Supporting facilitation for informal learning with mobile technology

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Abstract: Interpreters in informal learning spaces need to effectively reach many visitors when facilitating digital, performative exhibits. My research concerns how interpreters can be supported in dynamically distributing facilitation and attention across multiple modes of visitor participation. My preliminary approach and results are summarized below.

Introduction
Currently, Informal Science Institutions (ISIs) such as museums and zoos are designing exhibits incorporating hands-on interaction with dynamic digital content. Educational interpreters in ISIs are highly effective at improving visitor learning with traditional exhibits, but it’s unclear how to incorporate their facilitation most effectively into new exhibits driven by individual visitor performance. This indicates that there is need for a new approach to the interpreter’s role in the informal learning experience. My goal is to investigate how to design technological supports for interpreters, such that they can dynamically distribute their facilitation and attention to orchestrate visitor learning across multiple modes of visitor participation.

Interpreters can be equipped and trained with adaptive tools that allow them to responsively alter exhibit content, highlight additional media, and engage in “just-in-time” mediation of visitor learning. This allows interpreters to engage both the central participants in performative exhibits, as well as more disengaged peripheral audiences. Reaching both of these audiences is a unique challenge for informal learning spaces.

The testbed for my research is the prototype exhibit, “A Mile in My Paws” (Paws), an interactive climate change game. This exhibit relies on a single visitor who generates information about polar bears’ responses to climate change through their performance. The “lesson” is clear to the performer, but it’s unclear how to support the simultaneous learning of a wider audience at this exhibit (Jimenez Pazmino et al., 2013).

Current status and preliminary results
For interpreters to successfully engage multiple forms of visitor participation in performative exhibits, they need to move beyond typical rote delivery approaches, which can’t account for dynamic visitor-generated content. However, providing adaptive, relevant facilitation to large groups of visitors is a difficult task, as performative exhibits require interpreters to emphasize change over time, link immediate and distal events, and explain complicated multi-level phenomena. Interpreters learning to perform these tasks require scaffolding, which can take the form of a mobile, digital support tool. This tool would aid them in distributing their facilitation and attention to address multiple groups of visitors, who are participating in different ways in a single exhibit.

I am following a design research methodology that involves iterative improvement of technological supports, interpreter training, and exhibit design, with the participation of the zoo interpreters themselves. To date, the Paws team has performed three pilot studies, with the third pilot being the first to evaluate the success of Paws “on the floor” of the zoo (Slattery et al., 2013). This two-day pilot involved 12 interpreters interacting with visitors across 26 play sessions, in which hundreds of visitors came into contact (many brief, but some extended) with Paws. From this pilot, I began by investigating one interpreter’s extended interaction with a visitor family group across three play sessions. His approach to visitor interaction was relatively unchanging, but he did move beyond rote facilitation based in his authority as interpreter, and included data displays on the Paws support tool as a source of visitor learning. Nonetheless, his interaction with the family group drew on the Paws player experience in a limited way, indicating that interpreters still need support in linking visitor-generated exhibit content to peripheral visitor audiences.

My current next steps are towards supporting responsive and extended interpreter questioning, improving interpreters’ epistemological positioning of exhibit resources, and better integrating visitor-generated content into interpreters’ mediation of the Paws exhibit. Investigating these interpreter practices will then allow me to focus on how to extend them across multiple forms of visitor participation, and how best to scaffold more responsive (“just-in-time”) facilitation with digital support tools.

References

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