

NYC iZone  
2016 –2017 Short-Cycle Evaluation  
Challenge (SCEC)

# BrainPOP ESL

Pilot Report  
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Prepared by

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## **BrainPOP ESL:**

### **Results of a Short-Cycle Evaluation in NYC's iZone Schools**

In Fall 2016, teachers in six New York City elementary schools pilot-tested BrainPOP ESL, an educational software product designed to help K–4 students learn basic English vocabulary. The schools and teachers were part of a larger initiative of the NYC Department of Education (DOE), the Short-Cycle Evaluation Challenge (SCEC), run by the DOE's Office of Innovation (iZone). This report, prepared by EDC, summarizes the results of the pilot test.

#### **About the iZone and the Short-Cycle Evaluation Challenge**

The NYC iZone helps New York City public schools personalize student learning using technology. With support from the Bill & Melinda Gates Foundation, the iZone leads the Short-Cycle Evaluation Challenge, an initiative designed to help educators learn to make better decisions about education technology, using evidence from 90-day pilot tests in their schools. In 2016-17, the program's third year, the SCEC brought together teams of teachers from 12 different iZone schools to learn about technology products that might help with a broadly shared goal—helping ELL students and others improve their grasp of English and/or world languages. Beginning in June 2016, and guided by iZone staff, teacher teams selected a program to use, learned about it from product representatives, created a pilot plan, gathered data as they implemented the tool over 12 weeks in the fall, went on inter-visitations to colleagues' classrooms, and met to analyze and summarize what they had learned.

#### **About EDC | Center for Children & Technology**

Education Development Center's Center for Children & Technology (EDC | CCT) is the iZone's research partner. In the 2016-2017 SCEC, EDC | CCT served as outside evaluator and evaluation coach to the school teams, gathering data on technology usage across schools, observing student use of the products in each school, and helping teams summarize evidence of student learning they were seeing. This report is one of six produced by EDC | CCT for the 2016-2017 Short-Cycle Evaluation Challenge.

## About the Product: BrainPOP ESL



Figure 1: BrainPOP ESL Home Screen

BrainPOP ESL is an English literacy program designed for English Language Learners (ELLs) that uses videos and interactive media to teach conversational English, grammar rules, and vocabulary. The videos feature two characters, Moby and Ben, and are levelled, meaning that each new video builds on past lessons and helps reinforce vocabulary and grammar. Teachers can access accompanying lesson plans and printable reading and writing activities for students to use in conjunction with the program. Students can begin the program by taking a placement test, which tells them at what level to begin. There are six units within each level, each of which has a related video and associated activities. The activities include digital flashcards, “Read It” and “Write It” activities, quizzes, and a feature called “Hear It, Say It” that lets students record and play back their own pronunciation of English phrases for comparison to the recorded example. Students are able to click to different levels or units without having completed the prior levels. Teachers can monitor students’ progress through the activities and quizzes via a dashboard.

- Grade range: K–5, or any of three levels of ELL (beginner, intermediate, advanced)
- Subject areas: English as a Second Language, ELA
- Targeted skills: Learning to read, write, and speak the English language
- Platform: [BrainPOP ESL web app](#)
- Devices: Laptop or desktop computer; iPad
- Pricing: First lesson of each unit free of charge
  - \$85/year—home access
  - \$150—classroom access
  - \$695—school access
- Compatibility/Integration: As a Web app, it works with Mac iOS and Windows. It is also available in the Apple app store and Android app store.

## About the Pilot Schools

BrainPOP ESL was tested in six NYC public elementary schools during the Fall 2016 semester. Table 1, below, summarizes the school demographics, indicating that the schools served relatively high percentages of low-income and Hispanic students.

**Table 1**  
**Demographics of Schools in the BrainPOP ESL pilot**

School <sup>1</sup>	Size & SES	Racial breakdown	Grades in pilot	# Ts in pilot	# Ss in pilot	Student learning goals at the start
<b>Little Neck Bay School</b>	583 students 68% eligible for FRPL <sup>2</sup> 16% SPED 8% ELL	2% Asian 26% White 67% Hispanic 3% Black	K	4	~25	Students will improve their ability to express themselves using a larger English vocabulary, describing objects or procedures, or conveying their experience thinking
<b>Gowanus Canal School</b>	1,446 students 84% eligible for FRPL	47% Asian 4% White 41% Hispanic 7% Black	K	1	~25	Engaging English Language Learners in learning
<b>Harlem River School</b>	441 students 100% eligible for FRPL	0% Asian 1% White 98% Hispanic 1% Black	K–5	5	~28	Explore ways to better support English Language Learners using technology
<b>North River School</b>	939 students 100% eligible for FRPL 14% SPED 48% ELL	56% Asian 15% White 25% Hispanic 3% Black	K–2	2	~3	Improve speaking skills by building vocabulary and sentence structure for lower level English speakers
<b>Flushing Bay School</b>	146 students 97% eligible for FRPL 30% SPED 6% ELL	4% Asian 1% White 28% Hispanic 65% Black	K–5	4	~70	Improve vocabulary and skill in independent reading and essay writing
<b>The Narrows School</b>	481 students 92% eligible for FRPL 7% SPED 9% ELL	3% Asian 1% White 14% Hispanic 72% Black	K–5	5	~5	-Decoding -Reading fluency and comprehension of simple sentences -Writing simple sentences with correct grammar -Pronunciation and enunciation of multisyllabic words

<sup>1</sup> All school names in this report are pseudonyms

<sup>2</sup> Free and Reduced Price Lunch

## BrainPOP ESL Pilot: Results in Brief

### Learning Goals

Pilot schools hoped BrainPOP ESL would help English Language Learners and struggling learners improve their English vocabulary, sentence structure, and confidence in speaking. Beyond this, schools' goals varied somewhat (see Table 1, above).<sup>3</sup> Over 8–12 weeks, teachers sought evidence of improvement in several data sources—observations of ELL students' classroom talk over time, tracking a single student and his/her language use over time, and looking at student quizzes and writing.

### Evidence of Educational Promise

BrainPOP ESL showed a modest degree of educational promise in this pilot, according to teachers' and students' assessments. Teachers cited evidence that the program helped improve English vocabulary and reading confidence for a handful of ELL students; however for the most part they did not see evidence of wider improvement in other, related learning outcomes, such as improved sentence structure, reading comprehension, pronunciation, and writing. An exception is the Flushing Bay School, where teachers reported in all 46 of their weekly logs that they saw evidence of student improvement, including in speaking and writing. In the other five schools, by contrast, teachers' weekly logs cited evidence of student learning only half the time (in 19 out of 36 logs, or 53%). As discussed below, the greater success of BrainPOP ESL in this school can likely be attributed to the way teachers used the program with ELLs — as part of a small-group, facilitated classroom model of use.

Students concurred with teachers about BrainPOP ESL's educational value. Overall, somewhat more than half (61%) said that the program helped them learn English.

Four features of BrainPOP ESL appeared to be key to its educational value for students, based on researchers' observations and teacher and student logs and surveys. These were (1) a placement test, which helped steer students to the most appropriate of three program levels; (2) a “Hear it–Say It” feature, which enabled some students to practice pronunciation; (3) a text-to-speech feature that helped with text comprehension; and (4) animated stories that were engaging for many ELLs.

### Appeal and Ease of Use

Teachers were divided over how easy BrainPOP ESL was to use. While around a third of respondents to a teacher survey (3 of 10) said they had few problems, most (7 of 10) cited two main challenges: students' need for fairly constant guidance in navigating among program activities, and the difficulty of setting up student accounts. Students, by contrast, were generally very positive in their appraisal of BrainPOP ESL's appeal and ease of use. In two schools, nearly all of the student respondents said it was easy (94%) and fun to use (91%).

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<sup>3</sup> Teachers also hoped the BrainPOP ESL pilot might help them improve aspects of their teaching, a secondary focus of the pilot. Half of the 14 teachers polled at an early workshop said they would focus on *using data to make decisions*, three said they would focus on *personalized learning*, and three said would focus on *differentiating their instruction*. One teacher said she would focus on *using data dashboards*.

## Recommendations

Based on teacher and student responses, some recommendations for improving BrainPOP ESL include the following:

- Enable easier setup of student accounts and login procedures.
- Enhance the teacher dashboard—for example, by giving teachers the ability to assign particular content to students within the program.
- Create clearer pathways for students to follow within a unit, so ELLs can use the product more independently, with less constant direction and support from the teacher.
- Retrieve and display richer data than quiz scores, which tend to focus on content mastery. Also, give students and teachers feedback on users' progress in language learning.
- Enable the sharing of student progress across teachers.

Recommendations for schools and teachers considering using BrainPOP ESL include two caveats:

- Consider that, in its current state, small-group, teacher-facilitated use of BrainPOP ESL may be more effective than independent student use of the product.
- Because BrainPOP ESL is intended for 1-to-1 use, be sure you have sufficient technology access, via tablets or laptops, and also robust connectivity.

## Findings in Depth<sup>4</sup>

### 1. Evidence of Educational Promise

#### 1a. Teacher assessment of student learning

Each week, teachers were asked to cite in a teacher log any evidence of student learning they had observed. Teachers at all six schools said that they saw evidence of student learning with BrainPOP ESL at some point during the pilot.

*Increased English vocabulary, and greater confidence in speaking English* were the most common areas of student learning cited in the teacher logs. Teachers reported seeing evidence of improved vocabulary and oral confidence in several data sources—observations of ELL students' classroom talk over time, tracking a single student and his/her language use over time, and looking at student quizzes and writing. Taken together, data from the teacher logs suggest that BrainPOP ESL may have helped improve students' English vocabulary in modest ways over the course of the pilot, and also may have led to increased comfort in spoken English for some students.

In their weekly log responses, teachers summarized some of the evidence of learning they saw during the pilot.

At *Little Neck Bay School*, teachers began to notice around the sixth week that students were repeating aloud words they were encountering in the program, and were clearly engaged.

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<sup>4</sup> Please see the Appendix for details about the data collection and the number of responses to each instrument.

6th Week: (11/18)

“Students recognized and used some vocabulary from lessons they did on BrainPOP ESL in class and during conversation”

At *North River School*, one teacher tracked a single student’s language use during the period she used BrainPOP ESL. By the second week, the student was using English words she encountered in BrainPOP ESL around the classroom. By the third week, the student was responding better to verbal directions. By the end of the pilot, the student was making self-corrections while working.

4th Week (11/4):

“The student is using more English words and speaking with others in English more comfortably.”

11th Week (12/16):

“The student is able to respond to the verbal cues without prompt. She is also making self-corrections when she is working. She is repeating things more in a more correct way.”

At *Flushing Bay School*, teachers noted that their typically struggling ELL students not only were engaged while using BrainPOP ESL, but also had passing scores on quizzes after the first week. As the pilot progressed, teachers reported seeing improved vocabulary skills, student engagement, passing quiz scores, and students becoming more verbal. In the last week, teachers said that students were able to use grammar they had learned, and were writing and reading more.

2nd Week (10/14):

“The student appears to be doing better in the assessments given.”

3rd Week (10/28):

“Students are learning new vocabulary, which they are transferring in their writing in the classroom.”

5th Week (11/11):

“My ELLs are getting more verbal. They are able to express themselves better. They will tell me that they look forward to using the product.”

10th Week (12/9):

“I see that my students are able to express themselves much better.”

At *The Narrows School*, in the last week of the pilot, a teacher said she observed several students using some vocabulary and action words from BrainPOP ESL, but noted that students still could not put together full sentences using the words.

### **Frequency of student learning evidence**

The frequency with which teachers reported seeing evidence of student English vocabulary learning varied across schools, as did response rates in submitting logs. Teachers at Flushing Bay

School said they saw evidence of student learning most frequently—about three to five times a week—in all 46 of the teacher logs they submitted during the pilot. Teachers in Little Neck Bay School and North River School shared fewer teacher logs, but said that they saw evidence of student learning in eight and seven instances, respectively. Teachers in The Narrows School and Harlem River School completed fewer logs (three and six, respectively), and cited evidence of student learning in two of them.

School	Logs citing observations of student learning
Flushing Bay School	46 out of 46 logs submitted (100%)
Little Neck Bay School	8 out of 18 logs submitted (44%)
North River School	7 out of 9 logs submitted (78%)
Harlem River School	2 out of 6 logs submitted (33%)
The Narrows School	2 out of 3 logs submitted (66%)

### ***When during the pilot did learning occur?***

In two of the five schools, evidence of student learning with BrainPOP ESL did not appear right away, but emerged only in the latter half of the pilot. In Little Neck Bay School and Harlem River School, teachers and students spent the first weeks of the pilot getting to know the tool, without seeing much learning occur, but teacher logs cited evidence of student learning in weeks 7–12. In contrast, teachers at North River School and Flushing Bay School reported that the product was meeting student learning goals over the entire course of the pilot.

In sum, teachers’ observations suggest that BrainPOP ESL may have helped improve students’ English vocabulary in modest ways during the course of the pilot, and also led to increased comfort in spoken English for some students.

### **1b. Student assessment of learning**

In online questionnaires, **students were positive about their learning experiences using BrainPOP ESL; however, only a slight majority agreed that the program actually helped them learn English.**

Two of the five schools, Flushing Bay School and Harlem River School, had 53 students complete an online survey.<sup>5</sup> Thirty students (61%, n=49) said that BrainPOP ESL helped them learn English. Forty-four students (86%, n=51) said the program helped them to learn in a way that they liked. Thirty-nine (76%, n=51) said it made them more interested in learning English, and 41 (80%, n=51) said BrainPOP ESL helped them understand what they read.

In their open-ended comments, students mentioned ways BrainPOP ESL **helped make learning English and other topics more engaging for them.**

“I like using BrainPOP [ESL] because it helps me understand some words for reading and writing.” —4th-grade Girl

<sup>5</sup> Response rates varied by question, so percentages were calculated according to how many respondents answered each question. Teachers were instructed to only have students in 3<sup>rd</sup> grade and above who were not newcomers complete the online survey, due to the reading and writing demands of the survey. However, teachers could opt to have a class discussion with their students about their experiences with the product instead.



“I like BrainPOP [ESL] because it’s very fun to use and it’s a fun way to learn many different topics.” —3rd-grade Boy

At Flushing Bay School, where implementation was most robust, nine students participated in a class discussion about the product with their teachers. All nine said that **BrainPOP ESL helped them learn**. Students said they liked the videos, learning vocabulary words, and the quizzes. One student said it helped him “to speak English” because the program repeats words. Another student said that it helped him learn to say words because you could click on the word to hear it.

At Little Neck Bay School, both students who participated in class discussions about the product said **BrainPOP ESL helped them learn, but they both said that it could be very hard at times**.

## 2. Appeal/Ease of Use

Teachers were divided over how easy BrainPOP ESL was to use for them; students, however, found it fun and easy to use.

### 2a. Teacher appeal/ease of use

Six of ten teachers found BrainPOP ESL **challenging** to use in the classroom. They most often cited **students’ fairly constant need for support** in using the product; they said it was hard for students to work independently with the tool, as they had hoped they would. In addition, three out of ten teachers said that the **logistics and account setup were very difficult**.

“I am not able to use this product for what it offers. Whether it’s me or other factors, time is not on my side. I am not able to have a system for my students to use this product regularly nor independently.”

In their logs, teachers most often cited **technical challenges in setting up and managing accounts** as a frustrating barrier. It appears that teachers who made more use of the tool got past the technical challenges faster.<sup>6</sup> Little Neck Bay School and Harlem River School reported having the most technical challenges—and they also used the tool the least.

“I am having trouble trying to get my students on the product and fit it into my daily schedule.”

Reported technical challenges decreased among schools who were more robust users of program; for example, Flushing Bay School frequently reported having no challenges (24 of the 51 log responses, or 47%).

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<sup>6</sup> Although it is possible that technical challenges caused low usage rates in some schools, it could also be that technical challenges tended to be accompanied by low usage rates because of other factors, such as low teacher capacity in technology use.

### **Placement test and leveling**

Flushing Bay School teachers found some issues with the leveling of the product; for example, some students tested at level 1.1 and found that level too easy, while one student could not move past level 1.1.1 because it became too difficult too quickly. The lesson was dealing with the word *not*—as in, “What is *not* a cat?” and the student found this confusing and counterintuitive. Another teacher at Flushing Bay School used the writing worksheets, but wanted to see more writing examples within the product, such as examples “telling students how to formulate a question or sentence similar to what they are going to write.”

“The students using this product are true beginner ELLs, so they need more assistance than I realized when using the product.”

### **2b. Student appeal/ease of use**

**In online surveys, upper elementary students were largely positive about BrainPOP ESL’s appeal and ease of use.** Fifty out of 53 student respondents (94%) said that BrainPOP ESL was easy to use, and 50 out of 51 (98%) said it was fun to use. Fifty-one out of 52 (98%) students said they liked using BrainPOP ESL. When asked in an open-ended question why they liked or didn’t like BrainPOP ESL, five out of 46 students said they liked the quizzes, five said they liked that it helped them “understand,” and 14 students said they liked the games. Four students said that it was too easy.

“I like using BrainPOP [ESL] because it makes me learn new things and I learn the lessons just right.”

“I like using BrainPOP [ESL] because it helps me understand some words for reading and writing.”

Teachers concurred that BrainPOP ESL was appealing and engaging for students—especially the videos, which are at the core of the program

Teachers of students in grades K–2 reported that BrainPOP ESL was more challenging for those students because of navigation difficulties and the amount of reading required. After polling her younger students and observing them, one teacher mentioned a specific challenge.

“BrainPOP ESL is great—I just have trouble letting the student work on it by herself, as she still needs much guidance, which takes up my time or another student's time. I wanted the program to guide her a little more.”

— 1st-grade  
teacher

### 3. Use of BrainPOP ESL

#### 3a. How BrainPOP ESL was used

Researchers observed two broadly different ways of using BrainPOP ESL in the classroom— independent student use, and small-group, facilitated use.

##### ***Independent use***

In 5 of the 6 pilot-test schools, independent use predominated. In this mode, teachers hoped the program would provide useful remediation for the small number of ELL students in their classes, so they assigned these students to use BrainPOP ESL by themselves, during regular class time, while the rest of the class worked with other materials, either print or electronic. Teachers hoped that BrainPOP ESL would give struggling ELLs—and sometimes Special Education students—the supports they required to work independently on English language vocabulary and grammar. Teachers often told students to start with a particular topic, or to pick up where they had left off last time, but beyond this, they gave students little explicit guidance; often, the teachers themselves were not familiar with the program’s content. They hoped that the program itself would be sufficient to differentiate instruction for their ELLs.

Here are two sample observations.

- A third-grade teacher has pulled two or three students from class to work on BrainPOP ESL in the computer lab. Students spend 30 minutes working on individual desktop computers, with their headphones on. They have little interaction with the teacher, except for asking what part of the program to click on next.  
(—Observation note)
- Half-way through a period devoted to group reading, a fourth-grade teacher breaks the class into smaller groups and gives four ELL students tablets to use BrainPOP ESL.  
(—Observation note)

##### ***Small-group, facilitated use***

In Flushing Bay School, the five teachers devised a different approach. These teachers were not confident that their young students would succeed on their own with BrainPOP ESL. Rather than look to the tool alone to provide ELLs the supports they needed, teachers spent time together familiarizing themselves with the program’s content and selecting the parts they felt were well-suited to their ELL and Special Education students’ needs. Having printed out accompanying worksheets for “Read It!” and “Write It!” activities (see Figures 3 and 4, below), teachers then worked with students in small groups of four to six, had them watch the selected videos, and then guided them in follow-up activities, including diagnostic questions and answers and reading and writing extensions using the worksheets. These were not “better” teachers, but their approach required them to do more planning, to know the program better, and to work to rearrange class schedules so they could work alone with small groups of ELLs.

Figure 3: Read It! Activity

Figure 4: Write It! Activity

Here are sample observations.

- The teacher has gathered ELL students in groups of two to five students each. Students begin by watching the unit’s video, then move on to printed resources (“Read It!” and “Write It!” activities) the teacher has supplied. The teacher moves among groups helping students with the worksheets. (—Observation note)
- After watching the video as a class and completing the worksheets, students take the quiz at the end of the unit. When they are finished, the teacher goes over the answers with the class, having each student first share his or her answer and then explain their reasoning. (—Observation note)

### Effectiveness of usage patterns

Researcher observations suggest that **the small-group, facilitated approach was more effective for student users** of BrainPOP ESL than was independent use. Students in the small-group classrooms were deeply engaged with both language and content learning, actively participated in verbal interactions with the teacher and their peers, and produced written work (in the “Write It!” activities) reflecting their learning. They also made more active use of the software on their own. For example, students in the small groups felt comfortable putting on headphones and using the “Hear It/Say It” feature to practice saying English phrases aloud and to compare their own pronunciation to a model example. By comparison, students who worked independently in a classroom of more fluent English speakers were reluctant to speak English phrases aloud in front of their peers.

Several issues made independent use challenging for students and teachers. First, most teachers reported that **students needed too much help and assistance to use the program**; they were not really able to use it independently, as hoped. This was due in part to ELL students’ need for greater help using passwords and menus; but even more so, it was because the

program’s activity structure was open-ended, giving students more choices than they knew what to do with. For example, once they had watched a video in a particular lesson, students often were uncertain about what they should do next, and either sat idle waiting for the teacher to come and direct them or simply rewatched the video. The program’s lack of a clearly sequenced pathway meant that students used time unproductively, or else had to constantly seek assistance from the teacher, who was therefore unable to attend to other students in the classroom.

As a result, researchers noted that many students who used the program independently were (a) only watching videos, and often repeating the same video; (b) choosing follow-up activities more or less randomly; (c) sometimes misreading onscreen text; and (d) clicking through activities without understanding their intent or purpose.

### 3b. Students who used BrainPOP ESL

Overall, **207 PK–5 students** used BrainPOP ESL as part of the pilot study. The great majority of these were designated as English Language Learners and/or Special Education students.<sup>7 8</sup>

**Table 2**  
**Number of participants in each school, by type**

School Name	# of Teachers	Total # of Students	# of ELLS	# of SPED
Little Neck Bay School	4	32	31	14
Gowanus Canal School	1	5	2	2
Harlem River School	3	40	37	0
North River School	2	6	6	2
Flushing Bay School	4	114	32	22
The Narrows School	2	10	9	2
<b>SCEC TOTAL</b>	<b>16</b>	<b>207</b>	<b>117</b>	<b>42</b>

#### **Student users mostly spoke Spanish or English at home**

For example, among students from Harlem River School who completed the online survey, 87% (41 out of 47)<sup>9</sup> spoke Spanish at home, around three-quarters spoke English (34 of 47), and one

<sup>7</sup> Special Education students were included in user populations when teachers felt they were struggling with speech or language expression in ways that BrainPOP ESL’s supports might help address.

<sup>8</sup> The number and type of students using the product varied greatly by school and teacher. At Flushing Bay School, three teachers used the product with three to eight students each over the course of the pilot, for a total of 18 students (eight were ELLs and 10 were Special Education students). In the same school, another teacher used the program with 70 students. At Little Neck Bay School, three teachers reported using BrainPOP ESL with four to five students each, and one teacher reported using it with 19 students. Among these students, 20 were ELLs and 10 were Special Ed students. At Harlem River School, only one teacher responded, saying she used BrainPOP ESL with 28 students, 23 of whom were ELLs. North River School reported using it with two students, both of whom were ELLs and Special Ed. One teacher at Gowanus Canal School used it with 25 students.

<sup>9</sup> Students were allowed to select more than one language on the survey.

spoke Haitian Creole. At Flushing Bay School, two out of five students spoke Spanish, two spoke Arabic, and one spoke English.

### ***Classes in which the product was used***

Most teachers in the pilot who answered a survey question about their classes (6 of 11) used BrainPOP ESL in *English as a New Language* classes. Two used it in *English Language Arts* classes, and one used it in *Special Education* classes.

### **3c. Amount of BrainPOP ESL usage**

#### ***Frequency of use***

Teacher logs suggest that most **students used BrainPOP ESL about once a week** during the pilot. Usage was more robust in weeks two to eight of the pilot, and dropped off slightly in the following weeks. As expected, usage varied among schools. On the high end, the four teachers in Flushing Bay School reported student use of BrainPOP ESL in a given week in a total of 43 weekly log responses over the course of the pilot. The four teachers in Little Neck Bay School reported using the product with students in a given week in 18 log responses. In North River School (two teachers), Harlem River School (four teachers) and Gowanus Canal School (one teacher), teachers reported using BrainPOP ESL in 10, 9, and 8 log responses, respectively. The Narrows School teachers had only 5 logs reporting student use in a given week between two teachers.

#### ***Duration of use***

Students generally spent the equivalent of one class period a week on BrainPOP ESL during weeks that they used the product. As shown in Figure 2, below, in most cases students spent 45–60 minutes per week on the program (28 of 93 log responses). In a quarter of the instances, students used BrainPOP ESL for a shorter period, about 15–30 minutes each week (25 of 93 responses). In another quarter of the instances, students used it for an intermediate period, 30–45 minutes (23 of 93 responses). Few teachers said students used the product for over an hour a week (8 of the 93 responses).<sup>10</sup>

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<sup>10</sup> Again, usage varied by school. Flushing Bay School students used BrainPOP ESL most robustly, for 45–60 minutes a week, while Little Neck Bay School students more typically used it for 30–45 minutes a week. Students in Gowanus Canal School typically used it for 15–30 minutes, while at North River School, students used the product for the shortest period of time, usually less than 15 minutes a week.

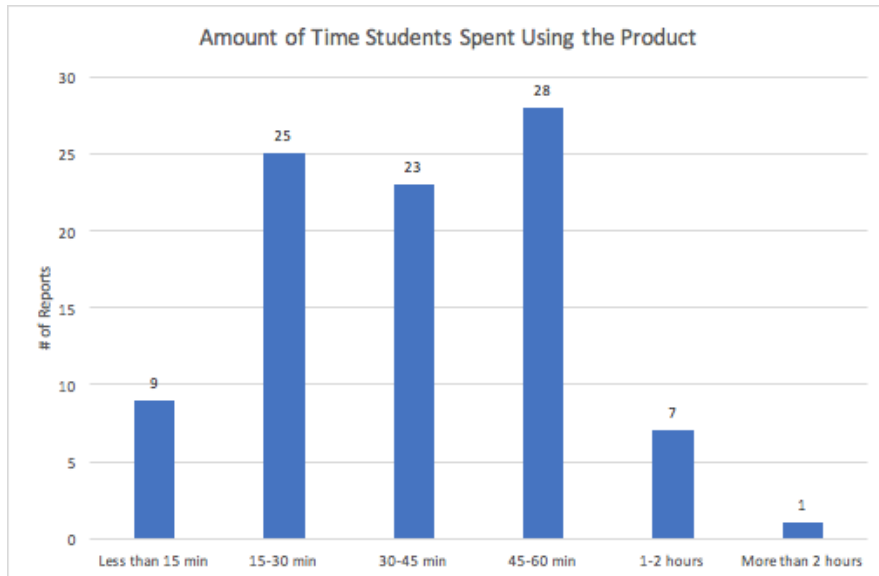


Figure 2: Amount of time spent using BrainPOP ESL in weeks that the product was used

## 4. Teacher Preparation and Effort

### 4a. Teacher learning about the tool

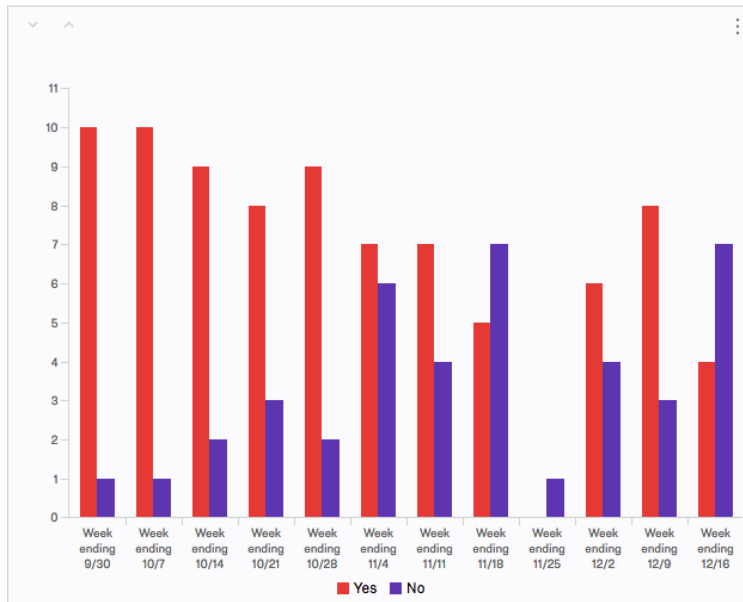
Teachers largely figured out how to use BrainPOP ESL on their own, rather than through formal professional development. **Most teachers who answered a survey question about professional development (8 of 11) said their only professional development around the product was a brief overview of it from the company representatives at the iZone workshops.** Two said they had a more in-depth overview at the workshops, and one said she participated in online training via a webinar.

**Teachers rated the company training as only moderately helpful.** A slight majority of teachers (6 of 11) said the training was somewhat helpful. Three teachers, all from Flushing Bay School, said it was helpful, and two said it was not helpful. Explaining their ratings, the two teachers noted that the company representatives they worked with were unable to answer technical questions because they were sales representatives.

**Teachers mostly learned to use BrainPOP ESL on their own in the first 6–8 weeks of the pilot.** However, a minority of teachers said their learning continued throughout the pilot study. In their logs, teachers most frequently reported spending between 15–45 minutes learning to use the program during the week (43 out of 64 logs).

### 4b. Preparation and planning

**Teachers spent time in instructional planning around the use of BrainPOP ESL throughout the pilot.** Figure 5, below, shows that during the first five weeks of the pilot, the great majority of teachers spent time planning or preparing to use the product that week. As the weeks went on, the number of teachers who were planning each week decreased somewhat. Despite this, there were only two weeks where the majority of teachers did not plan.



**Figure 5: Teachers who reported spending time planning around BrainPOP ESL each week**

Across schools, teachers said they spent much of their planning time scheduling the use of BrainPOP ESL. However, teachers in five of the six schools spent this time managing technical and device logistics, rather than preparing to use BrainPOP ESL instructionally (since, as mentioned above, these teachers typically had ELL students use the program independently, with little specific guidance.) Teachers in Little Neck Bay School, Harlem River School, and Gowanus Canal School reported spending between 15 and 45 minutes per week managing technical logistics—getting the program installed on tablets or desktops, managing student accounts, and so on. In contrast, teachers at Flushing Bay School spent most of their planning time on scheduling students’ access to the program, and on true instructional planning. They reported spending up to 45–60 minutes per week in group meetings where they brainstormed ways to squeeze in more student time with BrainPOP ESL, reviewed and selected content within the product to focus on with students, and printed out worksheets to guide student reading and writing.

#### **4c. Teachers’ use of BrainPOP ESL’s student data**

The BrainPOP ESL teacher view is designed to allow teachers to track students’ progress on activities and quizzes so that they can adjust their instruction as needed. Like other BrainPOP products, the ESL product incorporates “My BrainPOP,” a reporting system in which students submit their scores on the placement test and on quizzes, so that teachers can see and evaluate them. For each student, teachers can see what activities they completed and their score on any multiple-choice quiz (represented as a fraction—for example, 8/10 or 3/10). Teachers also can see the aggregate scores for all students on any quiz. However, with BrainPOP ESL, the number of ELLs in a class working on the same quiz at any time is so low that this functionality does not make a lot of sense; the main use is reviewing individual students’ progress.

**Teachers’ use of the data dashboard varied, but was generally quite low**, as shown in Figure 6, below. Two teachers—one at Little Neck Bay School and one at Flushing Bay School—said they looked at the data dashboard more than once a week. Most respondents either looked at the it once or twice over the course of the pilot (3 of 11), or not at all (2 of 11).



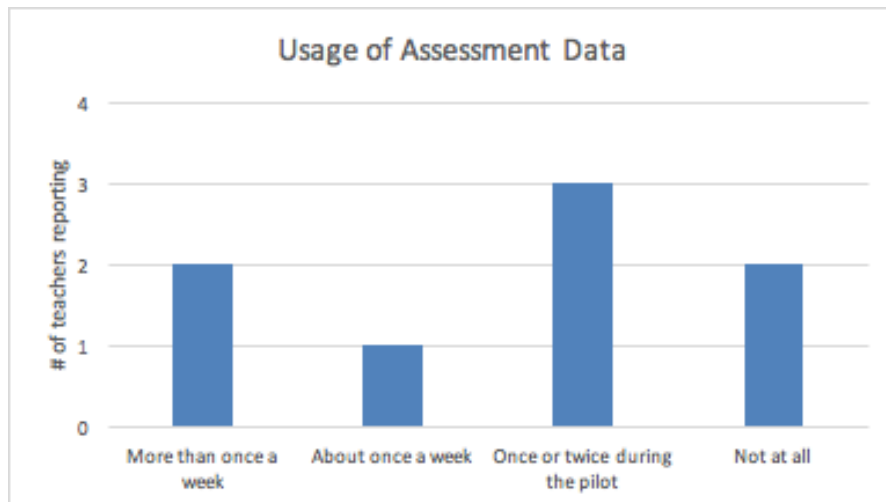


Figure 6: How often teachers looked at the BrainPOP ESL dashboard

Of nine teachers reporting on their use of the data tools, **four said that the in-product student data was not useful, three found it somewhat useful, and two said it was useful.** This mixed review reflects the fact that teachers found one feature of the student reports—the placement tests — helpful, while two other features were not helpful.<sup>11</sup>

### Placement tests

In interviews, teachers reported that students’ placement test results were the most valuable student information they found on the dashboard. They said the placement tests often confirmed in a helpful way other assessments of ELL’s ability level (though not always—see above), and helped them in initially directing students to Level 1, 2, or 3 of the program. Beyond this, teachers said the data often were not very helpful.

Corroborating this, teacher logs show that teachers looked at in-product student data most frequently in the first three weeks (when the placement tests were being used), accounting for 30% of all planning activities across the schools (25 of 83 logs reported using in-product assessment data).

### Quiz scores

Teachers said they found quiz scores insufficient for understanding individual students’ progress. As summary scores of knowledge (e.g., on a topic like “Gerunds,” students might get a score of 4/8), the scores left too much unanswered about where students—particularly ELLs—might be struggling: With decoding instructions or text? Comprehension of verbal speech? Pronunciation? As one teacher wrote,

“Retrieving and displaying more data (instead of just quiz results) will greatly influence the effectiveness of the program.”

<sup>11</sup> It should be added that in this 8–12-week pilot, teachers likely remained unaware of other features of My BrainPOP that could be useful in a more robust implementation.

### ***Inability to link teacher accounts***

Several teachers said they were troubled by their inability to link teacher accounts so that a student's progress is seen as cumulative and can be viewed by multiple teachers. They noted that this is especially important in a product for ELLs, who work on the same program across classes, teachers, and subjects.

"Data cannot be shared between teacher accounts, which is problematic when students are using an ed tech product across multiple classes/teachers/subject areas."

## **5. Recommendations**

### **5a. Improving the product**

As discussed above, teachers had many positive things to say about BrainPOP ESL as a learning tool for their students. In the final survey, they cited three features as being especially effective for ELLs:

- Videos that are highly engaging for ELL students (3 of 8 respondents)
- Text-to-speech, and Hear It/Say It features, that help ELLs comprehend and reproduce written and spoken English (3 of 8 respondents)
- Being able to use the program across content areas, which made it helpful for differentiation (2 of 8 respondents)

"The verbal aspect of this product is great—students need to hear the English language spoken correctly."

That said, **teachers also saw four key ways BrainPOP ESL could be improved.**

- *Easier setup of student accounts and login procedures.* Four of 10 teachers responding felt that the extensive setup time made it difficult to take full advantage of the product or fit it into their routine, especially in the critical first few weeks.
- *Ability to assign particular content to students within the program* (i.e., a more robust teacher dashboard).

"I would like to know how to assign work to my students. I know I can create a quiz and assign the quiz to them; however, how can I assign other tasks to my students?"

- *Clearer pathways for students to follow within a unit*, so ELLs can use the product more independently, with less constant direction and support from the teacher.
- *Retrieval and display of richer data* (more than just quiz scores) and *ability to share student data across teachers.*

"I'm disappointed that the teacher dashboard is not as developed as it would need to be in order to fully utilize BrainPOP ESL. There are a lot of missing pieces and it is not user friendly."

Students, by contrast, had one main recommendation in the final survey: in open-ended survey comments, 6 of 40 students said they wanted **more games**, making it the most common suggestion for improvement (the remaining open-ended comments either said BrainPOP ESL did not need any changes, or made more isolated suggestions such as including more math, recommended by 3 students).

### **5b. Improved teacher support**

Four of ten teachers said BrainPOP representatives were helpful and responsive to their needs during the pilot period. Most however, said they could have used more effective support. Two kinds of support were at the top of the list of what teachers said they would like:

- professional development that models more aspects of the product—such as navigation through units and using data (6 survey respondents)
- more direct access to BrainPOP technical support staff, rather than sales staff, for answering logistical and technical questions (6 respondents)

### **5c. Recommendations for Schools**

Pilot schools generally appeared to do a good job of supporting their teachers in conducting their short-cycle evaluation of BrainPOP ESL, by contributing planning time and collaborative colleagues. However, teacher logs suggest that over time, teachers became more aware of gaps in school support for their technology pilot test. Teachers said their pilot would benefit from

- better access to technology, such as tablets and laptop carts
- more consistent principal support for scheduling changes required for the pilot
- more consistent network connectivity

“With the strict schedule of our school, I am still having a hard time trying to figure out the best time to have the students go on this product and how to organize the time.”

Finally, EDC researchers would like to underscore a key finding from the pilot: **Small-group, teacher-facilitated use of BrainPOP ESL appeared to be more effective than did independent student use of the product.** When teachers worked together to make BrainPOP ESL a shared, small-group experience for ELL students—asking them to read, talk aloud, and write about what was happening on-screen, giving them feedback on their responses, or having them practice pronunciation with headphones while in all-ELL groups—students were more consistently engaged with the materials and showed more consistent evidence of English vocabulary learning. When teachers had ELL students work on BrainPOP independently, without much guidance, students—particularly younger ones—frequently became stalled or sidetracked, and did not actively process the material.

Our recommendation, then, is that teachers provide students with more, rather than less, guidance in using BrainPOP ESL. Unless and until BrainPOP ESL incorporates more guided activity sequences and pathways within each unit for learners, teachers should (a) spend time selecting those parts of the program they deem most useful for students; (b) view these with small groups of students; (c) actively check for student understanding through dialogue; (d) use the printable worksheets to have students write English words and their meanings; and (e) give students feedback on their written and spoken English words.

## Appendix:

### Data Collection Methods and Number of Responses

#### Methods

EDC|CCT’s methodology in this evaluation was partnership-based, in keeping with the principles of Improvement Science (Bryk, Gomez, Grunow, & LeMahieu, 2015), an approach to school improvement embraced by the NYC Department of Education throughout the period of the project. In essence, while EDC|CCT researchers took responsibility for gathering, analyzing and summarizing data across the school teams, each teacher team was engaged in practitioner-led cycles of learning about their tool and its value for students, given their particular goals. At the outset, SCEC program administrators and EDC|CCT researchers worked with the 10 teacher teams to refine their local goals for each tool in relation to student learning, and to identify the data they would use, in regular team meetings, to assess students’ progress. In turn, EDC|CCT collected five types of data on the progress and outcomes of the pilot: 1) *Workshop questionnaires* completed by teachers at the beginning and middle of the project gathered baseline data on teachers’ knowledge, skill and comfort evaluating new technologies. 2) In weekly *online logs* teachers described their use of the tool and any evidence of student learning they had found. 3) In visits to some of the schools, researchers *observed* students’ and teachers’ classroom use of the tools, and *interviewed* teachers for their interim assessments. 4) Teachers administered a *student questionnaire* that probed the tool’s appeal and learning value for students. And 5) a *final teacher questionnaire* gathered additional usage data as well as data that enabled pre-post comparison of teachers’ (self-described) skills and knowledge in evaluating new technologies. The number of teacher and student responses varied by instrument, as shown in Table 3. Response rates varied for a number of reasons. For example, workshop survey response rates depended on workshop attendance, and only students who were in grades three and above and who had at least basic proficiency in English were asked to take the online student survey.

**Table 3**  
**Teacher and student number of responses, by instrument type**

Teacher Response Rates	
Total Participating Teachers	16
Workshop 1 Teacher Survey Responses	9
Workshop 2 Teacher Survey Responses	15
Workshop 3 Teacher Survey Responses	11
Final Teacher Survey Responses	11
Logs Completed	125
Teachers Who Completed Logs	16
Student Response Rates	
Total Participating Students	207
Student Survey Responses	59

To understand how much each tool was used, with which students, EDC|CCT tabulated usage data gathered across all sources. To understand the educational promise of each tool, EDC|CCT factored in teacher and student assessments of student learning (including the amount and quality of evidence of learning reported by teachers in their weekly logs), and researchers' own observations. To understand the appeal and ease of use of the tool, EDC|CCT combined data gathered across all sources, from teachers and students. To understand the level and type of effort teachers put into learning and adapting the tool for classroom use, EDC|CCT analyzed data from the questionnaires, weekly logs, and interviews.

## References

Bryk, Anthony S., Louis M. Gomez, Alicia Grunow, and Paul G LeMahieu. *Learning to Improve: How America's Schools Can Get Better at Getting Better*. Cambridge, MA: Harvard Education Press, 2015