

## The Wicked Problem: Using games to demonstrate complexity of sustainability to novices

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SDES1104 Interactive Systems, a core course for first year Bachelor of Design Students at the College of Fine arts, aims to give students an understanding of the social, environmental and economic impact of human activity on Earth and how their practice as designers contributes to this. Inherently the content is complex, challenging and extends the students as it asks the students to consider areas of *troublesome knowledge* (Perkins 1999) often well outside their comfort zones. One assessment task, in particular, is a challenge for them. Students are asked to identify a current complex issue, local or global, and analyse it from as many perspectives as possible looking for ways of solving it. They keep a journal tracking their process and progress across the semester. These issues must be *wicked problems* ([Rittel, H., and M. Webber 1973](#)) so complex and with such incomplete or inconsistent information available about them that there is no one perfect solution to them. The notion of a wicked problem is a threshold concept (Meyer and Land 2003) for the 1<sup>st</sup> year students as they are mostly used to problems they can get 'right' or 'wrong' or that have only one solution.

This task is traditionally introduced very early in the semester. Students are expected to work on the project for the whole semester with the assessable outcome submitted in the final week of the course. Not understanding how complex and demanding the task is, students tend to leave it until the last couple of weeks to start and as a result have a very difficult time comprehending the task let alone completing it.

This paper discusses a game developed for students to undertake in tutorial early in semester to help them understand the nature of a wicked problem and how to identify one of their own. The goal being to illustrate, in a positive way how complex the task is, what wicked problems are, how they can be approached and that they have not got one definitive solution. In turn it is expected this will get them started on the task earlier in the semester by demonstrating how it is not as easy as it seems.