VIRTUAL ICT WITH EMPATHIC CHARACTERS
Framework V EU-Project VICTEC Work Packages

1. What is Bullying?
Bullying behaviour is different from teasing & aggression.
Bullying behaviour is repeated over time and does not just happen once.
Bullying involves power relationships.
The victim feels overpowered and intimidated by the bully.
Bullying is planned and deliberate and is not just a joke.

Direct Bullying:
A student is being bullied or victimised when he or she is exposed repeatedly and over time to negative action on the part of one or more others students. (Olweus, 1991)

Relational Bullying:
The purposeful damage and manipulation of peer relationships and feelings of social exclusion. (Crick & Grotopeter, 1995)

2. VICTEC and Bullying
Anti-Bullying initiatives to date have shown limited success to rate in reducing bullying problems within schools. VICTEC is a European funded project initiating ICT solutions for the reduction of bullying problems in Belgium, Italy, and Portugal. VICTEC offers a new and innovative approach to aid the reduction of bullying incidents within Virtual story telling environments (VLE).

The research team of experts on the project has developed scenarios with children in partners school using the Kar2ouche software, as well as a VICTEC trailer in order to test the believability of its characters.

3. Emergent Narrative scenario
The concept of Emergent narrative aims at solving and/or providing an answer to the narrativity paradox observed in graphically represented Virtual Storytelling systems.
Our research aims at a narrative structure appropriate and suitable for an optimal use of Virtual Environments, combining the entertainment values of both storytelling and virtual experience participation. The story, as it happens in real time, in a VE is seen as a process element that needs to be treated and considered dynamically.

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4. The theory of mind
Theory of mind refers to the ability to predict and explain the behaviour and feelings of others based on reference to mental states, beliefs, desires and percepts (Aston 1993; Weilman, 1990). Theory of mind abilities and differences between bullying roles (bully, victim, bullying/victim, neutral) is an area that has received little research attention and may be an important factor for explaining children’s involvement in bullying roles and the stability of these roles.

5. What is an Empathic Character?
Empathy is a key concept in VICTEC and describes the ability of one person (‘observer’) to achieve information on the ‘inner state’ of another person (‘target’), three different aspects of empathy can be distinguished: the cognitive, the affective and the ideomotoric aspects.

Cognitive empathy (“perspective-taking”), the observer tries to understand how the target feels in a given situation.
Affective empathy refers to processes with an affective outcome: The observer feels something due to the perception of a target.
Ideomotoric empathy is the tendency within an observer to perform a movement that has been performed by a target.

Empathic relationships between the child user and the virtual characters
• VICTEC tries to establish empathic relationships between the child user and the virtual characters:
  • Studies have been carried out to identify believable scenarios and character behaviours.
  • Since computer scientists are not able to create absolute realistic characters, cartoon-like characters have been used to create believability without demanding unattainably naturalistic behaviour.
  • The stories displayed on the screen are not pre-scripted, but use Emergent Narrative. Only the virtual characters (with dispositions, motivations and emotions) and the virtual environment are specified, and the autonomous characters creates the story through interaction.

6. Measuring empathy
Dispositional Empathy Measurement
Empathy is measured in VICTEC by the project’s own questionnaire. The questionnaire exists in three languages (English, Portuguese, German) and has been piloted in all three countries.

German sample:
109 boys / 125 girls
Objectivity: highly standardised procedure
Reliability: Internal Consistency (Cronbach’s Alpha): α = .84
Validity: All items have been judged by experts (psychology professionals) for their appropriateness for the measurement of empathy.

Two relevant empathy factors (cognitive & affective) were confirmed in a PCA. Results show gender and age differences in empathy, which have previously been reported in literature (e.g. Eisenberg, 1991).

7. Testing in Intelligent Virtual Environments
Tests so far have shown that:
1) Boys in the 8-12 age group do not understand relational bullying
2) Characters have different appeal in different countries
3) Girls empathise with male and female characters, boys more with male characters.

A psychological evaluation will be hosted at the University of Hertfordshire between the 14th – 25th June 2004. Its major aim is to determine whether user characteristics (roles in bullying behaviour) are reflected in user choices regarding the bullying scenarios in terms of mental representations (e.g. theory of mind), action choices, empathy and differences in coping strategies. In order to address the above research questions adequately, a large sample of children (N=400) will be required to take part in the psychology evaluation. This is due to the skewed nature of children classified as ‘pure’ bullies, ‘pure’ victims, bully/victim and neutral children. More children in the sample will be classified as neutral and few children will be classified as ‘pure’ bullies. A sample of 400 children will allow for adequate statistical analyses with the inclusion of all bullying groups.

http://www.VICTEC.org