

Resources for Communicating Science: Professional Development, Research, & Evaluation

About: This document describes and shares resources that may be helpful for professional development, research, or evaluation regarding Living Laboratory researchers' changes in communication skills over time. It includes several tools for measuring science communication skills, along with information about the tools' creation and guidance for using them in your Living Laboratory setting. While the tools were originally designed to focus on researchers' communication with the public at a Living Laboratory site, this document includes suggestions for using the tools in a variety of ways.

Background: The Living Laboratory model emphasizes mutual professional development between researchers and museum educators. While learning takes many forms, much of the evaluation work for Living Laboratory has focused on informal educators learning about current research from their research partners and researchers learning science communication strategies from museum educators. The National Living Laboratory leadership tasked the Research and Evaluation Department at the Museum of Science, Boston with studying change over time in researchers' communication skills. This document describes this process and the resulting tools.

Overview of the resources:

- *National Living Laboratory Researchers' Science Communication Pre-Interview:* This brief interview protocol was designed to ask researchers questions that were realistic to the types of conversations they would have in a museum during a Living Laboratory shift, as well as targeted queries about their perceived strengths, weaknesses, goals, and prior experience with science communication. It includes a series of open-ended questions as well as several multiple-choice questions.
- *National Living Laboratory Researchers' Science Communication Post-Interview:* Most of the open-ended and multiple choice questions in this post-interview are exactly the same questions as the pre-interview, to facilitate straightforward comparison between pre- and post-responses. Other questions provide follow-up about the researcher's perceived improvements in science communication during their participation in Living Laboratory.
- *National Living Laboratory Coding Schemes for Interview Questions 1-3:* These pages describe the criteria that were used to analyze responses to the first three interview questions from both the pre- and post-interview instruments. They provide a brief

definition and description of each code, an example of a comment that would be coded under each topic, and the data that would be recorded (i.e., presence or absence of criteria versus extent of criteria).

- *National Living Laboratory Researchers' Science Communication Observation Form*: This observation form has a built-in coding scheme that lists topics of nonverbal communication (body language, energy level, etc.) and defines what behaviors would be considered “Unsatisfactory,” “Satisfactory,” and “Excellent.” There is also room to take notes on this form, which can be used on recorded data (such as an audio or video recording) or during real-time observation.

The original evaluation process: Prior evaluation has shown that researchers self-report improvement in their own communication skills due to their participation in Living Laboratory, and the development of communication skills is the most common thing researchers say they get out of the experience of running research studies and talking with family members (Beaumont, Todd, Pfeifle, & Lindgren-Streicher, 2016). While this data is persuasive, there was interest in gathering additional data about what aspects of communication improve. Additionally, there was a desire for data that demonstrated actual pre- to post-changes rather than relying exclusively on self-reported assessment.

Evaluators invited Living Laboratory researchers at the Museum of Science, Boston to participate in an interview before their first Living Laboratory shift and at the end of the semester for which they were doing data collection. These interviews were video-recorded, and consisted of a series of questions about the researcher’s work; perceived strengths, weaknesses, and goals for science communication; and prior experience with science communication and research. Copies of the instruments and coding rubrics are provided on pages 6-14. In order to encourage researchers to speak as they would on the museum floor, the interviewer prompted the interviewee to respond as if talking to a child participant or adult caregiver. The choice to do interviews rather than natural observations of interactions with visitors was due to an interest in asking specific questions and making the pre- and post-comparisons as comparable as possible.

Evaluators used an iterative approach to develop a coding system that would account for changes in content and non-verbal communication. This coding system was applied to interview responses from the first three questions. Evaluators developed this approach from several types of resources, including:

- Conversations with National Living Laboratory leadership
- Prior evaluation rubrics from the National Living Laboratory summative evaluation
- A literature review of science communication, health communication, and public speaking resources (see Reference list)
- Inductive coding of data that did not fit in preliminary coding schemes¹

¹ Inductive coding involves reviewing data and identifying the most frequent patterns and themes (Patton, 2002).

Once the final coding schemes were established, two evaluators coded each respondent's data based on video and audio recordings. The data were randomized such that the coders were unaware of whether the recordings were from a pre- or post-interview. The two raters had an initial agreement rate of 85.5%, and agreed on 100% of the coding decisions after discussing them. Once data were coded, paired pre- and post-data were compared to look for change over time.

For the other open-ended interview questions, evaluators utilized an inductive coding approach, wherein they identified recurring themes and patterns in the responses (Patton, 2002). Quantitative data (resulting from several multiple-choice questions on the interview) were analyzed by comparing pre- and post-responses, using descriptive statistics to assess the spread (range and standard deviation) and central tendency (mean and median) of the responses. The evaluators expect to use inferential statistics to measure differences between pre- and post-responses once a sufficient sample size has been collected.

Preliminary trends: As of the creation of this document, the sample size of researchers who contributed both pre- and post-data was insufficient to run inferential statistical comparisons that would describe the extent of change between pre- and post-responses. However, the evaluators plan to continue collecting data such that this analysis will be possible in the future. In terms of descriptive changes, the preliminary data show improvements between pre- and post-responses in terms of the researchers speaking with appropriate volume; using clear pronunciation; minimizing distracting physical behaviors; carrying themselves with confidence; and presenting themselves with an appropriate level of energy. Comparing pre- and post-survey responses, the researchers reported increased confidence discussing their study with adults at the Museum; discussing their study with children at the Museum; and answering visitors' questions about their research.

Using these resources for professional development: While the tools were created for the purpose of evaluation, they may be valuable for sites that wish to use them for professional development purposes. This typically involves using the resources to spark conversation that focuses on identifying a researcher's strengths and weaknesses and helping them consider ways of improving their communication practices. The tools identify specific areas that researchers might wish to work on, and offer criteria for good communication. Living Laboratory sites are encouraged to take, adapt, and use these tools for their local sites. Adaptation could be particularly valuable if you are able to include specific things that researchers at your site are trained and/or expected to do, and exclude anything that is irrelevant at your location. It may also be possible to add certain criteria based on an individual researcher's goals.

Here are some ways to consider using these resources for professional development:

- *Use the nonverbal communication tool during greetings:* If your site uses the traditional Living Laboratory greeting model (in which a museum educator talks to a researcher at the beginning of each shift), the museum educator leading the greeting could use the nonverbal communication rubric to identify the researcher's strengths and weaknesses

during these regular conversations. The educator could then debrief with the researcher, celebrating the strengths and brainstorming together about strategies for improving the areas of weakness. It might be valuable to do this multiple times throughout a semester to document changes over time.

- *Ask the interview questions as part of a greeting:* The pre- and post-interviews include questions that could be integrated into a greeting. Questions 1-3 on the interviews could be analyzed using the enclosed coding schemes, and the other questions might provide more reflective information about the researchers' perceptions and goals. As with the nonverbal tool, it could be valuable to ask interview questions at multiple times, especially questions 1-3 that may help researchers develop their "elevator pitch" for their study. To help keep researchers on their toes and make sure the responses are tailored to different audiences, consider role playing with different perspectives; ask the researcher to explain her or his study as if talking to a two-year-old, eight-year-old, nanny, grandparent, etc.
- *Do observations of on-floor research:* A museum educator could watch the researcher during a shift and use the rubrics to identify areas of success and/or improvement. In this case, it may make the most sense to focus on the nonverbal communication resource, since conversations on the floor might not address the same questions included in the interview. However, researchers generally will provide a description of their studies, so it may be possible to adapt the coding schemes for naturalistic observation. If you are doing this, it is important for visitors to know you are observing the researcher, not them!
- *Have researchers self-reflect on a video:* Whether you want to focus on an interview setting or live, in-museum communication, it may be possible to video record a researcher. If this is something you are interested in, make sure you are adhering to any museum policies and IRB requirements that may apply to you. The benefit of this approach is that the researcher can watch her or himself and make personal judgments about areas for improvement. Whether the researcher does this alone or if a museum educator watches and discusses the film with the researcher, it can be valuable to be able to stop, start, and repeat sections of the recording.
- *Develop a library of examples:* If you choose to video tape researchers' communication and they are willing to share their videos, some sites might wish to develop a video library of examples to show to new researchers or research toy facilitators. Seeing and hearing examples can be more powerful than talking about them or reading written material. The nonverbal communication tool might lend itself especially well to this approach.
- *Integrate into training modules:* It could be valuable to share these resources, or adapted versions of them, when first introducing researchers to Living Laboratory or when training museum staff to lead research toys. The tools lay out criteria for strong communication, which could be helpful in articulating expectations for interactions with visitors on the floor. This might be especially useful with the nonverbal communication tool, which can help highlight researchers' or educators' strengths and areas for improvement.

Using these resources for research or evaluation: The main differences between using these resources for professional development versus for research and evaluation are the systematic approach to data collection and the use of the data. You could still adapt the resources for your local site, but once you have made your changes you will want your data collection to be consistent.

Here are a few things to consider if using these tools for research or evaluation:

- *Institutional Review Board:* If doing research or evaluation, it is very important that you follow Institutional Review Board requirements to protect the human subjects in your study.
- *Coding Reliability:* It is especially valuable to develop consistency in coding when doing research or evaluation. If you can, have multiple people learn the coding schemes and have them both code the data and compare responses. Start with a training set of data to develop a high rate of inter-rater reliability (the extent to which two different people agree about what code(s) should be applied to each comment), and then move on to coding the actual data set.
- *Minimizing Bias:* If possible, follow the guidelines that the original evaluators used by doing video recording. This allows the person doing the coding to review the data without knowing whether it is a pre- or post-interview, limiting implicit bias about improvement over time.
- *Patience:* Unless your site has an especially large number of researchers, it may take some time to gather enough data to perform certain analyses. If you have plans for reporting on the data, make sure to build in sufficient time for data collection, recognizing that you will not have 100% participation and it's likely you may not get matched pre- and post- data for all respondents.
- *Articulating the value of your work:* While the previous points identify some challenges of evaluation, the process can also be highly useful. For example, gathering data can help you describe the positive impact of your Living Laboratory activities. This can be helpful when advocating for your work with museum leadership, and/or could be integrated into a request for funding.
- *Identifying areas for future improvement:* Positive data that come from evaluation efforts can be used to celebrate your successes, as described above. In contrast, negative data can be particularly helpful in identifying where you might have room to adjust your activities to achieve the impact you are hoping for. Evaluation data can identify measurable opportunities for change. A clear agenda of proposed changes associated with a plan for ongoing data collection can be a compelling argument for funding and institutional support.

National Living Laboratory

Researchers' Science Communication Pre-Interview

For the first few questions, please respond as if you were speaking to a Museum visitor during a Living Laboratory shift. I know that you are brand new to Living Laboratory, so if you don't know how to answer a question that's ok. Just try your best, or if you prefer to skip a question that's fine, too!

1. Pretend I am a child participant in your study. What is your study about?
2. Now pretend I am a parent of a study participant. What is your study about?
3. Why is this research relevant to me and my child?
4. Thanks! Now I have some broader questions about science communication. What, if any, are your strengths as a science communicator?
5. What, if any, are your weaknesses as a science communicator?
6. What, if any, are your goals for improving your science communication this semester?
 - Probe: What do you hope your science communication will look and sound like at the end of the semester?
7. Thanks. Now I have just a couple close-ended questions for you: How much do you agree or disagree with each of the statements below?

<i>I am confident in my ability to...</i>	Strongly disagree	Disagree	Agree	Strongly agree
...discuss my study with adults at the Museum.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...discuss my study with children at the Museum.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...answer visitors' questions about my research.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...relate my research to visitors' daily lives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...adjust the way I talk about my research to make it appropriate for different audiences.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. How long have you been involved in conducting behavioral science research?

- Less than 2 months
- 2-6 months
- 7-12 months
- More than one year
- Other (please explain): _____

[If 2 months or more]: **Where have you conducted research in the past?**

National Living Laboratory

Researchers' Science Communication Post-Interview

For the first few questions, please respond as if you were speaking to a Museum visitor during a Living Laboratory shift.

1. Pretend I am a child participant in your study. What is your study about?
2. Now pretend I am a parent of a study participant. What is your study about?
3. Why is this research relevant to me and my child?
4. In what ways, if at all, have your science communication skills improved this semester?
 - Probe: If someone watched you at the beginning of the semester and then watched you now, what differences do you think that person would see or hear?
 - Probe: At the beginning of the semester, you said you were hoping to improve [goal]. Do you think you've met your goal? Why or why not?
5. Other than Living Laboratory, what science communication activities, if any, have you been involved in this semester?
 - [If discusses others]: To what extent do you think Living Laboratory contributed to your science communication skills, compared to other activities you did this semester?
6. When we last talked to you, you said one of your goals for the semester was [goal]. To what extent do you feel you have made progress towards that goal?
7. Thanks. Now I have just a couple close-ended questions for you: How much do you agree or disagree with each of the statements below?

<i>I am confident in my ability to...</i>	Strongly disagree	Disagree	Agree	Strongly agree
...discuss my study with adults at the Museum.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...discuss my study with children at the Museum.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...answer visitors' questions about my research.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...relate my research to visitors' daily lives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...adjust the way I talk about my research to make it appropriate for different audiences.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

National Living Laboratory Coding Scheme for Interview Question #1 (Child question)

Code	Example	Rating/coding scale
<p>The respondent names a <u>construct</u> that the study addresses.</p> <p><i>A construct is an overarching topic or a specific dependent variable being investigated in the study.</i></p>	<p>We are looking at <u>creativity and shape recognition</u> in children.</p> <p>Whether kids' number knowledge affects their <u>concept of sharing</u>.</p>	<p>Is a construct present in the response? Code "Yes" or "No"</p>
<p>The claim identifies one or more <u>independent variables</u>.</p> <p><i>An independent variable is a factor that affects the construct. It might be different conditions or demographic factors.</i></p>	<p>Whether your understanding of <u>numbers</u> is connected to your sharing behavior.</p>	<p>Is an independent variable present in the response? Code "Yes" or "No"</p>
<p>The respondent describes what they are trying to <u>learn</u> from the study.</p> <p><i>Respondents broadly describe the intended outcome of the study or the ways they are advancing the field in a way a child can understand. The RA describes what they want to "learn," "know about," or "understand" from their study. Stating what they are "seeing" or "studying" describes the variables of the study, and will NOT fall under this code.</i></p>	<p>We want to <u>learn about how children start to share with others</u>.</p> <p>NOT: We want to see how you share with other children.</p>	<p>Does the respondent mention what they are trying to learn? Code "Yes" or "No"</p>
<p>The respondent describes what the <u>child</u> will be doing.</p> <p><i>Respondents reference the methods of the study, by talking about the details of the data collection, analysis, or procedure broadly, in a way that won't bias the study participant. These responses should NOT include general questions asking if the child wants to participate, without describing what their participation entails.</i></p>	<p>We are going to play a <u>game by showing you a bunch of different pictures and you tell me what you think of them</u>.</p> <p>NOT: Would you like to play a game for our study?</p>	<p>Does the respondent describe what the child will be doing? Code "Yes" or "No"</p>

<p>The respondent notes that the study could inform a specific <u>application</u>.</p> <p><i>Here a respondent talks about how the research could be applied in the real world, in a context that the child can understand.</i></p>	<p>If we learn more about sharing, <u>we may be able to help parents teach their kids to share.</u></p>	<p>Does the respondent describe how the study's findings could be applied? Code "Yes" or "No"</p>
<p>The respondent connects the study to the child's <u>everyday life</u>.</p> <p><i>This statement connects to the child's personal experiences in a way he or she can understand, without making unnecessary assumptions about the child's culture.</i></p>	<p>We are learning about how you feel when you listen to music; <u>sort of like how you feel when you're listening to music with mom in the car.</u></p>	<p>Does the respondent connect the story to everyday life? Code "Yes" or "No"</p>
<p>The respondent <u>avoids or defines jargon</u>.</p> <p><i>Jargon includes terms that are not part of lay public's vocabulary. For children, the language assumes that the listener has never had any instruction in science, psychology or research. If the researcher uses a term but defines it in everyday language, that is alright. To check if a word is jargon, you can see whether it is on the list of the 5,000 most frequently used words in the English language (www.wordfrequency.info).</i></p>	<p>NOT: stimuli, operant conditioning, attachment theory, etc.</p>	<p>Does the respondent use language that is understandable, and define jargon terms if used? Code "Yes" or "No"</p>
<p>All parts of the response are <u>relevant</u> to the question that was asked, in that all parts of the response connect logically to the claim, evidence, reasoning, or examples.</p> <p><i>All information needs to make logical sense in response to the question.</i></p>	<p>We do a lot of studies about <u>things like music and memory and sharing and stuff</u>. This study is about math.</p>	<p>Does everything the respondent says connect logically to the question? Code "Yes" or "No"</p>
<p>The respondent minimizes <u>fillers</u>.</p> <p><i>Fillers are sounds or words used to fill a dead space in thought.</i></p>	<p>NOT: uh, um, like (when not used as a comparison), you know</p>	<p>Record the number of filler words in the response:</p>
<p>Respondent <u>asks a question</u>.</p> <p><i>The respondent asks a question to engage the child.</i></p>	<p>Do you know what math is?</p>	<p>Does the respondent ask a question? Code "Yes" or "No"</p>

National Living Laboratory Coding Scheme for Interview Questions 2-3 (Adult questions)

Code	Example	Rating/ coding scale
<p>The respondent names a <u>construct</u> that the study addresses.</p> <p><i>A construct is an overarching topic or a specific dependent variable being investigated in the study.</i></p>	<p>We are looking at <u>creativity and shape recognition</u> in children.</p> <p>We study whether kids' number knowledge affects their <u>concept of sharing</u>.</p>	<p>Is a construct present in the response? Code "Yes" or "No"</p>
<p>The respondent identifies one or more <u>independent variables</u>.</p> <p><i>This is what affects the construct. It might be different conditions or demographic factors.</i></p>	<p>Whether kids' <u>number knowledge</u> affects their concept of sharing.</p>	<p>Is an independent variable present in the response? Code "Yes" or "No"</p>
<p>The respondent describes <u>appropriate methods</u> for researching the study topic.</p> <p><i>The respondent must describe at least one method that is logically connected to the independent and/or dependent variables of interest.</i></p>	<p>We are studying children's perceptions of art. <u>We'll show two works of art, one of which is an original and one is a perfect copy</u>. Then, we ask children to rate how good the two works of art are on a scale of 1 to 7, with 7 being the best.</p>	<p>Does the researcher describe the procedure in such a way that you understand how it could be useful for studying the topic? Code "Yes" or "No"</p>
<p>The respondent describes <u>collecting appropriate data</u> for researching the study topic.</p> <p><i>The respondent must describe at least one type of data that is logically connected to the independent and/or dependent variables of interest.</i></p>	<p>We are studying children's perceptions of art. <u>We'll show two works of art, one of which is an original and one is a perfect copy</u>. Then, <u>we ask children to rate how good the two works of art are on a scale of 1 to 7, with 7 being the best</u>.</p>	<p>Does the researcher describe data that she or he collects in such a way that you understand how that data could be useful for studying the topic? Code "Yes" or "No"</p>

<p>The respondent relates the study to <u>prior research or advancing the field</u>.</p> <p><i>The respondent must connect her or his study to findings or questions from past research or talk about how their study will advance theories in child development/psychology. This can be somewhat vague, in that they don't have to cite specific research or theories.</i></p>	<p><u>We already know from existing research</u> that two-year old children use causal reasoning. We do not, however, know how younger children think about what makes things happen.</p>	<p>Does the respondent situate the current study in relationship to what is already known in the scientific field, or note what new knowledge will be contributed? Code "Yes" or "No"</p>
<p>The respondent notes that the study could inform a specific <u>application</u>.</p> <p><i>Here a respondent talks about how the research could be applied in the real world.</i></p>	<p>The things we learn from this study could hopefully be <u>used in developing tools to help parents and teachers foster these skills in their children</u>.</p>	<p>Does the respondent describe how the study's findings could be applied? Code "Yes" or "No"</p>
<p>The respondent connects the study to the adult's <u>everyday life</u>.</p> <p><i>This is a statement that connects to the personal experiences of the person the respondent is talking to, which in this case is a hypothetical caregiver of a child participant.</i></p>	<p><u>There are several instances in our daily life in which children make causal reasoning</u>, such as using the remote control and playing with toys. We can better understand how, when, and why children reason this way.</p>	<p>Does the respondent connect the story to everyday life? Code "Yes" or "No"</p>
<p>The respondent <u>avoids or defines jargon</u>.</p> <p><i>Jargon includes terms that are not part of lay public's vocabulary. The language assumes that the listener has never had had formal instruction in psychology or research. If the researcher uses a term but defines it in everyday language, that is alright. To check if a word is jargon, you can see whether it is on the list of the 5,000 most frequently used words in the English language (www.wordfrequency.info).</i></p>	<p>NOT: stimuli, operant conditioning, attachment theory, etc.</p>	<p>Does the respondent use language that is understandable, and define jargon terms if used? Code "Yes" or "No"</p>
<p>All parts of the response are <u>relevant</u> to</p>	<p>[Negative example of what</p>	<p>Does everything the</p>

<p>the question that was asked, in that all parts of the response connect logically to the claim, evidence, reasoning, or examples.</p> <p><i>All information needs to make logical sense in response to the question.</i></p>	<p>NOT to do]: <u>We do a lot of studies about things like music and memory and sharing and stuff.</u> This study is about math.</p>	<p>respondent says connect logically to the question? Code "Yes" or "No"</p>
<p>The respondent minimizes <u>fillers</u>.</p> <p><i>Fillers are sounds or words used to fill a dead space in thought.</i></p>	<p>NOT: uh, um, like (when not used as a comparison), you know</p>	<p>Record the number of filler words in the response:</p>
<p>Respondent <u>asks a question</u>.</p> <p><i>The respondent asks a question to engage the listener.</i></p>	<p>Do you know what algebra is?</p>	<p>Does the respondent ask a question? Code "Yes" or "No"</p>
<p>After reviewing these responses, you have an <u>overall comprehension</u> of what the study is about.</p> <p><i>Do you feel that you understand the study from the explanations provided by these two questions? Do you still feel confused or have questions?</i></p>	<p>[Negative example of what NOT to do]: So your kid might have done, I don't know, either language or control or there is a continuity or discreteness variable. Our study's about that. It's important because you've probably been counting or are familiar with your numbers already.</p>	<p>Choose one:</p> <p>"YES:" I have a good grasp of the study from the RA's explanation.</p> <p>"NO:" I am still confused about the study after hearing the RA's explanation.</p>

National Living Laboratory Researchers' Science Communication Observation Form

	Criteria: Verbal Assessment			Rating (circle)
	Unsatisfactory (U)	Satisfactory (S)	Excellent (E)	
Volume	The volume was inappropriate or a problem most of the time during the conversation. Distracting behaviors include talking too loudly/softly or shifting dramatically between volume levels.	While there were a few instances when the researcher could have spoken up or softened her/his voice, the volume was generally appropriate.	The researcher's volume was comfortable and appropriate for the duration of the conversation.	U / S / E
	Notes:			
Articulation	The articulation was inappropriate or a problem most of the time during the conversation. This includes mumbling, speaking too slowly/quickly, or slurring consonants and vowels in an unclear manner.	While there were a few instances when the researcher could have improved her/his articulation, it was generally appropriate.	The researcher's articulation was correct and clear for the duration of the conversation.	U / S / E
	Notes:			
Distracting vocal patterns	Vocal patterns and habits were inappropriate or a problem most of the time during the conversation. Distracting habits include using filler words (um, like, etc.), inflection, or inappropriate tone.	While there were a few instances when the researcher exhibited distracting verbal habits, it was generally appropriate.	The researcher's vocal habits were professional and appropriate for the duration of the conversation.	U / S / E
	Notes:			

	Criteria: Physical Assessment			Rating (circle)
	Unsatisfactory (U)	Satisfactory (S)	Excellent (E)	
Distracting physical behaviors	Distracting physical behaviors were inappropriate or a problem most of the time during the conversation. Distracting behaviors include poor posture, fidgeting, etc.	You recognize one to a few behaviors that the researcher could improve upon in his or her physical presentation during the conversation.	The researcher's physical behaviors were professional and appropriate for the duration of the conversation.	U / S / E
	Notes:			
Listening behaviors	For most of the time, the researcher exhibited poor listening skills, appearing disengaged/disrespectful. Listening behaviors could include head nodding, eye contact, facial expressions, or vocal reinforcement.	Listening behaviors were inconsistent, lacking at times, or could be improved upon. Overall, the conversation was generally respectful and comfortable.	The researcher's listening behaviors supported an inclusive and respectful atmosphere for the duration of the conversation.	U / S / E
	Notes:			
Appearance of confidence	For the majority of the conversation, the researcher exhibited low or overconfidence. Associated behaviors could include eye contact, posture, talking speed, nervous or patronizing tone, etc.	While the researcher may have appeared unconfident or overconfident on a few occasions, the overall conversation was comfortable.	The researcher exhibited an appropriate level of confidence for the duration of the conversation.	U / S / E
	Notes:			
Energy level	For the majority of the observation, the researcher was hyperactive or uncomfortably low-energy.	While at points the researcher was slightly over- or under-excited, the energy was appropriate overall.	The researcher maintained a comfortably positive energy level for the duration of the conversation.	U / S / E
	Notes:			

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