PBS KIDS Progress Tracker Platform

The Corporation for Public Broadcasting (CPB) and the Public Broadcasting Service (PBS) share the stewardship of some of the most innovative work in children’s educational media as grantees of the U.S. Department of Education’s Ready To Learn (RTL) program. The goal of the CPB-PBS RTL Initiative is to improve math and literacy achievement among young children, particularly in high-need communities. CPB and PBS seek to achieve this goal by delivering engaging, story-driven, curriculum-based transmedia content, and equipping parents and educators with the tools that enable them to support their children’s learning.

Since 2010, the CPB-PBS RTL Initiative has developed transmedia for children ages 2-8 that is connected by story line, characters, and curricular focus. The transmedia content that has been produced includes a combination of narrative video content, more than 100 digital games, mobile apps (both games and tools), and interactive white board applications, as well as offline activities. This variety of transmedia content maps to curriculum frameworks that align with state education standards in mathematics and literacy, and was created in collaboration with early childhood education experts on the CPB-PBS RTL Advisory Board.

As part of the project’s research and development activities, CPB, PBS and partners including PBS KIDS producers, educational advisors, UCLA/ CRESST, Incredible Pear, and WestEd have developed a prototype progress tracker platform that analyzes children’s educational gameplay data and delivers meaningful inferences about a child’s skill development, proficiency, strengths and weaknesses. The progress tracker platform parent reporting application provides vital information about a child’s learning outcomes, and access to related resources that best support the child at specific phases of learning.

With millions of children interacting with the digital content developed under this grant, the progress tracker platform, now in full-scale production, is being designed to be robust, responsive and scalable. It will collect, store, and process large amounts of well-structured interaction data, applying cutting-edge computational modeling and learning analytics across media types (e.g. games, videos, activities) and distribution platforms. The progress tracker will report to parents meaningful and actionable information about a child’s competencies, patterns of play, and problem solving strategies over time.

PBS KIDS believes that one of the most effective ways to improve educational outcomes for children is to empower parents and caregivers to understand, engage with, and support children’s learning activity. The progress tracker platform will allow parents to create child accounts, view a variety of summary and detailed reports, learn about the educational goals of the educational resources, and view tips about interacting with a child on related math topics. The project team also perceives significant future opportunities for this work. The progress tracker platform will provide large-scale, crowd-sourced data collection capabilities and the data model will be fine-grained enough to allow researchers to answer many different questions about game-based learning. Furthermore, the platform will enable game developers to rapidly test various game designs shortening the time to “good” design.

In today’s crowded children’s media landscape, CPB and PBS have continued to distinguish its work from its commercial competitors by not only creating engaging, evidence-based content, products and services that help improve children’s math and literacy skills but by also enlisting public media stations and community partners in year-round, on the ground efforts. These vital partners are key to this project’s success by ensuring that new resources like the progress tracker benefit young children and their families, particularly those in low-income and underserved communities in school and out-of-school settings.

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1 e.g. pbskids.org averages 11MM visitors per month