

DESIGN-BASED RESEARCH ON VIRTUAL FORUM THEATER

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Our overall goal is to investigate if Virtual Forum Theater (VFT), an application that allows children to create electronic dramatic presentations, is engaging and can foster the learning of expressive fluency, argumentation and conflict resolution skills. Based upon Bertold Brecht's Epic Theater (1964) and Augusto Boal's Theater of the Oppressed (1974), VFT is intended to provide a safe environment in which children can explore and react to injustice, oppression and conflict. The application includes a face and storyboard editors, chat environment, and a media player combining development in Java and existing free-software.

VFT enables participatory and collaborative digital playmaking through the World Wide Web. It is the first educational software that facilitates resolution of conflicts between youth through free on-line theater interactions. VFT can be considered an example of an Identity Construct Environment (ICE) (Bers, 2001), a family of computational tools that enable children to learn by becoming designers, builders and programmers of their own worlds. ICE is purposefully designed to promote positive youth development (Lerner et al, 2005, Bers, 2006) by fostering the development of skills and positive attitudes. VFT provides an environment where youth work in groups, negotiating meaning (socio-constructivism paradigm, Vygotsky, 1978), taking different roles in their collaborative stories, swapping points of views, elaborating argumentations to justify their choices and to solve conflicts, engaging in a dialog with their environment (Freire, 1972), as well as learning by doing and constructing meanings (Piaget, 1977, Papert, 1980).

Design-based research (DBR) consists of a series of approaches used with the objective to create both a specific profile of learning and systematically study that profile of learning in the naturalistic context implemented to support it. (Cobb, diSessa & al, 2003). We are "engineering" our own technological drama learning environment and studying it through a series of three experiments to accomplish the goals established by DBR. We are interested in how VFT reinforces or obstructs target behaviors, such as children's abilities to identify, recognize, and respect others' points of view; and solve personal and community conflicts. We are testing three constructs: expressive fluency, critical awareness, and conflict resolution. Expressive fluency is the ability to express emotions through acting, drawings or playwriting. Critical awareness is the ability to process and question any information received by someone else, as well as the knowledge being incorporated. Conflict resolution is the process of creatively resolving a struggle or disagreement between people in real life or on stage (Cavallo, 2005).

This paper reports upon two mixed methods studies (Creswell, 2003) with Brazilian public students ages twelve through eighteen. One of the purposes of the second study was to better understand how youth engage with our actual version of VFT, and how they

collaborate to solve conflicts presented by their on-line play. Correlation and Chi-Square tests will be executed to find out if there is a relationship between time spent on VFT and the improvement of these constructs. Based on this design experiment, we discuss how the tool and the design of the study should change in order to ensure the learning goals and to elaborate the third round of DBR, which is happening and will provide final data to test the research questions.

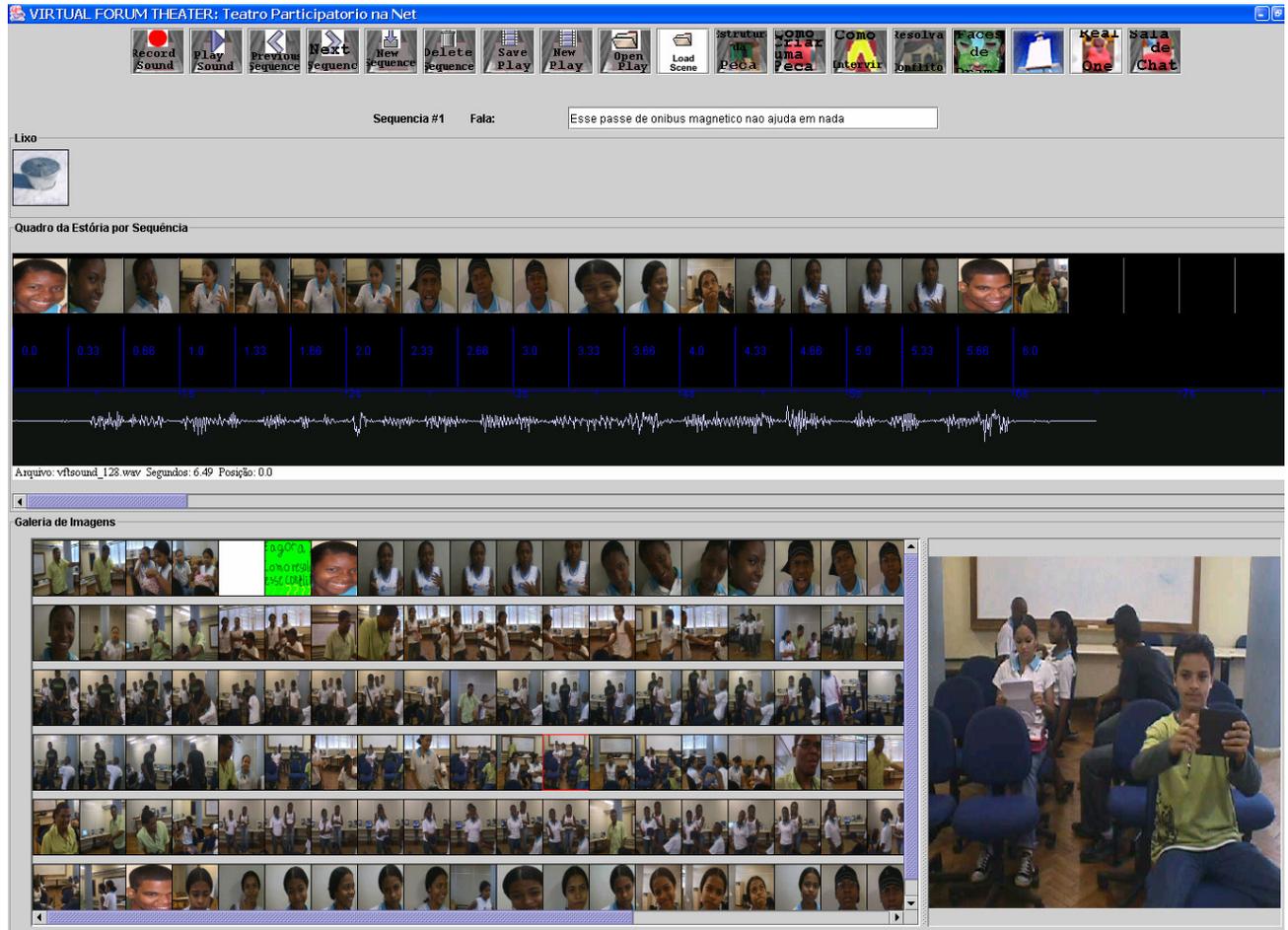


Figure 1. VFT GUI Storyboard



Figure 2. Dramatic Face

Keywords: digital play, design-based research, conflict resolution, ICE, PYD.