DIGITAL-BASED LEARNING THROUGH GRAND-NARRATIVE SIMULATIONS:

A PROPOSITION FOR ADOPTING SID MEIER’S CIVILIZATION SERIES IN NARRATING FORMOSAN MARITIME HISTORY

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Impartation: A Ludological approach

- The impartation of “history”, specifically the complex interplay between different factors through natural case-based learning opportunities that were not possible in centralized learning programs.
- An independent module outside the traditional classroom environment.
What are Simulations?

- simulations were intrinsic games that linked internal goals and gameplay (Prensky, 2000: 164)
- Replicated cognitive models of learning and organizational behaviour (Beer, 2000: 75)
- “breaking the rules and experiencing the consequences.” (Horton, 2000: 572)
Off-the-shelf Examples

- *Quake* mod for off-shore drilling orientation
- *Full Spectrum Warrior* for Marine squad command training
- *America’s Army* as a recruiting tool
- *Marine Doom*, an adoption of id software’s seminal work *Doom*
Why (God) games?

- Game: Goal, Rules, Feedback system, Voluntary participation. (McGonigal 2011)
- It all started with *Mancala* (6-7\textsuperscript{th} century)
- stimulate counterfactual thinking, augment our multiple intelligences (Burns 2002)
- Histotiographic implications of isometric displays (“Chaostory”)
Why Civilization?

“"If used in a scenarios workshop, Civilization becomes a brainstorming tool for the historical analysis of key variables" (van der Heijden, 1996: 138, 189).

Why Civilization?

- Potential in conveying how complex social systems generate negative feedback loops (Prensky 2000: 135).
- The extra-telic potential of gameplay
- Potential for enhanced historical fidelity
- Its AI engine and adviser
- System enabled replay and critique (Prensky 2000: 219).
Civilization: A Classroom Example

- Module accompanying “Introduction to Modern World History” course (Taylor 2003)
- Represent the complexities of Kennedy’s argument in The Rise and Fall of Great Powers in a dynamic and visible manner
- Students characterizing reading from the text as akin to “having an in-game help line”
Limitations and Implications of the Game Mechanics

- Epistemological concerns of History (Narrative undertaking or the recovery of the past)
- Individual influences over history neglected
- “World Domination”, depersonalizes violence, the “Military-Nintendo Complex”
- Reductionist approach, and a fixation on timing and resource control
- Biases toward the assumption that “the autonomous social entities whose interactions defined history on a global scale.” (McNeill, 1990: 7-8).
Origin: *Pirates of Formosa!*

- Originated in the 80s, based on an action-adventure Role-Playing approach.
- The maritime history of Formosa from 1542-1662.
- Linear-approach to history/story telling.
- Encompassing 5 distinct factions and professions, each with different, and sometimes conflicting goals.
Proposed Modification for Adoption

- Scenario based simulation with sandbox model vis-à-vis the open world “Spaceship Earth” model
- Specific, different victory conditions for respective factions
- Open /Close models for single/ multi-player implementation (CivNet)
- Heuristic AIs as mimesis for player behaviour (augment independent AI threads)
Proposed Modification for Adoption

- Incorporation of simulation models such as the Stanford ORBIS for transportation and control over specific regions.
- Changing developmental stages into exogenous factors.
- Increase in historical fidelity through
- Rebalancing during Beta-test phase required
Future prospects

- Evaluation through collected data on player behavior (Both for closed and open model), in-depth interviews and qualitative analysis in order to ascertain the perceived narrative process and constructed meaning
- Quantitative analysis to establish the casual relationship as communicated through the ludic structure of the game.
Future prospects

- Generate credible vectors of exploration for historical narratives through high-fidelity simulations of the interaction between known factors.
- Incorporation into Museum displays opens new possibilities for group interaction and dynamics other than AI, as well as providing a real-time context with which to conduct decision making.