Sexuality Road

Adam Herd
Bachelor of Information Technology
Otago Polytechnic
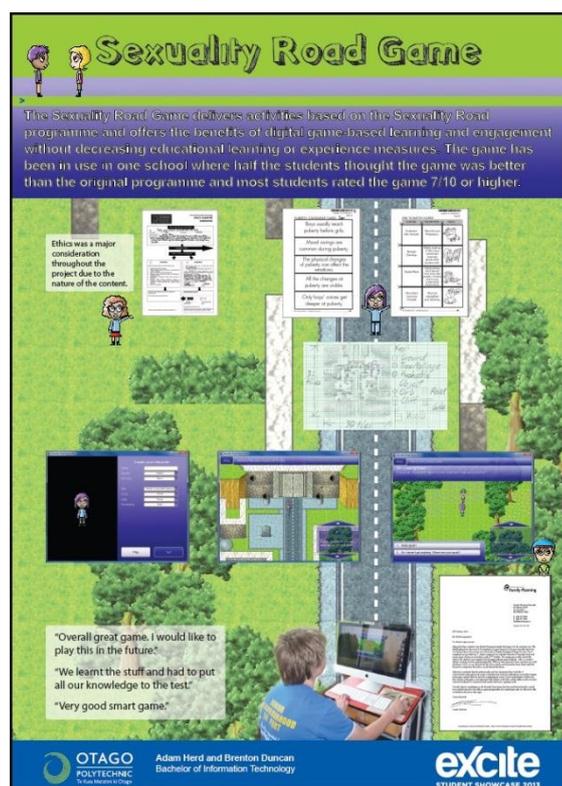
Paul Admiraal, Samuel Mann
College of Enterprise and Development
Otago Polytechnic
paul.admiraal@op.ac.nz, samuel.mann@op.ac.nz

ABSTRACT

The Sexuality Road game delivers activities based on content from the Sexuality Road programme, developed by Family Planning, to primary schools while offering the benefits of digital game based learning and engagement without decreasing educational learning or experience measures. We have created a Beta of the game utilizing a couple of activities from the programme. Our test results show that this game does deliver on the above values. This report details the game itself, brief aspects of the process taken towards implementing this game and proving the value this game has for Family Planning.

Family Planning is a not-for-profit charitable organization that provides sexual and reproductive health services, which include: information, clinical services, education and training, and research. They also sell a teaching programme called Sexuality Road to primary schools, with material for years five to eight. Family Planning has found that for small rural schools the cost of the material is out of proportion with the size of their classes. They needed to come up with a new way to deliver the programme that was more engaging and cheaper than the current paper-based programme while maintaining the same educational value.

We have built and delivered a computer game that utilizes a couple of activities based on the year eight programme material. The game uses the same material and lessons as the original programme but presents them as scenarios in a virtual world environment. They play these activities using a character they are able to personalize by choosing their: appearance, gender, ethnicity, and name the game activities are based on two activities: Divisions and Mix 'n Match. Divisions is a reimplementation of a true or false quiz into a scenario where the player collects orbs, each holding a puberty statement, and assigns them as true or false. Mix 'n Match, an activity where you match an image with a name and description, has changed to a scenario where the player helps some people lost in a forest by identifying and explaining the bodily change they are experiencing, and how they can cope with the change

This game addresses the problem of engagement by putting the activities in a different context. The original programme activities mainly consist of quizzes, group activities, and stories teaching the theory of the lessons but often the practical application of these lessons are limited to the student's imagination. Within the context of a video game world the lessons are being applied to scenarios that require their direct involvement, allowing them to apply what they learn from class in a more practical manner, and showing them where the lessons could be applied to the real world.

The game was built in Torque 2D which is a modular structure in loading game content which suits the need for separate year group content. The engine is very portable as all of the software needed to run it is built into the engine itself. It is also designed for cross platform support across Windows and Mac OS X, as well as iOS.

Family Planning gave us creative freedom in designing and creating the game and the content, so long as the activities taught the same lessons. We changed the activities to take advantage of the medium of video games and made the game about the journey of the player character travelling the Sexuality Road. The activities became scenarios that the player would encounter while travelling the road, typically solving puzzles and helping people with their problems in order to continue their journey. We wrote the character dialogue in the form of activity diagrams so that we could map out the flow of dialogue (see Figure 1).

Figure 1.

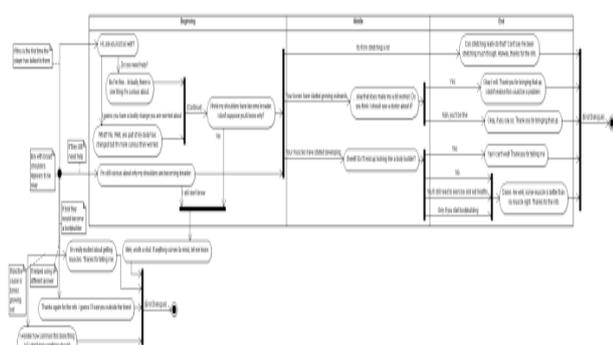| FR1	Allow students to interact with activities from the Sexuality Road programme.	In this prototype two of the eleven activities for the year eight module were implemented While the activities are not the same as those in the programme they are based on them and teach the same lessons.
FR2	Allow students to create a player profile.	Achieved. The game does not ask the user to create a profile but the user can create their own character and all of the elements for creating a profile are present (see **Error! Reference source not found.**).
FR3	Allow students to customize their character.	Achieved. At the beginning of the game the user can choose the: gender, ethnicity, hair style and colour, clothes and accessories of their character (see **Error! Reference source not found.**).
FR4	Provide immediate constructive feedback to students about their submitted answers and explanations	Partially achieved. The user does receive feedback on their immediate choices though we were not able to implement a results screen that will go into further depth about their answers.

		during activities.	
FR5	Allow teachers to add/remove compatible content.	Partially achieved. The system is built towards allowing this but only one Beta module has been created so far.	

Table 1. Initial Functional Requirements with assessment

One of our tests involved our functional delivery being played by other students. This test focused on the core gameplay features we had built up to that point, seeing if they could discover any bugs or exploits, and to get some first impressions of the game from people outside of the project.

We conducted a test of the robust delivery at a local Primary School. Along with the value statement metrics of fun, engagement and education, the test was about how well the game copes in a classroom environment and seeing what problems can occur while playing the game.

They played in two groups, each group was given 20 minutes to play the game and then fill out an evaluation form. The evaluation form asks the students to rate from zero (awful) to ten (great) the following areas: the look of the game, how they played the game, character creation, the two activities.

Fourteen year eight (approximately age twelve) students participated: six girls, eight boys. Ethnic distribution was approximately the same as the school. Some students did not play Divisions and one student chose to rate the game using words like "easy" instead of numbers; we found most of these ratings too ambiguous so they were not included in calculating the averages.

The overall results of the test look very positive. Across all ratings the average score is greater than six and almost all students gave an overall rating of seven or greater.

Of the fourteen students tested, eight thought the game was better than the original programme, five thought they were about the same, and only one thought the game was worse. Those who thought the game was better than the original programme gave reasons such as the game being "more fun", that it was "cooler on [a] laptop" and that they "get to help people."

The Sexuality Road Game delivers activities based on the Sexuality Road programme and offers the benefits of digital game-based learning and engagement without decreasing educational learning or experience measures. The game has been in use in one school where half the students said the game was better than the original programme and most of them rated the game 7/10 or better.