BRIDGING THE GAP:
Transforming Knowledge into Action through Gaming and Simulation

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Model United Nations Online (MUNO): a study of a policy exercise using Internet Gaming

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1. Introduction

During the past decades, we have witnessed the increasing importance of Information and Communication Technology (ICT) in knowledge communities. Through the ICT infrastructure, and especially the Internet, it has become a viable option to design and utilize web-based games, connecting groups of players located at diverse places. Within the field of gaming and simulation, International Relations (IR) simulations and policy games are increasingly influenced by these developments in the technological domain. As a result, types and structures of IR simulations change. Some 50 years ago, they were initially used as decision-making simulations in a military context (Starkey & Blake, 2001). Whereas typical modelled environments in the 1950s and 1960s were still used to develop and test theories on a decision-making level, the use of simulations for research purposes declined since then. Nowadays, the number and variety of IR simulations for pedagogic purposes is rapidly growing. Technology in particular has fostered change and innovation in the design and implementation of IR simulations. The impact of new information technologies on political and social interactions is an area where simulations have made valuable contributions (Starkey & Blake, 2001). At the same time, they have proven to be useful tools to anticipate and respond to future trends in the world of diplomacy and policy-making (Starkey & Blake, 2001). Applications such as policy support systems and negotiation simulations recreate new properties of the international system, such as its increasing interdependency.

The Model United Nations Online (MUNO) game is developed to address the abovementioned developments in the field of gaming and simulation. Not only did the game address the complex issue of migration from the perspective of the members of the Security Council of the United Nations. It was designed as a policy exercise in order to create a virtual policy arena where students could practice online policy-making in an educational context. Other game objectives were to explore the images of policy actors in cyberspace, and to enhance the understanding of the complex workings of the UN system. The MUNO project was developed and run in cooperation with the Red Cross Nordic United World College (RCNUWC). Two other schools joined in during the game session, as they recognized the educational potential of the MUNO game, the challenge of the project, and shared learning goals.
2. Design specifications of MUNO

The starting point for the design was the feasibility study for the RCNUWC. It resulted in the specifications of the game, and was based on experiences with two role-playing games, MUN and IDEELS. These games served both as an inspiration in terms of techniques and methods and were used as a model for the overall design goals.

Firstly, MUN influenced the design of MUNO. The reference system of MUNO and MUN, derived from the Security Council of the United Nations, is the same (UNAUSA, 2000). Other properties of MUNO, such as the focus on writing resolutions and particular policy-making procedures, are also identical in the two simulations. Moreover, the idea of learning basic negotiation principles is borrowed from the MUN simulation. MUNO borrows many features from the simulation game IDEELS (Intercultural Dynamics in European Education through online Simulation) (Sutherland, 2002), developed at the University of Bremen (IDEELS homepage). IDEELS uses two different ways of communication: The first one is asynchronous, simulating the communication between delegates on a day-to-day basis. The second mode revolves around real-time, synchronous conferences set at arranged times or organized spontaneously, and focuses on a specific item on the agenda. MUNO adopted these two modes of interaction, as they mirror the negotiations between delegates or diplomats in the UN Security Council through electronic means. In fact, we re-used the technological infrastructure of the IDEELS simulation shell, i.e. the web-based communication tool OPUSi.

Just as in IDEELS, we opted for handling policy questions that involve both governmental and non-governmental actors. Typically, the participants of MUNO have different but interconnected stakes, through which they simulate the interrelationships of global issues. In this context, IDEELS invites the participants into a collaborative problem-solving mode, and gains can only be realized through cooperative action. Both MUNO and IDEELS are related to ideas about post-normal problem-solving. Funtowicz and Ravetz (1993) use the term post-normal science for issue-driven research in a context of values in dispute, high decision stakes and high uncertainty. Post-normal indicates that the puzzle-solving exercises of normal science (that is: science in the rationalist (Kuhnian) sense) are no longer appropriate when society is confronted with the need to resolve policy issues regarding tricky transnational and trans-generational social issues.

In addition, we applied the design methodology derived from the taxonomy of games (Klabbers, 1999). While specifying the game architecture of MUNO, we used the framework as depicted in figure 1.
Klabbers (1999) defines games as models of existing, or imagined social systems. Guided by rules, people set objectives, apply strategies, and constitute a system of interactions within the boundaries of the game setting. As they form an organization, they try to influence each other, while steering resources. He connects the three building blocks: actors, rules, and resources with the idea of games as languages, or semiotic systems with their particular syntax, semantics and pragmatics. Table 1 depicts the resulting taxonomy of games.

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Table 1: Framework for a taxonomy of gaming (Klabbers, 2003)
Designers have to make numerous choices when specifying and developing a game. Using the abovementioned semiotic approach, the arrangement of the actors, the game manipulation set and the definition of the game space define the game structure on the level of syntax. The semantic aspects of the taxonomy fill out the content of the game, and refer to the meaning of the roles, rules and resources. At pragmatic level, games can be implemented in different ways. IR simulations of the type of MUN, MUNO and IDEELS are typically realized in a self-governing way, as participants usually are free to act within minimal constraints, according to their individual objectives and motivations.

In order to model the actor network, we applied the participative model of steering to model the Security Council of the United Nations. The participative model (Klabbers, 2003) aims at including multiple realities, while taking into account the perceptions from a rich variety of actors. It frames problems via multiple interactions between the actors, and intends to facilitate a self-organizing learning environment (Klabbers, 1996). The rules of the game emulated the procedures of the reference system, i.e. the Security Council of the United Nations. At the same time, they were adapted to a digital context. Speech time limit was translated into word limitation, and voting rules needed changes because of the OPUSi interface. English was the only language allowed within the game context. Role reversal was another technique used in running the MUNO sessions. Participants had to assume roles that were different from their national profile. This put most of them in a role-reversal situation where they had to place themselves in the shoes of another actor. During the scenario development, we paid particular attention to the calibration of the actor network by means of a dependency diagram, which links the various actors to specific issues. It revealed the interrelationships of the actor system, and the stakes in dispute. As a well-balanced actor constellation is of major importance for the game dynamics, the dependency diagram is a helpful tool to identify how all the actors interrelate and how issues are represented in a particular game state.

3. Procedure of the MUNO game

A participant group of 28 pupils, divided on three locations, two in Norway and one in Singapore joined the game. All participants were between 16 and 20 years old. Most of them came from different countries, and everyone but two of them used English as their daily tongue at the premises of the different schools. They entered the game on a voluntary basis. The overall game run lasted 3 days, and was preceded by briefing procedures. First, the participants got acquainted with the information resources, provided by the game website. In addition to the online briefing, different facilitators held a real-time briefing at the different schools. The participants also prepared themselves by writing a secret internal briefing document and a public policy document. During these briefing activities, the participants of the MUNO session were free to find briefing material on the MUNO web site.
or generally on the Internet. Consequently, they briefed themselves within the teams about the upcoming issues in connection to the scenario, both individually and in dialogue with each other. This also ensured that they read the other team profiles as well. In the meantime, three local facilitators coached the participants during the game preparation. They were entrusted with the follow-up of the briefing, technical support and the final debriefing of the teams.

The project manager adopted the role of game moderator, besides playing the role of UN-Secretary General during the game. The participants were divided in 9 country teams and one NGO. Throughout the game, all identities, UN-Secretary-General included, were kept secret, and none of the team locations was to be revealed during the game. Together with the scenario and the background documents on the Internet, the role profiles defined the initial state of the game. While playing, participants exchanged assertions and ideas about aspects of the theme of migration. The main activities while playing were on negotiation and writing resolution proposals. Convergence and divergence in the actor positions and in attitudes to the issues formed the game pace, and turned the game session into a concrete cognitive and emotional experience. All game activities were mediated through OPUSi, the integrated communication tool of IDEELS. Figure 2 depicts the graphical user interface of the message centre.

Figure 2: OPUSi graphical user interface of the Message centre (IDEELS homepage)
The negotiation sessions were divided into 4 rounds of 3 to 4 hours. The teleconferences that concluded these negotiation rounds intended to build up a climax, keeping the participants motivated to continue. The game was concluded by a voting session, in which the participants reject the resolution proposal they elaborated during the game. This voting session also functioned as an internal evaluation function for the game participants, and served as the starting point for the debriefing sessions.

Two different debriefing sessions were scheduled at the end of the MUNO game session, one online, and another face-to-face. Consistent with the self-organizing nature of the game, and the underlying participative model during the abstraction, we opted for a cooperative mode for both debriefings. Consequently, we kept the sessions informal and avoided any rigidity in form. With regard to the face-to-face debriefing, conducted with a much larger audience (23 participants), we implemented two measures to avoid either a boring and lethargic session or a chaotic discussion dominated by a few individuals. Firstly, we let them form break-out groups in the descriptive phase in the session, in order to give more people the opportunity to take the floor and describe their experiences. Secondly, we included a debriefing game right before the application stage. This technique often motivates participants and makes them more enthusiastic, as it returns more control to them (Thiagarajan, 1992). Two conditions apply for the facilitator when using a debriefing game; flexibility and willingness to relinquish control. As the project manager had operated during and after the game as a coach in an informal context, these conditions did not seem to pose a problem. The game we decided to use was called AVALANCHE (Meadows & Booth-Sweeney, 2001), facilitated by the project manager. AVALANCHE intends to instruct the participants about balancing personal and collective interests. This game is used as an eye-opener, and exhibits to the participant's counter-intuitive effects in collaborative environments. A detailed description on how Avalanche functions can be found in the Systems Thinking playbook (Meadows & Booth-Sweeney, 2001). Because of the physical limitations, the participants in Singapore were only debriefed online using the teleconferencing utility in OPUSi. They did not play AVALANCHE.

4. Observations on the exploratory assessment of the MUNO prototype

As the MUNO project was a design study, the assessment was only exploratory and its conclusions served as recommendations for future runs and further development of the prototype of the MUNO game. Central in the investigation stood following questions on the features of group learning and the nature of policy-making in a virtual context.

With regard to group learning, we assessed whether the game had generated an interactive learning environment. The web questionnaires addressed the participants’ attitude towards statements regarding thematic issues. These
were measured both before and after the game session. For those issues discussed during the game session, we noticed that attitude changed. For example, one statement posed that people should be able to move freely and without restriction across national borders to find work. This was an important issue during the negotiations, and two-thirds of the participants changed opinion, and either agreed or disagreed more strongly. Such attitude changes indicated that participants shared, constructed and revised their knowledge. Questionnaire feedback confirmed this observation.

Participants were overwhelmingly positive on the created learning community, and the majority agreed or strongly agreed that this was a positive and motivating learning environment. At the same time, the number of messages sent confirmed intense interactivity during the game session, both through synchronous and the asynchronous communication mode.

In addition to the web questionnaires, we used discourse analysis of the textual transactions between the actors. Central in this discussion were questions dealing with how effective and efficient the interactive student is in exchanging ideas and information through the Internet, and why and how policy actors (dis)agree on various issues in a multi-actor, multicultural environment. In this assessment, the influence of the technological infrastructure and the nature of the interaction became obvious. Functioning as substrata of the negotiation space, technology and interactivity were at the basis at the participants’ experience of the game environment.

The influence of the technology and interactivity on culture surfaced particularly as we took a closer look at specific metaphors. As the evaluation progressed, focus was on metaphors for time, space and types of negotiation. They indirectly described how the participants experienced the communicative environment. Analysis pointed out that the participants lacked a common time frame and an understanding of common space. We assume that the specific human-computer interface, connecting the teams in cyberspace, did not provide sufficient cues about time and space to simulate a realistic virtual Security Council of the United Nations. Consequently, a shared image of the Security Council negotiation table did not exist. In addition, the ICT-supported medium produced a lot of noise, caused by disturbing pop-up windows, other distracting emails, active messenger services, etc. This noise weakened this Internet game as a robust research medium. Easiness of message distribution frequently resulted in information overload for most teams in the game, bringing real negotiations and information sharing within the available time frame to a halt. Moreover, indications of uncertain presence in the teleconference caused certain teams to distrust and assume unwillingness to reply from the other participant. Consequently, the limited scope of connectivity through the communication tool OPUSi and the inefficient interactivity among the players heavily influenced trust and mutual understanding. Both are important factors in order to achieve efficient communication and successful negotiation processes.
Finally, we observed that calibration of the actor network resulting from the scenario needs further improvement. The participants echoed the topics in the scenarios, which had been formulated too univocally, without questioning them critically. Consequently, they did not trigger a serious reflection and therefore weakened the team dynamics of the overall game. For this particular session with this unique group of participants, a smaller number of items on the agenda, phrased in more ambiguity terms, might have been more suitable. Nevertheless, both the questionnaires as the participant feedback during the debriefing sessions pointed out that MUNO still proved to be a well-suited environment to share knowledge, to experiment with online policy making and to learn about the issue of migration from a UN perspective.

5. Lessons learned and conclusions

We wrap up the five most important lessons learned during the assessment of the MUNO game design and procedure:

Metaphor analysis of the game discourse led to the assumption that the bigger picture of UN negotiations – the Gestalt of the Security Council Round Table – was missing during the game session.

Mutual trust and understanding amongst the participants was heavily influenced by online aspects of the interaction, as a consequence of the limited scope of the connectivity.

The easiness of information distribution in an ICT-supported context resulted in this particular game session in inefficacy of the interactive mode due to information overload. Thus, the easiness of the web-based interactions became its worst enemy.

We experienced the Internet as a noisy and distracting research environment.

The calibration of the scenario and the role profiles prior to the game session is of key importance for the overall dynamics of this self-governing game.

Game scientists have theoretical models, and speculative conjectures couched in terms of those models. They also have views about how games can be designed, modified, adapted. Typically, the game does not behave as expected. The world resists. Scientists have to accommodate themselves to that resistance. They can do it by correcting the major theory under investigation, they can revise beliefs about how the game works and they can modify the game itself. The end result is a robust fit between all these elements (Klabbers, 2001, p.473).

During the design, implementation and procedure of the MUNO, we experienced that the world resists indeed. As the game architect envisions an imaginary world and invites the participants to create knowledge and learn from experience within that world, the free-form game changes from the initial setting of the game session. Unforeseen properties of the actor network emerge, and as a consequence, the game does not behave as expected, due to many factors beyond the control of the game facilitator. This dialectic
aspect of self-governing games poses a continuous challenge for the game designer, as he is forced to revise assumptions that lay at the basis of the initial architecture. Consequently, the design specifications deal with a moving target. In the case of MUNO, this means that the design of this self-governing game becomes an ongoing process, as the designer wants to achieve the robust fit between the gamed reality and the state of affairs at the UN Security Council. As a result, the lessons learned serve as an input to a new iteration of specification and design of the MUNO game.

References

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