

Abstract:

Funded by the US Department of Education Ready to Learn grant, Twin Cities PBS is developing a suite of transmedia resources for K-2nd grade children called “playlists,” which includes a digital science notebook. This digital notebook was designed to complement Next Generation Science Standards aligned transmedia activities presented to K-2nd children, in order for them to reflect on the science content they learned by producing an artifact (a picture with audio). The artifacts created by the digital science notebook were an important element of the intervention, as it allowed students to reflect on science content they learned through the various transmedia activities. Because of the importance of this reflection period, we decided to user test the intervention to see how our target audience would respond. In this poster, we highlight learnings from testing our digital science notebook across K-2nd grade boys and girls (n=178). The children used the science notebook to respond to two prompts related to an in-class hands on activity. Data collected to identify evidence of effectiveness includes telemetry data, researcher observation of children, and saved artifacts within the notebook. Results from the science notebook user-testing indicate that some children were able to successfully respond to the prompt and made connections to science content covered in other transmedia activities. However, a preliminary review of the results suggests a relationship between the quality of the artifact and on-task behavior. While there was frequent off-task behavior during the first session, on-task behavior increased in the second session, which we attribute to increasing familiarity with the science notebook. In addition, telemetry data revealed that children were not saving their artifacts in session one, however, children saved their artifacts more frequently in the subsequent sessions. Based on these findings, and reports of usability errors/excitement from using the tool for the first time leading to off-task behavior, we are implementing a free-play tutorial session in the first session for children to familiarize themselves with the tools in the digital science notebook. To address the lack of saving, we are developing an auto-save feature. Follow-up testing will examine whether these changes increase the effectiveness of the science notebook.