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Online video for preschoolers

Lessons learned with the PBS KIDS preschool video player

What can you do to facilitate the online experience of preschool children trying to access videos on a TV broadcaster's homepage? The US-American public broadcaster PBS shares insights in designing, testing, and building their online video player for preschoolers.

About 6 months after the debut of the PBS KIDS GO! online video player for school-aged children (see article in this issue), we set out to build a similar player for our 3- to 5-year-old audience. While the back-end of the new player had much in common with PBS KIDS GO! (technical specifications for encoding, very similar fields needed in the database such as title, length, etc.), we knew the interface would be very different: for starters, preschoolers are pre-readers, they relate even more strongly to characters, and they rely on more help from adults to set up their online watching experience.

Usability testing of a prototype player

As part of the production process, the PBS KIDS Interactive team built a prototype interface to be taken to usability testing with 20 children ages 3 to 5, all of them accompanied by 1 parent. The interface included large buttons with pictures of TV characters, very few text labels, and a parent control bar at the top of the screen, which was set against a subdued light

blue background (compared to the bright green of the kids' interface) so as not to attract the attention of our young users. Also, part of the prototype were short segments featuring Dash, the green PBS KIDS character, meant to guide children through the interface. Testing was conducted in 20 sessions each including 1 parent-and-child pair. Sessions lasted between 30 and 45 minutes and were led by a professional moderator.

Our main questions included:

- Is the interface intuitive and easy to use for preschoolers?
- Do children understand the Dash segments? Are the segments helpful?
- Do parents notice the area of the screen with controls for their use? Can they make use of the parent bar to help their children find specific videos or related content?

Here are some of our findings:

Basic video player functionality

Overall, preschoolers had no trouble engaging with the video player, clicking on character buttons and exploring the available content. They also understood the play/pause button well. In order to avoid having to explore the idea of playlists with this audience (this concept was a bit challenging even for older kids), we had decided to offer children "next" and "back" buttons, represented by big arrows, through which they could navigate one particular program's videos linearly (see ill. 1 and 2). This was confusing. Some children thought

the "back" button would take them to the beginning of the current video (rewind) and the "next" button would take them to the end (fast-forward). Some children used the left-facing arrow to play a video that was about to end again. This, of course, only worked for the first video in a playlist, creating potential for frustration when kids tried to replay videos. Parents also inquired about how to find out how many videos were available for a particular program.

To address both of these issues, we created a side "chute" on the left side of the screen (see ill. 2, preschool player "after" the usability testing) that shows thumbnail images of the next several videos that are queued up for a particular program. This gives children a little more independence to choose, without having to repeatedly press the "next" button to see each video.

Character buttons and "more" button

One of our concerns was whether children would understand that a character is representing a program, meaning, for example, that when you press the Elmo button, not all videos shown feature Elmo, but that Elmo represents *Sesame Street* overall. This was not a problem. Children did not seem surprised or frustrated when the character displayed on the button did not appear in a video.

To keep the interface clean and not overwhelm users with choices, we decided to limit the number of pro-



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Ill. 1: Prototype of the PBS KIDS preschool video player before the usability testing



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Ill. 2: The design of the PBS KIDS preschool video player after the usability testing

grams displayed in the initial screen to 9 (see ill. 1). In order to access other programs, users had to click on a button labeled “more”. This did not work; the button was confusing. Some children thought that the button would take them to more content (like games) and some parents thought it would lead to more information about the program. The solution was to place little pictures of the programs accessible in the next screen on the button (see ill. 2).

Dash's introduction and interstitials

Unlike our video player for school-aged children, the preschool video player prototype did not contain thematic playlists (which we called “channels” for older children), since we knew young children come looking for characters they know. However, we still wanted to curate the set of videos that plays when the player first loads. That gives us a chance to expose children to new clips and episodes, and also acknowledge seasons and holidays. Since we were not using words as labels, we decided to make this initial playlist accessible by clicking on Dash. Dash is the host character and he plays a two-fold role: he welcomes kids to the player and also mediates the experience, pointing kids to different options at the end of certain videos. In the prototype, the introduction was really short, and during the test many kids did not un-

derstand who he was. They expected to see more videos featuring him, as if he had his own program.

When the “chute” was created to display the thumbnails, Dash acquired a very practical role: he “starts” the video player by pulling on a lever and “loading” the videos. We also used this opportunity to add humor: when Dash first pulls the lever, something unexpected happens (it snows, the screen turns upside-down, pies come flying). He always has to try again to make it work.

The parents' control bar

In order to give parents more control over the experience, we wanted to offer them extra functionality on the screen in a way that would not confuse kids, so we created a parent control bar in a different, more subtle color scheme. It gave parents access to a search box and browse function where they could find videos by program or by curriculum area. It also offered parents links to more information about the program.

Overall, the original design was too subtle: none of the children noticed it (which was the intention), but most of the parents also did not notice it until it was pointed out to them. Parents saw some value in the functions offered in the control bar and had little trouble using them, but were mostly interested in seeing children use the video player independently. For example, one of the parent buttons links

to related interactive content. If a *Dinosaur Train* video is playing, there is a link to *Dinosaur Train* games. A few parents suggested we move that button to the kids area, so they can access games on their own.

Success and next steps

Since its launch in December 2009, the PBS KIDS preschool video player has enjoyed high traffic when compared to other areas on our website and also when compared to competitor video websites. Our site was recently ranked #1 in number of video streams served among video websites for children according to Comscore (as of October 2010).

The team is currently working with the producers of a few PBS KIDS preschool series to create interactive game layers for select videos. ■

THE AUTHOR

Silvia Lovato is the director of the PBS KIDS GO! website. She has been a Web producer for over 12 years and came to PBS in 2000, after completing an MA program in Communication, Culture and Technology at Georgetown University, Washington D.C., USA.

