How computer games could help us all make better decisions in life

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A prototype computer game has been developed to help improve decision making skills in all aspects of our lives.

Supported by the Engineering and Physical Sciences Research Council (EPSRC), a team at Queen's University Belfast has developed a prototype that could be built on by commercial games manufacturers and turned into an e-learning or training tool for professionals in all walks of life – and for the general public too.

Alternatively, some of its features could be incorporated into existing computer games that have a strategy element.

The team has explored whether people can be trained to make better decisions by improving their ability to recognise and make allowances for their subjective opinions and biases, and to 'factor in' accurately their uncertainty over a decision's likely outcome.

You're late for a train. Will you be able to catch it if you run? Or will that result in the stress of wasted effort? To maximise your chances of reaching the right decision, you'll need to take into account all information available to you (which may change minute by minute). But it also helps if, using this information, you try to make an appraisal of your chances, which will be more accurate if you take into account how you tend to interpret such information, based on previous experience. For example, maybe you know whether you tend to be over-or under-confident in similar situations.

In the same way, the prototype game (available for anyone to try out at http://quiz.worldofuncertainty.org/) teaches people to take their uncertainty into account and learn from experience when faced with simple choices.*

"It's the first ever online quiz designed to let people estimate how sure they are of their answers and score more highly if they don't ignore their uncertainty but realistically assess it," says Dr David Newman, who has led the project.

"Whether the choices facing us are simple or complex, a greater awareness of uncertainty and of our own biases can improve the quality of our decision-making. We believe there's real potential for people to acquire that awareness through computer games."

In the future, games of this type could be used for both educational and entertainment purposes by public and private sector decision-makers and by private individuals in order to enhance their decision-making abilities.

Over 500 members of the general public, as well as many students from Queen's and Dundalk Institute of Technology, have already tried out the prototype. The results are currently being assessed to establish the extent to which it has taught them to make better decisions.

"The game we've developed is a research tool that's enabling us to find out much more about the thought processes and psychological mechanisms involved in decision making," says Jyldyz Tabyldy kyzy, a key member of the project team.

  More information: * The prototype game presents a series of multiple-choice questions (e.g. 'what is the capital of Egypt?'). But its aim is not to test knowledge but to assess whether the participant can be trained to recognise, quantify and make allowances for their certainty or

uncertainty regarding the answer to each question. The player indicates their confidence in their answer using an interactive slider and is awarded points based on how accurately they estimated their level of certainty. Detailed feedback then helps them recognise and correct the over-or under-confidence they tend to show when faced with similar decisions.

Provided by Engineering and Physical Sciences Research Council