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Submitted by:
Betsy McCarthy, Ph.D.
Steve Schneider, Ph. D.
Michelle Tiu
Sara Atienza
Lisa Michel
Danielle Yumol
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This report describes WestEd’s formative evaluation activities for the Ready to Learn grant from October 2010 to September 2011. Funded by the U.S. Department of Education, the Ready to Learn grant supports the development of educational television and digital media targeted at preschool and early elementary school children and their families. The general goal of the Ready to Learn grant is to promote early learning and school readiness, with a particular interest in reaching low-income children. In Year One, WestEd’s formative evaluation efforts supported Ready to Learn joint grantees, the Corporation for Public Broadcasting (CPB) and the Public Broadcasting Service (PBS), as they created and delivered a next-generation educational ecosystem of integrated transmedia content in literacy and numeracy that is aligned with rigorous academic frameworks and research.

During Year One of the Ready to Learn grant, WestEd conducted a series of research studies, which included:

**PBS Transmedia Gaming Suite Pilot Studies:**
- WestEd pilot tested six transmedia gaming suites associated with established PBS properties: Sid the Science Kid, The Cat in the Hat, Curious George, Dinosaur Train, Fetch!, and Fizzy’s Lunch Lab. In total, the six transmedia gaming suites consisted of 49 different games that could be played on computers, interactive whiteboards (IWBs), smartphones, tablet computers, and other mobile digital devices. The six suites covered a variety of content targeted towards preschool and early elementary aged students, such as spatial reasoning, measurement, sorting and classifying, counting and cardinality, patterns, and shapes. Pilot testing took place in two preschool classrooms, three first grade classrooms, and two out-of-school-time afterschool sites. Researchers provided media devices to participating classrooms and collected quantitative and qualitative data while observing and interacting with students and media devices in the classroom. Findings indicate the transmedia gaming suites are highly engaging for students and are closely aligned with preschool and early elementary academic standards. Data and observations suggest students are learning mathematical concepts and skills targeted by the gaming suites, but lack of technology capacity in the classroom and technological knowledge are significant barriers for future use of the suites in preschool and elementary school settings.

**Evaluation of The Electric Company Summer Learning Program:**
- WestEd collaborated with Sesame Workshop to conduct a formative evaluation of The Electric Company (TEC) Summer Learning Program. The study took place in diverse summer programs throughout the United States and involved 16 teachers and 152 students ages 6 to 8 years old. Researchers collected extensive qualitative and quantitative
data from study classrooms, which included standards/skills aligned surveys, student interviews, teacher surveys, teacher interviews, classroom observations, and student website usage data from Google Analytics. Findings indicate significant gains in student knowledge of mathematics vocabulary, numeracy skills, and phonics skills. Fourteen out of 16 participating teachers reported that students progressed or grew significantly in the area of “motivation and confidence to engage in learning activities” related to both mathematics and literacy. Fifteen out of the 16 teachers reported that they would use TEC curriculum again, and 15 out of the 16 teachers reported that they would recommend the curriculum to other summer school or afterschool teachers.

Needs Assessment Study:

» WestEd implemented three comprehensive needs assessments in schools and in out-of-school-time programs with underserved preschool to 3rd grade (PK-3) students. The purpose of these needs assessments was to determine the schools’ and programs’ readiness to implement public educational transmedia on a variety of platforms and to communicate with parents and guardians about their child’s progress using the technology. Each needs assessment study focused on one of the following three areas: methods for communication with parents of PK-3 children, access to and capacity for IWB technology in PK-3 schools and programs, and access to and capacity for other technologies in PK-3 schools and programs.

» Data collected measured the capacity and interests of participants with regard to educational technologies such as computers, IWBs, tablet computers, and other mobile digital devices, as well as digital content for these devices. Data were collected from parents, teachers, and non-teaching district and school staff (e.g., principals, IT coordinators, and curriculum and instruction specialists) throughout the country via surveys, interviews, and focus groups. The results of the needs assessments suggest that there is a strong interest in using technology in PK-3 classrooms. Additionally, results identify potential areas for effectively developing educational digital content for low-income schools and families. At the same time, there are still enormous challenges to reaching parents, teachers, and students in underserved communities using technology. Low-income families have limited access to digital media, schools frequently do not have access to reliable computers and technologies like IWBs or mobile digital devices, and teachers need training and support to effectively integrate digital media into instruction.
SUMMARY OF YEAR ONE STUDIES

This section details the activities and key lessons learned from the three major research studies from Year One of the Ready to Learn grant.

TRANSMEDIA GAMING SUITE PILOT STUDIES

» Transmedia gaming suites are comprised of thematically linked content presented across formats (e.g., short-form videos, online games, mobile phone activities, in-classroom digital games) and across media devices (e.g., computers, interactive whiteboards, tablets, mobile digital devices). In collaboration with curriculum experts, PBS has developed transmedia learning content in math and literacy that is highly engaging for children aged 2-8 and that translates across various technology devices. To ensure consistency across platforms, teams of television producers for each PBS property, online game developers, and content and mobile experts collaborated to develop the narrative arcs and content plans for the transmedia gaming suites, which included computer games, mobile applications, interactive whiteboard (IWB) activities, and embedded video content.

» The goals of the pilot testing were to identify early evidence of student learning and engagement with the content, to determine usability and technical issues, to provide suggestions for the next round of product development, to elicit teacher’s perceptions of the suites, and to understand how transmedia gaming suites fit into the classroom environment. The pilot testing of transmedia gaming suites is important because it contributes to our knowledge of the efficacy and practicality of transmedia gaming suites in education.

» The pilot testing of six PBS transmedia suites took place from June 2011 to September 2011. Four suites were piloted in preschool classrooms for the following PBS properties: Sid the Science Kid, The Cat in the Hat, Curious George, and Dinosaur Train. The Fetch! and Fizzy’s Lunch Lab suites were piloted in three first grade classrooms and two out-of-school-time afterschool sites.

— The Sid the Science Kid series promotes exploration, discovery, and science readiness among preschoolers. The Sid the Science Kid transmedia gaming suite consists of nine games that can be played on either the computer or an IWB and covers content such as spatial reasoning, measurement, sorting, counting, and patterns.
— The *Cat in the Hat* series is designed to spark a love of learning and an interest in math in preschool-aged children. The *Cat in the Hat* transmedia gaming suite consists of two computer games, one IWB game, and one mobile-friendly HTML5 game and covers content such as shapes, patterns, classifying, and spatial visualizations.

— The *Curious George* series aims to inspire children to explore math in the world around them. The *Curious George* transmedia gaming suite consists of 16 games that can be played on either the computer or an IWB and covers content related to counting and cardinality.

— The *Dinosaur Train* series encourages basic scientific thinking skills as preschoolers learn about life science, natural history, and paleontology. The *Dinosaur Train* transmedia gaming suite consists of one computer game, one iPad game, and one iPhone game and covers content such as patterns, spatial sense, classification, and measurement.

— The *Fetch!* series uses the medium of reality television to help kids learn how to tackle problems, overcome fears, brainstorm, and collaborate. The *Fetch!* transmedia gaming suite consists of one computer game, one HTML5 smartphone game, and one augmented reality iPhone game and covers content such as measurement, time, and operations with numbers.

— The *Fizzy’s Lunch Lab* series is a web-only series that educates families about the importance of good nutrition, a balanced diet, and physical activity. The *Fizzy’s Lunch Lab* transmedia gaming suite consists of one computer game and one IWB game and covers content such as spatial sense, sorting and classifying, measurement, and counting and cardinality.

> During the pilot testing, at least five researchers were present in the classroom for one to two hours each day for a total of 40 days throughout the summer. Researchers brought the technology devices to the schools and configured 1-2 games per day for the students to play. Researchers observed and recorded student reactions and interactions with the games. The researchers were trained to look for evidence of student learning and engagement during their observations, while also making note of any technical issues within the games. A debrief conversation was conducted after each pilot session, where researchers shared their observations of students’ and teachers’ interactions with the games. Formal teacher interviews occurred at the conclusion of pilot testing for each suite, and informal teacher interviews occurred several times each week.

**KEY FINDINGS**

Researchers employed quantitative and qualitative data analyses to address the study’s research questions. Overall study findings, findings about the use of technology at study sites, and recommendations for future development are listed below.
OVERALL FINDINGS FOR THE TRANSMEDIA GAMING SUITES PILOT TESTING:

» Students were highly engaged in the transmedia suites. On each day of piloting, students were excited to try the new technology devices and new games.

» In general, games worked well together and functioned effectively as connected suites of games. The games within each suite reinforced learning and built upon the concepts covered in the suite.

» Teachers reported new learning for younger students and valuable content review for older students after playing the transmedia suites.

» Teachers saw the transmedia suites as valuable teaching tools. They appreciated the alignment of the academic content across games within a suite and felt that the suites targeted academic skills relevant to the preschool curriculum.

» The suites targeted for elementary-aged students were much better suited for 3rd graders than 1st and 2nd graders. The majority of the 3rd graders had the reading and math skill sets to read and understand game directions and progress through the levels of the game independently, whereas most of the 1st and 2nd grade students needed additional literacy and math support.

» When given the opportunity, children worked collaboratively on the games. This was especially true on the IWB, which lent itself well to group interaction and play. Students were also especially collaborative when playing on the tablets and computers and would often help each other if they struggled with games.

» Teachers mentioned that the IWB brought a particular aspect of motivation and learning to the suites. The opportunity for students to interact with the games in a small group via a highly engaging medium boosted student engagement and learning. Teachers expressed interest in using the IWB in the classroom for longer periods of time.

» Over the course of the pilot testing, students became more familiar with each media device and grew in their capacity to use technology.

MAJOR FINDINGS REGARDING THE USE OF TECHNOLOGY AT STUDY SITES:

» Schools may not have the technological infrastructure and hardware in place to be able to run the transmedia suites. In order to conduct the pilot testing at the preschool, researchers hired technicians to hardwire an Internet connection to another wing of the school and provided and configured wireless routers in each of the classrooms.

» Schools may not have the media devices to run the transmedia suites. Researchers purchased and provided SMART Boards, iPads, iPhones, iPod Touches, and webcam-enabled computers for the classrooms, in order for students to be able to play the transmedia suites.

» Teachers may need additional support and training, in terms of both technological capacity and academic content, in order to use the transmedia suites in their classrooms.
RECOMMENDATIONS FOR FUTURE DEVELOPMENT:

» Consider enlarging font sizes, buttons, and hot spots in games to be played on mobile devices. Children had trouble reading small text and interacting with small game controls.

» Allow the user to choose a level of difficulty before playing each game, or allow the user to choose what level of the game they would like to begin on. This eliminates issues of older students finding the content or pace of the games too easy, or younger students finding the content or gameplay mechanics too difficult.

» Consider the length and clarity of the game instructions and include a guided example at the beginning of each game. Children were able to play most of the games independently, after having the instructions explained to them by researchers or teachers and working through a sample item with researchers or teachers. However, children may not be able to play the games without researcher mediation.

» Take into account the needs of English language learners when creating text and audio for the games. English is not the primary language for many students, so students may need multiple methods of accessing the content.

» Audio should accompany text to provide scaffolding for students who have difficulty reading.

» Add more positive reinforcement for correct answers that not only praises students for selecting the right answer, but also reinforces and repeats the correct content knowledge.

» Consider how students might interact with games on different media devices, especially for games that are designed for multiple platforms (e.g., computer and IWB). Students had difficulty switching between different gameplay mechanics when moving between devices.

» Consider the type of feedback and hints students receive when selecting an incorrect answer. Feedback was most helpful when it guided students to understand what they did wrong and when students could use the feedback to correct or modify their answer, rather than start over from the beginning.

» To further develop student learning, teachers suggested presenting the transmedia suites in a purposeful sequence, grouping games that covered similar content.
EVALUATION OF THE ELECTRIC COMPANY SUMMER LEARNING PROGRAM

WestEd conducted a formative evaluation study of The Electric Company (TEC) Summer Learning Program. The TEC Summer Learning Program is a transmedia curriculum that presents a narrative story to students across multiple forms of media, including an online gaming experience and television episodes. The evaluation of the TEC program is important because it contributes to our knowledge of the usefulness of transmedia in out-of-school-time classroom settings. In addition, it provides valuable feedback to producers, researchers, and funders as they plan and create new transmedia products.

The study took place from March 2011 to September 2011 and addressed the effectiveness of the program in increasing 6- to 8-year-old students’ mathematics vocabulary, numeracy, and literacy skills, as well as their motivation to learn. Another purpose of the evaluation was to provide feedback to Sesame Workshop, the producer of the TEC Summer Learning Program, and Ready to Learn partners, including CPB and PBS, in order to identify successes and areas of improvement for the program.

The study took place in diverse summer programs throughout the United States and involved 16 teachers and 152 students ages 6 to 8 between the first and second grades. The study’s school-site based programs were located in rural, urban, and suburban areas across the country.

During the study, content was implemented in 5- to 6-week summer programs for 90 minutes a day, for a total of 24 days. This 36-hour curricular model included: scripted group facilitation, DVDs of 12 new TEC episodes (viewing two episodes per week), individual or peer activities, and access to Prankster Planet—a web-based transmedia gaming experience that supports The Electric Company’s Season Three theme of mathematics vocabulary. Teachers received two hours of online professional development on how to implement the TEC Summer Learning Program curriculum, as well as a detailed curriculum guide.

DATA COLLECTION METHODS

The following data were collected over the course of the study:

» Standards/Skills Aligned Survey. The student survey included measures of student achievement, including researcher-developed items and released math items from the California Standards Test. (Content of released items aligned with the TEC curriculum.) In addition, this survey included items measuring academic motivation and confidence. The survey was given to students at the start of their summer program and at the end of their summer program.

» Student Interview. A series of student interviews took place at each site. Students were asked about their experiences with the TEC Summer Learning Program, the content presented in the curriculum, and the meaning of targeted mathematics vocabulary words.
» Teacher Intake Survey. The teacher intake survey addressed teacher demographics, teacher experience, and school and classroom variables.

» Teacher Exit Survey. The teacher exit survey addressed teacher perceptions of student learning, motivation, and confidence. Teachers provided feedback on the TEC Summer Learning Program in light of related research questions.

» Student Usage Data from Google Analytics. Student usage of the Prankster Planet website was tracked and aggregated in Google Analytics. The website usage data were analyzed to measure students’ time on task in various aspects of the game and student success in embedded assessments in the game.

» Classroom Observation. Researchers visited study sites several times over the course of the summer. Researchers gathered data around fidelity of implementation at sites and collected data related to the research questions.

» Teacher Interview. Researchers conducted a mid-summer interview and final teacher interview with each participating TEC teacher. The interview questions addressed the research questions, checked for fidelity of implementation of the program, and gathered feedback on the TEC curriculum.

**KEY FINDINGS**

Researchers employed quantitative and qualitative data analyses to address the study’s research questions. In general, the TEC Summer Learning Program was well received in study summer school programs. Teachers highly valued the program and all student outcomes were positive. Specific findings in the areas of student outcomes, teacher outcomes, teacher feedback, program implementation, and suggestions for improvement are listed below.

**STUDENT OUTCOMES:**

» Students participating in the TEC Summer Learning Program showed significant growth in their knowledge of mathematics vocabulary (41% gain from pre- to post-assessment), numeracy skills (20% gain from pre- to post-assessment), and phonics skills (17% gain from pre- to post-assessment).

» Fourteen out of 16 participating teachers reported that students progressed or grew significantly in the area of “motivation and confidence to engage in learning activities” related to both mathematics and literacy.

» All 16 teachers participating in the TEC Summer Learning Program reported that using the program increased student morale and enthusiasm in their summer school setting.

**TEACHER OUTCOMES:**

» Fifteen out of 16 teachers reported that the TEC summer activities increased their motivation and confidence in leading groups.

» More than half of the participating teachers reported that they learned new instructional strategies in teaching mathematics and literacy. The three most common areas
of learning were: new strategies for teaching vocabulary, incorporating technology into lessons, and combining different modes of learning to keep students engaged in a topic.

TEACHER FEEDBACK:

» Teachers reported that students found Session 1 of the DVD episodes to be the most appealing and engaging aspect of the TEC program, followed closely by the Prankster Planet website. Teachers reported that students found the activity worksheets to be the least engaging and appealing aspect of the TEC program.

» Teachers themselves found Session 1 of the DVD episodes to be the most appealing, interesting, and valuable aspect of the TEC program, followed by the teacher-led activities and Jessica’s Word Wall. Teachers found the activity worksheets to be the least appealing, interesting, and valuable aspect of the TEC program.

» Fifteen out of the 16 teachers reported that they would use the TEC curriculum again, and 15 out of the 16 teachers reported that they would recommend the curriculum to other summer school or afterschool teachers.

PROGRAM IMPLEMENTATION

» Student outcomes were consistently positive, even with variations in the training teachers received and the number of TEC episodes viewed by students.

» The obstacles to implementation reported by teachers included: inconsistent student attendance in summer programs; technical difficulties at sites, especially with regard to running Prankster Planet on school computers; student lack of computer knowledge; summer program structure (e.g., class size either too small or too large, computer access too far from classroom, etc.); and teacher issues with either the length of time allotted for activities in the curriculum or the content of the curriculum being too challenging for some students.

SUGGESTIONS FOR IMPROVEMENT

» Teachers suggested that the online professional development could be improved in a variety of ways including: allow teachers to see the curriculum being implemented in an actual classroom; dedicate the webinars to questions and answers only (i.e., have teachers review the materials ahead of time); and schedule webinars at a variety of times to accommodate teachers who live in different time zones.

» When asked for suggestions to improve the TEC program, teachers offered the most feedback on the activity worksheets. Comments and suggestions for improvement include: worksheets should include phonics or literacy activities, and worksheets were either too far below or above the students’ skill levels.
NEEDS ASSESSMENT STUDY

WestEd conducted three comprehensive needs assessment studies that were designed to evaluate the need for interactive educational technologies in schools and in out-of-school-time programs with underserved preschool to 3rd grade (PK-3) students. Each needs assessment study focused on one of the following three areas: methods for communicating with parents of PK-3 children, access to and capacity for IWB technology in PK-3 schools and programs, and access to and capacity for other technologies in PK-3 schools and programs.

The results of the needs assessment studies are intended to:

» Inform the work of PBS as they plan product creation, including digital media for low-income schools and families
» Determine effective methods for communicating with parents of PK-3 children
» Describe access to and capacity for IWB technology in PK-3 education settings
» Describe access to and capacity for other technologies in PK-3 education settings.

The studies took place from May 2011 to September 2011. Data were collected from parents, teachers, and non-teaching district and school staff (e.g., principals, IT coordinators, and curriculum and instruction specialists) throughout the country through surveys, interviews, and focus groups.

The needs assessment studies are important because they help measure the capacity and interests of participants with regard to educational technologies, such as computers, IWBs, and smartphones and other mobile digital devices, as well as digital content for these devices. The findings from the needs assessment studies will help inform future product development and implementation.

STUDY SAMPLE

Participants in the needs assessment studies included 65 teachers, 75 administrators and district staff, and over 400 parents from small, medium, and large school districts with elementary schools, preschools, and out-of-school-time programs that provided instruction for PK-3 students. Participants were from public and charter schools in rural, suburban, and urban areas in the following states: Arizona, Arkansas, California, Connecticut, Michigan, Mississippi, Nevada, New Mexico, Rhode Island, Tennessee, and Utah.

DATA COLLECTION METHODS

Researchers implemented a mixed methods study design for each of the three needs assessments. Participant surveys, interview protocols, and focus group protocols were created based on research questions for each needs assessment. Data collection included use of the following instruments:
» Parent Survey (n = 410). The parent survey addressed technology access and use, current methods of communication with schools, and preferred methods of communication.

» Teacher Survey (n = 62). The teacher survey addressed availability and reliability of technology in the classroom (including IWBs), school guidelines regarding technology, barriers to use of technology in the classroom, and communication with parents.

» Administrator Survey (n = 75). The administrator survey was modeled on the teacher survey and addressed availability and reliability of technology in the classroom (including IWBs), school guidelines regarding technology, barriers to use of technology in the classroom, and communication with parents.

» Teacher Focus Groups (n = 20). The teacher focus groups addressed use of technology in the classroom, barriers to use of technology in the classroom, and resources for obtaining technology in schools.

» Administrator Interviews (n = 14). The administrator interviews addressed access to technology, district policies regarding technology, and funding for technology in schools.

» Parent Interviews (n = 38). The parent interviews addressed communication with school and after-school programs, as well as home access to technology.

**KEY FINDINGS**

**METHODS FOR COMMUNICATING WITH PARENTS OF PK-3 CHILDREN**

» About half of parents surveyed reported access to desktop computers and laptops in their homes, as well as access to the Internet (including high-speed and wireless connections) and text messaging.

» Less than half of parents surveyed reported access in their homes to smartphones, webcams, iPod Touches, or iPads.

» About half of educators surveyed reported that texting is not used as a means for communicating about student learning.

» Educators report that the use of texting to communicate with parents about student progress is not particularly effective.

» Email, websites, and online gradebooks were reported by teachers and parents to be fairly effective in communicating with parents about student learning.

» Parents reported not being comfortable with their children using webcams in their homes. However, if parents were informed that webcams would be used for educational purposes, they would be more amenable to their use in the home.

**ACCESS TO AND CAPACITY FOR IWB TECHNOLOGY IN PK-3 SCHOOLS AND PROGRAMS**

» Though participants reported limited access to IWBs, a majority of participants reported plans to obtain IWBs in the near future.
For all groups surveyed, there is a strong interest in standards-aligned curricular products designed for the IWB.

Barriers to IWB use include: lack of teacher expertise with the technology, lack of technical support from the school, poor Internet connectivity, and limited curricular materials and tools for children from preschool to 3rd grade.

Preschool teachers were much less likely to have access to IWB technology than non-preschool teachers (elementary and out-of-school-time educators).

Preschool teachers’ survey responses were markedly different from those of non-preschool teachers. Preschool teachers were less likely to rate educational products for IWBs as useful and were much more likely to mark “don’t know” when asked about the usefulness of educational products for IWBs.

ACCESS TO AND CAPACITY FOR OTHER TECHNOLOGIES IN PK-3 SCHOOLS AND PROGRAMS:

- Laptop and desktop computers and high-speed Internet are the most readily available technologies in participating schools.
- Technologies such as iPads, webcams, and tablet PCs are often not available to schools due to fiscal constraints.
- Wireless technology is often unreliable or not available in study classrooms.
- Teachers reported that the majority of the technology in their classrooms was only in fair condition and that the equipment was often unreliable.
- Preschool classrooms have much lower access to nearly all technologies than non-preschool classrooms. Less than one quarter of preschool classrooms have laptop or desktop computers and/or high-speed Internet access. Only 6% of preschool classroom have wireless Internet access.

CONCLUSIONS AND RECOMMENDATIONS:

- There is a strong interest in using more technology and digital media in PK-3 classrooms.
- There are enormous challenges to reaching parents, teachers, and students in low-income communities using technology: access and support are both limited.
- Continue to study how low-income families access and use digital media.
- Pilot test methods of media delivery to low-income parents and high-need schools to ensure that content and delivery are amenable to the target populations.
- Explore methods to reach low-income classrooms that do not have Internet connectivity.
- Continue to explore which types of IWB curricula and tools are most desired by PK-3 teachers.
- Create guidelines for webcam use that can be used by schools and parents to help allay safety concerns.
- Pilot test early project tracking models in low-income schools.
Pilot test early models of communicating with low-income parents about their students’ learning. Consider using models that give parents multiple pathways to access information (e.g., email, online gradebooks, and texting).

CROSS FINDINGS AND REFLECTIONS ON YEAR ONE RESEARCH

WestEd’s Year One research activities for the Ready to Learn grant, including pilot testing of transmedia suites, an evaluation of The Electric Company Summer Learning Program, and three needs assessments, provide deep insight into the short-term and long-term future of digital media in low-income schools and families.

USE OF TECHNOLOGY AND DIGITAL MEDIA IN THE SHORT TERM FOR LOW-INCOME SCHOOLS AND FAMILIES

The Year One studies suggest that penetration of technology and digital media into low-income schools will be limited in the short term. The needs assessments and pilot studies showed that lack of technological infrastructure at schools and preschools and limited technological expertise of the school staff were challenges when implementing technology and the transmedia suites. In addition, nearly all schools lacked access to most of the media devices required by the transmedia suites. IWBs, iPads, iPhones, iPod Touches, and webcam-enabled computers needed to be purchased and provided for the students to play the transmedia suites. The studies also showed that low-income families lacked the ability to easily access technology and the Internet. Many children in the pilot studies did not know how to use the mouse on a computer and reported they did not have a computer at home. A group of parents in the needs assessment study reported having to visit the library to access the Internet. These data suggest that the cost of technology and difficulty accessing digital media are significant barriers for many families and schools.

USE OF TECHNOLOGY AND DIGITAL MEDIA IN THE LONG TERM FOR LOW-INCOME SCHOOLS AND FAMILIES

The Year One studies suggest a bright future for the use of technology and digital media in the longer term. The needs assessments and pilot studies illustrated a great desire by students, teachers, administrators, and parents to access digital media to promote student learning. The studies showed that more and more teachers are beginning to communicate with parents digitally, via online gradebooks and webpages. Teachers and administrators who had access to and used IWBs reported the technology’s potential and said that their districts planned to obtain more IWBs. Those who used IWBs reported that they would like access to more educational
media, games, and tools for the whiteboard. In the pilot studies, students and teachers reported valuing the transmedia suites and hoped to use more of them. The TEC evaluation showed how a fully-developed transmedia curriculum can be successfully implemented in a summer school classroom and promote student learning and engagement. These findings suggest that as costs become lower for devices that access digital media and capacity for use grows in the teacher and parent populations, there will be a large demand for digital educational products at the elementary and preschool levels.

**OPPORTUNITY FOR READY TO LEARN TO CONTRIBUTE TO THIS GROWING NEED**

The Year One study findings suggest that low-income schools and families are anxious for access to more technology and digital media that can contribute to student learning. At this time of rapid advances in technological development, Ready to Learn producers and planners have a unique opportunity to provide exemplars of digital products for the preschool and elementary school classroom and to set the bar for products that help parents and teachers to support their young learners.