direct any questions or comments about the BISE Coding Framework to Amy Grack Nelson, Senior Evaluation & Research Associate at the Science Museum of Minnesota 651-221-4575 or [agnelson@smm.org](mailto:agnelson@smm.org).

# Development of the Coding Framework

How did the BISE project make sense of the content of 521 evaluation reports on Informalscience.org? It all began with our coding framework. Coding categories and related codes were created to align with key features of evaluation reports and the potential coding needs of the five BISE synthesis authors. Throughout our iterative process of developing the Coding Framework, we looked to a number of resources and individuals in the evaluation and informal education fields.

- The evaluation reporting literature provided guidance on what report elements are useful for understanding how an evaluation is carried out and interpreting an evaluation's findings (American Evaluation Association, 2004; Fitzpatrick, Sanders, & Worthen, 2011; Miron, 2004; Yarbrough, Shulha, Hopson, & Caruthers, 2011).
- We looked to the Center for Advancement of Informal Science Education (CAISE) Portfolio Inquiry Group's codebook, which was developed to analyze publicly available NSF informal science education (ISE) award data (Baek, 2011).
- We referred to the categories used in the NSF ISE Online Project Monitoring System's (OPMS) Baseline Survey, which NSF principal investigators complete annually about their project and related evaluation activities.
- We conducted preliminary coding of a sample of the reports on Informalscience.org to refine code definitions and identify additional codes that emerged from the data.
- The codes were further refined based on feedback from evaluators during a presentation and discussion at the 2011 Visitor Studies Association conference.
- As we brought in the five synthesis authors, code definitions and categories were further revised to ensure their clarity and relevance to the authors.
- As the Science Museum of Minnesota coding team coded reports, definitions continued to be strengthened through the addition of examples and non-examples in the codebook.

The process of creating the coding framework was a long and, at times, difficult endeavor. Within the ISE field, people sometimes use different terminology, so our coding was periodically refined and expanded to ensure we recognized and included the variations of language in the field. There was also variation in what people included in their evaluation reports, making it difficult at times to establish adequate percent agreement among coders. This led us to further refine our code definitions based on what was explicitly stated in reports. We recognize that within any qualitative study there are variations in how people might define codes or what codes they may see as important. We hope you'll find our final Coding Framework, and related BISE products, useful for gaining a deeper understanding about characteristics of evaluations in the ISE field.

# 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*	

# Codes & Definitions

## REPORT NUMBER

The ID number the BISE project uses for each report, aligns with the numbering system used in the previous version of informalscience.org.

## INTERNAL FOLDER

The internal folder structure within NVivo based on evaluand (object being evaluated). For definitions, see the “Evaluand” category.

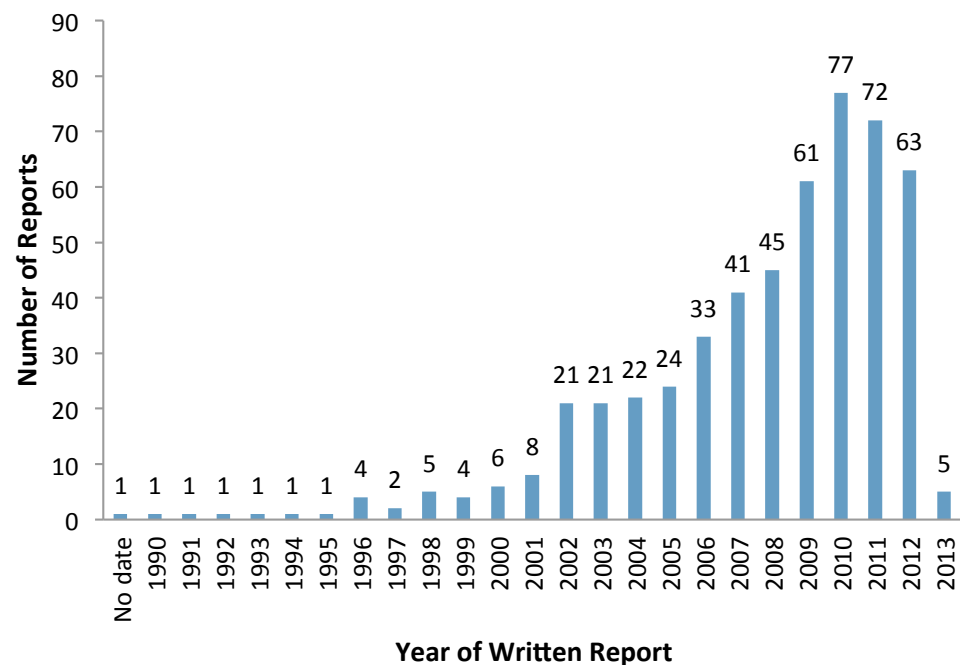
1. Audience study
2. Broadcast media
3. Collaboration or partnership
4. Combination of evaluands
5. Conference
6. Educational materials
7. Event or festival
8. Exhibition
9. Forums & science cafes
10. Mobile or handheld technology
11. Other
12. Out-of-school time program
13. Planetarium show
14. Professional development
15. Public participation in scientific research program
16. Public programming
17. School-related programming
18. Volunteer program
19. Website or software

## TITLE

The report title as listed on the informalscience.org evaluation page for the report.

## YEAR OF WRITTEN REPORT

1. The year indicated on the report.
2. Don't know - If there was no year indicated.



## AUTHOR

1. The author(s) listed on the report.
2. Don't know- If there were no author names listed.

## EVALUATION ORGANIZATION

1. The organization(s) the evaluators are from, as listed on the report.
2. Don't know - If there was no organization indicated.

## EVALUATOR TYPE

1. Internal
2. External

## NSF NUMBER

1. If funded by NSF, the NSF number (or numbers if funded by more than one NSF award).
2. NSF-funded, but can't find the number - If the report indicates the project is funded by NSF, but the NSF number was not reported or found online by the BISE team.
3. NA - Project funded by a funding source other than NSF.
4. Don't know funding source - The funding source was unknown.

## OTHER FUNDING SOURCE

1. The name of the funding source of the project other than NSF. Includes funders such as IMLS, EPA, SEPA, NIH, etc.
2. NA - Projects that were only funded by NSF.
3. Don't know funding source - The funding source was unknown.

## FUNDING START DATE

\*Only related to NSF-funded projects

This information was found on the NSF webpage for the grant associated with the evaluation report. If there were more than two grant periods, all dates were included.

1. If funded by NSF, the funding start date.
2. Can't find - If funded by NSF, but the BISE team couldn't find the start date.
3. Don't know funding source - The funding source was unknown.
4. NA - Project funded by a funding source other than NSF.

## FUNDING EXPIRATION DATE

\*Only related to NSF-funded projects

This information was found on the NSF webpage under expected end date for the grant associated with the evaluation report. If there were more than two grant periods, all dates were included.

1. If funded by NSF, the funding expiration date.
2. Can't find - If funded by NSF, but the BISE team couldn't find the end date.
3. Don't know funding source - The funding source was unknown.
4. NA - Project funded by a funding source other than NSF.

## EVALUAND

The object evaluated. Some evaluations included multiple evaluands.

Evaluand	Number of Reports
Exhibition	212
Broadcast Media	81
Website or Software	80
Public Programming	49
Educational Materials	43
Out-of-school Time Program	36
Professional Development	34
Event or Festival	25
Audience Study	24
School-related Programming	22
Forums & Science Cafes	19
Collaboration/Partnership	16
Conference	12
Other	11
Planetarium Show	7
Public Participation in Scientific Research Program	6
Mobile or Handheld Technology	5
Volunteer Program	3

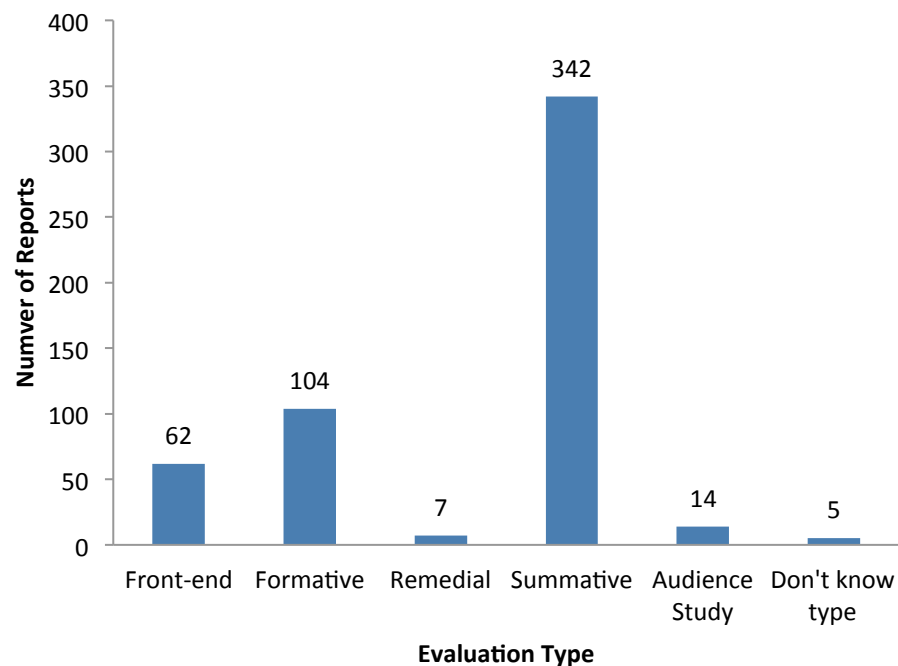
1. Audience study  
Also referred to as “audience research.” Audience studies may include examining who is coming to an institution, collecting visitor feedback about an entire institution, studying the impact of an entire institutional experience, or a studying visitors’ knowledge about a topic (but not for a front-end study that is used to develop a specific experience).
2. Broadcast media  
Includes radio/audiocast, film, video, Imax/large format productions, television show or series, and webisodes. Videos that were created as part of an exhibition were coded as “Exhibition,” not “Broadcast Media.”
3. Collaboration or partnership  
When an evaluation specifically focuses on evaluating the collaboration or partnership process and/or outcomes. Examples include evaluating a community’s experience collaborating to create an exhibition or evaluating the collaboration between museum educators and scientists from smaller scale partnerships to large networks.
4. Conference  
Includes seminars, meetings, symposiums, trainings, and convenings. If a professional development type workshop happens at a conference, it would be coded as “Professional Development.”
5. Educational materials  
Includes curriculum, educator’s guide, kit, teacher resource guide for an exhibition, lesson plans, and family guides.
6. Event or festival  
These are typically day or multi-day events. They often have various activities for people to participate in and may be around a particular theme. Includes family science night at a school, science festival, event at a community center, and event at a museum.
7. Exhibition  
Includes traveling, permanent, and outdoor exhibitions; individual exhibits; dioramas; signage for an exhibition or site; videos that are a component of an exhibition, such as a kiosk; and art galleries. All Science on a Sphere and Magic Planet evaluations were coded here.

8. Forums & science cafes  
Programs that tend to have someone presenting, such as a scientist, followed by discussion with the crowd or in small groups. These programs are sometimes held in the community at restaurants or bars and may also be called “science pubs.”
9. Mobile or handheld technology  
When a mobile or handheld device is used within an exhibition, institution, or as part of some other informal education experience. Includes handhelds provided by the institution, apps downloaded onto someone’s mobile device, QR codes, and audio mobile tours.
10. Other  
When an evaluand doesn’t fit within any of the categories.
11. Out-of-school time program  
Youth-focused programs for kids of any age that occur outside of the school day. Includes youth development programs, camps, museum classes, library drop-in programs, youth internship programs, etc.
12. Planetarium show  
Any show that is created for use in a planetarium. This code also includes portable dome shows.
13. Professional development  
Any training that is meant for professional development of formal educators, informal educators, and other professionals. Workshops would fall here if their purpose is professional development.
14. Public participation in scientific research program  
These programs are also referred to as citizen science programs.
15. Public programming  
Programs created for the public, which typically take place at an informal education institution, but could also occur in the community. Includes cart demonstrations, tabletop activities, stage presentations, theater presentations, enactor programs, public tours, and family workshops. Types of programming that do not fit here, but have their own codes – Forums & Science Cafes, School-related programming, Event or Festival.
16. School-related programming  
Programs for formal education school groups that occur at school or within an informal education institution during the school day. Includes classes specifically for students during their school day, school field trips, school tours, auditorium programs, etc.
17. Volunteer program  
Evaluation of a volunteer program at an informal education institution.
18. Website or software  
Includes a project website, social media, photo website, informational website, online activities, online game, video game, and software that may not be online. This does not include mobile apps that are meant to be used within an exhibition or institution. Those should be coded under “Mobile or handheld technology.”



## EVALUATION TYPE

1. Front-end
2. Formative
3. Remedial
4. Summative
5. Audience Study - The purpose of the evaluation was marketing or understanding who was coming to an institution. The study was not part of a front-end, formative, or summative evaluation.
6. Don't know – It is unclear what evaluation type it would fall under.



## EVALUATION PURPOSE/QUESTIONS

1. Evaluation Questions Included  
The evaluation report included evaluation questions when describing the purpose of the evaluation.
2. Purpose, but no questions  
The report described the purpose of the evaluation, but didn't include questions. The report has to go beyond stating the evaluation type (such as formative evaluation), but describe the reason for doing the evaluation. Otherwise, the report would be coded as "no questions or purpose." Describing the purpose of an individual method, but not the purpose of the evaluation would also be coded as "No questions or purpose."
3. No questions or purpose  
When a report did not include the purpose of the evaluation or evaluation questions. If a report only included the type of the evaluation (e.g. formative), but not what was studied it was coded here.

## PROJECT SETTING

This is the intended setting of a project, not where the evaluation activities took place if they are different than the project setting. The museum categories are based on the American Alliance of Museum's (AAM) accreditation categories (downloaded November 2011, but no longer online). The BISE team then developed the definitions for these categories. Categories that came from AAM are marked with an asterisk (\*). Institutions in these categories were coded based on how they were categorized by AAM, if applicable.

Some clarifications for this coding category: There were times when a museum was involved with developing an exhibition or program, but the actual project setting was not at that museum. For front-end evaluations, evaluators may gather data at institutions other than where the project is taking place. The project setting was coded as the institution(s) the project is going to take place at, not where data is collected for the front-end study. Professional development reports were coded based on where the professional development took place, as well as where the professional development was implemented.

1. Aquarium or zoo\*  
Institutions focused on maintaining live animal collections.
2. Arboretum or botanical garden\*  
Institutions focused on maintaining live plant collections. May also be called a conservatory.
3. Art museum\*  
Institutions focused on maintaining art collections.
4. Children's museum\*  
Institutions dedicated to serving young children.
5. Community site  
Community sites, as well as areas that are used by the community. Examples include community centers, churches, health centers, conference centers, bus stops, billboards, stadiums, restaurants, malls, theme parks, performance theatres, hospitals, etc.
6. Computer  
The setting for websites and educational software.
7. General museum\*  
Only applies to institutions that were on the AAM accreditation list. Instead of specifying their institution type, institutions could chose to be listed as General Museum.
8. History museum\*  
Historic sites and institutions focused on history.
9. Home  
Projects that take place in private residences or in neighborhood areas. For example, some citizen science projects fit here.
10. Library  
Projects that take place in public libraries.
11. Movie theater  
Locations where films are shown.
12. Natural history/Anthropology museum\*  
Institutions focused on preserving cultural collections and/or non-living plant or animal collections.
13. Park and/or nature center  
Includes city, regional, state and national parks; wildlife reserves and refuges; environmental education centers; and camps.

## 14. Planetarium\*

When a program being evaluated is designed to take place in a planetarium. This means that a science center with a planetarium is not coded as a planetarium unless the planetarium is where the project takes place.

## 15. Radio

Projects that feature radio broadcasting in some way.

## 16. School

Projects that take place in formal education settings, from pre-K to 12th grade, whether the settings are public, private or charter. They can occur during regular school hours or after school (when they are offered by the school and not by a community organization).

## 17. Science-technology center or museum\*

Institutions that focus on science or technology.

## 18. Television

Projects that feature television broadcasting in some way.

## 19. University or college

Projects that take place in post-secondary institutions, including four-year colleges, community colleges, private or public colleges, trade schools, and universities.

## 20. Don't know

When the project setting was unknown. For instance, a report said that a project took place in a particular state, but didn't mention the location.

## SAMPLE SIZE

1. Indicated sample size for all data collection methods used in the evaluation.
2. Indicated sample size for some data collection methods, but not all.
3. Didn't indicate sample size for any data collection methods.

## SAMPLE FOR THE EVALUATION

The audience the evaluator(s) intended to include for each of the data collection methods. Who the evaluator intends to sample and who actually participates in a study, as seen in the results, can be different.

## 1. Sampled general public

When the sample for a data collection method included a mix of adults and children. The report needed to specify an age range for it to be coded here, such as ages 8 and above. If ages weren't specified anywhere in the report, it was coded as "Don't know."

## 2. Sampled specific age groups

This could be one age group or multiple age groups. For instance, a sample of certain ages of children, a school group, or just adults.

## 3. Sampled Adult-Child groups

When the evaluator sampled a group composed of adults and children. For example, evaluators may observe an adult/child group interacting with an exhibit or sample an adult/child group to participate in an interview together. The adult in the group could have any kind of relationship with the child; he/she did not need to be a parent or caregiver.

## 4. Don't know

If a report wasn't explicit about the ages of the individuals in the sample for a particular method. The BISE team did not make assumptions about the sample based on demographics that were reported in the results. The report had to be explicit about the intended sample. In some instances, reports described individuals as visitors, users, viewers, subscribers, members, or community members, but if the report didn't specify ages, the sample for a data collection method was coded as "Don't know."

## AGE OF INDIVIDUALS SAMPLED

\*\*These subcodes are only for the codes “Sampled by specific age groups” and “Sampled adult/child groups.” The BISE team did not code the individual ages for “Sampled general public.”

This was the age(s) of the individuals who were included in the sample for the various data collection methods used in the evaluation. The table below illustrates the ages each grade was coded as.

Grade	Ages
Kindergarten	5 – 6
1 <sup>st</sup>	6 – 7
2 <sup>nd</sup>	7 – 8
3 <sup>rd</sup>	8 – 9
4 <sup>th</sup>	9 – 10
5 <sup>th</sup>	10 – 11
6 <sup>th</sup>	11 – 12
7 <sup>th</sup>	12 – 13
8 <sup>th</sup>	13 – 14
9 <sup>th</sup>	14 – 15
10 <sup>th</sup>	15 – 16
11 <sup>th</sup>	16 – 17
12 <sup>th</sup>	17 – 18

### 1. Children (unspecified)

When a sample was children, but the report didn’t specify the ages of the children. If a report described the sample as preschool, elementary, middle school, high school, teen, or tween but didn’t indicate the actual ages of the individuals, it was coded here.

2. Less than 1 years old
3. 1 year old
4. 2 years old
5. 3 years old
6. 4 years old
7. 5 years old
8. 6 years old
9. 7 years old
10. 8 years old
11. 9 years old
12. 10 years old
13. 11 years old
14. 12 years old
15. 13 years old
16. 14 years old
17. 15 years old
18. 16 years old
19. 17 years old
20. 18 years old - If a report specifically called out 18 year olds as a separate group. If the report referred to 18 years old as part of the sample of adults, they were coded as “Adults” instead.
21. Adults (Ages 18 and above)  
If 18 year olds were called out as separate from adults, they were coded as a separate group of “18 year olds.” There were some reports that considered 16 and above as adult. The BISE team stuck to the coding framework and these samples were also coded for ages 16 and 17. When a report referred to individual as “members,” they were coded as adults.

## SPECIAL TYPES OF ADULTS SAMPLED

\*\*These are subcodes for “Ages of Individuals Sampled” that are coded as “Adults.” In some reports, none of these subcodes applied to the adult sample and in other reports multiple subcodes applied.

1. Formal education professionals  
Includes teachers for Head Start, preschool, elementary school, middle school, and high school; pre-service teachers; principals; superintendents; homeschool educators; and college professors.
2. Informal education professionals  
Includes informal education staff, volunteers, librarians, docents, naturalists, and park rangers.
3. Educators (didn’t specify)  
When a report states that educators were sampled, but doesn’t specify if they are formal or informal educators.
4. Senior citizens (Ages 55 and older)  
The definition of senior citizen as 55 and above aligns with the OPMS definition of senior citizen. Reports were only coded for Senior Citizens when they were called out as a special group being sampled. If the ages 55 and older were part of the adult sample, but not called out specifically, they weren’t coded here.
5. Scientists  
This includes scientists and researchers in a STEM discipline. Learning experts were coded under “Formal education professionals” or “Informal education professionals” depending on their area of expertise.
6. Policy-related educational stakeholders  
Individuals in a position to influence policy or fund it, such as policymakers and funders. This does not include principals and superintendents; they were coded as “Formal education professionals.”

## SAMPLED A SCHOOL GROUP

This is when the sample was a preK-12 school group. These groups participated in activities during the formal school day such a school outreach activity, a school field trip to the museum, assembly program for a school, something tested in a classroom with students, etc. Just because the sample was described as students, it wasn’t assumed they were a school group. Some out-of-school time program reports referred to youth that way, even though the activity didn’t take place as part of the formal school day setting.

## ACCESSIBILITY ISSUES

Did the evaluation address physical and/or cognitive accessibility issues? This means people with cognitive and/or physical disabilities were involved in the evaluation.

1. Yes
2. No

## LANGUAGE TRANSLATION

Did the evaluation include language translation? This refers to the deliverable and/or the evaluation. For example, a project produced in English and Spanish was coded as “Yes – Spanish.” A project that conducted a focus group in Spanish on an exhibition that only had English text was also coded as “Yes - Spanish”.

1. Yes – If yes, indicated what languages were translated.
2. No

## DATA COLLECTION METHODS

The BISE team only coded one occurrence for each of the data collection methods in a report, focusing on the description of the method that included the most information.

1. **Artifact review**  
When already existing program documents or artifacts were used as a data source. This meant the documents weren't developed for the purpose of evaluation. Includes products created for the project such as meeting notes, fliers, agendas, marketing, presentations, projects, website, etc. It does not include instruments that were created for the purpose of collecting data.
2. **Card sort**  
When visitors were given small cards with images, words or phrases to sort in some way, such as by theme or on a rating scale.
3. **Comment cards or books**  
Includes online comments, comment cards, or guest books where visitors write comments.
4. **Concept map**  
When visitors were asked to map out their ideas about a topic. Includes personal meaning maps and mind maps.
5. **Didn't describe data collection methods**  
When there was not enough description about a method to be able to tell exactly what kind of feedback was obtained.
6. **Drawings**  
When people were asked to draw a picture of something.
7. **Focus group**  
A particular type of group interview. This code was only used when the report referred to a method specifically as a focus group. Any other type of group discussion was coded as "Interview."
8. **Interactive methods**  
These were data collection methods that asked people to provide data in an interactive way. Includes post it notes, graffiti sheets, interactive charts, brainstorming methods, etc.
9. **Interview**  
Includes individual interviews, cued and uncued interviews, debrief interview or discussion, and group interviews or discussion. When a group discussion is referred to as a focus group, it was coded as "Focus group" instead.
10. **Journals**  
Journal methods that typically took place over a period of time and at times included multiple instances of data collection. In some cases, journals included prompts for people to respond to. Includes blogs, written reflections, logs, and diaries.
11. **Observation**  
This included observing people, writing down behaviors, and sometimes timing them. If tracking was included in an observation, it was coded as "Tracking and timing."
12. **Participation data**  
When participation data, such as attendance data and sign-in sheets, was used as a data source.
13. **Professional critique**  
When someone other than the evaluator provided a professional critique of a project or product. For instance, a critique of a lesson plan by a teacher or a review of an exhibition by an exhibit developer. Was also described as an expert judging an exhibit or project.

## 14. Recorded conversation

This is when a conversation between individuals was recorded as a data source. These were conversations that the evaluator did not facilitate in any way. People were conversing freely; the evaluator was not asking people questions. For example, an evaluator prompted someone to use an exhibit and recorded or video-taped conversations that occurred around the exhibit. Another example was recording a meeting. Recorded conversations could be audio recorded, video recorded, handwritten notes, or typed notes.

Recording an interview led by an evaluator was not considered a recorded conversation, but an “Interview”.

## 15. Survey

Includes test, questionnaire, feedback form, rating sheet, and worksheet. This code did not include structured interviews that followed a questionnaire. If a report included the word “interview” at any time during the description of the data collection method, the method was coded as an interview, e.g. “We interviewed people following a standard questionnaire.” If a report said “we administered a questionnaire over the phone,” it was also coded as an interview.

## 16. Tracking and timing

Tracking and timing refers to following and recording visitor behavior and time spent in an area larger than a single exhibit component, usually an exhibition (Yalowitz & Bronnekant, 2009). Timing can include time at an individual exhibit and/or time in an entire exhibition. Tracking visitors refers more specifically to recording, in a detailed manner, not only the path visitors take and where they stop, but also what visitors do while inside an exhibition. In some cases, a report did not call the method tracking or tracking and timing, but simply talked about following people through an exhibition.

## 17. Web analytics

When an evaluator looked at use of an overall website or parts of a site. Includes web hits, kiosk logs, and web tracking. In some instances, an evaluator followed individuals through their use of a website.

## 18. Other

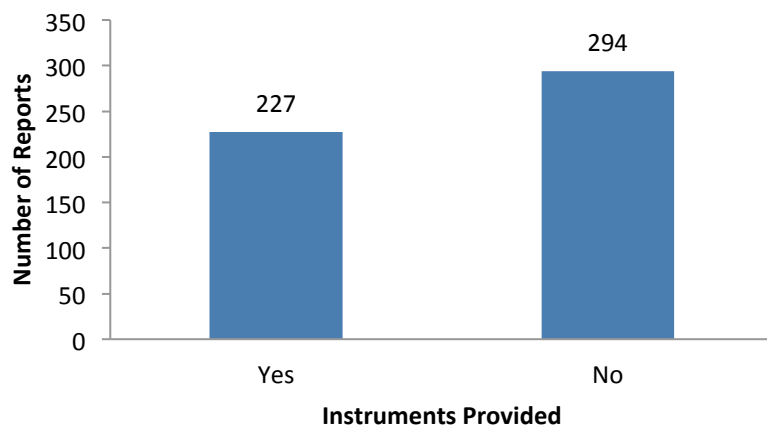
Anything that didn’t fit within any of the other categories.

Data collection method	Number of Reports
Interview	364
Survey	324
Observation	184
Tracking and timing	96
Focus Group	82
Artifact Review	58
Web Analytics	18
Journals	16
Recorded Conversations	12
Participation Data	11
Card Sort	10
Didn't describe data collection method	10
Professional Critique	10
Other	8
Drawings	7
Comment Cards and Books	6
Interactive Methods	5
Concept Map	4

## INSTRUMENTS PROVIDED

Did the report include any data collection instruments?

1. Yes
2. No



## INTERVIEW PROTOCOL PROVIDED

1. Yes – The report included this type of instrument.
2. No – The report did not include this type of instrument.
3. NA – The report did not include any instruments, so the type provided is not applicable.

## SURVEY INSTRUMENT PROVIDED

Also includes questionnaires, enrollment forms, quizzes, and tests.

1. Yes – The report included this type of instrument.
2. No – The report did not include this type of instrument.
3. NA – The report did not include any instruments, so the type provided is not applicable.

## OBSERVATION INSTRUMENT PROVIDED

1. Yes – The report included this type of instrument.
2. No – The report did not include this type of instrument.
3. NA – The report did not include any instruments, so the type provided is not applicable.

## TIMING & TRACKING INSTRUMENT PROVIDED

1. Yes – The report included this type of instrument.
2. No – The report did not include this type of instrument.
3. NA – The report did not include any instruments, so the type provided is not applicable.

## FOCUS GROUP PROTOCOL PROVIDED

1. Yes – The report included this type of instrument.
2. No – The report did not include this type of instrument.
3. NA – The report did not include any instruments, so the type provided is not applicable.

## OTHER INSTRUMENTS PROVIDED

Includes instruments such as a logbook, journal, and critique form.

1. Yes – The report included this type of instrument.
2. No – The report did not include this type of instrument.
3. NA – The report did not include any instruments, so the type provided is not applicable.



## PRE/POST MEASURES

1. Matched pre/post  
When data was collected from the same individuals for pre and post.
2. Unmatched pre/post  
When data was collected from different individuals for pre and post.
3. Post-retrospective (also called pre-retrospective)  
This is when only a post data collection instrument was used, but questions were included for people to report on their state at the beginning of the project and how they have changed.
4. Don't know type of pre/post  
Mentioned pre/post but unsure if it was matched or unmatched.
5. No pre/post  
The study did not have both a pre/post, or retrospective method. If only pre or post was used in a study, it is coded as "No pre/post."

## FOLLOW UP

1. Follow up  
The evaluator gathered follow up data some time after an individual participated in project activities, such as an exhibition or program.
2. No follow up  
No follow up used in the evaluation.

## STATISTICAL TEST

These are the statistical tests that were used within the report.

1. ANOVA (Analysis of Variance) - Includes MANOVA, ANCOVA.
2. Chi-square
3. Coefficient alpha - Also called Cronbach's alpha or discussed in terms of an internal consistency measure of reliability.
4. Correlation
5. Effect Size
6. Fisher's Exact Test
7. Hierarchical Linear Model
8. Kappa coefficient
9. Kruskal-Wallis Test
10. Mann-Whitney U Test
11. McNemar Test
12. No test
13. Regression - Includes multiple regression, simple linear regression, step-wise regression.
14. Said "significant" but didn't indicate test
15. T-Test
16. Wilcoxon Signed-Rank Test
17. Other - includes cluster analysis, factor analysis, principal components analysis, post-hoc test, gamma test, kappa coefficient, Cohen's Kappa statistic.

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## RECOMMENDATIONS

1. Recommendations included  
The report included the evaluator's recommendations or suggestions for improvement of the project. Sometimes a report referred to recommendations as things to consider or considerations. It is important to note that when talking about recommendations, they are recommendations from the evaluator, not audience responses to a specific survey or interview question about their suggestions for project improvement.
2. No recommendations  
When the evaluator did not include any recommendations in the report.

## SYNTHESIS SAMPLE

If the report was included in the sample that the BISE synthesis authors used for their papers. The synthesis sample reports were posted to [informal.science.org](http://informal.science.org) on or before January 31, 2012.

1. Yes
2. No

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# References

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