CEREBROedu: Una Ventana al Cerebro/
BRAINedu: A Window into the Brain

Year 2 implementation evaluation

February 2020

Knight Williams Inc.

Rachael Dobrowolski, MESc
Valerie Knight-Williams, Ed.D.
Divan Williams Jr., J.D.
Evalyn Williams, A.A.
Abigail Simmons

This project was solely supported by the Science Education Partnership Award of the National Institutes of Health under award number R25GM129232. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.
**Table of Contents**

Introduction ................................................................................................................................. 4  
Method............................................................................................................................................. 5  
Findings........................................................................................................................................... 7  

**Part 1. Educators’ feedback on the CEREBROedu trainings** ................................................... 7  
1.1 Educators’ reflections on the two training webinars............................................................. 8  
1.1a Overall feedback about the webinars ................................................................................. 9  
1.1b Perceived value of the webinars in program planning ....................................................... 9  
1.1c Perceived effectiveness of the webinars in conveying program information .................. 10  
1.1d Feedback about the amount of material covered in the webinars .................................... 10  
1.2 Educators’ reflections on the five Nearpod lessons............................................................. 11  
1.2a Overall feedback about the Nearpod lessons ................................................................... 12  
1.2b Perceived value of the Nearpod lessons in program planning ......................................... 12  
1.2c Feedback about the amount of material in the Nearpod lessons ....................................... 13  
1.2d Comments about the individual Nearpod lessons ............................................................. 14  

**Part 2. Educators’ pre-program expectations for CEREBROedu** ......................................... 17  
2.1 Educators’ feedback about the project goals and timeline ............................................... 17  
2.2 Program elements educators most looked forward to ..................................................... 18  
2.3 Challenges or barriers anticipated by educators ............................................................... 19  
2.4 Educators’ sense of preparation to conduct CEREBROedu activities with Hispanic youth and families .......................................................... 20  
2.4a Youth-focused activities .................................................................................................... 20  
2.4b Family-focused activities .................................................................................................. 21  
2.5 Educators’ comfort level addressing neuroscience/the brain with Hispanic youth and families 22  
2.6 Whether educators felt motivated and empowered to implement their programs ............ 23  
2.7 Educators’ hopes and expectations for potential program impacts .................................. 24  
2.7a Hoped-for program impacts ............................................................................................. 24  
2.7b Assessment of potential program impacts ......................................................................... 26  
2.8 Educators’ feedback about the CEREBROedu resources .................................................. 27  
2.8a Perceived value of the resources ..................................................................................... 27  
2.8b Concerns about using the resources .............................................................................. 28  
2.8c Suggested resources or support from TPT ....................................................................... 28  

**Part 3. Partners’ final CEREBROedu program reporting and reflections** ............................... 30  
3.1 Program characteristics ....................................................................................................... 30  
3.1a Program structure ............................................................................................................. 30  
3.1b Fulfillment of program requirements .............................................................................. 31  
3.1c Youth participants ............................................................................................................ 32
3.2 Partner feedback about the Welcome Event .............................................................. 33
   3.2a Welcome Event structure and participants .................................................................. 33
   3.2b How valuable partners found the Welcome Event and its elements .......................... 34
   3.2c What partners found most memorable about the Welcome Event ............................ 35
   3.2d Challenges partners encountered implementing the Welcome Event .......................... 35
3.3 Partner feedback about the Family Fiesta ................................................................. 36
   3.3a Family Fiesta structure and participants ................................................................... 36
   3.3b How valuable partners found the Family Fiesta and its elements ............................ 38
   3.3c What partners found most memorable about the Family Fiesta .............................. 39
   3.3d Challenges partners encountered implementing the Family Fiesta .......................... 40
3.4 Extent to which partners felt prepared to conduct CEREBROedu activities with Hispanic youth and families .............................................................. 42
   3.4a Youth-focused activities ...................................................................................... 42
   3.4b Family-focused activities ...................................................................................... 43
3.5 Partners’ comfort level addressing neuroscience/the brain with Hispanic youth and families ............................................................................................................ 44
3.6 Partners’ use and value of the CEREBROedu resources ............................................. 46
   3.6a Use and perceived value of the implementation resources ....................................... 46
   3.6b Overall perceived value of the primary program resources ..................................... 47
   3.6c Use and perceived value of the program activities ................................................... 48
   3.6d Use and perceived value of the role model videos .................................................. 51
   3.6e Extent to which partners encouraged parents/guardians to use the CEREBROedu resources at home ................................................................. 52
   3.6f Suggested resources or support from TPT ............................................................. 53
3.7 Partners’ perceptions of the impacts of CEREBROedu ............................................. 55
   3.7a Perceived impact on participants .......................................................................... 55
   3.7b Perceived youth learning ....................................................................................... 56
   3.7c Perceived parent/guardian learning ........................................................................ 57
   3.7d Perceived impact on partners ................................................................................. 58

Discussion ..................................................................................................................... 60

Reflections on the CEREBROedu trainings .................................................................. 60
Reflections on the CEREBROedu resources .................................................................. 61
CEREBROedu program reporting ................................................................................. 62
Comparing CEREBROedu post-training and post-program reflections .......................... 62
Perceived learning among CEREBROedu participants .................................................. 64
Recommendations ........................................................................................................ 65

Appendix 1: Compilation report of youth and parent/guardian Family Fiesta survey responses .......................................................... 68
Introduction

CEREBROedu: Una Ventana al Cerebro/BRAINedu: A Window into the Brain is a four-year national informal education project designed to educate Hispanic youth and their families about the brain. Directed by Twin Cities Public Television (TPT) and funded by the National Institutes of Health (NIH) Science Education Partnership Award, the project has three main goals: 1) empower informal STEM educators to provide culturally responsive activities about the brain’s structure and function to Hispanic youth and families; 2) encourage Hispanic youth to consider careers in neuroscience and mental health and demonstrate to parents the value of this academic path; and 3) promote mental health literacy among Hispanic families, thus reducing stigma and increasing utilization of mental health resources. TPT aims to meet these goals through use of the following educational resources and outreach programming:

❖ **Educational resources:** During Years 1 and 2 of the project, TPT produced a four-part curriculum and Family Guide about brain structure and function as well as four role model profile videos of Hispanic neuroscience and mental health professionals (with two additional role model videos to be released early in Year 3).¹ These three resources are all available on the project website, as are a variety of existing resources TPT leveraged for use as part of CEREBROedu, including video clips from previous PBS programs on brain disorders and diseases, and family guides developed for prior TPT projects, including the SciGirls Engaging Latino Families Guide and the SciGirls Family Guide for Engaging Girls in STEM.²

❖ **Outreach programming:** In addition to offering educators access to the educational resources listed above through the project website, TPT is partnering with 18 outreach organizations to implement these resources in afterschool, summer camp, and/or other out-of-school programs designed to engage Hispanic youth ages 10 to 13 and their families on topics related to neuroscience and mental health. As a condition of their participation, these partners are also required to incorporate local role models³ in their programs and implement a Welcome Event and a culminating Family Fiesta to facilitate family involvement. To prepare the partner educators to implement these various program requirements, TPT provides them with neuroscience education professional development, specifically two webinar trainings and five Nearpod trainings, all of which are accessible on the Training page of the Educators section of the CEREBROedu website.

---

¹ Echoing the program materials, the term “role model videos” is used throughout this report to describe the videos featuring in-person neuroscience or mental health professionals.

² The SciGirls Engaging Latino Families Guide and the SciGirls Family Guide for Engaging Girls in STEM were both available to partners in English and Spanish, as were the CEREBROedu Family Guide and five of the 17 CEREBROedu curriculum activities. Three of the four role model videos available for partner programs in Year 2 were primarily in English with Spanish subtitles, while one was in Spanish with English subtitles. All of the PBS video clips were in English, without Spanish subtitles.

³ Again echoing the program materials, the term “role models” is used in this report to refer to in-person guest speakers, although in the evaluation surveys for educators, youth, and parents/guardians they were called “guest speakers,” so as not to assume that participants would think of the in-person guest speakers as role models.
In addition to funding the educational resources and outreach programming, the NIH grant also supported three phases of independent evaluation conducted by the external evaluation and research firm Knight Williams Inc. (Knight Williams), including front-end evaluation in Year 1, implementation evaluation in Year 2, and summative evaluation in Years 2-4.

The implementation evaluation, the subject of this report, focused on the training and program activities of the first cohort of six partner organizations that coordinated CEREBROedu programs. Part 1 of this report considers the partner educators’ experience with the professional development training, Part 2 considers their post-training expectations prior to commencing their programs, and Part 3 considers their subsequent reflections on these programs. This report also considers the experiences of youth and their parents/guardians who participated in the partner programs, in this case focusing on feedback they provided at the end of their program’s culminating Family Fiesta. These findings are presented as a compilation report in Appendix 1. They are also incorporated, where applicable, in the Discussion section, along with the partner educators’ feedback.

**Method**

As shown in the flowchart in Image 1, partner educators shared their feedback through a series of online surveys at three key points: 1) after they completed two webinar trainings, 2) after they completed five Nearpod trainings, and then 3) after they conducted their CEREBROedu programs. Youth and parents/guardians also provided programmatic feedback at the partners’ culminating Family Fiestas.

**CEREBROedu partner activities**

- Participate in two training webinars
- Complete post-webinar evaluation survey (Two educators per site)
- Participate in five Nearpod trainings
- Complete post-Nearpod evaluation survey (Two educators per site)
- Conduct CEREBROedu program
- Administer youth and parent/guardian surveys at the end of the culminating Family Fiesta
- Complete post-program reporting and reflections survey (One educator per site)

*Image 1: Flowchart depicting the CEREBROedu partner educators’ training, programming, and evaluation activities*

---

4 The front-end evaluation focused on gathering feedback from the project’s primary public audiences (Hispanic middle school youth and their parents/guardians living in underserved communities) and professional audiences (the project’s advisors and partners). Participants were asked to review a set of materials prepared by TPT, including two sample role model profile videos and a curriculum framework, with some variations in the materials reviewed by each group (Knight Williams Inc., September 2018).

5 The summative evaluation will consider the 18 CEREBROedu programs held over the course of the project.
The evaluation methods used in each case are summarized below and, where appropriate, described in greater detail in the relevant sections of the report.

- Partner educators’ feedback on the CEREBROedu trainings was gathered through a post-webinar survey completed after the educators participated in the two training webinars and a post-Nearpod survey after educators completed the five Nearpod trainings (Part 1).

- Partner educators’ pre-program expectations were gathered from educators who submitted the post-Nearpod training survey prior to the start of their programs (Part 2).

- Partner educators’ post-program reporting and reflections relied on an online survey submitted by one educator from each partner organization at the end of their programs (Part 3).

- Youth and parent/guardian feedback on their CEREBROedu program and Family Fiesta was gathered through paper surveys available in English and Spanish distributed by the partner educators at the end of their culminating Family Fiestas. These findings are presented as a compilation report (Appendix 1).

Analysis and reporting

Basic descriptive statistics were performed on the quantitative data generated from the evaluation. Content analyses were performed on the qualitative data generated in the open-ended questions. The analysis was both deductive, drawing on the project’s goals and objectives, and inductive, looking for overall themes, keywords, and key phrases.

Note that in the reporting of findings, frequency distribution tables and charts with median ratings are provided for respondent groups as small as six. These summary statistics would not typically be used with such small respondent numbers; however, the information was included in this implementation report with the expectation that the summative evaluation report will examine findings across all 18 programs. Given that a total of six CEREBROedu programs took place in Year 2 of the project and that another 12 programs are scheduled to take place in Years 3 and 4, respondent numbers are expected to generally triple for the summative report.

---

6 Throughout this report, in instances where partner educators were asked to provide ratings, the range shared by the group is presented in cases where their ratings ranged across four or more numbers.
Findings

Part 1. Educator feedback on the CEREBROedu trainings

Prior to commencing their CEREBROedu programs, the partner educators were required to complete two webinar trainings and view five online Nearpod trainings. To provide TPT with feedback on their training experience, the educators were also required to complete two evaluation surveys developed by the external evaluation team from Knight Williams. The educators completed the first survey immediately after viewing the second webinar and the second once they completed the fifth Nearpod lesson.

Although the evaluation required two educators per site to complete each survey – resulting in an expected total of 12 educators per survey – 15 educators completed the post-webinar survey and 14 completed the post-Nearpod survey. Given that both surveys asked educators to reflect on the trainings, as opposed to their individual programs, the additional responses in each case were incorporated into the evaluation in order to provide TPT with as much educator feedback as possible.

To the extent known, information about the educators’ backgrounds is presented below, followed by their reflections on the webinar and Nearpod trainings.

Educators’ roles at their organizations
The 15 educators who provided information about their role at their organization shared a range of responses, including, “assistant teacher,” “outreach program coordinator,” “education and community engagement specialist,” “Spanish instructor,” “school services manager,” and “intern/educator.”

Educators’ years of experience at their organizations
Figure 1 shows that most of the educators (11) had at least two years of experience at their organizations, while a few (4) had a year or less of experience.

Educators’ experience teaching neuroscience content
Figure 2 shows that most of the educators (12) indicated that they did not have prior experience teaching neuroscience content to youth and/or families, while a few (3) indicated they did, as shown in their responses on the following page.

---

7 A total of 16 educators submitted surveys after their webinar and/or Nearpod trainings.
• I presented workshops on early brain development to adults for previous early childhood projects; it doesn’t go into as much depth as this project will.
• I have taught a variety of neuroscience activities in my 3 years at [our organization], mostly to elementary aged children.
• I participated in our school district staff development session on brain-based learning for upper elementary to high school.

1.1 Educators’ reflections on the two training webinars

As shown in Image 2, the April 2019 webinar provided an introduction to CEREBROedu. The May webinar addressed Hispanic family engagement and the program evaluation requirements. Both training webinars were available as online videos and PDFs after each live stream.8

![Image 2: Slide from the CEREBROedu webinar in April 2019](image)

This section reviews the reflections of the 15 educators9 who completed the evaluation survey about the two webinars, focusing on their overall feedback on the webinars and their perceptions of the value and effectiveness of the trainings and the amount of material covered.

---

8 Although most educators participated in two live webinars on April 18th and May 6th, 2019, a few viewed the webinars later in the year.
9 Three partner sites had two educators complete the survey. One site had only one educator submit the survey, another had three educators complete the survey, and the final site had five educators fill out the survey. As noted earlier, the additional responses were incorporated into the evaluation in order to provide TPT with as much educator feedback about the webinars as possible.
1.1a Overall feedback about the webinars

Educators were asked to rate their level of agreement with six statements about the webinars, using a scale from 1.0 (strongly disagree) to 7.0 (strongly agree). Figure 3 shows that, overall, the educators strongly agreed that the webinars were well run and organized and that they provided sufficient opportunities to ask questions about what was presented ($Mdn = 7.0$ in each case). They generally agreed that they enjoyed participating in the webinars and that the webinars were a worthwhile experience, met their expectations, and were designed with educators in mind ($Mdn = 6.0$ in each case).

Figure 3. Educators’ median ratings about the webinars (n=15)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Median Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>The webinars were well run and organized.</td>
<td>7.0</td>
</tr>
<tr>
<td>The webinars provided sufficient opportunities to ask questions about what was presented.</td>
<td>7.0</td>
</tr>
<tr>
<td>I enjoyed participating in the webinars.</td>
<td>6.0</td>
</tr>
<tr>
<td>I found the webinars to be a worthwhile experience.</td>
<td>6.0</td>
</tr>
<tr>
<td>The webinars met my expectations.</td>
<td>6.0</td>
</tr>
<tr>
<td>The webinars were designed with educators in mind.</td>
<td>6.0</td>
</tr>
</tbody>
</table>

1.1b Perceived value of the webinars in program planning

Educators who completed both the webinar and Nearpod trainings (n=10) were asked to rate the value of the two training webinars in helping them to plan their CEREBROedu program, using a scale from 1.0 (not at all valuable) to 5.0 (extremely valuable). Overall, the educators found the webinars to be very valuable in this respect ($Mdn = 4.0$), although as shown in Table 1, their individual ratings ranged from 2.0 to 5.0, indicating some differences in opinion.

Table 1. Frequency distribution of educators’ ratings of the value of the two training webinars in program planning (n=10)

<table>
<thead>
<tr>
<th>Value of Webinars</th>
<th>Frequency Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all valuable 1.0</td>
<td>0%</td>
</tr>
<tr>
<td>Slightly valuable 2.0</td>
<td>10%</td>
</tr>
<tr>
<td>Moderately valuable 3.0</td>
<td>20%</td>
</tr>
<tr>
<td>Very valuable 4.0</td>
<td>30%</td>
</tr>
<tr>
<td>Extremely valuable 5.0</td>
<td>40%</td>
</tr>
</tbody>
</table>


---

10 This question was only asked of educators who completed the post-Nearpod survey prior to beginning their CEREBROedu program, as it was in a section of the survey that asked educators to reflect on their plans for their upcoming program.
1.1c Perceived effectiveness of the webinars in conveying program information

Educators were asked to rate how effective they found the webinars in conveying the three types of program information shown in Figure 4, using a scale from 1.0 (not at all effective) to 5.0 (extremely effective). Overall, they thought the webinars were very effective in clarifying their CEREBROedu responsibilities and increasing their understanding of the components of CEREBROedu (Mdn = 4.0 in each case). The educators also generally thought the webinars were very effective in increasing their understanding of how to incorporate culturally responsive teaching (CRT) strategies in their programs (Mdn = 4.0), although their ratings ranged from 2.0 to 5.0, indicating some differences of opinion.

Figure 4. Educators’ median ratings of the effectiveness of the webinars in conveying program information (n=15)

1.1d Feedback about the amount of material covered in the webinars

Figure 5 shows that most of the educators (13) thought the webinars covered about the right amount of material, while two thought they covered too little, as detailed in their responses below:

- **Talking more about the expectations in respect to the schedule, for example: when do we need the role models, how long is the welcoming and the fiesta, is there a difference between doing the modules and activities every day or once a week.**
- **I would have liked more details about the actual program, and less overview.**
1.2 Educators’ reflections on the five Nearpod lessons

The five Nearpod lessons were available for educators to review prior to and during their programs. Lesson 1 was a project overview, Lesson 2 addressed brain structure, Lesson 3 covered brain connections, Lesson 4 considered the brain in action, and Lesson 5 looked at the brain and behavior. As shown in Images 3 and 4, the Nearpod lessons incorporated videos, activity descriptions, and other reference documents, and were designed to be completed at each educator’s own pace.

This section reviews the reflections provided by the 14 educators\(^{11}\) who completed the survey on the five Nearpod lessons, focusing on their overall feedback on the training and their perceptions of the value and effectiveness of the Nearpod lessons, the amount of material covered, and the individual lessons.

\(^{11}\) Five sites had two educators complete the survey. The remaining partner site had four educators fill out the survey. As noted earlier, the additional responses were incorporated into the evaluation in order to provide TPT with as much educator feedback on the Nearpod lessons as possible.
1.2a Overall feedback about the Nearpod lessons

Educators were asked to rate their level of agreement with five statements about the Nearpod lessons, using a scale from 1.0 (strongly disagree) to 7.0 (strongly agree). Figure 6 shows that, overall, they strongly agreed that the lessons were well-organized, that they enjoyed participating in them, and that they were a worthwhile experience, met their expectations, and were designed with educators in mind ($Mdn = 7.0$ in each case).

Figure 6. Educators’ median ratings about the Nearpod lessons (n=14)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Median Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Nearpod lessons were well-organized.</td>
<td>7.0</td>
</tr>
<tr>
<td>I enjoyed participating in the Nearpod lessons.</td>
<td>7.0</td>
</tr>
<tr>
<td>I found the Nearpod lessons to be a worthwhile experience.</td>
<td>7.0</td>
</tr>
<tr>
<td>The Nearpod lessons met my expectations.</td>
<td>7.0</td>
</tr>
<tr>
<td>The Nearpod lessons were designed with educators in mind.</td>
<td>7.0</td>
</tr>
</tbody>
</table>

1.2b Perceived value of the Nearpod lessons in program planning

Educators who completed both the webinar and Nearpod trainings (n=10) were asked to rate the value of the five Nearpod lessons in helping them to plan their CEREBROedu program, using a scale from 1.0 (not at all valuable) to 5.0 (extremely valuable).\(^\text{12}\) Overall, the educators found the Nearpod lessons extremely valuable in this respect ($Mdn = 5.0$).

\(^\text{12}\) This question was only asked of educators who completed the post-Nearpod survey prior to beginning their CEREBROedu program, as it was in a section of the survey that asked educators to reflect on their plans for their upcoming program.
1.2c Feedback about the amount of material in the Nearpod lessons

Figure 7 shows that all but one of the educators (13) thought the Nearpod lessons covered the right amount of material. As illustrated in the comments below, those who elaborated tended to praise the lessons and the amount of material they contained.

- **It gave enough information to have a good generalized idea of the program, with enough additional materials to be able to delve deeper into some of the activities.**
- **When I started I was looking forward to learning more about an area of science that I didn’t know much about. I enjoy teaching and found that the way the lessons were presented were taught in such a way that I feel more comfortable being able to teach them to the level of the students.**
- **It was a lot but for a workshop series like this, it is just about right.**
- **With the amount of content and the topic at hand, it can seem overwhelming to dive into the brain but this training felt just right and did not intimidate with the subject matter.**
- **I feel that there is enough time for the required material to be covered and still leaves flexible time for discussion or added activity.**

However, one educator who thought the Nearpod lessons covered the right amount of material added that they still would have liked “a little bit more information,” explaining that “some of the activities are tricky to facilitate, or the curriculum and activity steps don’t match,” while another thought the Nearpod lessons also could have covered “visual materials, like posters, puzzles, etc.”

As shown in Figure 7, the remaining educator thought the Nearpod lessons covered too much material, saying, “It is a whole lot of content to pour through. I understand that there is a lot of information and that we don’t have to be the experts, but it could be pretty daunting to have so much opportunity to explore the information.”
1.2d Comments about the individual Nearpod lessons

The educators were asked if they had any questions, comments, and/or concerns about the information presented in each Nearpod lesson, for example in terms of clarity, missing elements, how to implement, and/or how to incorporate CRT strategies. Figure 8 shows the number of educators who commented on the value or strength of each lesson, as well as the number who shared lesson-specific challenges and/or suggestions for how TPT might update each lesson for future CEREBROedu educators.

Among those who shared a response in each case, the majority commented on the value or strengths of the individual Nearpod lessons. Meanwhile, smaller groups of those who provided a response (between one and four educators in each case) shared challenges they faced when reviewing the lesson(s) and/or suggestions for how TPT might update them moving forward.

Examples of educators’ comments about the value or strength of the Nearpod lessons are presented in Table 3 on the following page, as are the challenges or suggestions they shared about the individual lessons. Although the educators generally shared positive feedback about the Nearpod lessons – for example finding them clear and useful to their planning – some requested Spanish-language materials, thought it would be helpful to standardize all of the program activities into a single format, and/or suggested TPT provide additional information about some of the lessons, among other recommendations.
### Table 3. Educators’ comments about the five Nearpod lessons

#### Lesson 1: Project Overview (n=13)

**Commented on value or strengths (10)**
- The project overview was straightforward and useful to understand the overall goal of the project.
- The information given for our project was well documented and clearly outlined. We felt a strong sense on how to approach the activities and programing.
- The planning guides for the various events are very helpful.
- I think the information was well presented. I think the tone to empower the educators was great too. I know when I spoke with our newest teachers, they were concerned that this is not in their background. Being able to sit together and talk about and explore the resources was super helpful.
- It was helpful information; good background information to help understand minorities and STEM careers.
- Clear instructions
- ... [I] did gain an understanding of the students and their families.

**Shared challenges or suggestions (4)**
- I felt that the webinars and the project overview were not much to my liking. I didn’t get as much information about the subject matter ...
- Culturally- we need materials in Spanish.
- Elaborate more on the project the students will need to work on throughout the modules.
- A well-defined schedule with how long each activity takes (not just overall module). Some of that info was missing in the individual lessons. If educators are implementing in different formats, you are then unsure which activities to do per session, how to create a schedule.

#### Lesson 2: Brain Structure (n=10)

**Commented on value or strengths (9)**
- Lesson 2 was useful for since I’m a very visual learner so having videos and the instructor video on the projects helped explain how to lead the activities.
- This is all new information and it is an eye opener. I look forward to exploring more and think that kids will be fascinated with the information and material. It is a unique experience for them.
- The brain video was very good.
- I think this is a great first lesson not only because the brain structure is being discussed, but because there is such a memorable activity this day (brain dissection). Good thinking. (No pun intended.)
- The idea of dissecting a sheep brain was initially grotesque and I had initially thought the youth wouldn’t want to participate in the activity. Perhaps this was a bit of fear and disgust from our staff members, but it was quite the contrary during the activities. Everyone seemed to enjoy and embrace dissecting the brain.
- This is probably my favorite lesson. As a science major I took delight in getting to know more about the function of the brain. The dissection part was very well done and gave a great insight about the brain structure.
- A good set-up day. I think the students will really enjoy these activities.

**Shared challenges or suggestions (2)**
- Consistency in brain dissection materials. The vocabulary list didn’t match the brain images (diagrams) or the dissection handout instructions for students. Some vocabulary words used different terms than diagrams, some terms in the diagrams were not defined in the vocabulary list.
- I would suggest providing more information that everything will be ok and not be grossed out. As an example, some staff felt uncomfortable with the idea of having sheep brains in our refrigerator as they assumed that’s how they needed to be stored. However, after calling Carolina company we learned that the brains don’t need to be stored in a refrigerator. I suppose my only suggestion is to let other educators know its ok to be squeamish but that all will be ok.

#### Lesson 3: Brain Connections (n=10)

**Commented on value or strengths (8)**
- Lesson 3 was again useful to have the instructor led video to understand what the activity was...to look like
- I like how the activities explore the different regions of the brain in a hands-on way
- I liked this lesson as it gives many hands-on experiments for the students. I love getting my students involved in what I am teaching. I feel it gives them a greater understanding than just lecturing ...
• These were all fun and engaging activities. I would keep the training as is.
• I like the Act & React activity (the options for different tests too). I think it lends itself for the audience to talk about how disabilities too.

Shared challenges or suggestions (3)
• I will need to dig deeper with the Get in Touch activity.
• Electromyography - we might need more than two EMG Spiker Box. We had trouble downloading app in the computer. Can we use or have a second option for using the EMG Box?
• The video had no sound but overall the lesson was good

Lesson 4: Brain in Action (n=11)

Commented on value or strengths (8)
• Good overview of the activities, with a lot of good resources on how to use the materials
• I really enjoyed the video that went along with this section. It was very informative and extremely interesting.
• I really like the integration of the Spiker Box. I think that introducing the technology will be pretty exciting to the group. I think that the adults may be familiar with the OI and the Stroop Effect test and this familiarity might be empowering.
• The interaction and discussion to process seem clear.
• I have always had a fascination with optical illusions and love tricking my brain. Having never worked with the spiker box, I am looking forward to seeing how this actually works.

Shared challenges or suggestions (4)
• Optical illusions needs a video in Nearpod. We tested the activities and struggled with the first few. We weren’t sure what we were supposed to see. Plus those lessons (from that vendor/ curriculum) how they are laid out (in the handout) you have to keep on going to the beginning to facilitate it properly. The SciGirls activities, on the other hand, are laid out in a way easy to facilitate (the questions to ask or explanations to provide are laid out in the way the activity flows). It’d be great if in the future all non-TPT material could be redone ... similar to SciGirls activities.
• Eye Poster. More visuals
• For this training, I felt that the technology component might have been a bit too complicated for most educators. We deal with technology in our program on a daily basis so using microcontrollers such as Arduinos and connecting them to other devices is normal to us. We were able to set things up quite quickly. However, I suspect that other educators might struggle with setting up the Claw and given that the instructions are provided by Back Yard Brains can confuse from the activity goals of CEREBROedu. Although Back Yard Brains has plenty of documentation and guides, I would suggest providing direct instructions from CEREBROedu. perhaps a video overview of the activity in action as it pertains to CEREBROedu activities. This way there’s no need to navigate away from CEREBROedu resources.
• I am still not sure I understand [the spiker box]. but I am sure when I get to work with it all will become clear.

Lesson 5: Brain and Behavior (n=9)

Commented on value or strengths (9)
• Great lesson. I also work with seniors and feel like teaching young people more about memory will eventually lead to a better understanding and maybe a cure for memory loss. Also, I will love seeing the results of the multitasking activity.
• I enjoyed the episode on Sci Girls from this lesson. I found the activities to be great for the workshop. I would keep as is.
• This looks like a good culminating activity. I appreciate the elevator speech time too.
• The kids should really enjoy these activities for memory and learning.

Shared challenges or suggestions (1)
• Each online lesson was great but if I didn’t have great internet connection it would have been difficult to utilize. Also, some feedback I received from the facilitators was that it would have been easier for them to understand if there were at least Spanish subtitles and if they could pause where they were and come back to it at a later time.
Part 2. Educators’ pre-program expectations for CEREBROedu

Prior to commencing their programs, educators were asked to share their expectations for their upcoming CEREBROedu programs in the second half of the post-Nearpod evaluation survey. Although this section of the survey required feedback from two educators per site – resulting in an expected total of 12 educators – 10 completed these survey questions. Their feedback is presented below.

2.1 Educators’ feedback about the project goals and timeline

Educators were asked to rate their level of agreement with three statements about the goals and timeline of CEREBROedu, using a scale from 1.0 (strongly disagree) to 7.0 (strongly agree). Figure 9 shows that, overall, they strongly agreed that they had a good understanding of the project goals (Mdn = 7.0) and they agreed that the goals of CEREBROedu were attainable for their organization (Mdn = 6.0). They also generally agreed that the project’s timeline was feasible for their organization (Mdn = 6.0), although their ratings ranged from 4.0 to 7.0, indicating that some educators were neutral about their level of agreement with this statement.14

![Figure 9. Educators' median ratings of the project goals and timeline (n=10)](image)

I think I have a good understanding of the goals of CEREBROedu.
I think the goals of CEREBROedu are attainable for my organization.
I think the timeline of CEREBROedu is feasible for my organization.

13 Three sites had two educators complete the survey questions, and one site had four educators complete the questions. Given that this section of the survey focused on pre-program expectations, rather than final program reporting, the additional responses were incorporated into the evaluation in order to provide TPT with as much educator feedback as possible. An additional four educators (two educators per site, from two sites) answered the survey questions about their pre-program expectations for CEREBROedu well into or after their programs had come to a close. Given this, their feedback is not considered in this section of the report; instead, it has been incorporated into Part 3: Educators’ final CEREBROedu program reporting, where applicable.

14 Mid-way through their training, the 15 educators who completed the post-webinar survey were asked to rate the same three statements about the goals and timeline of CEREBROedu, using the same scale. Overall, they agreed that they had a good understanding of the project goals and that the goals of CEREBROedu were attainable (Mdn = 6.0 in each case). They also generally agreed that the project’s timeline was feasible (Mdn = 6.0), although their ratings ranged from 4.0 to 7.0, indicating some differences of opinion.
2.2 Program elements educators most looked forward to

Figure 10 shows that the majority of educators (7) said they were most looking forward to working with youth, particularly doing the activities, watching the youths’ responses, and introducing them to STEM. Just under half of the educators (4) were most looking forward to working with families, and two said they were most looking forward to working with other educators.

Educators’ responses in these three areas are below.

**Working with youth (7)**
- Getting to do the hands-on activities with the kids
- Meeting the students and getting to know them and get them excited about science.
- ... getting girls motivated to engage in STEM.
- The hands-on activities and the kids’ responses and how they explain what they are learning.
- I am looking forward to the lessons with the students
- The response of the children to the different activities.
- Brain dissecting

**Working with families (4)**
- Working with Latino families ...
- Interacting with the families.
- I can't wait for the family events ...
- ... learning more from the families how they are extending this at home (and if they are).

**Working with other educators (2)**
- I can’t wait for … working with my youth intern.
- Hearing from the teachers about their experiences ...
2.3 Challenges or barriers anticipated by educators

Figure 11 shows that just under half of the educators (4) thought they would have difficulty finding or retaining CEREBROedu participants. Two educators thought it would be challenging to find role models for their programs, and three shared other challenges or barriers, with one each pointing to working with families, not speaking Spanish, and receiving the CEREBROedu materials close to their program dates. Two educators said they did not anticipate any challenges “at this point,” and one was not sure.15

![Figure 11. Challenges or barriers anticipated by the educators (n=10)]

Educators’ comments about anticipated challenges or barriers are below.

**Recruitment or retention (4)**
- Recruiting students
- Recruiting youth. We needed to host a dual generation program as we cannot supervise the children independently of their parents/guardians. With the timing of all other department activities, pursuing this in the Fall was the option we needed to use. This may impact attendance.
- Not having all the 10 Latino kids
- Completion - having families matriculate and attend every time.

**Finding role models (2)**
- … getting a role model
- I am also missing a second Role Model, but am still working on it!

**Other (3)**
- Working with the families along with the students.
- I am a little nervous about not being a Spanish speaker myself, but am thrilled that my counterpart on the project is a Latinx youth herself.
- We will be receiving the last of our materials during the week we are implementing. Plus, it’s one activity we need to try out so we will have to do that during the program.

15 The 15 educators who completed the post-webinar survey were asked what challenges or barriers they anticipated at that point in their program planning. At that time, just over half (8) pointed to challenges in recruiting and/or retaining participants. Three shared other challenges, specifically transportation/busing, finding a location, and memorizing “the brain’s parts.” Two declined to answer the question, two said they could not identify any challenges, and one did not know.
2.4 Educators’ sense of preparation to conduct CEREBROedu activities with Hispanic youth and families

This section considers educators’ pre-program ratings of their sense of preparation to conduct CEREBROedu activities with Hispanic youth and their families, using a scale from 1.0 (not at all prepared) to 5.0 (extremely prepared) in each case.

2.4a Youth-focused activities

Figure 12 shows that, overall, educators felt very-to-extremely prepared to incorporate CRT strategies (Mdn = 4.5) and very prepared to use in-person neuroscience role models with Hispanic youth (Mdn = 4.0), although their ratings in each case ranged from 2.0 to 5.0, indicating some differences of opinion. As a group, they also generally felt very prepared to conduct hands-on activities about the brain and to conduct the sessions on brain structure, brain connections, the brain in action, and the brain and behavior (Mdn = 4.0 in each case).  

When invited to elaborate on their ratings, three educators said they thought it would be helpful to “review the activities and materials in more depth to become familiar and be best prepared,” and one explained that it was a lot of information to digest, adding: “I feel I need to know everything related to the brain.”

16 The 15 educators who completed the post-webinar survey were asked to rate their sense of preparation in regard to four Hispanic youth-focused activities, using the same scale. Overall, they felt very prepared to utilize CRT strategies (Mdn = 4.0). They also generally felt very prepared to teach Hispanic youth about neuroscience (Mdn = 4.0), although their ratings ranged from 2.0 to 5.0, indicating some differences of opinion about their preparation in this area. They also generally felt moderately prepared to incorporate hands-on activities about the brain’s structure and function and to include in-person neuroscience role models (Mdn = 3.0 in each case), although these ratings ranged from 1.0 to 5.0 and 2.0 to 5.0, respectively.
2.4b Family-focused activities

Figure 13 shows that, overall, educators felt extremely prepared to implement the Welcome Event ($Mdn = 5.0$) and very-to-extremely prepared to implement the Family Event ($Mdn = 4.5$), although their ratings ranged from 2.0 to 5.0 in this case, pointing to some differences of opinion about their sense of preparation for the Family Event. Overall, the educators also generally felt very prepared to implement four other family-focused activities, including: encourage parent/guardian use of the PBS documentary clips to learn about Alzheimer’s disease, epilepsy, or depression with their family members; encourage use of the Family Guide to learn and talk about these topics with family members; and encourage use of the Family Guide to do hands-on activities about the brain at home with family members ($Mdn = 4.0$ in each case). In each of these instances as well though, their ratings ranged from 2.0 to 5.0, indicating that some educators felt less prepared in these areas than others.\(^{17}\)

A few educators elaborated on their ratings. One expressed a desire to spend more time reviewing the materials, another said they would feel more prepared once their program was under way, and a third explained that they felt some trepidation around the family activities, as in:

- *I need to explore the Family Guide.*
- *As weeks go by, I will be more prepared and continue to talk to the families about the different resources (videos, guides, activities). I will encourage them to use and explore.*
- *This is the part of the program where I feel the least prepared. I am comfortable working with youth but getting the families involved is something that will take a little more preparation on my part.*

\(^{17}\)The 15 educators who completed the post-webinar survey were asked to rate their sense of preparation to teach Hispanic families about neuroscience, using the same scale. Overall, they felt moderately prepared in this area ($Mdn = 3.0$). Their ratings ranged from 2.0 to 5.0, indicating that some educators felt less prepared than others.
2.5 Educators’ comfort level addressing neuroscience/the brain with Hispanic youth and families

Educators were asked if there was anything they wanted to share about their comfort level addressing topics related to neuroscience and the brain with Hispanic youth and families. As shown in Figure 14, the majority of educators (7) said they felt comfortable at this point in their pre-program preparation. As illustrated in the comments below, these educators tended to praise the trainings and the topics covered by CEREBROedu.

- I feel better than when I came in. I know what is expected and how it will be implemented.
- I was a little hesitant at first because I truly was not familiar with neuroscience, but the tools provided in the webinars and trainings really helped me feel empowered to teach it.
- I’ve always [enjoyed] this topic and [am] excited to learn more
- I feel very comfortable addressing this topic. It is one that has been neglected for some time and becoming more prevalent in our society.

Also shown in Figure 14, three educators shared other responses about their pre-program comfort levels. One said she was not entirely comfortable “working with parents, as someone who is not Latinx,” adding, “I wish my institution had a more diverse staff so this program could be truly representative and run by a Latinx professional.” Another thought that “being able to sit with the modules [would] be helpful,” and a third commented on how educators could encourage conversations among family members (as in, “I think coming at it with the approach of introducing the topics is important.Giving them the seeds to have more conversations as a family, as it can be hard for them to talk about these kinds of subjects around people they don’t know well, especially since some of our families speak English, and some Spanish”).

Figure 14. Educator comments about comfort level addressing neuroscience/the brain with Hispanic youth and families (n=10)
2.6 Whether educators felt motivated and empowered to implement their programs

Educators were asked to rate their level of agreement with three statements about whether they felt motivated and empowered to implement their program, using a scale from 1.0 (strongly disagree) to 7.0 (strongly agree). Figure 15 shows that, overall, they strongly agreed that they felt motivated to implement CEREBROedu in their community and empowered to provide culturally responsive hands-on activities about the brain to Hispanic youth and their families (\(Mdn = 7.0\) in each case).\(^\text{18}\)

Figure 15. Educators' median ratings of motivation and empowerment (n=10)

\[\begin{align*}
&\text{I feel motivated to implement CEREBROedu in my community.} \\
&\text{I feel empowered to provide culturally responsive hands-on activities about the brain to Hispanic youth.} \\
&\text{I feel empowered to provide culturally responsive hands-on activities about the brain to Hispanic families.}
\end{align*}\]

\[^{18}\text{The 15 educators who completed the post-webinar survey were asked to rate extent to which they felt motivated to implement CEREBROedu in their community, using the same scale. Overall, they strongly agreed this was the case (}Mdn = 7.0).\]
2.7 Educators’ hopes and expectations for potential program impacts

This section considers educators’ pre-program reflections on potential program impacts, focusing on their hoped-for impacts among participating youth and parents/guardian and their expectations regarding potential program impacts.

2.7a Hoped-for program impacts

Hoped-for impacts among youth

Figure 16 shows the impacts educators hoped their CEREBROedu programs would have on participating youth. Most (8) said they hoped youth would learn about and/or come away with an increased interest in neuroscience/the brain. Just under half (4) hoped youth would learn about and/or experience an increased interest in STEM topics more generally, while a group of the same size (4) hoped they would learn about and/or increase their interest in STEM careers.

Educators’ responses in these three areas are shared below.

Learn about and/or increase interest in neuroscience/the brain (8)
- Have a better understanding of the brain
- Learn about and have fun learning about the brain
- … at least a better understanding of the neurosciences.
- I hope that they will understand how there are so many factors that affect brain development and how it is their responsibility to care for their organ.
- Learn about the brain structures, how it works with the other senses, about diseases affecting it …
- Engage in neuroscience in places other than school. Have conversations with their friends about what they learned, and how to continue this learning.
- Feel comfortable knowing that the brain is a powerful tool in their growth and development.
- Become more curious about their brains.
Learn about and/or increase interest in STEM topics (4)
- Feel very knowledgeable and excited about furthering their understanding of STEM classes and field, and feel that they can do it. That they feel empowered and encouraged.
- Get excited about STEM
- Become more comfortable getting involved in the sciences. If I can create just a little spark I feel that we can facilitate a cure.
- Engage in STEM programs ...

Learn about and/or increase interest in STEM careers (4)
- Learn about ... career opportunities available
- Engage in STEM ... careers
- See themselves as scientists and develop a deeper understanding of the field
- Also [learn] that there are many career options available to them.

Hoped-for impacts among parents/guardians
Figure 17 shows the impacts educators hoped their programs would have on participating parents/guardians. Most (8) hoped their programs would inspire these family members to empower or encourage their children, while three educators hoped their programs would increase parent/guardian comfort level with the topics covered and three hoped their programs would help them learn about neuroscience/the brain.

Educators’ responses in these three areas are shared below.

Empower or encourage their children (8)
- Empower their children to seek opportunities where they can learn more.
- Feel empowered to extend the learning at home about this project but also other types of STEM activities.
- Encourage their families to continue to explore options available to them in education and career.
- Encourage their students to be interested in STEM
- I am hoping [they will] encourage their children to become better educated.
- Understand and be able to motivate their youth to explore STEM.
- Be inspired to leverage the resources at home and continue studying this with their children. I hope that it sparks conversations and that they explore more with their children and look for opportunities to engage role models.
- They will feel more knowledgeable to help their kids succeed in school and to understand what they are studying. They will see their child’s potential.
**Increase comfort level (3)**
- *I am hoping to get to know this community better so they feel comfortable to ask questions*
- *Openly talk about mental health with their children and other family members.*
- *Feel equipped to access local brain health resources.*

**Learn about neuroscience/the brain (3)**
- *Be more aware of brain diseases and mental health*
- *Be more aware of mental illnesses and what resources they have*
- *Learn about the brain, how it works, and its diseases ... Be exposed to neuroscience and mental health careers.*

### 2.7b Assessment of potential program impacts

Figure 18 shows the extent to which educators disagreed or agreed that their programs were likely to achieve seven potential impacts desired by the project team, using a scale from 1.0 (strongly disagree) to 7.0 (strongly agree). As a group, the educators strongly agreed that their programs would increase youths’ knowledge of diverse neuroscience-related careers and their awareness of brain illnesses and mental health (*Mdn* = 7.0 in each case). Overall, they agreed-to-strongly-agreed that their programs would encourage youth to consider neuroscience as both a viable and exciting career path (*Mdn* = 6.5 in each case), although their ratings in this second area ranged from 4.0 to 7.0. They also generally agreed-to-strongly-agreed that their programs would increase youths’ help-seeking behavior related to the brain illnesses and mental health (*Mdn* = 6.5), agreed that their programs would increase parent/guardians’ awareness of brain illness and mental health (*Mdn* = 6.0), and somewhat-agreed-to-agreed that they would increase parent/guardians’ health-seeking behaviors (*Mdn* = 5.5).

![Figure 18. Educators’ median ratings of potential program impacts (n=10)](image)

Figure 18. Educators’ median ratings of potential program impacts (n=10)

<table>
<thead>
<tr>
<th>Impact description</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase youths’ knowledge of diverse neuroscience-related careers</td>
<td>7.0</td>
</tr>
<tr>
<td>Increase youths’ awareness of brain illnesses and mental health</td>
<td>7.0</td>
</tr>
<tr>
<td>Encourage youth to consider neuroscience-related careers as a viable career path</td>
<td>6.5</td>
</tr>
<tr>
<td>Encourage youth to consider neuroscience-related careers as an exciting career path</td>
<td>6.5</td>
</tr>
<tr>
<td>Increase youths’ help-seeking behavior related to brain illnesses and mental health</td>
<td>6.5</td>
</tr>
<tr>
<td>Increase parent/guardians’ awareness of brain illnesses and mental health</td>
<td>6.0</td>
</tr>
<tr>
<td>Increase parent/guardians’ help-seeking behavior related to brain illnesses and mental health</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Only one educator opted to elaborate, saying, “... it may increase their awareness of brain illnesses and mental health, but more so, I think that it will help inform them of illnesses and mental health. I wonder if there will still be an apprehension to access support services. I hope that the [mental health] professional from our local community could help break this barrier.”
2.8 Educators’ feedback about the CEREBROedu resources

This section considers educators’ pre-program reflections on the CEREBROedu resources, focusing on perceived value, concerns about use, and suggested resources or support.

2.8a Perceived value of the resources

The educators were asked to rate how valuable each of the CEREBROedu resources were in helping them plan their program, using a scale from 1.0 (not at all valuable) to 5.0 (extremely valuable). Figure 19 shows that, as a group, the educators found five resources extremely valuable in this respect (Mdn = 5.0 in each case): the CEREBROedu website, the role model videos, the hands-on activities, the SciGirls Engaging Latino Families Guide, and the SciGirls Family Guide for Engaging Girls in STEM.

![Figure 19. Educators’ median ratings of the value of the CEREBROedu resources](image)

The educators generally found the remaining seven resources to be quite valuable, although some were used more frequently than others, as indicated in Figure 19 by the number who rated each resource. In general, educators found the CEREBROedu Program Overview document, the Welcome Event Guide, and the Family Fiesta Guide to be very-to-extremely valuable resources (Mdn = 4.5 in each case), although their ratings of the value of these three resources each ranged from 2.0 to 5.0, indicating some differences of opinion. Similarly, as a group, educators found the CEREBROedu Family Guide very valuable (Mdn = 4.0), although these ratings ranged from 2.0 to 5.0 as well. They generally found the youth reflection activities, the SciGirls Snapshots videos for running programs with youth, and the Brain Facts online book from the Society for Neuroscience to each be very valuable as well (Mdn = 4.0 in each case).
2.8b Concerns about using the resources

Figure 20 shows that more than half of the educators (6) said they did not have any concerns about using the CEREBROedu resources, such as the hands-on activities, role model videos, and youth reflection activities. Two educators shared concerns about the hands-on activities, as in “One thing that is a little confusing is that they are in a variety of formats. I always find it easier when my activity guides are uniform” and “I’m concerned about the time commitment and the number of activities. I think it is phenomenal, I just wonder about retention.”

Two educators felt they needed to further “study all [of the] materials” before commenting further, and one noted some concerns that were less directly related to the materials, saying, “My concerns are about finding appropriate role models for my students. Also, in trying to hold a Welcome Event and Family Fiesta.”

2.8c Suggested resources or support from TPT

Educators were asked if there were any additional resources or support TPT might provide to enhance the success of their CEREBROedu programs.19 Figure 21 shows that more than half of the educators (6) said they did not have any suggestions regarding resources or forms of support (as in, “none at this time” and “there [are] so many resources that I can’t think of something else we might need for the program”), and one wasn’t sure. As illustrated on the next page, three educators shared suggestions, specifically providing estimated activity times, creating a Slack group, and providing additional resources. Their comments are followed by a set of additional suggestions shared by five educators prior to their participation in the Nearpod trainings.20

---

19 Using a scale from 1.0 (strongly disagree) to 7.0 (strongly agree), the 10 educators were asked to rate their agreement with the following statement: I know how to get support from TPT, if needed, for my CEREBROedu program. Overall, they strongly agreed this was the case (Mdn = 7.0).

20 The 15 educators who completed the post-webinar survey were asked the same question about suggested resources or support. Of this group, three said they didn’t have any suggestions, three weren’t sure, three shared unrelated comments, and one left the question blank. Five shared suggestions regarding the resources or support, as presented in full on the following page.
Suggestions shared after completing the webinar and Nearpod trainings (3)

- Break down each module with suggested times for each activity. It's hard to be checking each handout and not all handouts have activity length. Also, a list of all materials you will need for all activities, it's hard to be looking at each activity and trying to gather all materials.
- Perhaps putting together a Slack group (or something similar) so the different piloting groups can talk through the process of preparing and executing the project.
- It would be great to have a flash drive with all materials; I know that there is the website, but sometimes WiFi isn't available. It would have been great to have materials for marketing purposes (flyers for recruitment, social media posts, as well as in interstitial). I think this could have helped a lot for community-based programs. I also think that having classroom decor (posters, tabletop signs) would have helped with the ambiance of the program.

Suggestions shared after completing the webinar trainings (5)

- A list with a variety of examples of mentors.
- Perhaps footage or notes on a pilot class run by the CEREBROedu team so as to give us a sense of what it might be like.
- I hope there is a suggested agenda (where it lays out the suggested order and times for the activities), as well as recruiting templates (flyers, etc.) that we can modify with our program info. It'll just make things easier instead of us creating everything from scratch.
- Just to be in touch with us. If we need something specific or any questions, we will contact you.
- Technical assistance throughout the program implementation.
Part 3. Partners’ final CEREBROedu program reporting and reflections

After concluding their CEREBROedu programs, partners were asked to share final program reporting and reflections through an online survey. Each of the six partners completed the survey, resulting in a response rate of 100%. Their feedback is presented below.

3.1 Program characteristics

This section considers characteristics of the six programs, including program structure, whether and how programs met the CEREBROedu implementation requirements, and demographics and background information about the youth participants.

3.1a Program structure

Image 5 shows that the six programs took place in five states around the United States. Additional information about program structure is in Table 4 and detailed below.

Program types and settings
Four partners held summer camps, one held an afterschool program, and one organized weekend sessions in the fall. With respect to setting, two programs were held in community centers, two were in a museum or science center, one was in a public library, and one was at a PBS station.

Program length and duration
Program length varied widely as the partners’ programs ran from one week to six months. Program duration also varied widely as the number of sessions (per program) ranged from four to 10 with an average of six, while session length ranged from one to six hours. Total program hours for youth also varied widely, from five to 35 hours, averaging 24 across programs.

How parents/guardians participated
Partners were asked how parents/guardians participated in their programs, outside of the Welcome Event and Family Fiesta. Three said they observed the program sessions and three explained

<table>
<thead>
<tr>
<th>Table 4. CEREBROedu program structure (N=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program types and settings</strong></td>
</tr>
<tr>
<td>Types</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Settings</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

| **Program length and duration**           |
| Shortest and longest programs | Shortest: 1 week |
|                                  | Longest: 6 months |
| Sessions per program | Range: 4-10 |
|                       | Average: 6 |
| Session length, in hours | Range: 1-6 |
| Total hours for youth | Range: 5-35 |
|                       | Average: 24 |

<table>
<thead>
<tr>
<th>Parent/guardian participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation outside of family events</td>
</tr>
<tr>
<td>Did not participate: 3</td>
</tr>
</tbody>
</table>
that they did not participate, with one adding, “I think we need more support for parents, more than giving them the guide to work from home.”

**Amount of programming in Spanish**

As shown Table 5, half of the partners conducted some of their youth programming in Spanish, while one each conducted all, most, or none in Spanish.

Meanwhile, two partners each conducted some or most of their parent/guardian programming in Spanish, while one each conducted all or none in Spanish.

### 3.1b Fulfillment of program requirements

The partners were expected to meet several implementation requirements covered in the [April 2019 training webinar](#), including:

- Complete 6 hours of webinar and Nearpod training
- Recruit 10 Hispanic youth ages 10 to 13
- Hold a Welcome Event
- Hold a Family Fiesta
- Recruit at least one in-person role model for the Family Fiesta
- Ensure families receive the Family Guide

Table 6 details whether and how the individual outreach partners met these requirements.

<table>
<thead>
<tr>
<th></th>
<th>Complete six hours of training</th>
<th>At least 10 Hispanic youth ages 10 to 13</th>
<th>Held Welcome Event</th>
<th>Held Family Fiesta</th>
<th>At least one in-person role model at Family Fiesta</th>
<th>Ensure families receive the Family Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner 1</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Partner 2</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Partner 3</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Partner 4</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Partner 5</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Partner 6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

While all of the partners met at least four of the requirements, only two partners met all six. Looking at each requirement:

- **Complete six hours of training.** Educators from all six partners organizations completed the webinar and Nearpod training requirements.
• Include at least 10 Hispanic youth ages 10 to 13. Four programs were known to have had at least 10 Hispanic youth ages 10 to 13. The remaining two partners had fewer than 10 youth in total: one had six youth and the other had eight.

• Host a Welcome Event. All six partners hosted a Welcome Event.

• Host a Family Fiesta. All six partners hosted a Family Fiesta.

• Include at least one in-person role model at the Family Fiesta. Half of the Family Fiestas featured at least one in-person role model. One of the partners who didn’t host a role model at their event explained that their invited speaker could not attend, so they “showed one of the role model videos” instead. Another explained that their speaker “didn’t show,” but noted that they had been able to bring someone in during one of their program sessions.

• Ensure families receive the Family Guide. All of the partners indicated that they shared the Family Guide with their participants.

3.1c Youth participants

Table 7 summarizes basic demographic and background information for the 77 youth that participated in the six partner programs.

**Gender**
Three-fifths (60%) of the youth were girls, and two-fifths (40%) were boys.

**Grade level**
More than four-fifths of the youth (86%) were in grades six through eight, while less than one-tenth each were in grades three through five (6%) and nine through 12 (8%).

**Hispanic or Latino background**
More than nine-tenths (92%) of the youth were of Hispanic or Latino origin.

**Types of communities drawn from**
Of the youth for whom this information was known (n=75), three-quarters (76%) were from urban communities, one-fifth (21%) were from rural communities, and very few (3%) were from suburban communities.

---

21 One of the partners was unable to identify the types of communities that two of their youth came from, saying, “We did not collect home addresses from participants, or complete an intake form. We know from talking to the families that some live in more rural areas, while others live in suburban/urban areas.”
This section considers partners’ feedback about their Welcome Events, focusing on the event structure and total number of participants, how valuable partners found the Welcome Event and its various elements, what they found most memorable, and the challenges encountered in implementation.

3.2a Welcome Event structure and participants

Table 8 provides information about the length, number of participants, and amount of programming in Spanish at the six Welcome Events.

**Length**
On average the partners’ Welcome Events lasted two and a half hours, with individual events ranging from two to three and a half hours in length.

**Number of participants**
There were a total of 74 youth and 67 parents/guardians at the six Welcome Events, for an average of 12 youth and 11 parents/guardians per event. Four partners reported having 30 other family members at their Welcome Events, such as siblings, grandparents, and cousins, although the exact breakdown by type of other family members is unknown.

**Amount of programming in Spanish**
Half of the partners conducted some of their Welcome Event youth programming in Spanish, while one each conducted all, most, or none of it in Spanish.

Additionally, two partners each conducted most or all of their Welcome Event parent/guardian programming in Spanish, while one each conducted none or some of it in Spanish.

<table>
<thead>
<tr>
<th>Event length</th>
<th>Range: 2-3.5</th>
<th>Average: 2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of participants</td>
<td>Youth: 74</td>
<td>Parent/guardian: 67</td>
</tr>
<tr>
<td></td>
<td>Other family: 30</td>
<td></td>
</tr>
<tr>
<td>Amount of programming in Spanish</td>
<td>Youth programming</td>
<td>None: 1</td>
</tr>
<tr>
<td>Parent/guardian programming</td>
<td>None: 1</td>
<td>Some: 1</td>
</tr>
</tbody>
</table>
3.2b How valuable partners found the Welcome Event and its elements

Perceived overall value
When asked to rate the value of the Welcome Event using a scale from 1.0 (not at all valuable) to 5.0 (extremely valuable), overall, the partners found the event to be extremely valuable \( (Mdn = 5.0) \), although as shown in Table 9, their individual ratings ranged from 2.0 to 5.0, pointing to some differences in opinion.

| Table 9. Frequency distribution of partners' ratings of the value of the Welcome Event (N=6) |
|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| Not at all valuable 1.0                       | Slightly valuable 2.0                         | Moderately valuable 3.0                       | Very valuable 4.0                             | Extremely valuable 5.0                        |
| 0%                                            | 17%                                          | 0%                                            | 17%                                          | 67%                                          |

Two partners elaborated on their ratings, pointing to the pros and cons of the Welcome Event, as follows:

- *The welcome event was fun, but I think having both a welcome event, and a family fiesta was overkill when it came to educating the parents. Interestingly, the families that came to the welcome event DID NOT come to the family fiesta. I think just a welcome video or email would be a better way to start the program, then having one main event at the end as a wrap up.*
- *I'm interested to see what the family participation would be for the Welcome Event/Family Fiesta in an after school setting. The parents were required to attend every session with their children in our situation, so they did attend, but would they be as open in attending the Welcome Event/Family Fiesta if they had less knowledge about what goes on in the sessions? I did enjoy both the Welcome Event and Family Fiesta, but I can see how participation at each would be difficult for the families -- especially if they were in the evening. We had our events from 10am-12pm.*

Perceived value of event elements
The partners were also asked to rate the value of the various Welcome Event elements, using the same scale from 1.0 (not at all valuable) to 5.0 (extremely valuable). Due to survey error, four partners appear not to have had the opportunity to respond to this question. The remaining two partners rated the value of the Welcome Event program information given to families, the *CEREBROedu* Family Guide, and the food; in each case, both partners rated these aspects of the Welcome Event to be extremely valuable. The same two partners also rated the value of the time for families to connect and converse with one another; one found this aspect extremely valuable, while the other found it valuable. One of these partners went on to rate four additional elements of the Welcome Event: the *CEREBROedu* website, hands-on activities, and role model videos, and the PBS video clips about brain illnesses. In each case, the partner found them to be extremely valuable.
3.2c What partners found most memorable about the Welcome Event

As Figure 22 shows, when partners were asked to identify what they found most memorable about their Welcome Event, half focused on an aspect of the in-person role models or community members featured, while half commented on observing parents’ involvement or response to different aspects of the event. Their responses in each case are below.

**Involvement of in-person role models or community members (3)**

- The community member that came and helped out
- Our role model visitor was the most memorable about the event. We had a former staff of ours who made it to Med school after graduating from Neuroscience. She was an ideal role model to kick off the event.
- The children getting excited about what they will be learning after our Welcome Event role model showed them a human brain. They seemed to feel invested.

**Parents’ involvement or response (3)**

- Having the parents challenge the kids in an engineering challenge.
- Families getting to know each other and getting familiar with us. Understanding more about families and youth attending.
- Parents really appreciate that someone can care about the future of the youth, specially been kids with farm worker parents. Parents also ask for a program for them, for adults because if they also know about the subject they will have a breach of good compensations at home. parents and kids learning together good opportunity to have a better communication.

3.2d Challenges partners encountered implementing the Welcome Event

Figure 23 shows that two of the partners indicated they did not encounter any challenges in implementing their Welcome Event. Another two pointed to challenges encouraging family participation, as in:

- Getting our campers’ families to attend.
- We expected people to arrive late and most of the families didn’t arrive on time.
  
  We had planned for all the families to connect with each other at the beginning of the program. That didn’t happen with everyone just those that were present.

One partner thought they “could do better in having guest speakers,” and another pointed to language barriers, saying, “Having a translator or a Spanish speaking person is a must at this event. Multiple Spanish speakers would have been helpful.”
3.3 Partner feedback about the Family Fiesta

This section considers partners’ feedback about the Family Fiesta, focusing on the event structure and participants, how valuable partners found the Fiesta and its various elements, what they found most memorable, and the challenges encountered in implementation.

3.3a Family Fiesta structure and participants

Table 10 provides information about the length, number of participants, and the amount of programming in Spanish at the six Family Fiestas, as detailed below.

Length
On average the partners’ Family Fiestas lasted three hours, with individual Fiestas ranging from two to four hours in length.

Number of participants
There were a total of 70 youth and 61 parents/guardians at the six Family Fiestas, for an average of 12 youth and 10 parents/guardians per event. Five partners reported having a total of 44 other family members at their Family Fiestas, such as siblings and grandparents, although the exact breakdown by type of other family members is unknown.

Amount of programming in Spanish
Two partners conducted some of their Fiesta youth programming in Spanish, another two conducted most of it in Spanish, and one each conducted all or none in Spanish.

Additionally, two partners each conducted most or all of their Fiesta parent/guardian programming in Spanish, while one each conducted none or some in Spanish.

How parents/guardians participated
Parents/guardians participated in the six Family Fiestas in various ways. As shown in Figure 24 on the following page, at all six events, they shared in a meal and participated in the hands-on activities, and at five Fiestas they also watched the activities. At three of the events they watched the guest speaker(s) give a presentation/talk and asked questions of the guest speaker(s). At two events each, parents/guardians watched CEREBROedu role model videos, watched PBS video clips about brain illnesses, looked at the Family Guide, and looked at the project website.
Number and background of guest speakers
Three of the six Family Fiesta events featured guest speakers. One event hosted four mental health professionals, one hosted three guest speakers (a neuroscience guest speaker, a mental health professional, and a psychology professor), and one Fiesta hosted two guest speakers (a mental health professional and a psychology intern). Among the nine total guest speakers featured across the three Family Fiestas, seven were Hispanic and seven were bilingual.

How guest speakers participated
At the three events that incorporated guest speakers, all of the speakers participated in person, rather than via video chat. As shown in Figure 25, the guest speakers at all three events answered (or offered to answer) participant questions and/or talked about overcoming the barriers that exist in their jobs/careers. At two events, the speakers talked about those barriers, ate a meal with participants, and/or conducted groups discussions with youth and with parents/guardian. At one event the guest speakers also “shared the importance of mental health to them (some of them suffered from mental health problems).”
3.3b How valuable partners found the Family Fiesta and its elements

**Perceived overall value**
The partners were asked to rate how valuable they found the Family Fiesta, using a scale from 1.0 (not at all valuable) to 5.0 (extremely valuable). As a group, they found the event extremely valuable ($Mdn = 5.0$). None of the partners opted to elaborate on their ratings.

**Perceived value of event elements**
The partners were also asked to rate the value of the various Family Fiesta elements, using the same scale. In general, they found the event elements to be quite valuable, although some were used more frequently than others, as indicated in Figure 26 by the number who rated each element. Overall, seven elements were found to be extremely valuable: the food, the sharing of students’ work, time for families to connect or converse, the role model videos, the PBS video clips, the neuroscience guest speakers, and the mental health guest speakers ($Mdn = 5.0$ in each case), although these last three elements were only used by three partners each.

The partners found three elements very-to-extremely valuable: the hands-on activities about the brain, the Family Guide, and the website ($Mdn = 4.5$ in each case). They also found the community tables very valuable ($Mdn = 4.0$), although in this last instance their ratings ranged from 2.0 to 5.0, pointing to some differences of opinion.

![Figure 26. Partners’ median ratings of the value of the Family Fiesta elements](image-url)
3.3c What partners found most memorable about the Family Fiesta

The partners were asked to share what they found most memorable about four main elements of the Family Fiestas: the neuroscience or mental health guest speaker(s), the hands-on activities about the brain, the sharing of youths’ work, and the community organization resource tables. Their feedback in each area is presented below.

**Neuroscience or mental health guest speaker(s)**

Two of the three partners who hosted neuroscience or mental health guest speakers at their Fiestas found their stories most memorable, two mentioned the resources they shared with participants, and two commented on their messages about mental health. Their comments included:

- We had two guest speakers, one with an immigrant background, and her story on how she became a professor in psychology was quite captivating to our participants.
- The stories they shared - not just their career path but why mental health is important and what resources they know about or had access to.
- Letting the kids know that everyone feels sad, nervous, etc., but when it affects their day-to-day life, it is something that should be worked on. The speaker also gave book recommendations to the parents.

**Hands-on activities about the brain**

One partner simply said that “they loved the hands-on activities,” without specifying which participants they were referring to. At the same time, three partners commented on how seeing youth and their families interact during the activities had been most memorable, and another three commented on specific activities. Their comments included:

- The kids did an amazing job facilitating the activities for the families. They even made up some of their own.
- This was combined with students work - parents/families trying things out
- Bitter activity with parents
- Everyone loved the Claw and optical illusions. Since we are also a technology program, we had a VR station with the brain and a 3D printer printing a brain.
- We completed the What I Like About You activity from the Family Guide, and I really liked when everyone finally got their card back and were able to read the positive comments someone else wrote about them.

**The sharing of students’ work**

Four partners found it most memorable to see youth share what they had learned and/or to watch their family members’ response, as in:

- Seeing how much of the information the students actually retained and further researched.
- The youth sharing what they learned about the program and concepts they learned
- The kids did an amazing job facilitating the activities for the families. They even made up some of their own.
- Seeing how excited the kids had been about camp, and hearing the parents gush about it
One partner said they found “the crumpled up brains” to be the most memorable aspect of this part of the Fiesta, and another described how they set up the sharing space, as in: “We did have tables with all the activities for parents to see, and a PowerPoint with pictures of each module.”

**The community organization resource tables**

Two partners said they found “the information” at the community organization resource tables most memorable, as in, “the parents realizing there are additional resources in the community that can help that they were not aware of.” Another two talked about how resources were shared during their guest speakers’ presentations (as in, “One of the guest speakers talked a lot about her work with teens and services [a local organization]” and “Less informal, it was resources the mental health guest speakers shared”). One explained that they had materials on a table, but that organization representatives had not been able to attend, without noting what they had found most memorable (as in, “Only one of our local community organizations were able to send materials, none were able to attend”), and the remaining partner simply wrote, “no.”

**3.3d Challenges partners encountered implementing the Family Fiesta**

Figure 27 shows that three partners pointed to challenges encouraging family participation, three said they experienced difficulty finding guest speakers for the event, and two shared other challenges, specifically commenting on their event going over time, needing a larger space, and not having a plan for younger participants.

![Figure 27. Challenges partners experienced implementing their Family Fiestas (N=6)](image)

Their responses in each case are shared below.

**Encouraging family participation (3)**

- **Having our families attend.**
- **We held our [Family Fiesta] very close to the holidays, so some families ... were unable to attend.**
- **Since we are a drop-in after-school program some of our older members came to the event but hadn’t participated in the CEREBROedu program but were very interested in the event and the guest speakers. Since the event date fell during the finals week for many participants, we feel was the reason we didn’t get the same amount of people who showed up to our Welcome event.**
Finding guest speakers (3)

- We held our [Family Fiesta] very close to the holidays, so ... all of our invited guest speakers were unable to attend.

- Getting folks to come out (speakers and organizations)
  - We need more help in reaching out for neuroscience and mental health guest [speakers].

Other (2)

- We planned for two hours, so having to share the final projects, having a role model speak, and a hands-on activity was difficult to do in the two hours. We ended up going over about an hour to eat and convene.

- The space we were using. After a week of the camp, the families felt more comfortable with us. They all showed up on time and brought their whole family with them. Unfortunately, we had limited space (at the library) and I wish we’d had access to a bigger space. Also, having a plan for the younger children (things they could play with, or activities for them with another staff member if possible).
This section considers partners’ post-program reflections of how prepared they had been to implement various Hispanic youth and family-focused activities, using a scale from 1.0 (not at all prepared) to 5.0 (extremely prepared) in each case.

### 3.4a Youth-focused activities

Figure 28 shows that, overall, partners thought they had been very prepared to conduct hands-on activities about the brain and incorporate CRT strategies (\(Mdn = 4.0\) in each case). However, for the latter activity, their responses ranged from 1.0 to 4.0, indicating some differences of opinion about their sense of preparation to incorporate CRT strategies. They also generally thought they had been very prepared to conduct sessions on brain structure, brain connections, the brain in action, and the brain and behavior (\(Mdn = 4.0\) in each case). Finally, they thought they had been moderately-to-very prepared to use in-person neuroscience role models (\(Mdn = 3.5\)), although their ratings ranged from 1.0 to 5.0, indicating that some partners felt they needed additional preparation in this area.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Median Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hands-on activities about the brain</td>
<td>4.0</td>
</tr>
<tr>
<td>CRT strategies</td>
<td>4.0</td>
</tr>
<tr>
<td>Sessions on brain structure</td>
<td>4.0</td>
</tr>
<tr>
<td>Sessions on brain connections</td>
<td>4.0</td>
</tr>
<tr>
<td>Sessions on the brain in action</td>
<td>4.0</td>
</tr>
<tr>
<td>Sessions on the brain and behavior</td>
<td>4.0</td>
</tr>
<tr>
<td>Use of in-person neuroscience role models</td>
<td>3.5</td>
</tr>
</tbody>
</table>

When invited to elaborate on their ratings, five partners shared a response. One commented on how the CEREBROedux resources had facilitated their sense of preparation, as in, “Although there was a lot of information to go through in regards to the brain, I felt well prepared in being able to run the program and often referenced the resources when I didn’t know or had forgotten something about the brain.” Meanwhile, four partners suggested ways TPT might help future partners feel better prepared, such as creating Spanish-language materials, providing templates for outreach to potential community organizations and guest speakers, PowerPoint presentations of each lesson, and additional explanatory resources for the electromyography activity. These comments are shared on the following page.
• Our biggest challenge across the program was translating to Spanish, even with a Spanish speaking/Latina facilitator.
• Thankfully, we did have a role model come during our camp week, but perhaps an email template or info sheet that could be sent out as an inquiry when trying to approach folks about coming in to speak? Also, one for community organizations. We created one ourselves, but having a generic flyer that’s professional looking and has the info about what the program is might help entice other organizations to be a part of it!
• The modules did not include a PowerPoint presentation, so I created one for each module, which took some time. I know the sessions are meant to be more informal, but because of the topics we’re asked to cover and the length of the sessions, it was necessary to have them in order to have the session go smoothly. I think we would have benefited from having that – or an idea of what that might have looked like.
• If possible, more detailed videos for the electromyography activity. The Nearpod video and handouts didn’t match. The handout focused on finding the muscles that control certain movements and the claw. But in the Nearpod videos (and the materials received) were also included the electrodes from the company to read brain signals. I wasn’t sure if we were also supposed to that (since it wasn’t in the handout) but was in the video. This activity was one of the ones the youth really like and made a huge impact. I think it just needs to be better explained and more resources given if possible.

3.4b Family-focused activities

Figure 29 shows that, overall, partners thought they had been extremely prepared to implement the Family Fiesta (Mdn = 5.0) and very-to-extremely prepared to implement the Welcome Event (Mdn = 4.5).

![Figure 29. Median ratings of partners' sense of preparation to conduct family-focused activities (N=6)](image-url)

Scale from 1.0 (not at all prepared) to 5.0 (extremely prepared)

- Implement the Family Fiesta: 5.0
- Implement the Welcome Event: 4.5
- Encourage parent/guardian use of the Family Guide to learn about Alzheimer’s disease, epilepsy, or depression: 4.5
- Encourage parent/guardian use of the Family Guide to do hands-on activities at home: 4.5
- Encourage parent/guardian use of the Family Guide to talk about Alzheimer’s disease, epilepsy, or depression: 4.0
- Encourage parent/guardian use of the PBS clips: 4.0
Meanwhile, the partners generally thought they had been very-to-extremely prepared to encourage parent/guardian use of the Family Guide to learn about Alzheimer's disease, epilepsy, or depression with their family members and to do hands-on activities about the brain at home with family members (Mdn = 4.5 in each case), although their ratings in both areas ranged from 2.0 to 5.0, pointing to some differences of opinion. Finally, the partners thought they had been very prepared to encourage parent/guardian use of the Family Guide to talk about Alzheimer’s disease, epilepsy, or depression with their family members, and that they had been very prepared to encourage use of the PBS documentary clips to learn about these topics with their family (Mdn = 4.0 in each case), with their ratings ranging from 2.0 to 5.0 in these instances as well.

Three partners elaborated on their ratings, with one commenting on parent/guardian disinterest in the CEREBROedu resources for family members, another noting that established connections had helped in this area of their program, and the third explaining the need for relationship-building among participants, as in:

- Our parents didn’t really show an interest in using the resources, so we focused mainly on the youth.
- We often do family events and have a close relationship with many of our member’s families, so it was easy to speak to families about the events and program and encourage their participation.
- Emphasize the relationship building be done in the first session if the group is new to each other.

### 3.5 Partners’ comfort level addressing neuroscience/the brain with Hispanic youth and families

Partners were asked if there was anything they wanted to share about their comfort level addressing topics related to neuroscience and the brain with Hispanic youth and families. As shown in Figure 30, half of the partners indicated that Spanish resources would be helpful. Two of these partners described how this would have helped their comfort level, and one said they would have liked more time to prepare in this area, particularly since some of their prep time had been spent translating materials, as in:

- It was difficult to translate in ways that our Spanish speaking youth and families could understand. Having all of the activity guides, especially vocab sheet, in Spanish would have been very helpful.

![Figure 30. Partner comments about comfort level addressing neuroscience/the brain with Hispanic youth and families (N=6)](image-url)
The biggest challenge is the language barrier and making sure we have all the handouts, etc. in Spanish to make sure we’re sharing the right terms with the youth and families in Spanish. This required a bit of prepping on our part since we’re not familiar with all the terminology in English but it can be harder to overcome in Spanish.

I wish I had more time to learn and prepare myself better, especially when you try to translate material and implement activities in a more cultural way.

The three remaining partners shared other comments about their comfort level, with one explaining that future programs might benefit from additional resources or support from TPT in this area, the second suggested TPT provide learning objectives for each lesson, and the third noted the importance of educator and guest speakers’ enthusiasm for the content. Each of their responses is shared below.

I think that having pre-done videos with a mental health professional, or perhaps a team of folks who could Skype in for the Family Fiesta who are familiar with the CEREBROedu program and can moderate some discussions with the parents would be a great resource. We talked with the parents a lot about resources and had some small discussions on our own, but to have someone "live" who is trained to moderate that, while keeping in theme with the program in general, would be a great help!

I think that it was a lot of information trying to be covered, so it was difficult to immerse myself in any one aspect of the brain in order to feel super comfortable with it. I know I am meant to be an informal educator, but the children and parents see me as the knowledgeable individual in the room, so I did feel some pressure in knowing more than what the activities provided in order to be able to answer questions that might have come up. I think for future planning, perhaps condensing what children are learning, or having objectives from the beginning would be helpful. IE: At the end of the program, the students will be able to identify 2 or more mental illnesses and explain their effect on an individual. As an educator, if I have those objectives, I can work towards making sure they are being checked off. I would also like to have more checkpoints to see how much of the information the kids are retaining.

I must admit that my interest in the brain had a lot to do with the excitement about running CEREBROedu. I'm not sure if others have shared the same enthusiasm but I noticed that a similar enthusiasm about CEREBROedu was shared by the role models who participated in our events. They were truly intrigued and said things such as "wow, I wish I would have had this program when I was younger". I suspect that to run this program successfully one needs to at least interested in learning about the brain. As an example, one of our staff members, not involved in CEREBROedu, was not happy about the brain dissection and we didn't want her negativity pouring into our members. Luckily it didn't and I was quite impressed the kids took off with the dissection and enjoyed it a lot.
3.6 Partners’ use and value of the CEREBROedu resources

TPT developed four types of CEREBROedu resources for the partners, including: implementation resources, program resources, program activities, and role model videos. This section considers partners’ use and perceived value of the resources, the extent to which they encouraged parents/guardians to use them at home, and their suggestions for improvement.

3.6a Use and perceived value of the implementation resources

The partners were asked to rate the value of 12 different CEREBROedu implementation resources, using a scale from 1.0 (not at all valuable) to 5.0 (extremely valuable). Figure 31 shows that, as a group, the partners found three of the resources to be extremely valuable: the CEREBROedu Welcome Event Guide, the Family Fiesta Guide, and the SciGirls Engaging Latino Families Guide (\(Mdn = 5.0\) in each case).

The partners generally found six of the resources to be very-to-extremely valuable: the CEREBROedu website, the Creating a Well-Rounded Youth Program document (which was the only resource that wasn’t used by all six partners, as shown in Figure 31)\(^2\), the SciGirls Family Guide, the SciGirls Snapshots videos for running programs with youth, the Brain Facts online book from the Society for Neuroscience, and the five Nearpod lessons (\(Mdn = 4.5\) in each case). Finally, three implementation resources were generally found to be very valuable: the two training webinars, the CEREBROedu Family Guide, and the Program Overview document (\(Mdn = 4.0\) in each case).

\(^2\)Two partners indicated that they did not use the Creating a Well-Rounded Youth Program document. When asked why this was the case, one said they hadn’t had time to use it and the other explained that the resource was not available when they planned and implemented their program.
Three partners elaborated on their implementation resource ratings, with two commenting on the value of the resources in general and one describing how including activity times in the resources would have helped with their planning, as in:

- These are amazing resources that I kept coming back to whenever I had questions about the program.
- Overall, all of the information given was helpful.
- For us when we could implement and the space availability made it a challenge to figure out how to create a weeklong schedule. We were making arrangements to use the space with an outside group, so a slot of time needed to be sent for approval. But at that time we had very little information on the individual activities (how long each one would take) to figure out what we’d do each day. In the end, I used estimates to fit all the activities in a reasonable amount of time. We still incorporated brain breaks, icebreakers, and wrap-ups each day.

### 3.6b Overall perceived value of the primary program resources

The partners were asked to rate the value of the primary CEREBROedu program resources, using a scale from 1.0 (not at all valuable) to 5.0 (extremely valuable). Figure 32 shows that, as a group, the partners found two resources extremely valuable: the lessons and activities about the brain and the role model videos ($Mdn = 5.0$ in each case), although partners’ ratings of the role model videos ranged from 2.0 to 5.0, indicating some differences of opinion. As a group, the partners generally found the CEREBROedu website to be very-to-extremely valuable ($Mdn = 4.5$). Finally, they found two resources very valuable: the Family Guide and the PBS video clips about brain illnesses ($Mdn = 4.0$ in each case), although partners’ ratings of the PBS video clips ranged from 1.0 to 5.0.

![Figure 32. Partners' median ratings of the primary CEREBROedu resources (N=6)](image)

When invited to comment on their ratings, one partner explained that the activities “didn't take anywhere near the amount of time they were slated to” and that they “had to fill in more time [than expected].” As shared on the following page, four partners commented on the value of the resources, two shared issues with the PBS video clips, and one expanded on how the materials might be used in a school curriculum.
Overall value of the resources (4)

- The kiddos really enjoyed the activities. They were excited to come to camp each day, and really seemed inspired about the role models they saw. Our instructor loved the activities and the families gushed about how much the kids loved the program.
- Our after-school program truly enjoyed all the resources provided by CEREBROedu. From the fun activities like dissecting a sheep brain to testing our reaction times, we have used these activities outside of the CEREBROedu program as well. For example, as a tech-focused program, we have used the claw on multiple occasions with our STEM programming.
- As I mentioned earlier, we will continue to use the resources of CEREBROedu with future participants of our program. We found a lot of value and are thankful to have been part of this program. Our role models have offered to come in on other occasions to visit new participants and have made themselves available to them.
- The content is good and was good for this audience, homeschoolers ... Good info and much appreciated by the population we worked with. Very rewarding for all involved.

Issues with the PBS video clips (2)

- We found the [PBS] videos less engaging than we hoped. The family guides were great, but our parents were not super engaged in the program so I don’t think they were used much at home.
- Some of the video clips (PBS, National Geographic) we couldn’t share because of technical difficulties. There was an issue with our sound in our laptop and any streamed videos would not have sound. We didn’t have any issues with role model videos because we downloaded them and those would play fine. I recommend if possible to have access to download all the videos, that would be great.

Uses in a school curriculum (1)

- Would need to explore where it would fit into a regular school curriculum ... The day long schedule would need to be adapted to fit the population. We did day-long sessions, it was a long day for the students ... It could be a good project based outline for a classroom as it has integrated reading writing science math critical thinking cooperative learning career options and resources for diversity and support. Emphasize to the students purpose and underlying goals, brain study, anatomy, functions, malfunctions, amazing adaptation of the brain and that the students will be acting as scientist, gathering information from literary sources, validating information, recording and gathering data, demonstrating knowledge, solving problems and articulating their discoveries. Emphasize the age group targets older elementary students to middle school.

3.6c Use and perceived value of the program activities

All of the partners (100%) indicated that they had used all 17 activities, within the four CEREBROedu modules. They were asked to rate the value of each activity in their programs, on a scale from 1.0 (not at all valuable) to 5.0 (extremely valuable). Their feedback is on the following page, presented by module.
Module 1: Brain Structure
As shown in Figure 33, the partners generally found the Brain dissection activity extremely valuable (Mdn = 5.0), the Good wrinkles activity and the Welcome activity very-to-extremely valuable (Mdn = 4.5 in each case) and the Module 1 reflection activity moderately-to-very valuable (Mdn = 3.5), although their ratings of this last activity ranged from 2.0 to 5.0.23

When invited to comment on their ratings, one partner expressed a desire for Spanish translations of the Module 1 activities (“We had difficulty translating directions to several activities for our Spanish speaking youth (especially the dissections), and had to make some handouts of our own in Spanish”), while another suggested changing the order of the modules (as in, “We would have liked to do Module 1 later in the program, as we found those activities to be the most technical and challenging”). Additionally, three partners commented on their lower ratings for the Module 1 reflection activity or for reflection activities in general, as in:

• The reflection activities were too long, especially at the beginning.
• While the reflection activities were good for the kids, they found them to be the least interesting, although they did enjoy a lot of the videos.
• Our youth were not very engaged with the role model videos or discussion afterwards. They preferred when we had our guest speakers come in person.

Module 2: Brain Connections
As shown in Figure 34, overall, the partners found This bitter be good activity extremely valuable (Mdn = 5.0), Act & react activity very-to-extremely valuable (Mdn = 4.5), and Get in touch activity and Finding your balance activity very valuable (Mdn = 4.0 in each case). They generally found the Module 2 reflection activity moderately-to-very valuable (Mdn = 3.5), although their ratings ranged from 2.0 to 5.0, indicating a range of opinions on this activity.24

---

23 There was one partner who indicated that their program used all of the activities, even though they held a program that was seemingly too short for them to have done so. If this partner’s ratings are removed, the five remaining partners generally found the Brain dissection, Good wrinkles, and Welcome activities extremely valuable (Mdn = 5.0 each), and the Module 1 reflection activity moderately valuable (Mdn = 3.0), with their ratings of this last activity ranging from 2.0 to 5.0.

24 If the same partner’s ratings are removed, the five remaining partners generally found This bitter be good activity and Act & react activity extremely valuable (Mdn = 5.0 each), Get in touch activity and Finding your balance activity very valuable (Mdn = 4.0 each), and the Module 2 reflection activity moderately valuable (Mdn = 3.0), with their ratings of this last activity ranging from 2.0 to 5.0.
Two partners shared specific suggestions about the Module 2 activities, and one indicated that this might be a good place in the program to encourage future partners to select their Family Fiesta activities, as in:

- For Get in Touch activity, it became repetitive testing for all spacing (3mm, 10mm, 15mm, 20 mm, 30 mm). I’d recommend doing only 3 tests otherwise it’s easy for the students to lose interest.
- I felt that the [Module 2] activities were too similar to be presented back to back and would be more effective presented separately.
- Having to select a bigger project and then deciding what they want to do (to share at Family Fiesta) was probably not needed until after halfway through the program. For a summer camp setting, I feel they need to have done quite a few activities to decide what they want to share with their family. Perhaps add more time halfway through so they can select a project.

**Module 3: Brain in Action**

As shown in Figure 35, the partners generally found three Module 3 activities extremely valuable: Electromyography, Optical illusion, and Stoop effect (Mdn = 5.0 in each case). They also generally found the Module 3 reflection activity moderately-to-very valuable (Mdn = 3.5), although their ratings ranged from 2.0 to 5.0. None of the partners commented on their ratings of the Module 3 activities.²⁵

**Module 4: Brain and Behavior**

As shown in Figure 36, the partners generally found the Memory activity extremely valuable (Mdn = 5.0) and the Mirror tracing and Multitasking mania activities very-to-extremely valuable (Mdn = 4.5 in each case). Overall the partners found the Module 4 reflection activity moderately valuable (Mdn = 3.0), although their ratings ranged from 2.0 to 5.0.²⁶

²⁵ If the same partner’s ratings are removed, the five remaining partners generally found Electromyography, Optical illusion, and Stoop effect extremely valuable (Mdn = 5.0 each), and the Module 3 reflection activity moderately valuable (Mdn = 3.0), with their ratings of this last activity ranging from 2.0 to 5.0.
²⁶ If the same partner’s ratings are removed, the five remaining partners generally found the Memory, Mirror tracing, and Multitasking mania activities extremely valuable (Mdn = 5.0 each), and the Module 4 reflection activity moderately valuable (Mdn = 3.0), with their ratings of this last activity ranging from 2.0 to 5.0.
When invited to elaborate, one partner shared feedback about *Mirror tracing* and *Multitasking mania*, and another shared an overarching comment about the amount of time for activities potentially making the programs prohibitively long for families, as in:

- **I wish there was an extension activity to add to the mirror tracing as the kids completed it very quickly. For the multitasking activity, the kids were not quite ready to design their own way to test multitasking, so I had to design the test for them. The role model video was in Spanish, but none of the children spoke Spanish and the subtitles were too fast to read.**
- **While I did think that the activities were great overall, I think the time allotted for each module was a lot ... I think that was the most difficult part for families that wanted to participate -- they were very interested in joining, but could not commit to [the full program].**

### 3.6d Use and perceived value of the role model videos

All of the partners (100%) indicated that they used all four role models video. As shown in Figure 37, when asked to rate the value of the videos to their programs using a scale from 1.0 (not at all valuable) to 5.0 (extremely valuable), the partners generally found three of the videos extremely valuable: speech pathologist Salvador, Psychology student Cori, and Psychology professor Raquel (*Mdn* = 5.0 in each case), although their ratings of each video ranged from 2.0 to 5.0, pointing to some differences of opinion. Additionally, the partners found family therapist Marlene’s video very-to-extremely valuable (*Mdn* = 4.5), with these ratings also ranging from 2.0 to 5.0.

Three partners elaborated on their ratings of the role model videos. One said their youth had a positive response to the videos (“*The students loved watching the videos and learning more about different neuroscience careers*”), and two commented on Marlene’s video, with the first saying they liked that the video was in Spanish and the other saying their youth had struggled with the English subtitles, as in:

- **While I liked the videos, our youth did not find them very engaging. The most helpful of them was Marlene because it talked about mental health stigma and was mostly in Spanish.**
- **Marlene’s video was in Spanish, and none of the children spoke Spanish. The subtitles were difficult to read because the video was edited in quicker shots.**
3.6e Extent to which partners encouraged parents/guardians to use the CEREBROedu resources at home

As shown in Figure 38, when asked how often parents/guardians were encouraged to use the Family Guide to learn about Alzheimer’s disease, epilepsy, or depression, and how often they were encouraged to use the Family Guide to talk about these diseases with their family, two partners said they did these things once, three did them twice, and one did them three or more times.

When asked how often parents/guardians were encouraged to use the Family Guide to do hands-on activities about the brain at home with family, one said they didn’t have a chance, another did so once, three did so twice, and one did this at least three times.

Finally, when asked how often parents/guardians were encouraged to watch the CEREBROedu role model videos and the PBS video clips about brain illnesses, one partner said they hadn’t had a chance to encourage either of these activities, two said they did these things once, another two did them twice, and one did them three or more times.

![Figure 38. How often partners encouraged parents/guardians to use the CEREBROedu resources (N=6)](image)

**Whether parents/guardians had questions or comments about the at-home resources**

When the partners were asked if parents/guardians had shared questions or comments about the CEREBROedu Family Guide, the website, or the PBS video clips about brain illnesses, most said this was not the case. One further explained that they didn’t think the family members in their program had used of the resources (as in, “Most of them did not use it”).

One partner said they received parent/guardian feedback about the Family Guide (”Only follow up comments that the information was valuable”) as well as the PBS video clips (“They enjoyed seeing other Latinos in the neuroscience field. ‘Si se puede!’ was a comment of many”). None of the partners indicated that their parents/guardians had shared feedback about the CEREBROedu website.
3.6f Suggested resources or support from TPT

The partners were asked if there were any additional resources or support TPT might have provided that they thought would have enhanced the success of their CEREBROedu programs. One partner said they did not have any suggestions, as in, “I think the resources provided were great and sufficient as is. The website being where everything was available was perfect.” The remaining five partners shared a range of suggested resources and support, both in response to this specific question and throughout their surveys, as summarized below.

**Suggested resources**
As noted earlier in this report, three of the partners thought Spanish-language materials would have been beneficial for their programs, as in, “We need materials in Spanish” and “Spanish translated materials, directions, and handouts … It was difficult to translate in ways that our Spanish speaking youth and families could understand. Having all of the activity guides, especially vocab sheet, in Spanish would have been very helpful.”

Others shared a range of suggestions for future resources, including more detailed guidelines, PowerPoints, more information about how best to discuss mental health, info sheets for potential collaborators, updates to the activities and the Nearpod trainings, and downloadable videos, as detailed in the responses below.

- A schedule with each activity and the suggested length of time. There was a document that shared the length of each module but that doesn’t help if you’re trying to decide how many activities you can get through a day/session. In the educator handouts, not all the activities have a suggested length of time (i.e. Brain Dissection). Some of the non-TPT activities, you really have to think about how you will facilitate them because some of the information is part of the background and not included in the section where you are leading the activities (i.e. Optical Illusions).
- I think for future planning, perhaps condensing what children are learning, or having objectives from the beginning would be helpful. IE: At the end of the program, the students will be able to identify 2 or more mental illnesses and explain their effect on an individual. As an educator, if I have those objectives, I can work towards making sure they are being checked off. I would also like to have more checkpoints to see how much of the information they kids are retaining.
- A PowerPoint to go with each module … The modules did not include a PowerPoint presentation, so I created one for each module, which took some time. I know the sessions are meant to be more informal, but because of the topics we’re asked to cover and the length of the sessions, it was necessary to have them in order to have the session go smoothly. I think we would have benefited from having that -- or an idea of what that might have looked like.
- I think a guide on talking points for starting discussions on mental health, or specific instructions on a breakout session about mental health with the parents would be great. Even a worksheet maybe, that the parents could do- even anonymously, during the family fiesta, to help provide a jumping off point for a discussion, or to help break the taboo of mental health?
- … perhaps an email template or info sheet that could be sent out as an inquiry when trying to approach folks about coming in to speak? Also, one for community organizations. We created
one ourselves, but having a generic flyer that’s professional looking and has the info about what the program is might help entice other organizations to be a part of it!

- I wish there was an extension activity to add to the mirror tracing as the kids completed it very quickly.
- If possible, more detailed videos for the electromyography activity. The Nearpod video and handouts didn’t match. The handout focused on finding the muscles that control certain movements and the claw. But in the Nearpod videos (and the materials received) were also included the electrodes from the company to read brain signals. I wasn’t sure if we were also supposed to that (since it wasn’t in the handout) but was in the video. This activity was one of the ones the youth really like and made a huge impact. I think it just needs to be better explained and more resources given if possible.
- Some of the video clips (PBS, National Geographic) we couldn’t share because of technical difficulties. There was an issue with our sound in our laptop and any streamed videos would not have sound. We didn’t have any issues with role model videos because we downloaded them and those would play fine. I recommend if possible to have [downloadable] videos, that would be great.

**Suggested support**
Two partners mentioned ways TPT might help support their programs, by helping them reach out to potential in-person role models, and being (or providing) someone “on call” to help guide some of the discussions about mental health, as in:

- We need more help in reaching out for neuroscience and mental health guest.
- I think that having pre-done videos with a mental health professional, or perhaps a team of folks who could Skype in for the Family Fiesta who are familiar with the CEREBROedu program and can moderate some discussions with the parents would be a great resource. We talked with the parents a lot about resources and had some small discussions on our own, but to have someone "live" who is trained to moderate that, while keeping in theme with the program in general, would be a great help!
3.7 Partners’ perceptions of the impacts of CEREBROedu

This section focuses on partners’ perceptions of the impacts of CEREBROedu on youth and parents/guardians, as well as perceived youth and parent/guardian learning and the perceived impacts of their programs on the partners themselves.

3.7a Perceived impact on participants

As shown in Figure 39, when partners were asked to consider a series of statements about their program’s impact on participants using a scale from 1.0 (strongly disagree) to 7.0 (strongly agree), as a group they agreed-to-strongly-agreed that their programs had: increased youths’ knowledge of diverse neuroscience-related careers, encouraged youth to consider neuroscience-related careers as a viable career path, encouraged youth to consider neuroscience-related careers as an exciting career path, and increased youths’ awareness of brain illnesses and mental health ($Mdn = 6.5$ in each case). They also generally agreed that their programs increased youths’ help-seeking behavior related to brain illnesses and mental health and parent/guardians’ awareness of brain illnesses and mental health ($Mdn = 6.0$ in each case). Finally, they somewhat-agreed-to-agreed that their programs increased parent/guardians’ help-seeking behavior related to brain illnesses and mental health ($Mdn = 5.5$).

![Figure 39. Partners’ median ratings of perceived impacts on participants (N=6)](image)

Four partners elaborated on their ratings, with one praising the resources, one commenting on the challenge of engaging family members, another recommending home visits as an additional method of family engagement, and the fourth suggesting that Module 4 could have gone deeper on the topics of brain illnesses and mental health, as shared on the next page.
• During the program, there were a lot of “aha” moments from both parents and participants! The resources made many things clear to everyone.
• Getting the parents to engage was a bit harder than the kids, but giving them the resources and talking about the topics openly I think was important, and did give them some tools for further study.
• Good program. We need to have it more often, with a parent extension, to create a science environment at home ... It is a good opportunity to see students and parents share same information. To have also more time so support parents, by showing and giving them materials to take home and do at least one home visit per family.
• I think that although the last session was meant to address Brain + Behavior, we did not really touch on activities that explored mental or brain illnesses deeply ... I think trying to cover all the different elements of what the brain does meant that some things weren’t touched on as in-depth as they could have been. It would be interesting to see what a condensed version of the program would look like if children were learning about one aspect of the brain, i.e. mental illness.

3.7b Perceived youth learning

Figure 40 shows how much the partners thought their youth learned about specific program topics, using a scale from 1.0 (learned nothing) to (learned a lot). In general, they thought youth learned a lot about the brain (Mdn = 4.0) and a moderate-amount-to-a-lot about how neuroscientists study the brain, neuroscience jobs/careers, and mental health jobs/careers (Mdn = 3.5 in each case). The partners also generally thought their youth learned a moderate amount about how to keep their brains healthy and mental health and brain illnesses (Mdn = 3.0 in each case).

Figure 40. Partners’ median ratings of perceived youth learning (N=6)
3.7c Perceived parent/guardian learning

Using the same scale to assess perceived parent/guardian learning, Figure 41 shows that the partners generally thought these family members had learned a little-to-a-moderate-amount about the brain, how to keep your brain healthy, mental health jobs/careers, neuroscience jobs/careers, and how neuroscientists study the brain (Mdn = 2.5 in each case), although their ratings in these last two areas ranged from 1.0 to 4.0, indicating that some of the partners thought there had been little to no parent/guardian learning about neuroscience careers or how neuroscientists study the brain. Finally, the partners generally thought their parents/guardians learned a little about mental health and brain illnesses (Mdn = 2.0).

Figure 41. Partners’ median ratings of perceived parent/guardian learning (N=6)

Scale from 1.0 (learned nothing) to 4.0 (learned a lot)

<table>
<thead>
<tr>
<th></th>
<th>1.0</th>
<th>2.0</th>
<th>3.0</th>
<th>4.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>The brain</td>
<td></td>
<td></td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>How to keep your brain healthy</td>
<td></td>
<td></td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>Mental health jobs/careers</td>
<td></td>
<td></td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>Neuroscience jobs/careers</td>
<td></td>
<td></td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>How neuroscientists study the brain</td>
<td></td>
<td></td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>Mental health and brain illness</td>
<td></td>
<td></td>
<td>2.0</td>
<td></td>
</tr>
</tbody>
</table>
3.7d Perceived impact on partners

Partners were asked to consider nine statements about the personal impacts of their CEREBROedu programs, using a scale from 1.0 (strongly disagree) to 7.0 (strongly agree). As shown in Figure 42, they strongly agreed that they could see the youth who participated in their programs as neuroscientists, that they saw neuroscience jobs/careers as an exciting career path for these youth, and that they saw neuroscience jobs/careers as a career path their youth could realistically do ($Mdn = 7.0$ in each case).

In general, the partners somewhat-agreed-to-agreed that they: knew how to provide culturally responsive activities about the brain’s structure and function to Hispanic youth as well as Hispanic families; felt comfortable providing culturally responsive activities about the brain’s structure and function to Hispanic youth as well as Hispanic families; and felt empowered to provide culturally responsive activities about the brain’s structure and function to Hispanic youth as well as Hispanic families ($Mdn = 5.5$ in each case). In each of these instances, their ratings ranged from 4.0 to 7.0, indicating that at least some partners were neutral about their level of agreement with these statements.

Figure 42. Partners’ median ratings of the personal impact of their CEREBROedu programs (N=6)
Four partners elaborated on their ratings. One explained that they thought they could have “[done] better” if they had been able to use “more material in Spanish.” Three commented further on the positive impact it had on their organizations and/or the success of their programs more generally, as in:

- **Overall it was a very exciting program.** The library we partnered with and the parents kept on commenting how it was a great opportunity and experience for their students that they rarely see, especially with a topic that they’re not familiar with. I hope we can offer it again in the future at the same library and area. For us, it provided us very important insights in working with the Latinx community here and saw in action many of the research already shared by TPT and others regarding working with Latinx families and culturally relevant training.

- **The well thought out resources and activities provided by CEREBROedu** have empowered our site, participants, and families to be informed in Neuroscience. We will continue to utilize these resources in future events. We hope to run a summer camp based off the CEREBROedu activities next year.

- **The kids who were in our program REALLY loved it,** and really got excited about the activities and about the role models that they learned about. The parents kept asking us if we’d be having any more similar programs because their kids enjoyed them so much!
Discussion

The CEREBROedu implementation evaluation focused on the training and program activities of the first six partner organizations to coordinate CEREBROedu programs. Through a series of online surveys, educators were invited to share their feedback at three key points: 1) after they completed two webinar trainings, 2) after they completed five Nearpod trainings, and then 3) after they conducted their CEREBROedu programs. In total, the implementation evaluation gathered feedback from 15 educators who completed the post-webinar survey, 14 educators who completed the post-Nearpod survey, and six partners who submitted the post-program reporting and reflections survey.27

This Discussion first reflects on the findings that emerged in both the educator and partner surveys relating to the CEREBROedu trainings, resources, and programs, and then shares recommendations that may inform the final two years of the project when new partners will implement an additional 12 outreach programs. In places throughout this Discussion, educators’ post-training program expectations are presented in comparison with partners’ post-program reflections. Where applicable, the Discussion also considers feedback from youth and parents/guardians who completed evaluation surveys at the end of their program’s culminating Family Fiesta.

Reflections on the CEREBROedu trainings

The two webinar trainings
Overall, the educators found the two training webinars very valuable in helping them plan their CEREBROedu programs. In general, they strongly agreed that the webinars were well run and organized and that they provided sufficient opportunities to ask questions about what was presented. They generally agreed that they enjoyed participating in the webinars and that the webinars were a worthwhile experience, met their expectations, and were designed with educators in mind.

Additionally, the educators generally felt that the webinars were very effective in clarifying their CEREBROedu responsibilities, increasing their understanding of the components of CEREBROedu, and increasing their understanding of how to incorporate CRT strategies into their programs. Most also thought the webinars covered about the right amount of material, while two thought they could have included more information, specifically asking for “more details about the actual program” and “more about the expectations in respect to the schedule.”

The five Nearpod lessons
Overall, the educators found the five Nearpod lessons extremely valuable in helping them plan their CEREBROedu programs. In general, they strongly agreed that the lessons were well-organized, that they enjoyed participating in them, and that they were a worthwhile experience, met their expectations, and were designed with educators in mind. All but one of

---

27 Throughout the Discussion section, when describing feedback shared in the post-webinar or post-Nearpod surveys, respondents are referred to as “educators.” When describing the post-program reporting and reflections, survey respondents are referred to as “partners.”
the educators indicated that the Nearpod lessons covered the right amount of material, with the remaining educator saying that the lessons presented a "pretty daunting" amount of information.

When invited to share questions, comments, and/or concerns about the information presented in each of the five Nearpod lessons, the majority of educators commented on the value or strengths of the individual lessons, while between one and four educators in each case shared challenges they faced when reviewing the lessons and/or suggestions for how TPT might update the lessons moving forward. Although the educators generally shared positive feedback about the Nearpod lessons – for example finding them clear and useful to their planning – some educators requested Spanish-language materials, thought it would be helpful to standardize all of the program activities into a single format, and/or suggested TPT provide additional information for some of the lessons, among other responses.

**Reflections on the CEREBROedu resources**

Feedback about the CEREBROedu resources was gathered from the 10 educators who completed the post-Nearpod survey before the start of their programs, as well as the six partners who completed the reporting and reflections survey after implementing their programs. In general, educators and partners both indicated that they found the following resources to be very or extremely valuable to their program planning or implementation, respectively: the project website, the Program Overview document, the Welcome Event Guide, the Family Fiesta Guide, the Family Guide, and the role model videos.

In terms of the hands-on activities and the reflection activities, after completing their training, the educators generally found them extremely and very valuable, respectively, in helping them plan their programs, although two educators shared concerns about using the hands-on activities, as in “One thing that is a little confusing is that they are in a variety of formats. I always find it easier when my activity guides are uniform" and “I'm concerned about the time commitment and the number of activities. I think it is phenomenal, I just wonder about retention.” After their programs, the partners generally found the individual activities within each module to be very or extremely valuable, except for the four reflection activities, which received somewhat lower ratings. Specifically, the partners generally found the reflection activities for Modules One through Three to be moderately-to-very valuable, and the reflection activity for Module 4 to be moderately valuable.

---

28 Two of the six partners submitted their post-Nearpod evaluation surveys well after the beginning of their programs, and thus were not asked to share pre-program expectations in this survey. For this reason, the evaluation cannot directly compare post-training and post-program reflections from the six partners. Rather than excluding two partners and focusing on the post-training and post-program feedback from just four partners, this Discussion compares the post-training expectations of the 10 educators who completed the post-Nearpod survey before the start of their programs with the post-program reflections of the six partners who completed the reporting and reflections survey, in order to provide the project team with as much feedback as possible.
CEREBROedu program reporting

Program length and hours for youth
Program length varied widely among the six partner programs, ranging from one week to six months. Total program hours for youth ranged widely as well, from five to 35 hours, averaging 24 across programs. Not including the site that coordinated five hours of youth programming, the remaining five partner programs averaged 28 hours.

Fulfillment of program requirements
All of the partners met at least four of the implementation requirements detailed in the April 2019 training webinar, although only two partners met all six. Specifically:

- All six partners had the minimum number of educators complete the required webinar and Nearpod trainings, all hosted a Welcome Event and a Family Fiesta, and all indicated that they shared the Family Guide with their participants.
- Four of the six partners met the requirement to include at least 10 Hispanic youth ages 10 to 13, while the remaining two partners had fewer than 10 youth in total, as one had six youth and the other had eight.
- Three of the six partners met the requirement to include at least one in-person role model at their Family Fiesta, while three did not include any in-person role models at this event.

Perceived value and challenges of the Welcome Event
In general, the six partners found their Welcome Events to be extremely valuable. When asked to share any challenges they encountered in implementing their event, two partners pointed to challenges encouraging family participation, one partner thought they “could do better in having guest speakers,” and another pointed to language barriers, saying, “Having a translator or a Spanish speaking person is a must at this event. Multiple Spanish speakers would have been helpful.”

Perceived value and challenges of the Family Fiesta
In general, the six partners found their Family Fiestas to be extremely valuable. When asked to share any challenges they encountered in implementing their event, three partners pointed to challenges encouraging family participation, three said they experienced difficulty finding guest speakers for the event, and two shared other challenges, specifically commenting on their event going over time, needing a larger space, and not having a plan for younger participants.

Comparing CEREBROedu post-training and post-program reflections
To compare educators’ post-training reflections and partners’ post-program reflections on incorporating culturally responsive strategies and activities, their comfort level addressing topics related to neuroscience and the brain, and their sense of preparation to incorporate in-person neuroscience role models, conduct the modules and activities, and encourage parent/guardian use of the resources, post-training feedback was gathered from the 10 educators who completed the post-Nearpod survey before the start of their programs, while
post-program feedback was gathered from the six partners who completed the reporting and reflections survey after their program came to a close.

Although the feedback from both groups was generally positive, partners’ post-program ratings were somewhat lower in three areas: sense of preparation to incorporate CRT strategies, empowerment to provide culturally responsive activities about the brain to Hispanic youth and their families, and sense of preparation to incorporate in-person role models. As a group, partners who provided post-program feedback were also more likely to suggest ways their comfort level around addressing the topics of neuroscience and the brain could have been improved, as detailed further below.

**Sense of preparation to incorporate culturally responsive strategies and activities**
After completing their training, the educators generally felt very-to-extremely prepared to incorporate CRT strategies in their programs. After implementing their programs, the partners similarly reflected that they felt very prepared to incorporate CRT strategies, although some noted that they felt less prepared in this area than in others.

**Sense of empowerment to provide culturally responsive activities**
After completing their training, the educators strongly agreed that they felt empowered to provide culturally responsive hands-on activities about the brain to Hispanic youth and their families. After implementing their programs, however, the partners somewhat-agreed-to-agreed that they had felt empowered in this way. Although most partners didn’t elaborate on their lower ratings, one commented on her neutral ratings (in a few areas) regarding her sense of empowerment, comfort, and knowledge of how to provide culturally responsive activities about the brain to Hispanic youth and families by saying, “I think I could do better if I was able to get more material in Spanish.”

**Comfort level addressing neuroscience/the brain**
When educators were asked after the training if there was anything they wanted to share about their comfort level addressing topics related to neuroscience and the brain with Hispanic youth and families, the majority said they felt comfortable at that point in their preparation. One said she was not entirely comfortable “working with parents, as someone who is not Latinx,” adding, “I wish my institution had a more diverse staff so this program could be truly representative and run by a Latinx professional.” Another thought that “being able to sit with the modules [would] be helpful,” and a third commented on how educators could encourage conversations among family members.

When asked the same question after their programs, three of the six partners focused on their desire for Spanish resources. Two of these partners indicated that having the materials would have helped their comfort level, and one said they would have liked more preparation time since they had to spend some of their own time translating materials. The three remaining partners shared other comments about their comfort level, with one explaining that future programs might benefit from additional resources or support from TPT about addressing topics related to neuroscience and the brain with Hispanic youth and families, the second suggesting TPT provide learning objectives for each lesson, and the third noting the importance of educator and guest speakers’ enthusiasm for the content.
**Sense of preparation to incorporate in-person role models**

After completing their training, the educators generally felt very prepared to use in-person neuroscience role models with Hispanic youth. By contrast, the partners who implemented the first six programs generally reflected that they were moderately-to-very prepared in this respect. The three partners who did not incorporate in-person role models in their Family Fiestas shared the lowest ratings in this area, with two partners indicating that they were moderately prepared and one noting that their site was not at all prepared. One of these partners explained that they had an in-person role model at a different program session, another said they had trouble finding a guest speaker because their program was close to the holidays, and the third felt they needed “more help in reaching out for neuroscience and mental health guest [speakers].”

**Sense of preparation to conduct the modules and activities**

Educators after their training and partners after their program indicated that they generally felt very prepared to conduct hands-on activities about the brain and to conduct the sessions on brain structure, brain connections, the brain in action, and the brain and behavior.

**Sense of preparation to encourage parent/guardian use of the resources**

Educators after their training and partners after their program indicated that they generally felt very or extremely prepared to: encourage parent/guardian use of the PBS documentary clips to learn about Alzheimer’s disease, epilepsy, or depression with their family members; encourage use of the Family Guide to learn and talk about these topics with family members; and encourage use of the Family Guide to do hands-on activities about the brain at home with family members.

**Perceived learning among CEREBROedu participants**

The survey feedback that youth and parents/guardians provided at the end of the Family Fiestas about their learning from the CEREBROedu program generally aligned with the partners’ assessment of their participants’ learning, although in some cases the partners reflected that participants learned somewhat less than the participants themselves indicated.

**Youth learning from their program**

Overall, youth thought they learned a lot about the six main topics featured in the CEREBROedu program. When asked to reflect on their youths’ learning about the same topics, the partners generally assessed that their youth learned a lot about the brain, a moderate amount-to-a-lot about how neuroscientists study the brain, neuroscience jobs/careers, and mental health jobs/careers, and a moderate amount about how to keep their brains healthy and mental health and brain illnesses.

**Parent/guardian learning from their program**

In general, parents/guardians thought they learned more about the six topics featured in the CEREBROedu program than the partners’ assessment indicated. Specifically, parents/guardians thought they learned a lot about the brain and how neuroscientists study the brain, and a moderate amount about how to keep your brain healthy, mental health and brain illness, mental health jobs/careers, and neuroscience jobs/careers. By contrast, the partners
generally thought their parents/guardians had learned a little-to-a-moderate-amount about the brain, how to keep your brain healthy, mental health jobs/careers, neuroscience jobs/careers, and how neuroscientists study the brain. Their ratings ranged most widely in these last two areas, indicating that some of the partners thought there had been little to no parent/guardian learning about neuroscience careers or how neuroscientists study the brain. Finally, the partners thought their parents/guardians learned a little about mental health and brain illnesses.

**Recommendations**

Looking across the findings summarized in the Discussion, some final recommendations are provided below in an effort to assist the project team as they work to finalize the CEREBROedu trainings, curriculum, and other materials for the remaining partner programs.

**Provide Spanish translations of trainings and activities.** Educators after their training and partners after their program both indicated that they would have found it helpful to have more CEREBROedu materials in Spanish, particularly the trainings and hands-on activities.

- In terms of the trainings, a few educators indicated that they would have liked to have Spanish subtitles for the webinars and Nearpod lessons, for those for whom English was not their first language, as in, “Some feedback I received from the facilitators was that it would have been easier for them to understand if there were at least Spanish subtitles.”
- In terms of the activities, half of the partners indicated that translated materials would have helped them feel more comfortable addressing the topics of neuroscience and the brain with Hispanic families. One partner said they spent time translating that they would have liked to use for other preparation, and two explained that it had been difficult for them to translate things related to neuroscience and the brain in a way that they felt their Spanish-speaking participants could understand, with these partners noting that it would have been helpful to have “all of the activity guides, especially [a] vocab sheet” in Spanish. Providing Spanish-speaking educators with these translated materials would likely increase their comfort level with the materials, and in turn enhance the experience for their Spanish-speaking participants.

**Provide clearer expectations for partners.** Although all of the partners met at least four of the implementation requirements detailed in the April 2019 training webinar, shown in Image 6 on the following page, only two partners met all six.

As noted earlier in this Discussion, the two main areas where some partners fell short were around youth participants and in-person Family Fiesta role models. Specifically, four of the six partners met the requirement to include at least 10 Hispanic youth ages 10 to 13, and three of the six partners met the requirement to include at least one in-person role model at their Family Fiesta. In both areas, partners may need a reminder of what is expected, encouragement to ask for help when needed, and assistance from the project team in finding both participants and role models. Finally, although all six partners held a

---

Knight Williams Inc. 65
program (a requirement in the third bullet point in Image 6), one site’s program was notably shorter than the others, with only five hours of youth programming, in comparison with the 22.5 to 35 hours reported by the other partner sites. This is another area where the project team may want to be more explicit with future partners, by, for example adding required programming hours, in writing, to the introductory webinar.

To help facilitate the partners’ efforts to meet all of the above program requirements, TPT also might consider:

- creating a one-page document that outlines all of the requirements, so partners won’t have to go back to the webinar to review what is expected;
- incorporating all of the requirements in future partners’ contracts with TPT (if they do not currently include this language); and/or
- establishing a new system of accountability, with partners reporting directly to TPT about whether or not they achieved each requirement, given the confidentiality of their evaluation reporting and reflections.

Reformat curriculum activities and provide additional information. After reviewing the Nearpod lessons, one of the educators suggested that the project team standardize the curriculum activities, which, for Year 2 of the project, were pulled from various sources. As this educator explained, "[in comparison with the non-TPT materials, TPT’s] SciGirls activities ... are laid out in a way easy to facilitate (the questions to ask or explanations to provide are laid out in the way the activity flows). It’d be great if in the future all non-TPT material could be redone ... similar to SciGirls activities." In addition to standardizing the curriculum (if TPT receives permission from the original creators to do so), other educators suggested including more information in each of the activities, such as activity times and consistent vocabulary across elements like diagrams and handouts.

Modify the reflection activities. As noted earlier in this Discussion, the six partners generally found the four reflection activities somewhat less valuable than the hands-on activities. While they found the individual hands-on activities from each module to be very or extremely valuable, they found the individual reflection activities to be moderately or very valuable.
Although the partners did not share much feedback about how they thought the reflection activities might be modified, three commented on their lower ratings in this area, saying: “The reflection activities were too long, especially at the beginning,” “While the reflection activities were good for the kids, they found them to be the least interesting, although they did enjoy a lot of the videos,” and “Our youth were not very engaged with the role model videos or discussion afterwards. They preferred when we had our guest speakers come in person.” Additionally, relating to the Nearpod training in this area, one educator suggested the Nearpod lessons needed “more on the project the students will need to work on throughout the modules.”

Moving forward, the project team may want to consider modifying the reflection activities by, for example:

- providing educators with more guidance at the top of the activity on how to direct their youth to create hands-on reflection projects in response to the role model videos;
- making the discussion questions secondary to the project-based part of the activity, so they play a role helping youth brainstorm their responses but aren’t the focus of the activity; and/or by
- providing more detailed examples of projects youth could undertake, such as writing a letter to the featured role model, making a list of questions they’d want to ask the role model, writing the script for a skit of a day in the life of the role model, drawing a picture of something that inspired them in the video, or recording a Flipgrid video about what they found most interesting in the role model video.

Help partners further encourage parent/guardian learning. As noted earlier in this Discussion, the parents/guardians generally thought they learned less about some program topics than others, particularly mental health and brain illnesses, how to keep your brain healthy, and neuroscience and mental health jobs/careers. The partners’ ratings of what they thought parents/guardians learned generally aligned what the parents/guardians reflected, particularly in the areas of mental health and brain illnesses and – by some partners’ assessments – neuroscience careers. Given the project’s goals of promoting mental health literacy and demonstrating the value of careers in neuroscience and mental health to Hispanic families, TPT may want to work with partners to highlight these topics both at their family events – for example through the inclusion of in-person role models, as discussed above – and by further encouraging parent/guardian use of the CEREBROedu Family Guide, role model videos, and PBS video clips.

Additionally, a few partners suggested new resources or support that might help future partners promote mental health literacy at their sites, including, “a guide on talking points for starting discussions on mental health, or specific instructions on a breakout session about mental health with the parents,” “pre-done videos with a mental health professional, or perhaps a team of folks who could Skype in for the Family Fiesta who are familiar with the CEREBROedu program and can moderate some discussions with the parents,” and greater inclusion of “activities that explored mental or brain illnesses” in Module 4: Brain and Behavior, with this partner adding, “I think trying to cover all the different elements of what the brain does meant that some things weren’t touched on as in-depth as they could have been.”
Appendix 1: Compilation report of youth and parent/guardian Family Fiesta survey responses

Compilation of youth survey responses (N=49)

The first few questions asked youth about their experience at their Family Fiesta.

1. Please indicate how much you enjoyed each part of today’s Family Fiesta, using the scale from 1 (didn’t enjoy at all) to 4 (enjoyed a lot). If you didn’t do a part, you can circle NA (not applicable).

   Median ratings of how much youth enjoyed each part of the Family Fiesta

   Scale from 1.0 (didn’t enjoy at all) to 4.0 (enjoyed a lot)

   Neuroscience or mental health guest speaker(s) (n=28) 3.5
   Hands-on activities about the brain (n=39) 4.0
   The sharing of students’ work (n=37) 4.0
   The community organization tables (n=26) 3.0

2. Please indicate how much you learned from each part of today’s Family Fiesta, using the scale from 1 (learned nothing) to 4 (learned a lot). If you didn’t do a part, you can circle NA (not applicable).

   Median ratings of how much youth thought they learned from each part of the Family Fiesta

   Scale from 1.0 (learned nothing) to 4.0 (learned a lot)

   Neuroscience or mental health guest speaker(s) (n=28) 3.0
   Hands-on activities about the brain (n=37) 4.0
   The sharing of the students’ work (n=36) 3.5
   The community organization tables (n=27) 4.0
3. Thinking back to each part of today’s Family Fiesta, what was most memorable in each case? What stands out for you at this point? If you didn’t do a part, you can skip to the next part.

Duplicate responses have been removed. Sample responses in each area are below.

**Neuroscience or mental health guest speaker(s)**

- Who likes Star Wars?
- interesting
- Sun
- One is dealing with depression and is getting help
- that we always have to keep going
- How they talked about their life
- Never be afraid if you have a situation. And always be you
- How they explained everything and answered our question.
- When she talked about depression
- Her job, her diagram
- I love what they talked about
- I like them a lot
- I learned a lot of new sicknesses
- explaining their specific interests in the field
- mental illness is caused by chemicals in brain
- how the professor is from Mexico
- interesting info about psychology careers
- weighs 3 pounds
- we dissect a sheep’s brain because it is a smaller brain than humans
- their job

**Hands-on activities about the brain**

- dissecting brain
- Brain dissection
- Balance
- Everything was fun
- Because we learned from parts of the brain
- It was very cool to learn about the brain and to learn what you have inside.
- I liked to cut brains
- when our brain sent signals to the phone and we experienced activities
- what I liked most about the class was when we played the cerebro and experience it
- if I liked it when we made our brains
- I liked everything about the class
- I liked it all
- okay memory match
- yes I liked
- I liked the memory
- which is divided into 4 parts
- Cutting the brain open and looking at all the diff parts
- Sharing card with each other
- I enjoyed them a lot
- It was fun
- That babies cry to get attention
- I didn’t like the dissections on day 1. everything else was good.
- dissecting the sheep brain
- some of the lobes
- I liked the reaction times
- I loved the hand robot with brain
- cut sheep’s brain in half
- liked how I used the claw
- learning about the nerves with the claw
- that I touched the sheep and put all the parts on them
- making the claw move with my hand
- that the brain is a big part of our body
The sharing of students’ work

- spiker box
- The ideas
- it was more or less
- Because I learned things and also what they (parts of brain) can do
- I liked very much to learn that the cerebro is very important
- I liked to share with my parents
- I liked how they talked about the classes they took
- if I liked to show the photos to the parents
- I don’t like to meet people
- very good
- ok protesis
- yes I liked
- I liked the activity of those who had sour.
- I liked all the activities
- Yes, ok

The community organization tables

- it was fun
- good
- meet people from other places
- being social and making new friends
- liked the robotic claw
- that animals are also there to help
- I got info of a clinic

- No clue
- Sharing my movie
- I had fun watching the work of other kids and sharing my own
- it was fun
- I felt really nervous
- I liked the engineering challenge
- learning different perspectives
- the brain weighs 3pds
- I got to share my newspaper brain
- I like sharing my work
- got to learn new things from other people
- learned awesome new things
- is the illusions I did group work and tried every part of them
- seeing what they did and what it is for
- that they worked hard and it gives us info of what the brain does
- tried to learn more things with the claw
- liked robotic claw a lot I had fun
- seeing what the activity is & what to do
- it was nice

4. Did you find any of the information presented today confusing, or did anything leave you wanting more explanation (e.g., about the brain or about neuroscience or mental health jobs/careers)?

Duplicate responses have been removed. Sample responses are below.

- No
- No it was all clear.
- all good
- everything was explained well
- ok good information for us
- not well
- I’m not clear about everything
- I don’t think so
- Some of the mental health information
- Some of it
- Yes, about the good mental health and the regulation
• if they used some vocabulary times. Difficult but they answered my questions
• I would like more information on certain career choices
• why do you get depressed
• everything confusing
• everything

5. Please indicate how much you agree or disagree with the following statements about the neuroscience or mental health guest speaker(s) at today’s event, using the scale from 1 (strongly disagree) to 5 (strongly agree). If your speaker(s) didn’t do something, you can circle NA (not applicable).

Youths’ median ratings about the neuroscience or mental health guest speaker(s) at their Family Fiesta

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoyed hearing about their work. (n=28)</td>
<td>4.0</td>
</tr>
<tr>
<td>I enjoyed hearing about their personal life. (n=27)</td>
<td>4.0</td>
</tr>
<tr>
<td>I enjoyed hearing about their path to their job. (n=26)</td>
<td>4.5</td>
</tr>
<tr>
<td>I enjoyed doing an activity with them. (n=25)</td>
<td>4.0</td>
</tr>
<tr>
<td>They seemed comfortable talking with us. (n=28)</td>
<td>4.0</td>
</tr>
<tr>
<td>They seemed passionate about their work. (n=28)</td>
<td>4.5</td>
</tr>
<tr>
<td>It was important to me they were Hispanic. (n=26)</td>
<td>4.0</td>
</tr>
<tr>
<td>I found them inspiring. (n=28)</td>
<td>4.0</td>
</tr>
<tr>
<td>I felt I could relate to them. (n=28)</td>
<td>3.5</td>
</tr>
<tr>
<td>They are good role models for me and my friends. (n=28)</td>
<td>4.0</td>
</tr>
<tr>
<td>I would like the opportunity to meet with them again. (n=28)</td>
<td>4.0</td>
</tr>
</tbody>
</table>

The next few questions asked youth about their experience in the entire CEREBROedu program.

6. Please indicate how much you agree or disagree with the following statements about the neuroscience or mental health role model videos you watched in your CEREBROedu program.

Youths’ median ratings about the role model videos

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoyed hearing about their work. (n=48)</td>
<td>4.0</td>
</tr>
<tr>
<td>I enjoyed hearing about their personal lives. (n=48)</td>
<td>4.0</td>
</tr>
<tr>
<td>I enjoyed hearing about their paths to their jobs. (n=48)</td>
<td>4.0</td>
</tr>
<tr>
<td>They seemed passionate about their work. (n=47)</td>
<td>4.0</td>
</tr>
<tr>
<td>It was important to me they were Hispanic. (n=47)</td>
<td>4.0</td>
</tr>
<tr>
<td>I found them inspiring. (n=46)</td>
<td>4.0</td>
</tr>
<tr>
<td>I felt I could relate to them. (n=47)</td>
<td>4.0</td>
</tr>
<tr>
<td>They are good role models for me and my friends. (n=47)</td>
<td>4.0</td>
</tr>
</tbody>
</table>
7. Please indicate how much you enjoyed each part of CEREBROedu program, using the scale from 1 (didn't enjoy at all) to 4 (enjoyed a lot). If you didn't experience a part, you can circle NA (not applicable).

Youths’ median ratings of how much they enjoyed each part of their CEREBROedu program

<table>
<thead>
<tr>
<th>Part</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome event (n=43)</td>
<td>4.0</td>
</tr>
<tr>
<td>Lessons and activities about the brain (n=46)</td>
<td>4.0</td>
</tr>
<tr>
<td>Role model videos (n=47)</td>
<td>4.0</td>
</tr>
<tr>
<td>Family Guide (n=42)</td>
<td>3.0</td>
</tr>
<tr>
<td>PBS video clips about brain illnesses (n=44)</td>
<td>3.5</td>
</tr>
<tr>
<td>Family Fiesta (n=45)</td>
<td>4.0</td>
</tr>
</tbody>
</table>

8. Please indicate how much you learned about the following topics from the CEREBROedu program, using the scale from 1 (learned nothing) to 4 (learned a lot)?

Youths’ median ratings of how much they thought they learned from their CEREBROedu program

<table>
<thead>
<tr>
<th>Topic</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>The brain (n=46)</td>
<td>4.0</td>
</tr>
<tr>
<td>How neuroscientists study the brain (n=45)</td>
<td>4.0</td>
</tr>
<tr>
<td>How to keep your brain healthy (n=47)</td>
<td>4.0</td>
</tr>
<tr>
<td>Mental health and brain illness (n=47)</td>
<td>4.0</td>
</tr>
<tr>
<td>Neuroscience jobs/careers (n=47)</td>
<td>4.0</td>
</tr>
<tr>
<td>Mental health jobs/careers (n=47)</td>
<td>4.0</td>
</tr>
</tbody>
</table>

9. As a result of participating in CEREBROedu, how interested are you in the following topics on a scale from 1 (not at all interested) to 4 (very interested)?

Youths’ median ratings of their interest in CEREBROedu topics as a result of participating in the program

<table>
<thead>
<tr>
<th>Topic</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>The brain (n=48)</td>
<td>4.0</td>
</tr>
<tr>
<td>How neuroscientists study the brain (n=47)</td>
<td>3.0</td>
</tr>
<tr>
<td>How to keep your brain healthy (n=48)</td>
<td>4.0</td>
</tr>
<tr>
<td>Mental health and brain illnesses (n=47)</td>
<td>4.0</td>
</tr>
<tr>
<td>Neuroscience jobs/careers (n=47)</td>
<td>3.0</td>
</tr>
<tr>
<td>Mental health jobs/careers (n=48)</td>
<td>3.0</td>
</tr>
</tbody>
</table>
10. Now that the CEREBROedu program is almost over, do you plan to follow up or look into any of the topics covered in CEREBROedu on your own (e.g., about the brain or about jobs/careers in neuroscience or mental health)?

Duplicate responses have been removed. Sample responses in each area are below.

Yes: \((44\%)\)

**What will you look into?**

- When is the next program
- What does each body part do
- About the celeloros
- I would like to invent the human brain with each corvita
- Why does it cause cancer in the brain?
- I would like to investigate the brain of cats and dogs, etc. I want to be a veterinarian
- I would like to learn about how the brain works
- What happens if a brain is inactive
- It was really fun to learn about the brain, I would like to know more
- It was very interesting to me / a lot of it
- The careers related to the brain
- The brain
- I will look into learning more about the brain in google
- Learn more and more about the brain
- Mental Health

No: \((20\%)\)

**Why don't you plan to look into anything further?**

- I'm going to be an engineer
- Cause I'd like to code games
- Because I am going to study architecture if the program is good
- Because they know e many things that I don't know
- Hated the dissections
- Not interested
- Not something I want to pursue as a career
- I have other interests in other careers

Not sure: \((36\%)\)

**Why aren't you sure?**

- Because
- I'm not sure
- I'm kinda interested
- Because I rather be a hairstylist
- Because I want to work on computer science but I'm interested in the brain.
- Because I cannot remember
- Because I didn't like it so much but I liked the celebration
- Because i don't know
- Some of the toys were interesting, but I'm not really interested in the brain
- The brain is cool but seems complicated
- I don't know other what more is involved in the career
- I don't know what path I'm going to take in life & I don't know what I want to be when I grow up
11. Please indicate how much you agree or disagree with the following statements about the impact of the CEREBROedu program on you.

Youths' median ratings of agreement with statements about the impact CEREBROedu had on them

<table>
<thead>
<tr>
<th>Statement</th>
<th>Median Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>I know what neuroscientists do.</td>
<td>4.0</td>
</tr>
<tr>
<td>I think it is important to study the human brain.</td>
<td>5.0</td>
</tr>
<tr>
<td>I have a better understanding of what is involved in working toward neuroscience jobs/careers.</td>
<td>4.0</td>
</tr>
<tr>
<td>I could see myself as a neuroscientist.</td>
<td>3.0</td>
</tr>
<tr>
<td>I see neuroscience jobs/careers as an exciting career path.</td>
<td>4.0</td>
</tr>
<tr>
<td>I see neuroscience jobs/careers as a career path I could realistically do.</td>
<td>3.0</td>
</tr>
</tbody>
</table>

The final questions asked about youth demographics and job/career interest.

12. How old are you? *(range: 8-15, mean: 11.4)*

13. What is your gender (e.g., female, male)? *(female: 64%, male 34%, both: 2%)*

14. Are you of Hispanic, Latino, or Spanish background/origin?  
   ☑ Yes *(96%)* ☐ No *(2%)* Don't know *(2%)*

15. BEFORE the CEREBROedu program, what jobs or careers were you most interested in?

   Duplicate responses have been removed. Sample responses are below.
   - Cooker
   - Architect
   - Being a doctor (any type idk)
   - Gaming, Youtuber, and code
   - Engineer
   - in being a hairstylist
   - Computer Science
   - dissector
   - architecture
   - a chef
   - neurology cardio science
   - teacher
   - veterinary
   - police
16. What jobs or careers are you most interested in now?

_duplicate responses have been removed. Sample responses are below._

- cooker
- **Still Architect**
- Science
- **being a therapist or a doctor**
- the same ones
- Still engineer
- hairstylist
- **Still computer science/photography**
- I’m not sure
- architecture
- electrical technician
- neurology cardio science
- neuroscience or I want to be a teacher
- brain doctor
- veterinary
- math
- coding
- environmental engineer/accountant
- digital artist
- engineer/design
- pscologia
- I do not know
- veterinarian
- herbalist
- studying about the brain
- cosmetology

17. OUTSIDE of the CEREBROedu program, do you know any adults who work in a job/career in neuroscience or mental health?

- Yes (19%)
- No (38%)
- Not sure (44%)
Compilation of parent/guardian survey responses (N=44)

The first few questions asked parents/guardians about their experience at their Family Fiesta.

1. Please indicate how much you enjoyed each part of today’s Family Fiesta, using the scale from 1 (didn’t enjoy at all) to 4 (enjoyed a lot). If you didn’t do a part, you can circle NA (not applicable).

   **Median ratings of how much parents/guardians enjoyed each part of the Family Fiesta**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Scale from 1.0 (didn't enjoy at all) to 4.0 (enjoyed a lot)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroscience or mental health guest speaker(s)</td>
<td>4.0</td>
</tr>
<tr>
<td>Hands-on activities about the brain</td>
<td>4.0</td>
</tr>
<tr>
<td>The sharing of students’ work</td>
<td>4.0</td>
</tr>
<tr>
<td>The community organization tables</td>
<td>4.0</td>
</tr>
</tbody>
</table>

2. Please indicate how much you learned from each part of today’s Family Fiesta, using the scale from 1 (learned nothing) to 4 (learned a lot). If you didn’t do a part, you can circle NA (not applicable).

   **Median ratings of how much parents/guardians thought they learned from each part of the Family Fiesta**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Scale from 1.0 (learned nothing) to 4.0 (learned a lot)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroscience or mental health guest speaker(s)</td>
<td>4.0</td>
</tr>
<tr>
<td>Hands-on activities about the brain</td>
<td>4.0</td>
</tr>
<tr>
<td>The sharing of students' work</td>
<td>4.0</td>
</tr>
<tr>
<td>The community organization tables</td>
<td>4.0</td>
</tr>
</tbody>
</table>
3. Thinking back to each part of today’s Family Fiesta, what was most memorable in each case? What stands out for you at this point? If you didn’t do a part, you can skip to the next part.

Duplicate responses have been removed. Sample responses in each area are below.

**Neuroscience or mental health guest speaker(s)**
- We enjoyed their personal experiences and how they became into their careers.
- How some of the speakers were first generation grads and it’s possible to succeed even being low income
- Sol, Cristina, Nataly
- His very convincing form of his profession.
- Enjoy what they talked about their jobs and different experiences.
- Sol
- Personal stories of how each guest decided to work in areas of brain health.
- Because this company helps you open up the parts of your brain and be able to help others.
- The first speaker was very interesting. The last speaker was very informative.
- Good information for the entire family
- New knowledge of local resources
- The great information that was shared
- The many different ways to recognize the source and when it actually starts as young as a baby
- the most memorable parts were the invited neuroscience speakers
- very enthusiastic & motivating speakers. Open & introduced new information about psychology careers and how broad the branch can be
- one of the speakers spoke about using psychology for persuasion and I found that interesting
- The most memorable aspect was that they are people with passion to help the kids

**Hands-on activities about the brain**
- Absolutely loved hearing about dissecting a real brain!
- Balance, nerves
- Very interesting.
- I liked the activities the students showed us.
- Balance
- How your hand moves.
- Very fun.
- The brain thing.
- very fun
- opened a real brain
- liked the activity with the prosthesis
- when they cut into the the brain that was very interesting
- Learning the names of the different parts of the brain
- the representation of the brain with paper
- I liked the activity about measuring emotions
memorable
he liked to see the brain and how you can protect it.
The sheep brain
Great way to connect and show perspectives
Connecting the info to tangible experience
The dissection was great, EMG was awesome also
Very much enjoyed the interaction and learning
Mental health/brain breaks are important for all ages
the happiness and laughter of the children
the robotic arm was amazing; especially the optical illusions
being able to control the robotic arm
I liked to see how our brain brakes us
how are nerves work through our veins

The sharing of students' work
I enjoyed the collaboration amongst each other.
We did the "biter" test which was a surprise
Parts of the brain
Very good. Very safe to share your acquired knowledge.
Interesting to see how to teach the work.
The ideas and the responses.
I liked to see how the students worked as a team.
to participate
I liked the photos
the presentation of the brain with newspaper
chat about what my son learned that a good experience
very interesting. We learned about topics interesting to share at home
doing teams and investigations to learn more
I liked all activities
prosthesis
he was excited to see a real brain
Each child's perspective and delivery of information
The encouragement of the peers before and after each presenter.
The different type of personalities & presentations
Learning how each one is different and learning more
My child learned a lot throughout the camp
I enjoyed building towers with the kids
loved seeing a little of what they did
great to see what students learn and created
loved seeing what they have learned and projects they did
very well done
brave for sharing

The community organization tables
It was nice, but I feel that more fathers should've been here.
Very favorable to share
• Everything was very beautiful and interesting.
• I was able to meet people from the community
• Good and a lot of information.
• Well presented. Good information on available resources within community.
• New knowledge of local resources
• Nice setup
• Great resources with information
• fun as a family
• I learned a lot about the services offered
• the organizations are far from us but good to know
• very fun and interesting

4. Did you find any of the information presented today confusing, or did anything leave you wanting more explanation (e.g., about the brain or about neuroscience or mental health jobs/careers)?

Duplicate responses have been removed. Sample responses are below.

• Not really
• No.
• The provided information was in a vocabulary that was understood.
• scientific
• I liked it all
• To do well explain
• Everything was well presented. The videos of professionals were confusing, not very interesting.
• No. Information presented well
• I wish this program offered a follow up. It was great.
• The information was clear. The explanations were very clear and explained very well
• nothing confusing, but opened my eyes more to having my kid study neuroscience/mental health
• more explanation about the brain or more information about it
• yes; I would like to learn more about careers in psychology
• There were a lot of therapists but there's no other kind of work with brains (like surgeons or neurologists)
• Wanting to learn more about the different helps and educations needed
• not all right
• It was not clear
5. Please indicate how much you agree or disagree with the following statements about the neuroscience or mental health guest speaker(s) at today’s event, using the scale from 1 (strongly disagree) to 5 (strongly agree). If your speaker(s) didn’t do something, you can circle NA (not applicable).

**Median parent/guardian ratings about the neuroscientist or mental health guest speaker(s) at their Family Fiesta**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoyed hearing about their work (n=23)</td>
<td>5.0</td>
</tr>
<tr>
<td>I enjoyed hearing about their personal life (n=21)</td>
<td>5.0</td>
</tr>
<tr>
<td>I enjoyed hearing about their path to their job (n=23)</td>
<td>5.0</td>
</tr>
<tr>
<td>I enjoyed doing an activity with them (n=18)</td>
<td>4.5</td>
</tr>
<tr>
<td>They seemed comfortable talking with us (n=23)</td>
<td>5.0</td>
</tr>
<tr>
<td>They seems passionate about their work (n=23)</td>
<td>5.0</td>
</tr>
<tr>
<td>It was important to me that they were Hispanic (n=23)</td>
<td>5.0</td>
</tr>
<tr>
<td>I found them inspiring (n=23)</td>
<td>5.0</td>
</tr>
<tr>
<td>I felt my child(ren) could relate to them (n=23)</td>
<td>5.0</td>
</tr>
<tr>
<td>They were good role models for my child(ren) and their friends (n=23)</td>
<td>5.0</td>
</tr>
<tr>
<td>I would like my child(ren) to have the opportunity to meet with them again (n=23)</td>
<td>5.0</td>
</tr>
</tbody>
</table>
The next few questions asked parents/guardians about their experience in the entire CEREBROedu program.

6. Please indicate how valuable you found each of the following parts of CEREBROedu program, using the scale from 1 (not at all valuable) to 4 (very valuable). If you feel you aren’t familiar enough with a part to comment, you can circle (NA).

7. Please indicate how much you learned about the following topics from the CEREBROedu program, using the scale from 1 (learned nothing) to 4 (learned a lot)?

8. As a result of participating in CEREBROedu, how interested are you in the following topics on a scale from 1 (not at all interested) to 4 (very interested)?
9. Now that the CEREBROedu program is almost over, do you plan to follow up or look into any of the topics covered in CEREBROedu on your own (e.g., about the brain or about jobs/careers in neuroscience or mental health)?

All responses received in each area are below.

Yes: (97%)  

**What will you look into?**
- How to stay active and not lose more neurons.
- To keep my brain active despite age.
- I will research about the brain and autism. How the brain learns in children with special needs.
- Local therapists for my children.
- Mental health
- how to prevent Alzheimer's
- because it is interesting and I would like to learn about mental illnesses and how to prevent them
- I am interested in knowing more about brain diseases and what to do to prevent it
- more things about the brain
- activities to help prevent mental illnesses.
- i need more help
- about mental illnesses and how we can prevent or treat them
- More info about the brain and how it works and keep it healthy.
- Reading recommended books and exploring technologies available
- Clarity! Child guidance center!
- Yes, more about on learning disability to learn what challenges can be overcome.
- brain breaks for all ages, Alzheimer’s-learning more info
- mental health
- about the brain and mental health
- careers for my children
- about mental health
- I’ll do a little research online
- more about which schools are good for neuroscience
- I would like my son to see more.
- we currently go to therapy and want to break the stigma between mental health and men going to therapy

No: (3%)  

**Why don’t you plan to look into anything further?**

Not sure: (0%)
10. As part of the CEREBROedu program, have you had a chance to watch or use any of the following resources, or do you plan to soon? For each resource, please check one circle.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Already did</th>
<th>Plan to do soon</th>
<th>Don’t plan to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch the CEREBROedu role model videos (on the CEREBROedu website)?</td>
<td>11%</td>
<td>86%</td>
<td>3%</td>
</tr>
<tr>
<td>Watch the PBS documentary clips (on the CEREBROedu website) to learn about Alzheimer’s disease, epilepsy, or depression?</td>
<td>5%</td>
<td>92%</td>
<td>3%</td>
</tr>
<tr>
<td>Use the Family Guide to learn about Alzheimer’s disease, epilepsy, or depression?</td>
<td>31%</td>
<td>67%</td>
<td>3%</td>
</tr>
<tr>
<td>Use the Family Guide to talk about Alzheimer’s disease, epilepsy, or depression with your family members?</td>
<td>27%</td>
<td>70%</td>
<td>3%</td>
</tr>
<tr>
<td>Use the Family Guide to do hands-on activities about the brain at home with your family members?</td>
<td>19%</td>
<td>73%</td>
<td>8%</td>
</tr>
</tbody>
</table>

11. Please indicate how much you agree or disagree with the following statements about the impact of the CEREBROedu program on you and your child(ren).

Median parent/guardian ratings of agreement with statements about the impact CEREBROedu had on them and their children

Scale from 1.0 (strongly disagree) to 5.0 (strongly agree)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Median Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>I know what neuroscientists do.</td>
<td>4.0</td>
</tr>
<tr>
<td>I think it is important to study the human brain</td>
<td>5.0</td>
</tr>
<tr>
<td>I have a better understanding of what is involved in working toward neuroscience jobs/careers</td>
<td>4.0</td>
</tr>
<tr>
<td>I could see my child(ren) as a neuroscientist</td>
<td>4.0</td>
</tr>
<tr>
<td>I see neuroscience jobs/careers as an exciting career path for my child(ren)</td>
<td>5.0</td>
</tr>
<tr>
<td>I see neuroscience jobs/careers as a career path my child(ren) could realistically do.</td>
<td>5.0</td>
</tr>
</tbody>
</table>
The final questions asked about parent/guardian demographics and their jobs/careers.


13. Are you of Hispanic, Latino, or Spanish background/origin? ☑ Yes (95%) ☐ No (5%)

14. What is your relation to the student you attended with today?
   ☑ Mother (77%)
   ☑ Father (21%)
   ☐ Other (friend) (3%)

15. What kind of work do you do? ________________________________
   Duplicate responses have been removed. Sample responses are below.
   • Photography/director
   • Accounting Tech
   • Housework
   • Teacher. Mexico
   • Special education teacher.
   • Manager of a store.
   • Clinical Laboratory Scientist
   • Community work
   • Housewife
   • work at home
   • Childcare
   • gardening
   • work with dental patients
   • stay at home mom
   • Occupational therapy
   • Engineer
   • homeschool mom - run a homeschool co-op/group
   • stay at home mom
   • mechanical engineer
   • homeschooling/group fitness instructor
   • construction
   • Spanish teacher
   • clinic receptionist
   • homemaker
   • handy man construction
   • cleaning
   • In the house
   • administrative assistant

16. OUTSIDE of the CEREBROedu program, do you know any adults who work in a job/career in neuroscience or mental health?
   ☑ Yes (31%) ☐ No (46%) ☐ Not sure (23%)

17. Did you attend the welcome event at the beginning of the program?
   ☑ Yes (67%) ☐ No (33%) ☐ Not sure (0%)