# Beating the bullies -- changing real-world behaviour through virtual experience (w/Video)

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(PhysOrg.com) -- Social problems like bullying and stereotyping involve thoughts, feelings and reactions that resist change. New research shows that when students play active roles in virtual dramas their attitudes and behaviour can change.

In 2006, a group of European educators, psychologists and IT specialists realised that emotionally driven problems, such as bullying, stereotyping and scapegoating demanded emotionally compelling interventions.

The researchers set out to create virtual worlds with characters that children could interact and empathise with powerfully enough to change their own attitudes and behaviour.

The EU-funded research project eCIRCUS (Education through Characters with emotional-Intelligence and Role-playing Capabilities that Understand Social interaction) has now produced two programs - FearNot! and ORIENT - that give students helpful roles in interactive virtual worlds, where they can learn to change their thoughts, feelings and actions.

Finding new ways to resolve such problems is important, says eCIRCUS coordinator Ruth Aylett, because they are pervasive, hurtful, and can cause lasting psychological damage.

“Knowledge-based interventions don’t necessarily succeed,” says Aylett. “If we’re able to reduce victimisation, we’re giving people a way to get out of a very painful situation and improve the quality of their lives.”

**FearNot! - help for bullied children**

The eCIRCUS researchers first focused on primary school children who were the victims of bullying. They drew on recent psychological theories that highlight the importance of feelings for changing how people treat each other.

“Emotion is an essential part of human interaction,” says Aylett, “so education about human social interaction must include feelings.”

The theories led them to expect that if they could get children to empathise with and try to help victims of bullying in a virtual world, the children could try out different strategies, experience the results, and develop better ways to deal with bullying in their own lives.

The researchers used a computer program, called FearNot! (Fun with Empathic Agents to Achieve Novel Outcomes in Teaching), that had been developed as an initial small prototype by an earlier European research effort called VICTEC.

The eCIRCUS team made FearNot! much richer in content and more open-ended. For example, they provided virtual bullying victims with the ability to remember strategies that they have tried. Those memories allow the virtual characters to reject approaches that have failed and ask the children who are helping them in the simulation to come up with better ideas.

“We are the first people to produce software for dealing with bullying that is not pre-scripted,” says Aylett. “We’ve produced something that is

genuinely interactive to the individual responses of each child."

To test the effectiveness of FearNot!, the eCIRCUS team tried it out with close to 1000 students in 30 primary schools across Germany and the UK.

The researchers tested FearNot! by comparing a group of users and a control group of non-users, similar to the method used for testing medical treatments.

Students in selected classes spent a total of 1.5 hours playing FearNot! over the course of three weeks.

The results were encouraging. "It definitely reduces victimisation in the short term," says Aylett. "It has a significant positive effect even at this low exposure."

Although further work is needed to demonstrate long-term effects, Aylett is confident that if all the children in a school experienced FearNot! over a longer term, and as part of a social learning curriculum, bullying and victimisation would be reduced.

"FearNot! has achieved its objectives very well," says Aylett. "You'd need a games or educational software company to take it further."

## ORIENT - empathising with newcomers

While FearNot! has younger children interacting with cartoon-like characters in a simple world, ORIENT immerses older students in a much more vivid and complex virtual world, where they learn to empathise with and accept newcomers from other cultures.

In ORIENT, three students are equipped with various handheld control

devices and “beamed down” as a team to save the planet Orient.

Planet Orient is populated by aliens called Sprytes, who look rather like large bipedal tree frogs and who have their own language and customs. Students have to learn a lot about the Sprytes and empathise with them in order to help them.

“We wanted users to feel adrift in this alien culture,” says Aylett. “How can you empathise with new people in your own culture if you’ve never experienced being adrift yourself?”

The software that shapes what happens as students interact with the Sprytes acts like the director of an improvisational drama. The software starts and ends scenes, chooses which characters appear, and can impose challenges such as a storm.

Each Spryte has its own goals, feelings and memories that control what it does and that can change based on experience. The interaction between the Sprytes and the students produces an unpredictable “emergent narrative”.

“There’s no fixed plot,” says Aylett. “Our characters are acting autonomously, making up their minds as they go.”

According to Aylett, students standing in front of a large screen and interacting with these psychologically believable aliens soon respond as if they were real. “ORIENT produces the feeling of really being there,” she says.

Although ORIENT needs further development and testing, Aylett believes it has the potential to help solve a major social problem by spurring students to change their attitudes toward students from other cultures.

“It’s the attitudes of the host community that can either make new students welcome or make their lives miserable,” she says.

More information: www.e-circus.org/

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