Chapter 4
ORIENT:
The Intercultural Empathy
Through Virtual Role-Play

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ABSTRACT

In a globalised world, cultural diversity is a challenge for everyone. Even for those staying "at home" cultural diversity enters their daily lives by people migrating from other regions of the world, sharing their social world. While intercultural encounters pose a great enrichment to one's experiences and perspectives, they also represent an immense challenge, confronting us with different languages, attitudes, habits, and social norms. The work presented in this chapter takes up this challenge by developing and evaluating a believable agent-based educational application ("ORIENT") designed to develop intercultural empathy for 12-14 year olds. The following chapter: (1) discusses the approach to use the appealing character of games in order to foster social and emotional learning in the age group while drawing on effective pedagogical interventions like role-play that have previously been successfully used to trigger social and emotional learning in a variety of real-world contexts; (2) introduces the development of ORIENT as an affective agent architecture modeling culturally-specific agent behavior, drawing on the psychological and pedagogical theories outlined; (3) considers the role of novel interaction modalities in supporting an empathic engagement with culturally-specific characters as well as active engagement in collaborative learning within a group of learners; and (4) presents and discusses results of preliminary evaluation studies based on an early prototype.

BACKGROUND

eCIRCUS (Education through Characters with emotional Intelligence and Role-playing Capabilities that Understand Social interaction)has developed a new approach in the use of ICT to support social and emotional learning within Personal and Social Education (PSE). This was achieved through virtual role-play with synthetic characters that establish credible and empathic relations with learners. eCIRCUS investigated educational role-play using autonomous synthetic characters and involving the child through affective engagement, including the use of standard and highly innovative interaction mechanisms. This has developed novel conceptual models based on theories of narrative and role-play from psychology and implemented them in affectively driven autonomous graphically embodied agents – actors with attitude. It has delivered early prototype showcases through a VLE for emotional and social learning, one on anti-bullying education and one on intercultural empathy.

SETTING THE STAGE

ORIENT (Overcoming Refugee Integration with Empathic Novel Technology) focuses on the domain of intercultural learning, aiming at the home community with the ultimate goal of improving the social integration of youths with migration background in European countries. ORIENT is a showcase developed for Personal and Social Education by the EU-funded project eCIRCUS, funded within its Framework VI program. It offers a virtual learning environment for a group of three learners who are interacting with autonomous artificial characters representing another species (the "Sprytes") on an alien planet called ORIENT, a distant planet under threat of destruction by a large meteor. Interacting with the ORIENT application, a small group of adolescent learners equipped with innovative interaction technology

are asked to solve – as foreigners on the alien planet of ORIENT – story-based problems and learn by interacting with the software how to get into contact, communicate, and cooperate with others who are fundamentally different from themselves.

The virtual world of the Sprytes is represented on a large screen of the real-world interaction space of the three learners, allowing for interaction between the learners in the real-world context as well as for interaction between the learners and the virtual world of the Sprytes; interaction devices used include RFID tagged real-world objects and RFID reading mobile phones, a game mat for navigation in the virtual world, and a WiiMote controller. First participants are told about their role as applicants for an internship in Space Command who will travel to an alien planet called ORIENT to find out about the inhabitants, the so-called Sprytes, of whom only very little is known so far. Their mission goal is to find out about Spryte habits and ways, to allow Space Command to judge whether it would be safe to establish further contact with the Sprytes. Then they are allocated the three roles:

- Navigation officer, who navigates on ORIENT using the game mat and handles the ORA-CLE;
- Communication officer, who communicates with the Sprytes by using expert knowledge about Spryte gestures, using the WiiMote;
- Intelligence officer, who can exchange objects with the Sprytes and attract the Sprytes attention, using the mobile phone.

The team then "teleport" to ORIENT, which is displayed via projector on a wall of the room after the participants have moved to their respective places.

In the course of the role-play, the group of learners and the Sprytes gradually learn from each other and the learners share the engaging

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