Criterion E– Evaluation of the Product

Meeting the criteria for success

1. The interface to the game is a clear graphical representation of the board – *this is met*
2. Player or computer to go first is random – *works well*
3. The player can make the move as easily by clicking on the chosen pot – *this is met but sometimes it is necessary to click a few times for reasons that I couldn't work out. Could be a problem with my computer as I was the only one that had this problem. It is also important that the player waits until the computer move is finished.*
4. The computer calculates an efficient move that gains as many points as possible and does not leave it in a vulnerable position – *this works partially in that the computer calculates the way to gain points but does not check that the position left in is not vulnerable. Also, after playing it many times my teacher noticed that sometimes the computer move was not the best, as described below. [Descriptive writing – words counted in this bullet point]*
5. If there is no preferred move the computer randomly chooses a pot which is not empty – *works.*
6. The rules of the game are correctly implemented – *rules correct.*
7. The pot situation is updated as soon as a seed is dropped - w*orks well and the visual representation shows this at the same time.*
8. Scores are adjusted correctly and a visual simulation of “taking seeds” made – *works well.*
9. The game finishes when one of the players has all of the pots empty – *works well.*
10. The player with highest score is announced as winner – *works.*

Recommendations for Future Improvements

The game works well to a certain extent and anyone wanting to investigate strategies for the game could learn a lot. The moves made by the computer are mostly predictable. This could be improved by improving the algorithm for best move to not only count the possible score from a pot choice but also check if a move would leave one of the computer pots in a position to be taken by the player on the next move.

To do this another array “potLosses” could be set up which was completed for each pot in a similar way to “potScores” but which held the number of points the player could score if a particular computer pot was chosen. The decision algorithm would then have to take into account both arrays. It would be interesting to add this and see if the computer then had more of a chance to win.

In fact, as I discovered too late, the computer choice is flawed. If the pot contains more than 12 seeds, the “potScore” does not take into account that more than one seed will have been put into some pots when moving round the board.
Product functions as intended with minor flaws – links to criterion D.

Was my choice of Scratch a good one? Yes for the graphics because they were easy to manipulate but as blocks of code got longer as I was moving them around they sometimes snapped into the wrong place which gave errors that were difficult to sort out.
Word Count 332
This is awarded 6 marks for this criterion.
The product is fully evaluated with feedback from client and advisor (as evidenced in the record of tasks and discussed in criterion C).
The recommendations are realistic and demonstrate that this product is extensible (links with D).