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Crossing borders

Learning from educational media in 4 countries

This international study on Sesame Workshop's multi-media project *Panwapa* was conducted with 4- to 7-year-olds in the US, China, Mexico and Egypt. *Panwapa*'s educational aim is to promote global citizenship. The main questions were: What can children learn from these TV, print and online materials? Are there differences in the learning outcomes across countries?

Many research studies have proven that educational television can help children learn subjects such as language, literacy, mathematics, science, and social studies (e.g. Fisch, 2004). Yet, the changing landscape of television gives rise to new questions that have not been researched before. For example, television has become increasingly global, but most research has been conducted in only one country, rather than comparing learning from a given program across countries. How, then, is learning from television similar or different across countries?

To find out, we assessed children's learning from *Panwapa*, an international, multiple-media project produced by Sesame Workshop and distributed internationally in 5 languages. Designed for children aged 4 to 7, *Panwapa*'s educational goals are to promote positive attitudes, skills, and behavior regarding several aspects of global citizenship, such as awareness of the wider world, appreciat-



Ill. 1: Screenshot of the English-language *Panwapa* website

ing similarities and differences, and understanding and being responsive to economic disparity (Cole, 2008). It addresses these goals through videos (that portray either Muppet stories or the lives of real children in various countries), online games and activities (e.g. *Panwapa* World, a virtual community in which users can create pages to describe themselves and visit pages created by other kids around the world), and hands-on activities (as detailed in a *Panwapa* magazine for parents and caregivers).

We measured learning from *Panwapa* in 4 countries: Egypt, Mexico, the United States, and 2 sites in China, Beijing and Wuhan. A total of 1,277 children participated in the study, including roughly equal numbers of boys and girls, and a fairly even distribution of children between the ages of 4 and 7 years old. Because some *Panwapa* activities required internet access, which can be rare in schools that

serve children in poverty (especially outside the U.S.), the children in the study were largely middle class and above. (Of course, "middle class" refers to very different economic levels in different countries, because such judgments are relative to the overall economic level of each country.) For this reason, the demographics of our sample were not nationally representative, but they were sufficient to reveal cultural differences, as we shall see.

Design of the study

Children were divided into 3 groups, each of which used a different combination of *Panwapa* materials for 4 weeks:

- "TV + Print group": These children viewed 4 Muppet videos and 4 live-action videos about real children in various countries. They also played 2 hands-on games –

one that encouraged children to differentiate between needs and wants, and a board game that spanned the *Panwapa* curriculum.

- “All Materials group”: These children used all of the above materials, plus 4 activities on the *Panwapa* website. They created and visited other kids’ pages in Panwapa World, played a hide-and-seek game that incorporated words in other languages, and played a movie-playalong game that turned live-action video segments into interactive games.
- “No Exposure (i.e. control) group”: This group did not use any *Panwapa* materials, thus serving as a baseline for comparison to the 2 groups that used *Panwapa*.

Researchers observed the “TV + Print” and “All Materials groups” as they used *Panwapa* materials, and later interviewed them to assess comprehension and recall of the educational content presented in *Panwapa*. In addition, before and after the 4-week period, children in all 3 groups were interviewed to assess their understanding of several aspects of global citizenship: “languages” (e.g. naming their own and other languages, saying words in other languages), “countries” (e.g. naming their own and other countries, finding their country on a globe), “culture” (e.g. identifying similarities and differences between their own and other cultures), “needs and wants” (e.g. distinguishing between physical needs and things they might want but did not need), and “economic disparity” (e.g. recognizing inequalities in access to resources across different countries or cultures). Finally, we also interviewed 50 parents and 50 teachers of children in the study (i.e. 10 parents and 10 teachers in each site). The adult interviews were intended to lend further insight into any educational effects that might be found among children, and to gather the adults’ own reactions to the *Panwapa* materials.

Results

Across the 4 countries, children’s engagement with and learning from *Panwapa* was evident in several ways: their comments while using the materials, their subsequent recall of content from the videos and activities, and increases in their more general understanding of global citizenship. For example, while using the materials, many children:

- commented on countries, activities, or languages as they watched the videos, and sometimes related on-screen material to their own lives (e.g. a Chinese child said “They speak Swahili” during a segment from Tanzania; an Egyptian child waved back at the screen and said “Hola” in Spanish). Across the 4 countries, we recorded 942 such comments during viewing;
- tried to count along in a foreign language during the online hide-and-seek game. In all, 75 % of the Egyptian children, 70 % of the Chinese children, 37 % of the Mexican children, and 28 % of the U.S. children tried to count along;
- used Panwapa World as a vehicle to reflect on themselves (while creating pages about themselves) and to visit and communicate with children in 121 different countries;

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say ‘Hello’ in a foreign
language*

- talked about foreign countries, community service, and/or needs vs. wants while playing the 2 hands-on games. For example, during the board game, 98 % of the children who picked the relevant card named something they would give to a needy child, and more than 90 % attempted to say “Hello” in a foreign language.

Not surprisingly, children often were particularly engaged when they had some familiarity or felt a personal connection with the cultural content presented in the materials. For example, many Mexican children responded while watching video segments about Guatemalan children (probably because they looked most like the viewers and engaged in familiar activities), whereas Jewish children in one U.S. school responded to on-screen portrayals of Israel and Hebrew letters in another segment. Similarly, in the online hide-and-seek game, children often chose to play the game and count along in a foreign language that was already somewhat familiar to them.

At the end of the 4 weeks, most children understood and retained educational content from the *Panwapa* materials over time, even when we asked them about materials they used several weeks earlier. Most children could accurately recall the problem (63 %) and solution (54 %) from the first Muppet video, and 67 % remembered at least one activity from the live-action videos of children in other countries (e.g. finding and collecting water in a desert). Children who used the website recalled 31 countries that they visited in Panwapa World, and a majority of the children (53 %) recalled one or more activities from the board game.

Finally, across all 4 countries, children who used *Panwapa* improved significantly more than non-users in their understanding of global citizenship. This overall impact stemmed from *Panwapa* users’ demonstrating small but significant gains in every as-



Ill. 2: Chinese-language website of *Panwapa*

pect of global citizenship measured in this study: languages, culture, countries (primarily in Egypt and Beijing), economic disparity, and distinguishing between needs and wants. The positive effects of *Panwapa* were consistent for boys and girls, and for children of different ages, ethnicities, and socio-economic levels, although some effects of *Panwapa* appeared more strongly in some countries than in others, as we shall discuss next.

Learning across cultures

Across the 4 countries, we found more similarities than differences in what children learned from *Panwapa* – and in how they learned, as well.

Learning does not occur in a vacuum

Similar types of comments and behavior were observed among children in different countries as they used the *Panwapa* materials, and significant learning effects were found in all 4 countries.

Yet, the data also highlighted the fact that learning from educational media does not occur in a vacuum. Culture, experience, and prior knowledge all play roles as well. As noted earlier, viewers of the videos often reacted

most to on-screen children and places that were familiar in some way, and children often chose to play the online hide-and-seek in a foreign language that was already somewhat familiar. Conversely, learning effects were sometimes stronger in countries where children may have less exposure to the relevant concepts in their day-to-day lives. For example, children in the U.S. showed the greatest improvement in understanding economic disparity, perhaps because the United States has a higher economic standard of living. Yet, some effects regarding foreign languages were stronger in Egypt, Mexico, and China, perhaps because 18 % of the U.S. children reported that they already used foreign languages with their families at home (versus 7 % of the Mexican sample and 2 % or less in China and Egypt). Thus, children appeared to connect most immediately with aspects of *Panwapa* that they found familiar or to which they felt connected. At the same time, however, they sometimes benefited most from content that they did not encounter regularly in their own lives. Looking toward future international efforts, these data demonstrate the effectiveness of using familiar situations or settings as an entry point for children, and as a bridge to introduce them to diverse, unfamiliar cultures from around the world.

The role of parents and teachers

Since parents, teachers, and other adults often serve as gatekeepers for educational media, we must also consider the implications of culture in adults' perceptions and use of *Panwapa*. In all 4 countries, adults praised *Panwapa* for its appeal for children, educational value, and usefulness as an educational tool.

In addition to these broad similarities, however, we sometimes found evidence of cultural differences that could either facilitate or pose challenges for adults' use of *Panwapa* with children. On the one hand, because one of the schools in the U.S. was a parochial school where all of the students share a common religious background, some parents and teachers from this school particularly appreciated *Panwapa's* exposing their children to other cultures (e.g. "It's really important, especially if you don't have regular exposure to different people. This is a really good age to understand that the world is made of all different people, and that we're all made by God."). On the other hand, adult attitudes toward either media or other ethnic groups can also hinder the use or impact of projects such as *Panwapa*. Chinese educational practice favors hands-on learning for preschoolers, rather than computers (e.g. Gardner, 1988; Wong, 2008). Thus, in China, some parents and teachers preferred *Panwapa's* hands-on games to its online activities (e.g. "It's better to make things with paper, so that the children's ability to use their hands can improve. Materials like paper are good for the purpose of protecting their eyes [versus watching a screen]. Paper things are portable, too."). Indeed, while recruiting sites for this study, our Chinese research team found that many preschools did not

have internet access at all. In Egypt, the U.S., and Mexico, however, we found little evidence of any such bias against computers (although, of course, access is always a challenge, particularly in low-income areas). With regard to attitudes toward ethnic groups, it is helpful to recall research on the U.S. version of *Sesame Street*. Preschoolers who watched *Sesame Street* race relations segments often understood that the children in these segments were happy to be together, but some also assumed that the parents of the on-screen children were less pleased, apparently reflecting their knowledge of their own parents' attitudes toward other ethnic groups (Truglio et al., 2001). In our study, virtually all of the nearly 1,300 children and 100 adults in our sample appreciated *Panwapa*'s encouraging an appreciation of diverse cultures. As one Egyptian teacher put it, "the materials create the cooperation spirit inside the child. They teach him that we are all similar; there is no difference between Muslim and Christian, or between Egyptians and anyone else."

Media are only one influence in children's lives

The only child who did not seem to appreciate *Panwapa*'s diversity was one Egyptian child, who cried during a segment that showed real Israeli and Palestinian children working together to design a clock for their town. Since all of the other Egyptian children enjoyed the segment, the research team was puzzled by this reaction – until they interviewed the child's mother, who objected strenuously to the Israeli segment: "... We raised our children that we do not love the Israelis; they kill us and hate us. This is the truth, but the media tried to deceive us ... We are not one world ..." While we must stress that this reaction came from

only one child and parent, it highlights the fact that educational media are only one influence in children's lives, alongside the much stronger influences of family and society. Such attitudes point to the vital need for such projects, designed to promote tolerance and mutual respect. Yet, as we set expectations and standards for judging their success, reasonable expectations must take into account the socio-political context in which the materials are used.

In light of such challenges, it is all the more impressive that children's use of *Panwapa* resulted in significant learning about aspects of global citizenship. These data demonstrate that the benefits of educational media can reach across countries and cultures. However, we also must recognize that such media are only one influence in children's lives. To best understand how children learn from media – and how to create effective educational media – we need to consider their impact within the context of all of the other influences in a child's world. ■

NOTE

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