
A Computer Game on Emotions for Teenagers Excluded from School

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Abstract

In this paper we describe the case study of the COOL project, aiming at developing a computer game (U-Think) for pupils excluded from mainstream educational settings. The game intends to engage the specific target group in reflecting on their own emotions and behaviour and the project involved the young people throughout its whole development, from the design to the evaluation. The paper concludes with reflections on the ongoing evaluation and the value of the project from a design and educational point of view.

Keywords

Emotional Intelligence, Difficult behaviour, Participatory Design, Computer Game

ACM Classification Keywords

H 5.2 [**User Interfaces**]: Prototyping, Screen Design, User-Centred Design.

Introduction

There are not many studies of design activities with individuals that are on the edges of the educational system for all sorts of behavioural problems. In general studies use children from mainstream schools. An example is the work by [1], where adjudicated youth were engaged in an educational project with technology. Another study is reported by Waraich et al. [8], where an Informant Design approach is adopted to

develop an educational game to teach management and business skills to pupils of the local Youth Service.

The COOL (Collaborative Object for Off-target Learners) project is funded by the HEFCE's Strategic Development Urban Regeneration Fund. The main aim of the COOL project is to engage pupils, excluded from mainstream high school educational settings, to reflect on their emotional intelligence and their behaviours. The computer game 'U-Think' has been developed to achieve this aim.

The rationale for the project lies in the evaluation of current strategies in Pupil Referral Units (PRU's) that have been designed to help pupils develop social and emotional competencies, including self-worth. The aim of these interventions is to help young people excluded from school to re-engage with education, and to reduce deviant behaviour. The focus on emotional intelligence [4] is based on research demonstrating correlation between engagement in deviant behaviour by these young people and the level of their emotional intelligence [6]; and between emotional intelligence and academic performance/engagement with school [5]

From previous discussions with staff and pupils in PRU's, it seemed that what they wanted was a more interactive tool than the strategies already implemented in school. An example from local reality is a computer programme, DVice, dedicated to delivering offending behaviour work to the young people of regional Youth Offending Team (YOT) within their own community setting. It uses technology in a fun and engaging environment to enable young people to reduce their offending behaviour [3].

Upon examination, DVice seemed only suitable for its original population group (Pupils in YOT teams), so we decided that a similar product (U-Think) could be developed specifically for use with pupils in PRUs, with the aim of developing key emotional intelligence skills.

The product

Based on the four areas of EI identified in [14] the topics of the game were divided in four sections as follows:

- Recognising emotions;
- Understanding emotions;
- Using emotions;
- Controlling emotions.

The game was required to provide a detailed definition and explanation of a core set of emotions and include specific activities on these four sessions. The psychologists' team identified the 10 core emotions the game would have focussed on: they are considered the ten basic emotions the pupils should get familiar with.

The Design

To understand the users' characteristics and needs, we adopted a design approach based on participatory design methods [2, 8]. Involving the young people since the beginning of the design process as principal informants was considered necessary to achieve a product meant to reach the target. Due to the fickleness of the situations in the PRU's and the critical behaviour of the pupils, the design sessions had to be tailored and re-adapted around the pupils over time.

Since the overall structure and contents of the game was established at the beginning of the project; what needed to be elicited from working with the pupils was:

- Vocabulary (terms and language pupils are familiar with)
- Interests (topics, situations, hobbies)
- Abilities (attention span, literacy skills, technology skills)
- Familiar context (situations that they would feel at ease in and the ones to avoid)

The computer application has been implemented in Flash© by a programmer. As each component was built, it was shown to the pupils and the design features were discussed. Pupils were asked their opinion, both in term of look and interaction (examples of screenshots can be seen in Figures 1 and 2).

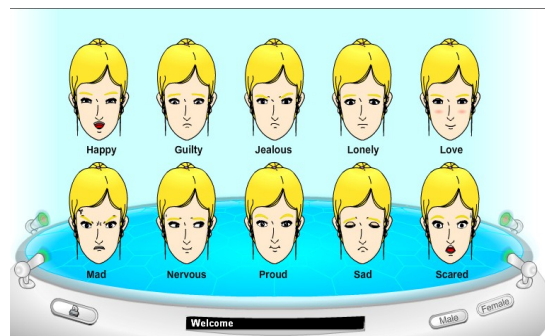


figure 1. a screenshot from the computer game modified after the pupils' feedback

Pupils were also asked to contribute to the product by giving their voice to the characters by recording the dialogues.

The evaluation

During the implementation of the product its usability has been evaluated by an external team of usability experts and at the same with a group of users. The pupils were observed while playing the different sections of the game and they were asked to comment on it according to a Think Aloud method. Flaws and major problems were fixed before the product was delivered to the selected schools by the team of psychologist to test its actual educational value.



figure 2. The screenshot of a question at the end of a video clip in the computer game

The programme is delivered to the pupils both in the computer version and in a correspondent paper version. The activities presented in the paper version are the same as the computer game but with printouts of selected screenshots. Pupils are asked to complete the different activities together with the case worker or

a psychologist. An Example of the questions about emotions is shown in Figure 2.

Results about the effectiveness of the tool to improve emotional intelligence of the pupils are not yet available as the evaluation is ongoing at the moment of writing this paper. For now, we can state that the results of the evaluation of the design sessions have been positive, both from the pupils and from the case workers. The idea of contributing to a computer game and also the fact of being acknowledged for it thrilled the pupils giving them some sort of responsibility. The tutors and case workers recognized that having used varied types of activities had been successful with the pupils. These aspects were reflected in an improving behaviour over the design sessions and a progressive engagement.

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