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Democratizing the learning space: The use of games to teach economics

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BACKGROUND

DEMOCRATIZING WHAT?

- The learning space of lecture

From instructivist/transmission mode of education

- Problem: Learning left with the expert and textbook

Result: Student disconnect with the learning

- My subject economics lends itself to this type of learning

Go anywhere in the world find fast paced lectures with PowerPoints and a standard curriculum.

- Theory first approach with lots of diagrams and mathematical proofs

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- Breaking the monoculture of the lecture, by introducing alternative methods of teaching such as games to more diverse approach
- Where does the learning remain? Firmly in the hands of experts or in the hands of the students where the lecturer becomes guide.
- Closing the gap between the real world and theory can be facilitated by the use of games as an alternative pedagogy.
- This paper is based on a larger study that used the Interactive Qualitative Analysis (IQA) to examine 'how' and 'why' students learn from an economics gaming intervention.
- This was a qualitative study based on the focus group and semi-structured interviews of 14 students randomly chosen from an economics class who experienced the economic gaming intervention.
- For this paper, I going only to consider the outcomes of the IQA model namely: 'understanding the subject'; 'expanded on the subject', 'application to the real world' and 'didn't feel like a lesson' that resulted in a deeper conceptualization of the economics topics.

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Interactive Qualitative Analysis (IQA)

- These themes were created by the students during the focus group meetings and formed the basis for in the semi-structured to gain a richer understanding of these affinities (themes).
- The key feature of IQA is that the participants in the research are directly involved analyzing and interpreting data under the guidance of the researcher. The IQA protocols, as designed by Northcutt and McCoy (2004), ensure that the researcher has minimal influence over the data created by the participants, as sets of rules govern the research process.
- This means that each of the participants should have a collective understanding of the phenomena as a result of looking at the causal relationships between the themes (affinities). Collectively they develop a System Influence Diagram (SID), which is a graphic illustration of the phenomena and the inter-relationships between the various themes (affinities).

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Outcomes

- The primary outcome 'Application to the Real World' is made up of two secondary outcomes 'Understanding the Subject' and 'Expanded on the Subject'.

- The secondary outcome 'Understanding the Subject', led to a qualitatively different level of understanding because it changed the previously abstract economic theory into a set of tools which the students could use to facilitate economic reasoning in their everyday lives.

- No longer were the terms 'merely vocabulary in an exact form' according to their theoretical definitions, or as Huyen and Nga (2003) stated "they do not know how to use it with different shades of meanings in real life", but the context provided by the game transformed the terms into meaningful tools which explained 'the shades' of economic reality in the market place.

- the secondary outcome ‘Understanding the Subject’ gave rise to ‘Expanded on the Subject’

- When it comes to ‘Expanded on the Subject’, the role played by games is exactly that as it elucidates the theory by providing an opportunity for the students to walk through and experience the theory in action.
- The game acts as the master and the student takes on an apprenticeship-type role as he/she learns how to apply the economic concepts in a real-time, hands-on environment.
- the game generates the live awareness of the theory and the wisdom to be able to make connections between the theory and the real world.

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- This finally culminates in the final outcome ‘Application to the Real World’ where deeper conceptual understanding arises out of the integration of ‘Understanding the Subject’- conceptual realisation and ‘Expanded on the Subject’ - conceptual awareness looking at the connection the students are able to make between academia and the real world.
- This is an important competence to develop. As they overcome the challenges posed by the game, the students begin to realise the relevance of what they are learning and are enabled to transfer knowledge from one context to another and vice versa.

- The primary outcome Didn't Feel Like a Lesson' -here emphasis was on the disruption of traditional lecture format caused by the introduction of the gaming intervention.
- This brought about a learning environment in which the students felt freed of traditional classroom constraints where they were able to interact with each other; personalise their learning; and, naturally retain what they had learned.

- Why? How could they be developing this deeper conceptual understanding that remained with them?
- Sweller (1988) – Cognitive Load Theory
- Working memory – limitations
- if the load on the learner's working memory is exceeded, the result is a decreased efficacy of learning, thereby jeopardising the student's performance and attainment of knowledge.
- Goal to free up as much as possible space in working memory for deeper conceptual understanding.

- Games as worked-out examples – scaffolded examples
- Games use of multiple channels for information processing tactile, auditory and visual

Conclusion

- By changing change in the context of the learning environment and the journey **they** travelled through the use of educational games led to a deeper conceptual understanding which empowered **them** to take control of their own learning through play.

THANK YOU