European Union Computer Simulation Game:
Blended Cooperative Learning with Multiplayer Computer Gaming

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Declaration

I declare that the work described in this dissertation is, except where otherwise stated, entirely my own work and has not been submitted as an exercise for a degree at this or any other university.

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Abstract

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Computer gaming is changing learning (Schaffer et al., 2005). Schools often present students with abstract, disconnected learning experiences. Computer games, on the other hand, allow learners to experience the world in a new way, join communities surrounding the games, and develop the resources for future learning and problem solving from the experience (Gee, 2003, p. 45). Massively Mulitplayer Online Gaming is incredibly popular and may hold special potential for learning. Blizzard Entertainment, the creators of *Worlds of Warcraft*, report 8.5 million users worldwide (Blizzard Entertainment press, 2007). Competition and cooperation are at the heart of the multiplayer gaming experience, as gamers work together, work against one another, or both, in simulated worlds.

Learning theories are embedded in computer games. Constructivism is learning by doing (Bruner, 1960; Jonassen, 1994, 1998) and is the way computer gamers learn about the worlds they interact with. Cooperative learning, the concept that learning is enhanced as learners work together (Johnson & Johnson, 2004, p. 786), shares an obvious connection with multiplayer gaming.

This study specifically evaluates how and why a classroom-based, multiplayer computer game simulation of a real-world situation facilitates learning with respect to cooperation among secondary students.

A multiplayer game simulating European Union politics was specially designed and implemented in a secondary school over the course of eight weekly sessions. The reflections of two participant observers and the responses of students comprise a data set viewed as a single, holistic case study. Evaluation of that data shows that a classroom-based, multiplayer computer game simulation of a real-world situation facilitates learning with respect to cooperation among secondary students because competition engenders cooperation in a unique way. The experience caused students to adopt cooperative methods for problem solving as the key to competing in the gaming environment.

Table of Contents

Table of Diagrams and Illustrations

List of Abbreviations

CAQDAS – Computer Assisted Qualitative Data Analysis Software

EU – European Union

MEP – Member of European Parliament

MMOGs – Massively Multiplayer Online Games

TSCL – Technology-Supported Cooperative Learning

1. Introduction

Coca-Cola recently launched a television advertisement using scenes from Rockstar Games' popular computer game, *Grand Theft Auto*. This is one of many signals broadcasting the importance of computer gaming in popular culture. Once the "nerdy" pursuit of computer "geeks," computer gaming is now a multibillion dollar industry worldwide. Computer games have been designed for all ages, genders and interests and may become as ubiquitous to students in the industrialized world as books, television, mobile phones, or the Internet. The recent widespread advent of broadband Internet helped spark the phenomenon of Massively Multiplayer Online Games (MMOGs), which enable gaming between millions of people worldwide.

Blended learning is widely used to incorporate learning technology with traditional, face-to-face learning. Computer gaming already facilitates a wide range of learning experiences (Schaffer, et al., 2005), from knowledge construction (Bruner, 1960; Jonassen, 1994, 1998) to situational learning (Lave & Wenger, 1991). However, multiplayer computer gaming is a relatively unexplored avenue for learning. There is now a clear case for exploring multiplayer games to facilitate collaboration (Smith & MacGregor, 1992) and cooperation (Johnson & Johnson, 2004) between students in a mediated classroom learning experience (Vygotsky, 1962, 1978).

1.1. Research Questions

In order to guide this investigation of cooperative learning in context the multiplayer gaming phenomenon, the following over-arching question is posed:

> How and why does a classroom-based, multiplayer computer game simulation of a real-world situation facilitate learning with respect to cooperation among secondary students?

When considering this question, several sub-questions arise:

- Is there evidence of increased cooperation between students during this activity?
- Are collaborative problem solving skills and strategies increasingly evident in students' approaches to the activity?

- What is appropriate scaffolding for students when engaging in cooperative learning through a multiplayer computer game simulation?
- Does engaging in this activity facilitate learning with respect to the specific educational subject area?

To assess the above questions, this paper details related background literature, describes the design and implementation of the multiplayer computer game *European Union Simulation*, and discusses the data findings resulting from an implementation of that game.

As a result of this study, it is shown that a classroom-based, multiplayer computer game simulation of a real-world situation facilitates learning with respect to cooperation among secondary students because competition engenders cooperation in a unique way. The blended environment provides a place for students to learn with guidance. The simulation game provides a context where a student can learn by doing. The multiplayer facet of the game provides learning through cooperation. The experience causes students to adopt cooperative methods for problem solving as the key to competing with their classmates.

1.2. Dissertation Roadmap

1.2.1. Literature Review

This chapter explores the learning theories that underpin this research including constructivism, mediated learning, blended learning, and cooperative learning. The review also investigates computer gaming as a mode of learning, especially multiplayer computer gaming, and suggests the use of multiplayer computer gaming for blended, cooperative learning.

1.2.2. Artifact Design and Learning Experience

This chapter describes the design of the artifact, the underlying learning principles, and the envisioned learning experience.

1.2.3. Methodology and Implementation

This chapter describes the methodology for examining the artifact, the implementation of that artifact, and the data gathering procedures.

1.2.4. Findings and Discussion

This chapter describes the results of the data analysis and the implications of those results for the stated research questions.

1.2.5. Conclusions

This chapter draws final conclusions in light of the stated research questions and the supporting data analysis. It also gives implications for further research.

2. Literature Review

2.1. Learning Theories

2.1.1. Introduction

Underpinning this research is a range of important (and sometimes overlapping) learning theories, briefly described below. The most important, for the purposes of this paper, is cooperative learning, which is examined more extensively.

2.1.2. Constructivism

Constructivism is the theory that people learn by constructing knowledge through experience. Constructivism favors learning by doing and discovery rather than by an abstract, synthesized experience (Bruner, 1960; Jonassen, 1994, 1998). Unfortunately, constructivist learning seems to be unusual as much of school education today is abstract and disconnected from experience (Schaffer, et al., 2005, p. 10). In contrast, computer gaming (described later) relies heavily on constructivist learning (ibid).

2.1.3. Mediated Learning

Mediated learning, or scaffolding, is illustrated by Vygotsky's zone of proximal development (1962, 1978). This model, part of the theory of Social Constructivism, indicates that students are capable of doing more when assisted and guided by a teacher. This process helps students learn, or internalize, knowledge by completing tasks with the help of a teacher or guide. Later, the individual can apply the knowledge to various situations. The key to this model is scaffolding constructivist learning.

2.1.4. Blended Learning

Blended learning broadly refers to the incorporation of multiple learning theories in one learning experience. It often specifically indicates the integration of web-based community learning with a face-to-face, classroom learning experience (Bonk & Graham, in press). A blended learning approach is most relevant to this paper as it may enable collaboration between students on multiple levels.

2.1.5. Cooperative Learning

Cooperative and collaborative learning are often used to describe the same learning process. Collaboration indicates people working together, while cooperation generally indicates working together for a common goal (Schaffer, 2004, p. 102). Therefore, cooperative learning is generally understood to be a subset of collaborative learning as collaborative learning may or may not include a common goal. Smith and MacGregor (1992) explain that the concept of collaborative learning is "an umbrella term for a variety of educational approaches involving joint intellectual effort by students... Usually, students are working in groups of two or more..." (p. 9). The collaborative learning theory is implemented through vehicles such as problem-centered instruction, writing groups, and peer teaching (Smith & MacGregor, 1992).

Cooperative learning is defined as "the instructional use of small groups so that students work together to maximize their and each other's learning" (Johnson & Johnson, 2004, p. 786). It is an alternative to traditional classroom techniques where students work in groups and receive grades or recognition based on the performance of those groups (Slavin, 1983).

The benefits of learning through cooperation include the facts that students support each other, optimize their own and each other's understanding by exchanging information and ideas, give and receive immediate feedback, challenge one another (giving rise to critical thinking), and develop teamwork skills (Johnson, 2004). Collaborative learning, when compared to competitive or individualistic methods, often results in higher achievement, greater long-term retention of material, higher-level reasoning, creative thinking, the transfer of learning from one situation to another, and more positive attitudes toward the task (ibid, p. 790-791). Furthermore, cooperative learning methods used in the classroom seem to have positive effects on most students' academic performance, social skills and self-esteem (Manning and Lucking 1991).

In addition to the above listed benefits and outcomes of cooperative learning, students may realize (perhaps subconsciously) that they cannot individually succeed without contributing to the group as a whole. Axelrod (1984) describes a theory of mutual reciprocity, where individuals cooperate because working together produces better individual results than solitary efforts. Cooperative learning creates a model where students further their own understanding by contributing to the learning processes of others.

2.2. Computer Gaming and Learning

2.2.1. Introduction

Computer gaming and its implications for learning are explored here. Some popular ideas and methods for employing computer gaming in learning are investigated, specifically those of Gee and Schaffer.

2.2.2. The Computer Gaming Experience

Computer gaming is a worldwide, multibillion dollar industry. For some secondary school students, interacting with computer games might be as common an experience as sending an email or going to school. Traditional education is increasingly being made irrelevant because these games produce intense learning environments.

People enjoy playing computer games for more than entertainment. Computer games provide opportunities to learn in intense, competitive, entertaining ways (Prensky, 2003). Kolb (1984) indirectly supports this notion when he describes the internal world of fantasy and ideas as "in equal or perhaps superior status" with the reality of the outside world (p. 54). Schaffer et al. (2005) also imply that the quality of learning experienced through computer gaming dwarfs the quality of the perceptively forced learning in classrooms and educational institutions today (p. 10).

2.2.3. Computer Game Theory

Learning takes place through computer games when the gamer plays critically because he or she learns to experiences the world in a new way, has the potential to join a community surrounding the game, and develops the resources for future learning and problem solving from the experience (Gee, 2003, p. 45). Gee states that game designers use learning theories to teach gamers their games. Attributes of good learning games fit into three categories: empowered learners, problem solving, and understanding (ibid, 2004). Competition and cooperation are also major facets of computer game design theory (Lepper & Malone, 1987).

2.2.4. Constructivism in Computer Games

Most computer games create another world, a new experience, or a simulation where users learn by participating. This type of learning, with knowledge construction through experience (Bruner, 1960; Jonassen, 1994, 1998), is sometimes, but not often, harnessed in

schools. Examples of teachers using constructivist techniques are outnumbered by teachers giving abstract information that seems disconnected from a student's world. The emergence of computer gaming as a force in pop culture indicates that a fundamental shift may be taking place in how learning happens for students.

Constructivist learning through computer games, while not always educational in nature, is a powerful technique and is in competition with our traditional learning styles, argue Schaffer et al. (2005, p. 11). They describe computer gaming as a conduit for the development of knowledge and thinking skills by becoming part of a "community of practice" (ibid, p. 5). The "community of practice" is part of a learning theory called situational learning where learning is encouraged by a community because learners take on the attributes, skills, and values of their community (Lave & Wenger, 1991). Community can be created virtually through the gaming interface and experience. Real world communities are also created around the gaming experience by gamers. Both types of communities achieved through gaming are instruments for the transfer of knowledge and skills. Schaffer (2005) calls them epistemic games, and indicates their impact on education:

> Although epistemic games of the kind we describe here are not yet on the radar of most educators, they are already being used by corporations, the government, the military, and even by political groups to express ideas and teach facts, principles, and world views. Schools and school systems must soon follow suit or risk being swept aside. (p.10)

2.3. Multiplayer Computer Games

2.3.1. Introduction

Multiplayer gaming is a type of computer gaming that has recently exploded in popularity. Multiplayer gaming is described here and MMOGs are given special attention.

2.3.2. Massively Multiplayer Online Games

Computer games are usually designed for a single player while opponents or challenges are created using artificial intelligence. Multiplayer games, on the other hand, allow gamers to compete directly against one another using a network. Broadband Internet effectively creates a high-speed global network, giving rise to incredibly popular MMOGs. The largest MMOG, Blizzard Entertainment's *Worlds of Warcraft*, boasts 8.5 million users

worldwide (Blizzard Entertainment press, 2007). Games like *Worlds of Warcraft* allow gamers to interact with thousands of other gamers in a rich environment. There is rarely a detailed storyline. Instead, MMOG players spend most of their time interacting with their environment and with each other.

MMOGs are alternate world simulations that capture the rapt attention of millions of gamers partly because gamers are entertained by discovering and interacting with a digital world (Prensky, 2003). Alessi and Trollip (2001, p.213) describe various types and implementations of digital simulations. They claim that the key to educational simulations is that they recreate a real world phenomenon, but simplify it by, "omitting, changing or adding detail" (p. 214). This is done to isolate some specific aspect or aspects of a real world experience for learning. In line with the concept of knowledge construction, educational simulations seem primarily useful for allowing students to experience and learn about situations and concepts for themselves (Axelrod, 1997).

Perhaps the most compelling aspect of MMOGs, and multiplayer games in general, is that they facilitate human-to-human interaction through a computer interface, rather than simulating that interaction through artificial intelligence the way traditional, single player games, do. The interface, surroundings, characters, situation and challenges are simulated, but the interactions, be they competitive or cooperative, are human-to-human in real time. This creates a rich virtual experience that may often be more interesting than the real world.

2.4. Discussion

2.4.1. Introduction

The concept of multiplayer computer gaming as a conduit for cooperative learning is discussed here. Related research questions are posed.

2.4.2. Cooperation Through and Around Computers

Computer gaming is already a compelling mechanism for constructionist and situational learning (Schaffer et al., 2005) and, while the body of literature investigating the impact of multiplayer gaming on learning is not yet rich, the implications for cooperative learning through multiplayer computer gaming seem promising.

Johnson and Johnson (2004) discuss technology-supported cooperative learning (TSCL) as cooperative learning taking place either *around* or *through* computers. Cooperation around computers happens when students collaborate by using computer applications

designed for a single user or cooperate using a shared digital space to exchange ideas. Cooperating through computers happens when students, teachers and others cooperate through a digital interface. An example of cooperating through computers would be the use of computer mediated communication including email, discussion boards, chat systems, etc. to enable cooperative learning.

Computer games have been used to facilitate learning, even cooperative learning, using a single point of human-to-computer interaction. Regardless of the success or failure of these educational gaming experiences, it is duly noted that the application of TSCL has generally been *around* computers rather than *through* them. The rise of multiplayer gaming, especially in the form of MMOGs, suggests that new avenues of TSCL *through* computers are possible.

2.4.3. Pilot Project

The pilot project for the research discussed in this paper involved a multiplayer computer game, called *Traders of Zoobar*, and indicated that secondary students may be prompted to consider the importance of adopting cooperative methods through a cooperative multiplayer computer game experience. *Traders of Zoobar* presented students with an imaginary world in which they were required to interact through a computer interface to solve a problem. In the end, the only solution to this problem was for students to collectively adopt a cooperative strategy (Lobel, 2006).

If cooperative learning helps students discover the underlying concepts of cooperation, such as Axelrod's theory of mutual reciprocity (1984), TSCL through multiplayer simulation games may enable students to discover concepts of human interaction in situations they would otherwise be unable to experience or simulate. As stated above, the lack of broadband network infrastructure had previously limited the development of such games.

The *Traders of Zoobar* took students to an imaginary world. Ideally, a multiplayer computer gaming simulation designed for blended learning in a classroom (or across classrooms) would provide an interesting learning environment to pique students' curiosity, simulate a real world experience with defined learning goals, and simultaneously add an interactive, student-to-student element of collaborative learning. If well designed and skillfully implemented, the impact of such a learning environment could be profound.

Students might learn about the real world by competing or working together in a simulated environment. They might develop teamwork skills or challenge one another to think critically about the simulated experiences and problems they are collectively facing.

2.4.4. Implications for Research

Given the potential of computer gaming for learning, the popularity of MMOGs and the importance of blended, constructive, cooperative learning, there is a clear case for investigating multiplayer computer gaming for learning. Implementing true MMOGs on a large scale for educational purposes would be costly and difficult because of the large number of participants and extensive infrastructure required. Therefore, there are compelling reasons at this time to develop and test smaller multiplayer games that share attributes with MMOGs for blended classroom use. Such games should be interesting for students, simulate real world environments and problems, allow students to collaborate through computers, and encourage students to adopt cooperative methods.

This project will investigate one such game and will evaluate the question:

> How and why does a classroom-based, multiplayer computer game simulation of a real-world situation facilitate learning with respect to cooperation among secondary students?

When considering this question, several sub-questions arise:

- Is there evidence of increased cooperation between students during this activity?
- Are collaborative problem solving skills and strategies increasingly evident in students' approaches to the activity?
- What is appropriate scaffolding for students when engaging in cooperative learning through a multiplayer computer game simulation?
- Does engaging in this activity facilitate learning with respect to the specific educational subject area?

3. Artifact Design and Learning Experience

3.1. Artifact Design

3.1.1. Introduction

The artifact design is detailed here. First, the general idea and principles behind the design are discussed. The detailed specifics of the artifact are then described, including the roles of students and course administrators, the rules for the game, and the features of the computer gaming interface.

3.1.2. Game Design

The artifact designed to answer the above stated research questions is a multiplayer computer-game simulation of European Union (EU) politics. It is meant to be played over a series of weeks by secondary school students in a blended learning classroom setting. Each student represents one EU member state. Activities take place both within the computer gaming environment, where students manage resources and electronically communicate with other member states, and in face to face settings, where students represent the European Parliament, write laws, and pass legislation.

The aim during artifact conception was to create an interesting and challenging mode of constructivist learning (Prensky, 2003; Kolb, 1984, p.54) in a simulation environment that would include cooperative learning (Alessi and Trollip, 2001; Axelrod, 1997). The game was designed with Gee's principles in mind (2004), and was set up to maximize competition and cooperation in the learning experience (Lepper & Malone, 1987).

Competition is a critical element for any game (ibid). A delicate balance between competition and cooperation must be achieved in a gaming experience where cooperative learning is the desired outcome. Too much emphasis on competition may drown cooperation. The artifact in this study attempts an interesting approach in suggesting that it is possible to use competition to stimulate cooperation. Cooperation may be carefully and quietly brought out through competition. It must be, unknown to students, the key to success, the clandestine operation by which the unassuming gamer steals the prize. This artifact is designed to be such a game.

Politics, specifically EU politics, is a real-world context that requires extensive cooperation for all parties involved to achieve their individual goals. Understanding modern European politics generally requires an advanced understanding of cooperation and compromise. Therefore, a simulation of EU politics through a classroom-based, multiplayer computer game may be an ideal virtual environment for students to discover and adopt cooperative methods through participation. After participating in the simulation, students are expected to understand the political structure of the EU and to display an increased understanding of the cooperative processes involved.

3.1.3. Student Roles

Each student participating represents one EU member state. A sample of member states is chosen by the course administrators to represent a range of European countries. In addition to managing a member state, every student represents his or her country in the European Parliament and possibly in the European Commission. The specific member states chosen for this simulation are Germany, France, Italy, United Kingdom, Spain, Poland, Netherlands, Belgium, Czech Republic, Greece, Hungary, Portugal, Sweden, and Denmark. These countries provide a range of sizes and perspectives, while also representing most major EU players. Each student makes political and economic decisions for his or her country.

3.1.4. Student Objectives

Each student is provided a secret list of objectives through the computer game interface. These objectives are designed by the course administrators and represent some of the real objectives and goals of the member states. Examples of objectives might include passing certain legislation in the European Parliament or being chosen as European Commission President. Each objective has a certain point value assigned to it. The total point value a student has accrued, plus his or her percent GDP growth, determines the score. Scores will be ranked and, at the end of the game, will determine the winner(s).

3.1.5. Classroom Discussions/Scaffolding Sessions

A portion of the class time each week is set aside for scaffolding through classroom discussions. Class administrators present lectures on current events in Europe and explain

how these events are represented in game objectives. Students know, by accessing their computer gaming interfaces, what their political objectives are. They simulate the European Parliament, representing all the votes their member states. They vote on legislation, presented by students representing the European Commission, and talk about ways to solve problems. This is a key time for cooperation as students are responsible for meeting their own objectives in the context of group dynamics. Each discussion is facilitated by a course administrator.

3.1.6. Computer-based Interaction

During each class period, students log into the computer gaming interface and manage their member states. Students may use this time to make decisions about their member state (i.e., manage budget decisions through the computer interface) or negotiate and plan with other students via an electronic messaging system. Students with roles as commissioners are responsible for drafting new legislation and submitting it to the President of the Commission. The student selected as President of the Commission is responsible for reviewing legislation before it is submitted to the Parliament.

3.1.7. Representation

- European Parliament – Each student represents all of his or her member state's votes in the European Parliament. Larger countries have more votes to simulate real life circumstances. Members of European Parliament (MEPs) are encouraged to collaborate and negotiate during sessions of Parliament.
- European Council – Twice during the game, each student represents his or her member state as the Head of Government at a European Council Summit. The purpose of the Summit is to select the President of the European Commission. Students have time for discussion before voting. Each country is allowed one vote in the Council.
- European Commission – The Commission President, when chosen by the European Council, selects five commissioners. The real European Commission has twenty-seven commissioners. The number has been paired down in this simulation to five commissioners of environment, EU enlargement, justice, economy and agriculture.

A vote of no confidence in the Commission by the Parliament results in the disbanding and reselection of the Commission by the Council.

3.1.8. Decision Making

Decisions made by students will affect their ability to meet their secret objectives. For example, students will be given the opportunity to implement or ignore EU legislation. These decisions will affect their individual GDP growth and therefore affect their ranking.

3.1.9. Course Administrator Roles in the Game

The supervising course administrators play the following roles:

- The Press – Course administrators are responsible for documenting the laws and decisions made by the EU and for posting game information on the News Wire.
- Discussions – Course administrators scaffold the learning experience by providing guidance and structure for class discussions and by chairing sessions of Parliament and the European Council.
- Game administration – Course administrators are responsible for administering all game objectives and scoring. All administration takes place through a web game administration interface.

3.1.10. Weekly Order of Play

- Presentation of new EU issues
    - Course administrators will present information on current issues in the EU. These issues will normally be directly related to new objectives for each student in the game.
- Interaction through the computer game interface
    - Member state management – Students make decisions concerning their individual state such as budget and policy. Budget and policy options are presented through the game interface.
    - Negotiations with other member states – Students are able to communicate with other students through the electronic messaging system.
    - Commissioners use the messaging system to create legislation.
- European Parliament and Council meetings

- Legislation is submitted by the European Commission. The Parliament votes to approve, modify, or reject the legislation by majority vote. The number of votes directly represents the number of real MEPs for each member state (i.e., Germany 99; Malta 5; Czech Republic 25).
- If a new President is to be selected for the European Commission, a session of the European Council is simulated. Each member state is allowed one vote in this session.

3.1.11. Computer Gaming Interface

The computer game interface is accessible through any web browser, making it possible to play with any Internet enabled computer. The system is coded in the PHP web programming language and is supported by a MySQL database. The programming consists of approximately 1,500 lines of code and the database is comprised of eleven tables. The PHP code drives the game ranking and economic algorithms, while SQL statements embedded in the PHP create real time results for users. Interactive user and administrator web interfaces allow complete front and back end control of all system data.

Each student is presented with a custom homepage. The page consists of various windows, each with a different purpose:

1. Objectives - This window presents each student with his or her specific, secret objectives. As each objective is completed, this window will display the progress and total point score for the student.
2. Policy and Budget – This window contains budget and policy decisions for each student during every turn.
3. Message Center – This is the primary communication tool for students to interact with other students.
4. News Wire – Major events in the game are reported through this News Wire by the Press (the course administrators). Enacted laws are also recorded.
5. Current Point Ranking – Students are able to view the current point rankings of each member state. Students can only see the total points accrued, not which objectives have been completed by others.

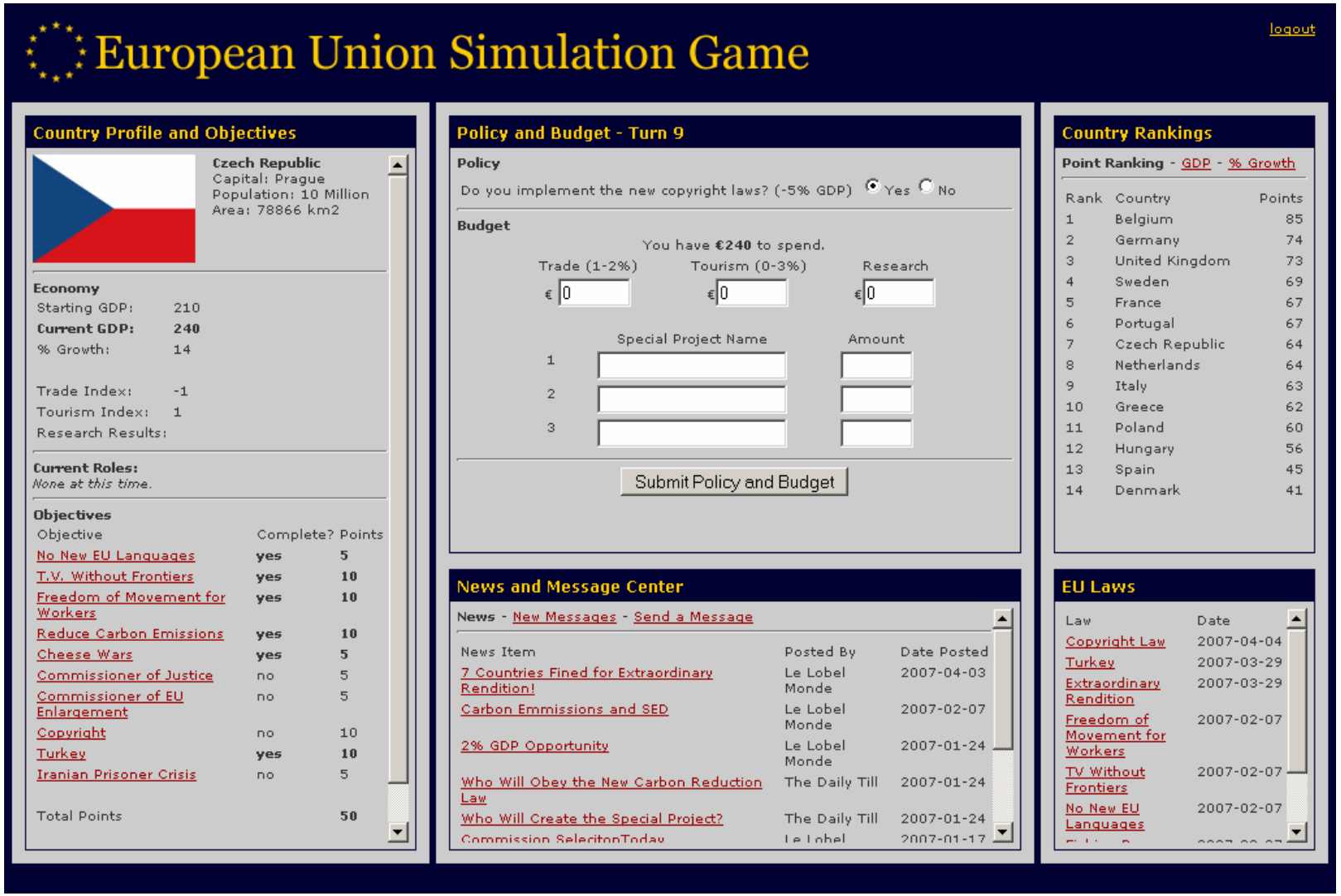

Figure 1: Game Interface

3.2. Learning Experience

3.2.1. Introduction

The intended learning experience is described here. The broad goals for the learning experience are mentioned followed by specific goals for technology supported cooperative learning (TSCL) where cooperation is engendered through competition.

3.2.2. Broad Goals

It is envisioned that students will engage in this game because it is an interesting, enjoyable, and challenging constructivist learning experience. The game is designed so that cooperation will be a key to success. Throughout the game, students are expected to increasingly rely on cooperative techniques to complete their objectives in a competitive environment.

3.2.3. Technology Supported Cooperative Learning

The artifact is envisioned to be a TSCL experience where students learn through and around a multiplayer computer game (Johnson & Johnson, 2004). Students are expected to communicate, compete, engage each other, and eventually cooperate through the computer interface and in face-to-face classroom discussion. The course administrators scaffold learning around the experience by explaining current events, new student objectives, and facilitating face-to-face class discussions. Students are expected to gain a working knowledge of the specific subject area covered by the game, EU politics. They are also expected to progressively adopt cooperative techniques for solving problems and meeting objectives, both through the game interface and the face-to-face activities scaffolding it.

3.2.4. Cooperating through Competition

The cooperative learning experience is designed to be hidden in a game that appears competitive. In an attempt to use competition to engender cooperation, the ranking system and secret objectives are designed to give the impression that defeating every other opponent is the way to win the game. In reality, the theory of multiple reciprocity is central to the learning experience embedded in the game (Axelrod, 1984). Players may succeed in the short term by competing, but can only meet the majority of their objectives by cooperating with others, acquiring parliamentary votes through compromise, and finding creative ways to make alliances and deals.

The computer environment was created to facilitate cooperative learning (Smith & MacGregor, 1992; Slavin 1983) through and around a TSCL interface (Johnson & Johnson, 2004) where students are able to communicate, compete, cooperate, and discover the importance of working together in the real world context of EU politics.

3.3. Summary

The artifact is designed to be a multiplayer simulation game of EU politics for use in a blended learning, secondary school environment. Students playing this game will be able to interact both through the computer interface and around the computers in a face-to-face environment. The competitive elements of the game are envisioned to engender cooperation, which is designed to be a key to success.

This artifact should facilitate examination of the stated research questions by providing an environment where the increase of cooperative learning among secondary school students may be observed in a blended, multiplayer gaming context.

4. Implementation and Methodology

4.1. Introduction

This study was designed to examine questions in the area of cooperative learning in a blended, multiplayer computer gaming environment. The artifact was built specifically to address those questions in the context of an EU multiplayer simulation game. This chapter outlines the theories for observing and analyzing an implementation of the artifact at a secondary school. The methodology, implementation and data gathering techniques are all explored in depth.

4.2. Implementation

The implementation took place at Gymnázium Beskydy Mountain Academy, a secondary school in Northeastern Moravia, Czech Republic. Fourteen students were enrolled in an optional EU Politics weekly elective course, which was taught in English. All participating students had conversational English skills. The multiplayer simulation game described in this paper played an integral part in the course. The game was implemented during eight classes from 10 January to 4 April 2007. Each weekly, 1.5 hour class session was divided into two parts: a classroom discussion and scaffolding session, followed by students engaging in the computer game and simulating the European Parliament.

Each student was working toward his or her secret game objectives. Each objective had a specific point value assigned to it. Completing these objectives played the primary role in an algorithm to calculate an individual student's rank against his or her classmates. At the close of the game, the final point rankings had a direct effect on the marks given to each student for his or her participation in the course.

4.3. Applied Methodology

The implementation design was viewed as a single, holistic case study of collaboration with multiple participants through a multiplayer computer game. It was a revelatory example of the computer game as it played out (Yin, 2003; Adelman, Kemmis & Jenkins, 1980). This single implementation was recorded using multiple data streams (outlined below in 4.4 Data Gathering) so that it might be further examined at a later time to provide insight into what happened and how the data changed over a period of time (Yin,

2003). The researcher and a third party course administrator took part as participant observers (Cohen, Manion & Morrison, 2000) by giving game instruction, scaffolding, and facilitating class discussions. The implementation process should be viewed as a whole endeavor, though it was comprised of eights sessions and fourteen participating students (Yin, 2003). While an individual component or session may have yielded interesting, discussable results, it was the actions of the group as a whole, in context of the overall implementation, that were of interest for this study. Major emphasis was placed on collecting qualitative data throughout the implementation (Cohen, Manion & Morrison, 2000). The quantitative data collected (through tracking game actions) was primarily taken to support and validate results of the qualitative analysis.

As the two participant observers documented each session's events and reflected on them, an element of iterative design was introduced to the implementation of the game. Problems with the game were quickly identified and addressed following each session.

The majority of students were capable of participating and communicating a high level. A limited amount of translation was arranged for Czech language messages sent via the electronic messaging system. A single implementation of the artifact was considered sufficient to yield data for the evaluation of the research questions posed.

4.4. Data Gathering and Coding

Data gathering and examination took place, as described below, to present a complete picture of the gaming experience. Multiple data sources on the same experience were taken to triangulate data and pinpoint important facts. With the exception of the qualitative game record, all data was coded and themed for rigor using computer assisted qualitative data analysis software (CAQDAS) called NVivo 7. Screenshots from the CAQDAS coding process are presented in Appendix H: CAQDAS Coding.

- Researcher's written observations and reflections – The researcher recorded observations and reflections in a journalistic style following each game session over the course of the week (see Appendix B: Researcher's Reflections Journal). These observations and reflections were qualitative and tell the story necessary to make sense of the other data sources. The researcher was primarily watching for significant learning events, insights, or "light bulb moments," where a student or

group of students displayed a new understanding. Evaluation of these "light bulb moments" was based on observing initial behavior and making note of changes in behavior over the course of the implementation. Changes in student behavior were thought to be indicative of changes in understanding. These moments might have been observed during student interactions during the game. These observations and reflections were systematically coded and themed according to methods outlined by Creswell (2005).

- Third party written observations and reflections – Much like the researcher's observations and reflections, the third party teacher's observations and reflections were recorded in a journalistic style following each session over the course of the implementation process (see Appendix C: Third Party Reflections Journal). They gave insight and a second perspective into student behavior and the influence of the experience on students. These observations and reflections were especially helpful because the course administrator making the observations had previous knowledge of the students and was positioned to make insightful reflections concerning their development. These observations and reflections have been systematically coded and themed and were compared with the researcher's observations to ensure trustworthiness and accuracy. A final narrative is presented, compiled using both reflections journals as sources (see Appendix A: Implementation Narrative).
- Audio recording of class reflections following implementation – The class period following the final week of game play was used for a class reflection, facilitated by the course administrators. The goal of this discussion was to hear students orally express what they learned in the same scaffolding environment in which the game took place. The entire discussion was recorded digitally on a laptop computer and was transcribed (see Appendix D: Class Reflection). This qualitative data was taken as supporting evidence and was systematically coded and themed. This third qualitative data set was compared to the observations of both participant observers to identify emerging themes across the data sets. A full digital audio file of the discussion is presented on the included data CD.
- Student surveys – Students were given the opportunity to respond to written survey questions during the game and were required to respond to written survey questions following the game. The first survey was designed to capture a snapshot of students'

developing strategies and learning. The second survey was designed to gauge what students learned from the game. The surveys were transcribed (see Appendix E: Student Surveys & Appendix F: Survey Results), coded and themed. This data was compared with the reflections of the two participant observers for data triangulation.

- Game data collected by artifact – The artifact was designed to capture messages and player actions throughout the duration of the implementation. This data was both qualitative and quantitative (messages were qualitative while details on economic and policy decisions were quantitative). The quantitative record was of little use for the purposes of this paper because it only supports the record presented in the reflection journals and narrative. The qualitative record of messages was examined in light of the observations and reflections and used as a supporting data source. The messages sent by students during the game were not rigorously coded and themed, but samples are presented in the appendices that illustrate certain themes (see Appendix G: Electronic Messages). A full record of game messages and actions is available on the included data CD. It should be noted that the electronic messaging system record did not represent all student interaction, as face-to-face interaction played a major role the experience.

4.5. Summary

The game was implemented once as a single case study of collaboration with multiple participants. Observations and reflections written by two participant observers (the course administrators), student surveys, and the class discussion were used as the main data sets, while the artifact's game record provided supplementary supporting data. The data was coded and themed using CAQDAS and provided a basis for evaluating the posed research questions concerning cooperative learning among secondary students in a blended, multiplayer gaming context.

5. Findings and Discussion

5.1. Introduction

Analysis of the data gathered throughout the implementation of the artifact provides the basis for a compelling evaluation of the stated research questions. Included here is an evaluation of the complete data set derived from the qualitative thematic analysis, and a discussion of the stated research questions in light of the data.

5.2. Data Evaluation

5.2.1. Data Sources

The data from this implementation was recorded in five sources. With the exception of the electronic messaging system record, all data was coded and themed using CAQDAS. Screenshots from the CAQDAS coding process are presented in Appendix H.

Two reflections journals, recorded by the researcher and a third party participant observer, were kept each week and give detailed accounts and reflections on the implementation. These journals combined run in excess of 9000 words and are presented in Appendices B and C. A narrative account of the implementation process was derived from the reflections journals and is presented in Appendix A.

A class reflection session took place during the class period following the implementation. The session was facilitated by course administrators and students were given the opportunity to express their thoughts and reflections on the game experience. The session lasted forty minutes and the audio was recorded digitally with a laptop computer. The transcription runs to approximately 3500 words and is presented in Appendix D.

Two written student surveys were taken, one during and one at the close of the implementation. The first was optional for students and was taken during the implementation. The second was required for students and was taken at the end of the implementation. The surveys are presented in Appendix E. The survey results run to approximately 3000 words and are presented in Appendix F.

The electronic messaging system record includes 253 messages sent by students during the course of the game. Some of the messages were originally written in Czech and

were subsequently translated into English. Some statistical analysis of the messages is presented in Appendix G, while a complete record is available on the included CD.

5.2.2. Themes and Trends

The emphasis of this research, students learning by cooperation engendered by competition, can be seen in the thematic evaluation of the data. Each of the major themes, marked in bold, is discussed below.

Students and teachers mentioned a range of **competitive activities** in their reflections. Students engaged in extensive competitive activities such as purposely betraying one another, exerting pressure on one another, using their influence with one another for their own ends, and exploiting the game and other students for their own ends. Students set up rival alliances. The leader of one alliance wrote about another, "We also have a propaganda campaign running against the evil [opposing alliance leader]. We send mass messages slenderizing [sic] their axis of evil. This will undermine their following." (Appendix F, p. I). The student indeed did send out mass messages via the electronic messaging system containing propaganda like, "Do not listen to [my rival]! [My rival] is going to take over the world!" (Appendix G, p. I).

Reflectors noted that votes on legislation in Parliament were often very competitive. One particular session of Parliament saw a vote of no confidence and an overthrow of the government. (Appendix A, p. II) The ousted President of the Commission said afterward, "Unfortunately in the end my power as President of a puppet government failed as I was overthrown by the powers of Satan (France, Germany)." (Appendix F, p. I).

Further illustrating the trend of competition, the researcher observed one student suggesting "some kind of rebellion or coup d'etat" and recorded a major clash between large and small countries culminating when, "The large countries threatened to dissolve the commission unless the president passes their laws." (Appendix B, p. IV). The third party participant observer noted students infuriating one another with political trickery and reported that what students stated they liked best about the game was "the uprising against the president and the formation of the Big Countries' Alliance." (Appendix C, p. VI).

It is clear that students were drawn into game experience by the high level of competition. This is in line with gaming research, which indicates that computer games give the opportunity for students to learn in intense, competitive, entertaining ways (Prensky,

2003) and that competition (as well as cooperation) is critical for compelling computer gaming (Lepper & Malone, 1987).

The competitive activities of students had a direct impact on their **cooperative activities**. Students engaged in discussions, made deals, proposed compromises, worked together, and formed alliances to complete their objectives. One student stated in a survey, "I learned how to negotiate with people, make compromises, and bargain." (Appendix F, p. II). Another said, "My plan was to create as many deals and compromises that would help me advance in the game." (Appendix F, p. III). During the game, one student described his strategy by saying, "In order to achieve your goal, you can't forget about everyone else, you have to learn to work together even though you may have different views on things." (Appendix F, p. I). During the class reflection session, a student said that while making laws they, "would have to make a compromise. People who would not normally vote for your law, it would give them inspiration to do it." (Appendix D, p. IV).

At one point, the researcher wrote, "Many students stood around the computers discussing, arguing, and compromising to find ways to pass laws that would get everyone some points." (Appendix B, p. II). Clearly this indicates the cooperation around computers that Johnson and Johnson explore (2004). Later the researcher wrote, "They are continuously adopting more diplomatic and cooperative methods to achieve their own goals." (Appendix B, p. III). And again, "Students were bartering over compromises as commissioners feverishly wrote and rewrote laws to the taste of other students." (Appendix B, p. III). The third party observer once observed, "Then there was another great burst of activity led by [Sweden] and [Portugal], who were trying to balance different members' concerns: 'She wants this, and she'll vote for us if we agree to that…' " (Appendix C, p. IV).

Competition encouraged cooperation. For example, students set up two rival alliances that were critical in deciding the outcome of the game. The rivalry forced each alliance to work together within itself to compete for votes in Parliament. This rivalry of alliances was noted twenty-seven times in the data by students and observers. In reflection, one student said, "It was interesting to try and work it out with the littler countries and try to beat the big countries," citing both cooperative and competitive goals (Appendix D, p. II). Another student wrote that, "Trying to beat the alliance of other big countries was pretty tough." (Appendix F, p. III). At the end of the game, the researcher observed that the "large countries are now talking about dissolving the Commission and putting themselves in

power." (Appendix B, p. IV). The third party observer wrote, "[France], [Italy] and [Germany] then realized that [Spain] was on their side… and counted their votes with satisfaction. [Germany] was now looking confident and the [Small Countries' Alliance] was looking very nervous." (Appendix C, p. V).

Cooperation engendered by competition was one of the main designs of the game. Cooperation is also cited as a key ingredient for compelling gaming (Lepper & Malone, 1987). The computer game simulation seems to give the special competitive edge to the experience while the fact that the game is multiplayer allows learners to interact through that competition, the combination of which engenders a cooperative learning experience.

The narrative accounts of the implementation suggest that both competition and cooperation generally increased over time, further indicating a correlation. Week three, as recounted by both participant observers, was the low point in the game. "The session this week was less than optimal. Students came to the first European Parliament meeting far less than prepared," reflected the researcher (Appendix B, p. I). The third party observer noted during this week that, "learning seemed far away." (Appendix C, p. II).

Week four can be viewed as the "light bulb moment," as described by the third party observer:

> The next ten minutes were fascinating. For once we had major discussion and strategy. Most kids were out of their seats, looking for commissioners, making proposals, correcting each other, and conducting negotiations. For ten minutes I found my spirits rising: the kids were trying to figure out how to meet their objectives using the political systems we had created. They were trying to make alliances of three or four, trying to get things done. (Appendix C, p. II).

This sudden change in student behavior revolved around cooperation as a result of competition. Students were actively negotiating and forming alliances because they wanted to meet their own objectives. They wanted to compete and had to cooperate to do so.

The trend of increasing competition and cooperation continued to end of the implementation where, in the final week, students from one alliance dismissed the Commission through a vote of no confidence in Parliament and selected their own government. The atmosphere of that final class was, in the words of the third party

observer, "chaotic and spectacular," (Appendix C, p. IV). as students were, "discussing laws…madly making deals…threatening to dissolve the commission…and involved in frantic negotiations." (Appendix B, p. IV). "Students are playing for real," observed the researcher (Appendix B, p. IV).

The themes of competition and cooperation were originally envisioned to play a major role in the game experience (see Chapter 3.2 Learning Experience) and the fact that they did may be viewed as a validation of the design and structure of both the artifact itself and the context and manner of deployment. Additional strengths and **successes of the game**, when comparing the data to the supporting research, can be seen throughout the implementation. For example, students seemed to learn in intense and entertaining ways (Prensky, 2003). They showed interest in the subject area and created their own strategies. Students took ownership of the game, as recorded by the third party observer:

> They talked about things they wanted to accomplish in order to get more points, and when pressed they couldn't really say why they cared about those points, suggesting to me the most awesome kind of victory – a game that sneaked into their very bloodstream. They didn't even know why they liked it. That is a big success.
>
> What they liked could be best described as politics. They were really animated, for example, in discussing the final day – the uprising against the president, and the formation of the Big Countries' alliance.
>
> The students kept repeating and agreeing on the Big Thing (my words not theirs): they learned that to advance their goals, they had to approach other students and cut a deal. They had to find out what would motivate other players. They had to decide which of their priorities could be sacrificed to give to a potential opponent in order to work together. (Appendix C, p. VI)

Student learning by doing was expressed in an increasing student interest in the subject area and in real world connections made by students. At the close of the game, students expressed their own ideas for improving the European government system. One student said, "I learned that, firstly, the EU is just a playground for the larger powers. The

smaller countries are in it because their GDP shoots up for a few years after entry into the EU. But their freedom is checked." (Appendix F, p. V).

Another student was critical of the parliamentary voting system and said, "Not every country has the same right to vote. I think that a more fair way would be if every country had one vote." A classmate responded, "Ok, if all of them had the same vote it wouldn't be fair because Germany is almost half of Europe and Malta is a little tiny island somewhere. So the people of Malta could really screw up things for Germany." (Appendix D, p. III).

Students learned about the subject area and were able to apply this knowledge to the real world, in this case evident as students made intelligent observations about the EU government. Therefore, it is fair to conclude that students learned about the real world subject area because the artifact encouraged cooperation. It is also clear that Gee and Schaffer et al. are justified when they mention that constructivist learning in computer games is more powerful for students than abstract classroom learning (Schaffer et al., 2005).

Scaffolding was an important part of this experience for students. The participant observers noted that more scaffolding was needed at various times during the implementation and responded accordingly. Ten extra minutes of discussion time during the third week may have been a spark for the "light bulb moment" when students started seriously cooperating. A detailed, specific example given by course administrators during the sixth week caused a positive student reaction which prompted the third party observer to write, "The way the kids looked, and especially the way [a student] engaged with me afterwards, made me think that we were doing well." (Appendix C, p. III).

Scaffolding was especially important at the beginning of the implementation as students learned how to play the game, how to write laws, and how a session of Parliament worked. The scaffolding was scaled back extensively during the second half of the implementation as students took control of the game. This is in line with Vygotsky's zone of proximal development (1962, 1978), in which students are competent with a task and can apply their knowledge to other situations only after they have internalized the knowledge with help from a teacher or guide.

Scaffolding in this blended multiplayer gaming environment was critical because of the complexity of the game design. The complex design, meant to heighten competition and cooperation, was initially too much for students to understand. It took three weeks of explanation and guidance for students to reach the moment where they started seriously

competing and cooperating on their own. From that point on, the scaffolding was progressively scaled back until, in the final week of implementation, students were searching for inventive ways to win the game without any scaffolding from the course administrators.

An assortment of **failures** prompted students to give helpful **ideas for future changes**. Three students (out of fourteen) never really participated at a meaningful level. Some of these students had worse English skills than their peers.

The messaging system was almost completely disused after two weeks. 56% of all messages were unrelated to the game. One hilarious message reads, "hey [classmate], I have rabies…" (Appendix G, p. I). Additionally, 81% of all messages were sent in the first two weeks before the game really got going. Students said they realized that face-to-face contact was better for making things happen quickly. For future implementations, students suggested some kind of live chat system. (Appendix D, p. I).

Finally, the blended environment was sometimes difficult for students because their objectives were located on computers at the back of the classroom while parliamentary sessions took place in the front. The proximity of students to computers in a blended environment should be carefully considered in the future.

5.3. Answering the Research Questions

- **Is there evidence of increased cooperation between students during this activity?**

It is clear from the data analysis that a theme of cooperation engendered by competition increased over time. Students displayed more cooperative behavior at the close of this implementation than they did at the outset. The majority of the cooperative behavior took place in the form of face-to-face interactions around the computer game.

- **Are collaborative problem solving skills and strategies increasingly evident in students' approaches to the activity?**

It was observed that, starting in the third week, students increasingly adopted a collaborative approach to solving problems presented by the activity. This is most evident when observing the two alliances created by students that were responsible for controlling major political decisions. The effectiveness of each alliance was based on students' abilities to work together to solve problems.

- **What is appropriate scaffolding for students when engaging in cooperative learning through a multiplayer computer game simulation?**

The appropriate scaffolding for students engaging in such a game is intense scaffolding at the outset, scaled back over time to give students more freedom to cooperate on their own. A multiplayer computer game simulation may be complex and confusing at first, creating a need for scaffolding. Once students internalize the information necessary to proceed with the experience on their own, the scaffolding can be scaled back to encourage cooperative learning without help from administrators.

- **Does engaging in this activity facilitate learning with respect to the specific educational subject area?**

Students developed an understanding for the subject area and displayed that understanding as they made connections between their classroom experience and real world events. Twenty-three such connections were recorded during the implementation process.

- **How and why does a classroom-based, multiplayer computer game simulation of a real-world situation facilitate learning with respect to cooperation among secondary students?**

Learning was successfully facilitated through such an experience in several ways. Observed learning results support both the mediated and constructivist learning viewpoints to varying degrees. More importantly, cooperative learning was enabled by the multiplayer aspect of the game, creating a rich learning environment for students. Students were observed learning under the guidance of the course administrators, learning by interacting with their simulated environment, and by competing, communicating and collaborating with each other.

The reason that such an environment was successful is that it allowed intense competition to enable cooperation. Cooperation was undoubtedly the key for success in the game and was a real world learning objective, in the context of EU politics. The simulated game environment allowed students to learn this for themselves, with some necessary scaffolding in a blended environment. The competitive game environment prompted students to explore cooperation as a method to succeed. The cooperative interactions were facilitated by the fact that the game had a multiplayer facet.

A compelling result of the multiplayer game simulation is that students spontaneously adopted cooperative methods to solve their problems. They were learning about cooperation through a simulation by cooperating and they didn't realize it. No one told them to cooperate. There was no scaffolding as they set up rival alliances and collaboratively compromised their way to achieving game objectives.

The secret of this spontaneous cooperative learning lies in the relationship between competition and cooperation made possible through the multiplayer gaming experience. Cooperation and competition were observed to have a direct relationship in the data trends. As competition heightened, cooperative behavior also increased. Competition engendered cooperation (and cooperative learning) in a unique way because the multiplayer facet of this game enabled interactions between students in a competitive gaming environment.

6. Conclusion

It has been shown in this study that a classroom-based, multiplayer computer game simulation of a real-world situation facilitates learning with respect to cooperation among secondary students because competition in a multiplayer computer game can engender cooperation in a unique way. The blended environment provides a place for students to learn with guidance. The simulation game provides a context where students can learn by doing. The game environment encourages competition, while the multiplayer facet of the game provides learning through cooperation. The entire experience caused students to adopt cooperative methods for problem solving as the key to competing in the environment with their classmates.

This specific implementation of a multiplayer computer game further justifies claims by Schaffer, Gee, and others that computer gaming is a viable and effective form of learning and that it can and should be used in schools today.

The results of this study indicate that further research could be made into the field of multiplayer gaming. While this study tested some critical cooperative components of MMOGs, the massively multiplayer gaming phenomenon is still relatively unexplored with regards to learning. Furthermore, the role of competition as a catalyst for cooperation in such gaming environments should be investigated.

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Appendix A: Implementation Narrative

The artifact implementation took place at Gymnázium Beskydy Mountain Academy (BMA) in Northeastern Moravia, Czech Republic. The implementation took place over eight weeks as part of an elective class called European Union Politics. The class was comprised of fourteen secondary students and two course administrators, one of whom is the researcher. Each student was assigned one European Union member state for this game. Students will be referred to in this narrative by the country they represented in this implementation. The events of the implementation are recounted here briefly as a reference point for the following discussion (for a complete narrative of the implementation, see Appendices A & B).

The first week was the initial introduction of the game concept and interface, as well as the first scaffolding session. Students required some time and several explanations to understand at a basic level how the interface worked and the goals of the game. They were given time to explore the game interface, read their objectives, and ask questions. Many students quickly learned how to send each other messages via the game messaging system. They sent many messages, most of which were completely unrelated to the game. Two enterprising students, Germany and Italy, used the messaging system to set up an alliance of large countries calling themselves the "PA" ("Programing [sic] Association"). Sweden and the United Kingdom set up their own alternate alliance. One of the course administrators made a presentation on the topic "TV Without Frontiers" and explained the game objectives on the same topic. Students were left with free time at the end of the class to continue exploring the game or leave early. Little cooperation between students was observed during this first week beyond formation of the "PA" and the Sweden-UK alliance. Interestingly enough, these two alliances would define the game and eventually come into direct confrontation in the European Parliament during the final week.

Week Two began with another explanation of the game interface and rules. Students were then given time to prepare for the upcoming selection of the commission president. Three students, Germany, Netherlands, and Sweden actively campaigned for support from their peers primarily using the messaging system. Germany then defeated Sweden for the presidency by eight votes to five. Commissioners were selected by the new president according to the countries that had supported him during the selection process. This campaigning and rewarding of supporters was the first sign of cooperation among students.

Week Three was a low point for cooperation and game play. Use of the messaging system almost completely ceased this week and was never revived. Most students seemed unmotivated or unable to do anything about reaching their objectives. The Commission didn't have a single law to present to the Parliament. The course administrators gave extra time for the Commission to write and present a law. Further unforeseen complications dampened the mood. Bugs in the game administration system confused everyone. Another game weakness was revealed that would haunt the researcher for the remainder of the implementation. Students participating in the face to face sessions of Parliament could not access their secret objectives without returning to their computers at the back of the classroom. This resulted in disoriented students or a chaotic rush to the computers every time a new law was presented.

The first half of Week Four wasn't much better that the previous week in terms of cooperation or compelling game play. Students remained relatively unmotivated and clueless. The Commission didn't have any laws to present to Parliament. For the second consecutive week the course administrators gave an extra ten minutes for students to get some laws together. Suddenly, students were out of their chairs, congregating in small groups, looking for a commissioner to write a law, and finding ways to get things done. It seemed like the game was finally making sense to the majority of students. They managed to pass two laws by the end of the class, though there was no discussion or opposition in Parliament.

Week Five was Cheese Week. The course administrators continued to scaffold learning through the game by creating game objectives related to real world issues and making timely presentations on those issues. This week's presentation concerned official cheeses of EU member states and included real cheese for student consumption. Students seemed to have completely caught on to the game and its nuances. They voted on five laws in Parliament,

passing three. Negotiation, debate and a great deal of politicking surrounded the laws, especially those that didn't pass. This week was the time to select a new Commission president. Only Sweden, loser of the last selection process, wanted the job. He made appointments to the Commission from his gang of supporters who were most of the smaller countries. The great power struggle between large and small countries started at the end of Week Five.

The class was full of young politicians in Week Six. The new president from Sweden swept away the Old Guard with style and was seen speaking with about laws he wanted to pass. Poland was clearly scheming to pass some difficult laws to his benefit, and was working closely with Sweden on them. They took advantage of the absence of several key large countries and passed a very controversial law on extraordinary rendition by the CIA. A law repealing legislation on migrant workers was barely defeated in Parliament. The Commission ran out of time and was unable to present two other laws they were drafting. Almost all students were involved in intense face to face discussions right up until the end of the class.

Week Seven was a smashing success. Almost every student was involved in massive negotiations over legislation. Commissioners wrote and rewrote legislation. The commissioner from Portugal ran around the room counting votes while the commissioner from the UK presented two laws to Parliament as a package in an attempt to pass difficult legislation. It worked. The chaotic discussions, arguments and movement to and from computers to check website information created a hideous din. The president from Sweden revealed to the course administrators that his secret to successfully passing laws this week was the fact that so many students owed him favors for appointment to the Commission and he took take advantage of large countries that were absent and therefore unable to vote. He managed to propel most of the small countries to the top of the point rankings while he perched at the pinnacle.

A vote of no confidence, the fall of the Swedish Commission, and the triumph of the large countries all took place in the final week of play. The division between large and small countries was clear immediately when each side lobbied for the critical votes of medium countries like Poland and Greece. Sweden tried everything to save his position while protecting his fragile alliance of small countries. After serious negotiations on all sides for more than an hour, the former president from Germany called for a vote of no confidence in the Commission. The vote was extremely close and was decided by Portugal and the Netherlands, who double crossed their small country allies. A new president from the Netherlands was selected and led a much divided Parliament to reverse an important law while three other proposed laws were narrowly defeated. The defeated students of the small country alliance left the game clearly shaken while their triumphant enemies rode high on the glee of the moment. So ended the first implementation of the epic European Union Simulation Game at BMA.

The following week, the course administrators led a class discussion on the game. Students were quick to talk about what they had learned, offer their views on the European Union, and give advice for improvement on the game and the European government.

Appendix B: Researcher's Reflections Journal

Week 1 – 10.01.2007

This week we introduced the game and played for the first time. We did not introduce all the game concepts, to reduce the initial learning curve. Instead, we explained how the rankings, points, and budget systems work. In addition we discussed the procedure for making laws.

Introducing the game in small chunks posed some interesting problems. Several students asked questions like, "Why are we even doing this?" because there was not a good indication of the bigger picture.

Students seemed to enjoy playing with the game interface for the first time. The all submitted budgets and used the messaging system. Several students with poor English skills had some difficulty understanding the budgeting system.

Most students seemed fairly occupied with messaging each other and asking questions about the interface. The student running Italy was very proactive about asking how many votes each country got in Parliament. He was going around the room asking other students to sign on with in to push laws through before we had even officially started the law making process. This seems to indicate that the presentation of the game framework initiated cooperative processes in his mind from the very beginning. It will be interesting to see how he and others continue to respond throughout the game process.

Week 2 – 17.01.2007

This second week of gaming saw an increase in student understanding and competition. I explained the game concepts again at the outset and fielded questions. The students who were not present last week caught up with the game idea. One student was terribly disappointed that she hadn't been in class last week to submit a budget because which left her with zero points.

The first item on the agenda was to select a president of the EU Commission. Students were allowed some time to review their personal objectives (some of which concern Commission appointment). For ten or fifteen minutes, students were running around the classroom making deals and pledging support to the two emerging presidential candidates. Acting as the European Counsel, each student gave one vote. The representative from Germany beat out the representative from Sweden by a vote of eight votes to five.

The new President of the Commission selected his commissioners in accordance with those who had lent him their support in voting. Among them were some unlikely students. The class was then given freedom to discuss strategy among themselves. The President of the Commission began writing laws with his new commissioners. I am very curious to see what kind of laws are produced and presented to parliament next week.

At this point, every student seems to understand the game and many are engaging in it in a competitive way. Some leaders are emerging, such as the students who ran for President of the Commission. Some cooperation is evident, as students are cutting deals and pledging support for each other. This seems to be in response to the game design though, not the technology of the game.

Week 3 – 24.01.2007

The session this week was less than optimal. Students came to the first European Parliament meeting far less than prepared. The President of the Commission had one law in mind but hadn't written it out. With some help and effort, a draft law concerning Carbon Emissions was presented to the Parliament and it passed unanimously. Another MEP suggested that the Commissioner of Agriculture write a draft law next time concerning legal fishing days.

I noticed today that on major problem with the system of having students with online objectives and in class discussions is that no one seems to really remember what their objectives are unless they are in front of a computer. I suppose this is understandable, as there are a lot of new ideas presented in the individual objectives. Students with laptops in front of them (a handful bring their own to class) seem to have more direction during class discussions. Additionally, the simply Commission selection process last week was simple and exciting compared to the lawmaking process. This may be because the students could grasp and recall the information they needed for it.

Week 4 – 31.01.2007

Two laws were passed this week by the European Parliament in our class game. The president and commissioners were seen scrambling at the last moment the present new draft legislation to the Parliament. Their laws passed almost unanimously.

I originally envisioned a Parliament where discussion and pitched battles were to take place over legislation. Yet, it is quite drab with an unorganized Commission barely coming up with laws. I imagine this could be due to several factors. The laws and objectives might be too complex or difficult to understand to promote the in depth discussion I was hoping for. The language barrier might be a problem. The fact that each student's objectives are on the computer and the Parliament session is taking place at the desks might create a gulf between the two concepts.

Week 5 – 7.2.2007

What a week! Recent real life news about an EU squabble between Poland and Slovakia over the naming rights to a cheese sparked an interesting idea for our class. Mr. Till bought some bread and cheese for the students to munch on while he lectured on the current debate. Students seemed more interested than normal. Before class, we had introduced a cheese objective for students to pass an EU law on. The objective pitted some students against one another to have their national cheese approved by the EU as one of the chosen, protected chesses.

The President of the Commission was sick, creating an interesting problem for our Parliamentary law makers. In the end, we allowed commissioners to propose laws without the president's approval. It became clear that the game had finally really caught on and students were interested in a very real way in passing laws and negotiating in ways that benefited their countries. I observed cooperative and competition as students tried to get the commissioners to propose laws that benefited them.

Two individual attempts to pass a law about extraordinary rendition both failed (barely) because a common ground couldn't be found. The cheese law passed with five countries represented by official cheeses. A law prohibiting any new official EU languages and a law increasing the number of legal fishing days also passed. In fact, the parliamentary session was closed because we ran out of time.

Finally, a new President of the Commission was selected. The representative from Sweden who had barely lost in the previous selection was the only candidate. His most interesting choice of commissioner was Poland as Commissioner of Justice as extraordinary rendition promises to resurface and Poland has been accused of having secret CIA prisons.

Most students are now engaging each other, finding ways to get things done, and seem to enjoy the game. Many ask detailed questions about their finances or objectives, showing a growing understanding of the game and it's nuances.

Week 6 – 28.2.2007

The change of commission seems to have sparked a good deal of excitement. Many students stood around the computers discussing, arguing, and compromising to find ways to pass laws that would get everyone some points.

Students frequently asked both instructors how much they are permitted to bend the rules, make creative solutions to meet their objectives. Overall, students seem much more tuned in and aware of what their objectives are. Most students seem to be making intelligent efforts to meet those objectives.

The Commission managed to push one law through Parliament concerning extraordinary rendition. Another proposed law, which would have repealed a previously enacted law on worker movement, was narrowly defeated in Parliament. Finally, the Commission was working feverishly on presenting a law on Copyright and Piracy, but couldn't agree on the specifics in time.

The whole process of law making in class is starting to resemble the actual process in various ways. Law makers are pressed by various groups and deadlines. One or two dissidents throw any progress back to ground zero. Deals are almost made, then fall apart.

Real questions about the real EU remain for Europeans. Our students are experiencing the bureaucracy and frustration of the club. They are continuously adopting more diplomatic and cooperative methods to achieve their own goals. In the midst of this, I hope that students are developing their own opinions about the EU. I will hold some kind of class discussion at the end of the game to hear what kind of conclusions they draw.

Week 7 – 28.3.07

Several weeks went by without the class playing the game. This was because a key teacher and reviewer of the process was absent during this time. I spent extra time reviewing current issues and possible laws before releasing students to start their game web pages.

The game today seemed to be a smashing success. There was a flurry of little group discussions, law writing, perspective vote counting. Students who had shown little prior interest were suddenly main players. The student representing Portugal was counting the votes she could count on for a new law. The commissioner from the United Kingdom put together a package law to pass two pieces of legislation that would be difficult to pass on their own. Students were bartering over compromises as commissioners feverishly wrote and rewrote laws to the taste of other students. A few students sat out and participated very little. These were the youngest students who are normally not enthused about the class.

Two controversial laws were passed as a package. The first piece of legislation cleared the way for Turkey to become a full member of the EU. The second revised a previous law on extraordinary rendition. The major opponent to the rendition law modifications, Poland, was not present to fight against it.

Finally, an individual law on copyright easily passed. I asked the president of the Commission how he received so much support on this copyright law when many countries theoretically should have voted against it. He said that some countries owe him favors after he selected them as part of his government. He also revealed in a post class interview that he is able to pass certain laws while certain members of parliament are absent. For example, the copyright law would normally split votes in Parliament but passed by a landslide due to the fact that major players Poland, France and Italy were not present to cast votes. Other students thought this was unfair and mentioned how this indicates that large countries control EU lawmaking. One student suggest some kind of rebellion or coup d'état (which are not provided for in this game).

I observe students finding creative, cooperative news ways to achieve their goals. Students seem completely comfortable with the game system and are now exploring ways to exploit it (and each other) to win.

Week 8 – 4.4.2007

Changing the extraordinary rendition law had major effects on the class rankings. Several countries, most notably Poland and Italy, lost major points because of the law and penalties imposed by the law. Sweden, on the other hand, managed to pass almost every law on his objective list during his tenure as commission president and commands a sizeable lead in the class rankings.

Several students were complaining before class (during another class) about their drop in the rankings. They were scheming to garner the support of the largest EU countries and repeal the extraordinary rendition laws passed by the Swedish commission president. They even discussed voting as parliament to dissolve the commission.

As I write, students are actively discussing laws. Several students are badgering a member of the commission to write a law for them. I see one student that is browsing an internet website unrelated to the game. The president of the commission seems to have lost some favor and students are looking for ways to pass laws without him or change laws that he put in place. Italy suggested a change to the copyright law. Now France, Germany, Greece and Italy are gathered around a computer screen discussing changes. Portugal and Netherlands have joined the discussion. Sweden and the UK are in one corner having their own secret meeting. Belgium and Denmark are in another corner, though their participation has been dubious thus far. Spain is playing minesweeper. The anticipated late appearance of Poland to class could make a big difference.

It seems that a deal has almost been reached on Iran Crisis, though small countries are very afraid of large country dominance. Large countries are now talking about dissolving the Commission and putting themselves in power. My observation is that now that the game is on the line, the students are playing for real.

Poland has arrived! Small countries rejoiced! Poland will swing the voting balance of power. Poland is grinning and listening to everyone's offers. Will Germany entice Poland to join the bigger countries in their coup?

Sweden has offered a compromise on Turkey is they allow him to remain in power. Poland has submitted a change to the rendition law but needs permission from the president. Will he get it?

Spain, Czech Republic, Belgium and Denmark are not actively taking part in the discussions. Everyone else is madly making deals. The representative from France is attacking the one from Portugal. Poland is shaking Sweden by the shoulders and giving him a real talking to. The UK now is pleading his case with Sweden, president of the commission. Copyright law is now a major trading chip. Seven students are speaking at the same time with Sweden. What kind of deal are they going to come up with?

The large countries have threatened to dissolve the commission unless the president passes their laws. He said no. Now we are meeting Parliament…

The Parliament session was chaotic and spectacular. Dissatisfaction with the current commission was rampant and the parliament overwhelmingly voted to dismiss the commission. The representative from the Netherlands replaced Sweden as president of the commission and selected five new commissioners (Portugal, France, Italy, Poland, and Denmark). For all the fuss of dissolving the commission and selecting a new one, only one law was changed.

The commission president did not allow a changing the rules about extraordinary rendition to go before parliament (proposed by Poland). She did however allow three other laws concerning Turkey, Iran, and copyright. Both proposals concerning Turkey and Iran were narrowly defeated by a few votes. The copyright law barely passed.

Students certainly have been experiencing the struggle between large and small countries in the EU. Complaints about unfair weighting of votes rain down upon me. I believe students are grappling with real life issues.

Cooperation seems to increase as students' knowledge of the game increases and a sense of competition becomes more acute. Most students were involved in frantic negotiations for forty-five minutes today. Several students who showed relatively low interest previously were running around the room counting votes and cutting deals. In the end, they dismissed the commission and passed one law (or kept several proposals from becoming law). Next week we will have a debriefing session where we discuss the results of our game.

Appendix C: Third Party Reflections Journal

January 10, 2007
We Introduce the Game

Jonny and I had worked for so many hours on this thing, especially Jonny, that the actual experience was something I was starting to dread. I was very angry with 3 kids (my son being one of them) for trying to waltz in 10 minutes late. Patrick will do great in this game, but two of the kids have the worst English and the worst attitude and I have no confidence that they will participate well, especially after missing 10 minutes of explanation.

Here's how we structured the presentation
1) show of the sample website, Spain (Jonny)
2) explanation of key components (money, objectives, messaging/news) on the white board (Jonny)
3) repeat of key components on the sample website (Jonny)
4) kids get identities and try out their websites
5) specific example: "TV without frontiers" using internet and powerpoint presentation (me)
6) kids get time to make first moves on their websites.

Overall, there was good energy in the room except when Jonny was lecturing on the white board. He did a good job of keeping it slow and specific, but it was still a room full of very still, staring eyes. I think Daria, Natalie, Tyler, Patrick, Michal and Martin got it on this pass… but they weren't showing any enthusiasm. I expect that Rachel, Filip, Marek, Michal and Gabi were lost.

I have a guess that we had results that were that good because of the mini-version we played for two weeks before Christmas. This simulated the trade-tourism part, and the idea of laws. I am patting myself on the back right now for running that mini simulation because I think it did really important work preparing their imaginations for this big version.

When the kids got on the computers, there was immediate energy. Clearly Jonny has created an interface that they like, that they are familiar with, that they can bend to their wills. They all wanted to change their passwords – that was the first thing. (Sorry, guys – no chance.) Then when they understood the messaging capacity, they wanted that – they wanted to send each other all the messages that they would be SMSing to each other if they had their phones on!

Of course, most of these messages were blbost – Czech for nonsense. (Example: from Patrick to Tyler,
wow
Sweden
2007-01-10

and you say i'm wierd?)

My reaction: these kids speak the language of instant messaging. This website allows them to speak their language, fast and furiously, in the middle of class. They loved it. A successful game has to have two things. A successful currency (not money necessarily, but things which have value – goals that make sense, are desirable, and objects or tools that help acquire the goals.) that have meaning to the players, and a successful language. Johnny has created the tools which I think will allow the kids to quickly become familiar with the currency and the language.

IMPORTANT IDEA. In the future versions of this game, or if Jonny can pull it off, in the near future, we should have increasing levels of website fun – better messaging capability, access to more fun stuff (games???) which can be earned by reaching game objectives.

There was a flurry of activity, and probably 10% of it was game oriented, although Martin – one of the hardest kids to keep on task, and a kind of key to the social dynamic of the room – was captivated and sent out many messages pushing one of his objectives.

I had two conversations with Gabi that were encouraging and discouraging. Gabi asked me, "What is the point of this game?" which was discouraging because it sounded as if she had gathered nothing from all of our preparation. It was encouraging though because I started with "do we prefer lectures or games as a learning style?" and explained it all, and she got it. Then she asked another question which revealed a mistaken understanding of the money rule, but a small misunderstanding, meaning that she had at last clued in as to the idea of the money and some of the financial goals overall.

Jonny observed Filip and Michal, our students with the lowest English, and using his admin. features watched their database record insufficient deposits into the "trade" and "tourism" boxes. We had them log on again and repair the damage. Two strong conclusions. Johnny might consider programming it so that a mistake like this would be rejected by the game engine. If indeed he wants everyone to always deposit the full amount of their GDP, then he could arrange that. Meanwhile, I need to realize that PRECISELY BECAUSE MY STRATEGY OF THE INTRODUCTORY GAME WAS SUCCESSFUL, a difference between my game and the full game could prove disastrous as kids struggle to adjust the rules.

I felt there was good energy when I was speaking, explaining the specific example of "TV Without Frontiers." This was key, and I think that our class is at our best when we can – with the aid of powerpoint/internet presentations – exactly draw the lines between the real world (there really is a "TV without frontiers objective, there really is a "commissioner" writing this stuff) and the game, and drawing important conclusions about the world (in this case: what INSANE BUREAUCRACY.)

January 24th, 2007

This was a more frustrating class. We began (first hour) with a presentation by me about party blocks and then a review for the upcoming test. With a lot of video material on the screen, I felt I had good attention and maybe even interest.

The EU game time, though, was much more difficult. The goal was to have at least one law presented to the Parliament by the President of the Commission, Michal, and he did so. It was the Carbon Emissions law. This came with a handicap, one I think created by me. The "special projects" clause proved pretty tricky to understand. I had intended the clause to create an opportunity for investment, and the investment to have a 1 in 6 chance of working. But that sort of strategy game twist was hard for people to grasp even if their English was excellent. So that proved my first mistake; the President of the Commission presented the special projects as part of his law, as if it was a done deal – and Michal has excellent English, so the fault was not his.

I was disappointed that there was no debate on the law. In fact, I am frustrated because I have yet to see a real, political debate in any of our simulations. In previous games I have designed in other settings I have been able to get students to take ownership of laws, even completely fictitious ones, and make clever or passionate arguments in the public forum provided. Not this time. Although there seems some evidence of kids persuading each other via internet message, it is very low level, as in, "Vote for this please."

The law passed unanimously. This is great, but I doubt that students understand a) what they can do about the "special projects or
b) that this is not a completed objective, and that each nation will have to choose whether or not to obey.

I was not satisfied with the atmosphere of the game today. Jonny of course was frustrated for another reasons: software or computer failures. He was very down and of course a distracted and anxious teacher does not make for a great atmosphere in which political ideas are being eagerly debated. Overall, I felt that students were giving a bare minimum of attention so that they could get back on the internet to chat or look up Youtube videos.

My own feeling was one of constant tension. Instead of having that wonderful feeling which I have often had – the feeling that all my preparation results in smooth, independent investigation by the kids, and I can just sit back and watch – I had that awful feeling that my all nervous energy had to be channeled into a nearly useless attempt to keep the kids from drifting into sleep or rioting. Creative learning seemed far away.

January 31st, 2007

After presenting some new issues, I worked hard, using Spain as a model, to review the confusing "Carbon Emissions" business, and I think I might have successfully explained it this time. Then I handed the baton so to speak to Jonny.

We had an uncomfortable moment when no one wanted to propose a law. There was a flicker of interest in a "no confidence" motion which Jonny explained, but that died out – just as well, since it is the cheapest and least helpful way of getting objective points.
Michal, the President of the Commission, had no laws to present.

Marek, one of the Commissioners, called out a desperate attempt at a law on fishing, but because he had not supplied it to the President, Jonny had not allowed it. This was very discouraging, but then Jonny had the bright idea of giving 10 bonus minutes to get some ideas together.

The next ten minutes were fascinating. For once we had major discussion and strategy. Most kids were out of their seats, looking for commissioners, making proposals, correcting each other, and conducting negotiations. For ten minutes I found my spirits rising: the kids were trying to figure out how to meet their objectives using the political systems we had created. They were trying to make alliances of three or four, trying to get things done.

After the ten minutes, Michal proposed the law on freedom of migrant workers. This was slightly hopeful since I had just made a presentation on it and I felt as if maybe people had paid attention. There was not any discussion in parliament, however – this is still my sore point – and the law passed with only 3 kids opposing it.

Michal, working with Gabi, managed to get T.V. Without Frontiers written down and placed on the table. This one may have also been rather complicated – 5 parts to it – and Gabi was totally struggling with the English. Again, no discussion, and this time, unanimous agreement.

I had really mixed feelings. On the one hand, I loved seeing the kids put their heads together to agree on these laws. On the other hand, I would feel better about this affair if there were students making "speeches" in parliament. Maybe the language barrier has something to do with this. The majority of kids just don't have enough oomph to get up and speak in English. But if we stressed that Czech would be fine – and it certainly would be – would that help?

The T.V. Without Frontiers law is a curious case. My idea was to create 5 possibilities, and say that, to meet the objective, a successful law would have to have 4 out of the 5 pieces. Then I gave certain countries the objective of opposing one of the constituent pieces. Even as I write these words I realize that this is a complicated concept in English. My goal was to create debate, so that (for example) Germany would want part a, b c and but oppose e, Portugal would wand b – e and oppose a, and there would be a reason to fight for a compromise. As sound as I think that idea is, I don't see it bearing any fruit yet, and I have to wonder if it's just too much.

So today, we got two new laws. They were written on the board, but how well are they understood? Would it have been clearer if, instead of Jonny's untidy handwriting in red marker, we had typed this in Word and put it up on the screen? What if we had insisted the President submit his own Word document for us to display on the screen? The higher standard would give a better, more substantial feel to the whole operation – I think kids would take it more seriously, make more of an effort to think and attend – but it might be such a tough request that no one would want to make an effort.

Meanwhile, I wonder if we are correctly keeping track of the economy. What about those indexes? Shouldn't we have been sending out news bulletins about factors helping or hurting, say, tourism?

This is all fun, but it is awfully complicated. What is the bottom line? Even though several things are too complicated or disappointing right now, I feel sure of two things…
- the kids have a real acquaintance with actual issues in the EU today, and
- the kids are getting a clear picture of how EU laws are made,

… and I feel that these two things have been accomplished through a game far more effectively that if I had simply lectured once or twice.

P.S. Ten minutes after Jonny dismissed the kids to their computers. The majority of kids are still reading or writing on their EU websites. That's good. What are they writing? They're figuring out money things. Daria is reading our EU news bulletins. But now, Patrick is reading e-mails. Michal the President is playing a racing game. So, do we have enough oomph here to make this game a full two-periods a week success?

The adventure continues…

February 7th, 2007

Well, this class was certainly lots of fun! It was a riot watching the desperate politicking going on over the "special rendition" law as Gabi tried to craft a law in her capacity as commissioner. The fun was in part because Natalie, Daria, Gabi and Pavel were paying the most careful attention, and they have great senses of humor. They were begging, wheedling, pleading, shouting, yelling, shrieking – all to get their country's way.

Why was Gabi so crazy? In part, she had an imperfect understanding of the complex law. In part, she did understand – but the way I had written her objective (on purpose) was opposed to the majority of the other countries. When she finally crafted a four part law (most countries wanted five) she infuriated Natalie who wanted the more complete list. Gabi's draft was thus the first one NOT to pass our European parliament, and the decisive vote of Portugal (Daria) was the dramatic highlight of the day as she begged for more time to decide (on her knees as I recall) and different friends (especially Natalie) shrieked at her to comply. Natalie was also a commissioner, however, and quickly offered a second version – a complete version – of the law which also did not pass.

The voting was chaotic. Fun, but chaotic. Of course we didn't have little Michal's attention at all. We lost Martina who installed herself at a computer and did e-mail or something. That was very dispiriting; she has excellent English and I feel losing her is a bad reflection on us. Partly it was chaotic because the kids were having fun and arguing desperately – just as we wanted them to. We were now seeing the beginnings of real politics – the goal, of course, of the simulation. However, the ineffectiveness of it also stemmed from

a) poor presentation of the actual texts of the laws
b) scruffy voting procedures
c) the kids' not being sure of what objectives exactly they wanted (since these are written on their websites but not available when they are sitting at their desks voting.)

Lots of laws came up. After the battle over "extraordinary rendition" by the CIA, these were passed:

- Greek, Polish, Czech, Dutch, British cheeses became the official PDO cheeses of the EU.
- Fishing days were increased by 10%
- There will be no new official EU languages.

Then we voted for a new Commission. Patrick had done very effective campaigning, with the results:

President: Patrick, Sweden
Economy: Gabi, Greece
Enlargement: Tyler, UK, Enlargement
Justice: Pavel, Poland
Agriculture; Daria, Agriculture
Environment: Martina, Spain.

February 28th

Thus one we had prepared for at length with lots of careful discussion.

I really enjoyed the beginning of this class where I tried to add some creativity with the "copyright" issue – the songs, the piracy in action… Then I got increasingly specific, showing an example objective on the screen (Czech Republic.) Jonny and I debated in advance the wisdom of giving an exact example. Was this acceptable scaffolding or was it giving the kids too much? My feeling is that we gave them too little scaffolding at the beginning and now have to play a bit of catch up.

I felt I had the kids with me and I think this was because I went slowly and carefully from the whimsical and imaginative to the serious to the game-specific. I also made the point that "I don't really care about copyright laws" but the important issue was the way the EU government structures work – I told them that it all boiled down to the one statement that the new copyright law being debated this week was a "departure" from previous EU parliamentary work, in that it mandated exactly what criminal penalties each country should enact.

The way the kids looked, and especially the way Pavel engaged with me afterwards, made me think that we were doing well. Pavel, his eyes lighting up, was coming up with all kinds of political strategies to both help his country (Poland) and get some EU-wide legislation passed.

Then Jonny sent the kids to their computers to do their work and study their new objectives.

Important point: Jonny has been correctly urging that objectives be less complicated. Therefore I designed two "piracy" objectives and Jonny split them among the countries 50-50. The objectives were identical except that one set allowed each member nation to set their own penalties, and one set specified the penalties (just as the EU is trying to do right now.) I explained the difference with almost painfully slow precision and I was pretty sure they understood, especially because Daniel asked me a penetrating question suggesting that he really did get the philosophical distinction. Once everyone was pecking away at their keyboards (including me) it was gratifying to see that Pavel and Patrick were both busy writing laws as they should have been doing as members of the Commission.

I was feeling good about this (even though Michal and Martina were cruising the internet, way off topic – Michal always plays Tetris in such situations) but I have to concede that the great atmosphere in the room may be due to the people who aren't here. The two students with the worst English – little Michal and Rachel – weren't here, and nor is the one most likely to divert attention and behavior from anything productive, Marek. Jolanta and Gabi are usually positive influences; they weren't here either.

Patrick as President circulated, seriously working his political magic.
Then more kids got involved – Patrick, Daniel etc. took the law writing very seriously, crafting the working ultra-carefully and checking to see how many countries would be helped or hurt. The most fun (for me) was when Patrick and Daniel crafted a very clever bit of legalese trying to draft a law which would make both camps on either side of the objective dichotomy get their objectives. Patrick protested that this was exactly what politicians do in real life – a nice demonstration that at least someone is getting into the spirit of EU bureaucracy. (On the specific issue of this one law, I promised nothing – only that Mr. Lobel and I would study it and decide ourselves if it in fact satisfied anyone's objectives.) Patrick kept repeating his motivation – that a lot of people would be badly hurt because so many points had been allocated to this objective. A nice demonstration of the power of the points.

Towards the end of the open time, everyone was done except the hard-working president; lots of giggling, viewing Youtube videos, etc. while Patrick crafted the legislation exactly.
First law:
Extraordinary rendition
a) no planes
b) no kidnapping
c) penalties for a + b 10%

The law was clearly written and displayed. This made me feel good. Then we ran into a major problem pointed out by Jonny last time: kids don't have their objectives memorized and needed to run to the computers to check the exact wording of their objectives to decide how to vote. Jonny had previously observed that this was a flaw: how do we play this game unless kids can be in front of their screens?

At least I streamlined the voting! This law passed. I actually don't think it meets anyone's objective – but it was a nice piece of work.

The next law was nicely written out by President Patrick with special font art and a great picture of a migrant worker picking a tomato. This was an attempt to repeal the existing freedom of movement legislation. Again, Jonny gave kids time to check the objectives on the computers. Many did and this was great! (Even Martina was on the Spain website.)

The whole atmosphere was so much better and the sense that kids were striving to figure out political solutions was awesome. It is hard to tell but I think any kid paying even a minimum of attention has to have ingrained in his brain a sense of the political structure and the basic political issues.

Hooray for us.

March 28th

Jonny started with a brief explanation of the current situation – reminding them about the copyright issue from last time, and briefly introducing a vote on Turkey. He explained that half the class wanted Turkey and half didn't. Question: was this very brief introduction sufficient? With other issues, I made a full-blown presentation (powerpoint, humor, even food) so does this very brief prompt get the kids into it? We will see…
The students hurried to their websites, including Flip and Michal who helped each other.
Patrick, the President, did not appear to be prepared but he quickly took counsel with Jonny. He wisely started by asking for a listing of previous laws (not realizing that Jonny has been helpfully providing these all along.) Jolanta who has been really working hard and paying great attention (but is never in the top half with her English) asked me about her copyright law objective. This was a little discouraging -- was she absent when I made my massive presentation? And I though I had been so brilliantly creative!
Absences today: Pavel (he's usually helpful), Marek (usually a wreck or a wrecker), Martin (who could go either way but has often been positive).

Patrick began taking a straw poll of EU members – who wants Turkey?
Little Michal was the first to start randomly cruising the internet. Daria, Natalie, Rachel, Jolanta and Natalie had a massive and very promising big discussion about trading off political favors. Daria was clearly a good choice as commissioner as she tried to organize the writing of the appropriate laws. Next into cyberspace (Gmail?) was Tyler. Gabi and Daniel took turns on Patrick's skateboard, but still, the majority were tuned in appropriately.

Notes about the standings… Jonny brought to my attention the stunning fact that Rachel is winning this game. The fact that Patrick, Daria, Michal and Pavel are all also at the top is great – it confirms the whole structure of the game, that people who work hard, try to build political alliances, etc. get to the top. That was the whole point. But Rachel! Is she clever, hard-working, lucky or just cute? In the words of Daniel Gunka, "she would be good at lobbying!"

Daria's fevered negotiation session and attempts to cobble together a useful bill lasted about fifteen minutes, and they were forwarded to (I think) Tyler who picked them up on e-mail and tried to be the redactor. (is that the correct word?) At this point, Patrick was still actively superintending the political process and the rest of the class was doing music and e-mails.

Then there was another great burst of activity led by Patrick and Daria, who were trying to balance different members' concerns: "She wants this, and she'll vote for us if we agree to that…" Patrick rounded up votes, and then made sure that his team e-mailed the text to Jonny on his computer. All very healthy. Gabi meanwhile showed off photos from someone's wedding, Michal (big) watched videos and Daniel skateboarded.

After a brief conference, Jonny and I (as the Court of Justice), I think, agreed that if Patrick pushed his creative copyright law compromise (concocted with Daniel in the last class, see above) then we would accept it. I hoped that my acting dubious wouldn't dissuade them since I was only acting that way to conceal my delight at their political ingenuity. Jonny said, "cooperating to the max!"

The result of all the conferences…

Turkey enters the EU and all six provisions of the extraordinary rendition law were prepared as one package.

Patrick (and team) created a very well written, thick text – it really looked like a bureaucratic masterpiece. It also included some great political commentary – whoever wrote it (Tyler + Patrick I think) put a little care into it, and creativity. It passed, even without Germany.
Copyright, or anti-piracy, law was next. Patrick did not try to propose his creative compromise but the straight copyright law that half the class wanted and half didn't. It passed by a landslide. (Were these things so easy since the people with lots of votes – Italy, Poland – were absent?)

To our humor but great frustration: Patrick attempted to make a speech in defense of his proposal, and started off really well. I was thinking, "Yes! Finally someone is getting ready to debate these issues and take some intitiative! It's finally working!" Then in great embarrassment, Patrick realized he was delivering an intelligent, effective speech in defense of the "package bill" that had just passed! He turned very very red, but had no trouble laughing along with the rest of us. Too bad! Otherwise his politics today were a great performance!

My overall feelings are provisionally positive. I mean, we have created a system that has a functioning economy (people understand the money and the points, and seem reasonably motivated to seek both), a well-oiled means of communicating (the websites) and at atmosphere that mirrors the political landscape we were attempting to describe. But we see little debate. We have failed, I think, to inspire students to take an issue and actually try to analyze different arguments. Is this a language issue? It could be, and the fact that Daniel, Daria, Tyler (somewhat) and mostly Patrick are the ones writing legislation, and that Patrick has been leading the lobbying charges, suggests that it could be a language issue, because they are the most fluent in English. And yet these same people, despite their language proficiency, haven't taken any initiative with the exception of Patrick's aborted speech today.

Also failures: the idea of someone independently researching and presenting research, or the idea of my e-mails from the Monstro corporation inspiring someone to negotiate with Big Business. (Only Pavel Kucera took my bait and that was weeks ago. He dropped it.)

We need more feedback than just tests of information. I would like to create a debriefing session, maybe during the first class after the close of the EU game, before the beginning of the next one. We had better prepare some questions for the kids.

April 4th

I very briefly presented the new issue – the capture of 15 British soldiers by Iran. Then students went to their computers. Immediately there was activity. Patrick stood as otgher sworkked on their computers. Michal, Martin and Daniel began a small caucus, and then sought help of Gabi, a random commissioner. When Natalie saw that they were approaching Gabi, she called out – no, don't agree with them! I think their issue was Iran, the new one. Tyhen Michal was demanding a change to the copyright law, wanting each coutbnry to set their own penalities. Dariua and Natalie then began a strong press to persuade Gabi not to work with them.

During this interesting time, Martina did e-mail and Michal (little) stared at a random internet picture, but slowly they got involved.

Martin skuta continued campaigning on the iran issue, going up to students and asking, "what do you have on Iran?"

Tyler came late, and Patrick cornered him immediately. He was nervous. He said to Tyler, "They could pass any law they wanted…" apparently afraid that there was a group of big countries getting ready to change things.

Natalie was getting very partisan. "He's with us! (Patrick!) He's with us! You can go away!" to Daniel and Martin who were hankering for Patrick's attenbtion.

Daniel, Martin and Michal then realized that Spain was on their side in the Iran issue, and counted their votes with satisfaction. Michal was now looking confident and the Patrick-Natalie-Daria-Gabi-Jolanta group was looking very nervous. Daria was carefully counting votes.

Just for fun, I went up to jolanta to convgrtatulate her on her curtrent second place showing. She was sweet but said with a sad face, "Yes, but I'm going to drop. They're going to change everything. I just have a few votes." (Hooray for my Czech!)

Next, Daria tried to find out what Daniel wanted – she was using Turkey as a lever. Do you want Turkey in the EU? This might have been a way into a deal.

Significantly, the political machinations were going on a long time and including more people than usual. only Filip and little Michal were totally out of it.

Patrick grimly approached Jonny and complained about the process. Usually, the President has to present laws to the Parliament at the head of a united commission,. but today Jonny was going to allow any commissioner to present. Reasoning: the usual checks and balances don'ty applty: it's the last day.

Jonny and I discussed the problem. My suggestion – far from perfect – was that we keep the principal of the President presenting all laws from the whole commission, but (since we had lots of time and lots of interested kids) that the Parlliament could dissolve the commission and fire the President.

Even though there was the risk of looking dumb and confusing everybody, jonny decided to go this route. After all, we had lots of time and the kids were very motivated. So he made this announcement, and the big countries needed a moment to process it. Then one of them, I think Dan, grinned, and said, "Fine – it'
ll be us three."

Still half an hour into it, and everyone was participating except Martina, Filip and little Michal. Martina's lousy attitude was a cloud with a silver lining – at least it argues against my suspicion that it is only an issue of language. Martina has some of the best English in the school but couldn't care less. Jolanta is very involved.

Then Pavel Kucera, Poland, walked in late from some medical appointment. The room was electrified. Pavel went straight up to Patrick and the Big Thee looked glum. But Pavel was annoyed with something and with a malicious grin whirled around, joined the Big Three and provoked a storm of cheers and groans.

Pavel's beef was the renditions law, because of course Poland was the one under fire for stiff penalties. He went to work on that, needing my help to clarify.

Patrick, Jolanta and Tyler now looked like they had checked out. It was kind of sad. It appeared that they were certain Patrick would be kicked out. But apparently Michal did some quick figuring and realized that his bloc had only 296 votes when 297 were needed to beat 50%. Negotiations with Patrick reopened. Patrick appeared to offer a compromise on Turkey (I think) if they would not kick him out. During these negotiations I heard him complain, "I didn't know what you wanted: you weren't here!" Meaning of course that Pavel and Martin, very annoyed with Patrick, were absent, so how could he protect their interests?

Side note, but an important one: we were now discovering that one of the key things we haven't accomplished is teaching the idea that the Commission is a unitary force, acting together as one government. What we have here are the different factions trying to pull one Commissioner their way, and another faction going after another Commissioner.

Ultimatum; face off of the big countries against Patrick. The last straw appears to be the copyright law. It appeared to be something to be traded for Turkey. But then Daniel and Pavel, with evil grins, demanded of Patrick essentially that he agree to everything they wanted or they would kick Patrick out.

We gathered together and were about to open up the Parliament, but Daniel brought up the motion to dissolve the commission. This was actually closer than I had expected. We then had the "Council of Europe" who selected Natalie (Netherlands) over Patrick (Sweden) as new commissioner. Tyler was kind to renominate Patrick, but he was very reluctant.

Natalie had this figured out. She immediately named her team: Daria for Economy, Martin for Environment, Daniel for Justice, Pavel for Agriculture and Big Michal for Enlargement. A total victory for the Big Countries.

The next move amazed me. Pavel, Poland, had flexed its muscles by writing a new rendition law (favorable to Poland) Natalie refused to submit Pavel's law, which astonished the big counties who had supported her.

Next there was a revote on the Turkey issue, and the move to refuse Turkey's accession to the EU did not pass.

Next was Iran. Just as Jonny and I had schemed, the votes broke down according to big countries (against sanctions) and small plus Britain (for sanctions). Had Hungary been present today, however, it would have gone differently.

Finally, a revision of the copyright law was introduced. This was a bit odd. First of all, Natalie as President allowed the commission to present this law. Then it was passed, 449 – 148. Then Natalie demanded a chance as President to strike down the law since she didn't want it! Oh well.

The overall atmosphere in the class was amazing. It was sad to see Patrick and Jolanta so downcast. Patrick didn't exactly blow it off, but once he sensed his impending defeat, he really withdrew into himself. The energy, the light in his eyes, was gone. But the energy of the majority more than made up for it! It was also a tremendous disappointment.

Final thoughts

The discussion we had with the students was both encouraging and discouraging. We asked the students a series of questions and got some good answers, but not always the answers we wanted to hear.

Things I liked:

I liked the fact that so many kids were motivated to participate in this discussion and gave us intelligent answers. Active participants were Pavel, Martin, Patrick, Tyler, Natalie, Daria, Daniel. (Michal Uhlar, a key player, was absent.) They seemed to like the game. They talked a lot about their strategies and their desire to win. They seemed to really care. They talked about things they wanted to accomplish in order to get more points, and when pressed they couldn't really say why they cared about those points, suggesting to me the most awesome kind of victory – a game that sneaked into their very bloodstream. They didn't even know why they liked it. That is a big success.

What they liked could be best described as politics. They were really animated, for example, in discussing the final day – the uprising against the president, and the formation of the Big Countries' alliance.

In discussing the things they learned, I made a distinction between information and "process goals." The students kept repeating and agreeing on the Big Thing (my words not theirs): they learned that to advance their goals, they had to approach other students and cut a deal. They had to find out what would motivate other players. They had to decide which of their priorities could be sacrificed to give to a potential opponent in order to work together.

There was a lot said about trusting politicians. Daria and Natalie gleefully revealed that they had set everyone up: Natalie became President after making assurances which she never planned to keep. Several students—Pavel, most clearly – expressed a deepset doubt about the EU. Politicians as individuals and big countries conceptually were clearly mistrusted and the whole system called into question.

This of course is a questionable success. After all, it represents a success on the part of two instructors who have developed a conviction that (for these very reasons) the EU is not a good deal for smaller countries like the Czech Republic. But it is fair to ask if our job was to bring about an awareness that coincides with our perspectives or if we should have created a broader, richer experience in which positive aspects of the EU were more clear. I felt a curious pang when Pavel forcefully expressed his disappointment with the real-life EU.

One of the really satisfying and yet disappointing things was what Natalie shared about the Czech situation – the current penalties for their overproduction in the agricultural sector. The EU is penalizing them! On the one hand, I was proud to have created a system in which this kind of real-life news story becomes understandable to our students. They have a whole experiential template in which to place this otherwise erudite and exotic information. But on the other hand I was alarmed – WE should have been the ones bringing the Czech crisis to the class. If we hadn't incorporated it into our game, we could have at least done a five minute lecture on it.

Things I didn't like:

Some of the things that were true for our game but not the EU were "learned" as "lessons." Oops! For example, this idea of the big countries beign able to band together has a certain amount of validity, but equally or more true is the fact that MEPs from one country divide themselves into political blocks according to ideology, not nationality. What we did for the sake of simplicity may have communicated an inaccurate picture. similarly, the way we streamlined the

commissions made them seem more competitive and unrelated to the commission's area of supervision. The fact is, of course, that every country gets a commission, and that the commissioner , say, fisheries really sticks with fisheries.

I asked Martina Kocourkova point blank: why weren't you more involved? I wanted to know from the students, honestly, what kept some of them from better participation and success. Whereas little Michal and Filip may not have enough English to honestly answer such an interrogation, and may not feel that they have a relationship with me such that they could answer freely. Martina should have been comfortable with me and with the language. Well, she maintained that she missed the first two classes (true) and therefore never really understood the instructions. I don't know about that. I don't know if we could have ever reached her.

Other kids mentioned the importance of understanding the important instructions. This makes me glad that we did the mini-sessions before the game started, the ones in which we allocated money in the budget. (On looking back, it's amazing how much time Jonny and I spent on the numbers and the money when in the end that was a minor focus of the class time or my experience.) I want to think more about how to present the rules to a complicated strategy game

The students had some good comments about the information flow and the use of the computers. They panned the messaging center; a few of them seemed to think that a real-time chat might have worked. They agreed that they needed information in front of them to fully participate in debates. Several were excited about the idea of online, realtime voting. Perhaps a proposed law could appear on your screen and you could see how other countries are planning to vote.

Students also asked for a way of seeing how the objectives line up. For example, before a vote on Law Number 153, there could be a preliminary vote showing which countries' objectives would predispose them towards option A, option B or option c. This is something I disagree with. I want to continue the very successful system of students having to talk to each other and exercise (or at least attempt to exercise) diplomacy.

Taking a big step back, I am tied but happy. After all, from zero we created a workable system that had a huge buy-in factor, an "economy" of values that students were ultimately willing to fight for. They brought emotion, relational skills, creative problem solving, competition, curiosity and humor to the study of important information. I still believe that this blend is far more effective than traditional lecture style teaching in terms of giving students things they can remember and use.

Appendix D: Class Reflection

Classroom Discussion Audio Recorded on 18.04.2007
Transcribed 21.04.2007

PAUL TILL: Ok, Ladies and Gentlemen, today we are starting with a discussion and Mr. Lobel is recording the discussion so I'm going to have to have the discussion in English but I will try to [speaking Czech] when we need to. Here'Student: the reason for the discussion. Mr. Lobel and I invented this game this year because we love inventing games. It's my philosophy that playing a game is a better way of learning information that listening or reading. That playing, doing something, moving around, organizing your own plans, is a better way to learn. For example, here are some facts that I hope you learned in the last two months.
PAUL TILL: I hope you learned that twenty-seven states make up the EU. I hope you learned what is the EU Parliament. How does a commission work? I hope you learned some facts: today they made a law about copyright, they made a law about the CIA, etc. How did you learn those things? Well, I gave you some PowerPoint presentations. I talked. Mr. Lobel talked. But I hope, my goal, our goal is that you know them better because after you sat and listened you had to go do something. You had to go and talk to Patrick. You had to cut a deal with Daria. And you will remember those things better, I hope.
PAUL TILL: Right now because this is the first time we have done this game, we want to hear your feedback about how effective this game was. Did you learn information? Also, did you learn something bigger than information? Did you learn, in English we call these process goals. Did you learn more than facts? Did you learn strategies? Did you learn political strategies? Did you learn personal strategies for success? Those are some of the questions I am going to ask you. I would really like to hear your answers so that next year this game will be better. Of course, it won'Paul Till: be with you. I can'Paul Till: have the same students next year. But a new group. Or, if I invent a new game, will it be better? So I am going to ask you some questions right now.
PAUL TILL: The first questions are going to be specific questions and then there will be open questions for any feedback at all. My first question is about the website, which Mr. Lobel designed. Did you understand how to use Mr. Lobel's website? Martin, I will start with you because you said, "yeah." You did understand it? The English? Was it easy?
STUDENT: I think it was easy. Everything was easy.
PAUL TILL: For how many people was the English too hard? Anybody? Ok, I see that two people are saying the English on the website was difficult.
PAUL TILL: What about the system Mr. Lobel invented for your money? Did you understand that system? Jolanta, you understood it?
STUDENT: Yes.
PAUL TILL: Quickly, or did it take a long time to understand?
STUDENT: Quickly.
PAUL TILL: Ok, you understood it quickly.
PAUL TILL: What about when it gave you an objective? Did you understand how the objectives worked? Yeah? Ok, great.
PAUL TILL: What about communication with other countries? There was a place where you could communicate with other countries. Was that a good system or a bad system?
STUDENT: It was useless.
PAUL TILL: Martin says it was useless. Why was that system useless?
STUDENT: Because you need a quick answer but you have to check this all the time. It would be better if it were live chat or something.
PAUL TILL: I'm going to ask if people agree with Martin or disagree. But first I'm going to ask a follow up question. You said it was useless because you needed a quick answer. When did you need a quick answer? In what kind of situation?
STUDENT: I asked them if they agreed with me and my laws and I need it right away because it was pushing the time here in class and I needed to know.
PAUL TILL: I think that answer is perfectly clear. Who agrees with Martin? Seems like eight of nine people agree. Who disagrees? Anybody disagree. Michal?
STUDENT: I think it was a really good idea, but in the end it was just easier to talk.
PAUL TILL: Is there anything that he could have done that would have made it more useful to speak electronically?
STUDENT: Maybe it there was a live chat like ICQ or something.
JONATHAN LOBEL: How do you think that European Parliament make laws in real life? From your experience here in the classroom, what do you think is the most effective way?
STUDENT: Live conversation.
JONATHAN LOBEL: Great, what else? What do you think Daniel?
STUDENT: Um, like real communication.
JONATHAN LOBEL: Yes, it might be a reason for meetings of Parliament every month.
PAUL TILL: I thought there was one major problem with the website and Mr. Lobel and I talked about this and we agreed. I'm going to explain the problem to you. You tell me if you agree and then tell me if you have an idea for how we could make it better.
PAUL TILL: Let's: imagine Natalie had a law. She would say, "OK, we have a new law, it's: the copyright law!" Everyone had to think, "What's: my objective? I am Portugal. Do I agree or disagree? I don't: remember." So then Portugal would have to run back to a computer, read a complicated paragraph on a computer, then come back and vote on the law. So you had this crazy situation. Mr. Lobel would say, "Everybody be quiet! Sit down! Sit down! Natalie, what's: you law? Do you agree?" And everyone jumps up again and runs to the computers and then comes back and votes. That was a bad system I thought. Do you agree? Can you think of a solution?

STUDENT: I would say if Mr. Lobel would say, "Now you can start to vote," And people would have five minutes to vote electronically in the system.
STUDENT: Maybe it would be a good idea to make some counter in the game for everyone so we can see who is for yes and who is for no. Every country will write it there what vote they have. Instead of running back and forth.
PAUL TILL: So here is Rachel, she is sitting at her computer. She sees the law. She sees Natalie's goals and Daria's goals. She sees it all on her screen.
STUDENT: Yeah and she will have the choice to write if Natalie will agree or not agree.
PAUL TILL: Wow, that is very interesting. Patrick?
STUDENT: It's something like Dan's idea except on the projector you would have a list and for each law you would have a list and for each country you would have a Yes or No up on the screen the whole time.
PAUL TILL: According to the students?
STUDENT: No, according the opinions of the game.
PAUL TILL: The written objectives.
STUDENT: Yeah
PAUL TILL: The way that we wrote the objectives, we know what you would probably prefer. So then we would put that on the screen. And then you know where you have to focus your attention?
STUDENT: We would have it up on the screen during the voting.
PAUL TILL: Ok. Any other comments about the website?
STUDENT: Maybe there would be a better way to add new countries. Because it wasn'tt possible to add and it couldn't be that hard if the system was designed well.
PAUL TILL: OK. My next question has to do with how Parliament worked. One of my goals here was that you would learn how do laws get passed by the European Union? Did you learn that?
Many Students: Yeah. Yeah. Yeah…
PAUL TILL: OK. So, what caused you to learn something? Because I put it on the board? Because I make a PowerPoint? Because I said it? Because I am such a brilliant teacher? Why did you learn they way that Parliament works?
STUDENT: Because you've explained it clearly from the beginning. About the votes. How many voted has every state. I mean the members. I think it was clear since the beginning.
PAUL TILL: You're giving me credit for clear explanation. Thank you. Did anybody learn about Parliament best because we acted it out? Because you *were* Parliament?
STUDENT: Yes, that helped me.
PAUL TILL: In the acting out of Parliament, what was the most interesting part for you?
STUDENT: The game.
PAUL TILL: What part of the game?
STUDENT: All of it.
PAUL TILL: OK, I will come back to you. Martin says "making laws." Can you give me an example? When was it really interesting that you had to make a law?
STUDENT: When the alliance of big countries had different goals. Because usually the big counties would beat the little countries.
PAUL TILL: I'm thinking about last week. There was a major alliance of big countries. Why was that exciting?
STUDENT: It was more exciting than normal because the big counties wanted things and had most of the votes and the law passes.
JONATHAN LOBEL: It was interesting when they had different objectives?
STUDENT: Yeah, it was harder. Yeah, because the weaker countries had a chance to beat the big countries.
STUDENT: Also very interesting was making deals with other countries. For example, I will vote for some law "yes" if you will vote for my law "yes."
PAUL TILL: Aha! So you thought that was really fun to work out. You had to make deals. How many people in the class were a participant of making a deal? I see almost everyone saying that they participated at least once in some kind of deal. Tyler, can you tell me a good story about making a deal?
STUDENT: It was really interesting last week when all the big countries were doing their.. Because I'm a big country but I wasn's part of their alliance. So it was interesting to try and work it out with the littler countries and try to beat the big countries and at the same time, one of the things was that the big countries had a law that included something that I wanted and something I didn't want. So it was interesting to try and figure that out.
PAUL TILL: Ok, great. I wrote a list of information. I wanted you to learn the number twenty-seven or the name EU Parliament. But I also wanted to show you process goals. Making compromises is a skill that a mature person has to learn. Patrick'a little brother does not know this skill yet. If we are playing a game in our house, or if he wants something, little Paul'a strategy is to say, "Well I want this! Give it to me now!" He has not yet learned the strategy of making some kind of a compromise or building an alliance or working as a team. Has Patrick learned this skill?
[laughter]
PAUL TILL: Patrick would you like to tell us your experience? It was very dramatic, watching you over the last few weeks.
STUDENT: Well, in the end, I learned the skills that I … [laughter]
PAUL TILL: Natalie, can you tell us why Patrick lost the presidency?
STUDENT: Because he didn't agree with Daniel and he wanted some laws to pass but Patrick didn't want those laws to pass.
PAUL TILL: What about you? How did you become president? What was your secret?
STUDENT: Daria voted for me!
PAUL TILL: Oh Daria was the secret! Daria, what was the secret?
STUDENT: We made a little plan that she will become president and then say no to their laws.
PAUL TILL: Wait, what was the plan?

STUDENT: That she will become president and not stop our laws in the Parliament.
PAUL TILL: She will or will not stop them?
STUDENT: She was against one but she will not stop the others.
PAUL TILL: So these are examples of strategies and process goals. What other things did you enjoy learning about in this game?
[silence]
JONATHAN LOBEL: What's: the most difficult part about making laws in the European Union system? We have a Commission which does what?
STUDENT: Make laws.
JONATHAN LOBEL: Right, so the commissioners were writing laws. And the Parliament was doing what?
STUDENT: Voting.
JONATHAN LOBEL: Voting on laws. So what was difficult, what was easy? What was good about this system? What do you think now that you have played this game?
STUDENT: It's stupid.
JONATHAN LOBEL: Stupid? Why is it stupid?
STUDENT: Because not every country has the same right to vote. I think that a more fair way would be if every country had one vote. This is the first one and the second one is that if somebody wasn't a commissioner and had a good law he couldn't pass it without having a commissioner write it for him.
STUDENT: Ok, if all of them had the same vote it wouldn't be fair because Germany is almost half of Europe and Matla is a little tiny island somewhere. So the people of Malta could really screw up things for Germany.
JONATHAN LOBEL: So you think this was a good system then?
STUDENT: No, I don't. I think it sucks.
JONATHAN LOBEL: Why do you think it's bad?
STUDENT: Well, first of all I don't think you can have everybody have one vote. It would be a lot less though. Germany shouldn't have ninety-nine votes. But you can't have it be ever because then people in Malta would be able to mess up…
JONATHAN LOBEL: So from your experience, should it be based on population or should it be based on something else?
STUDENT: Maybe Patrick is right. It would be unfair if everyone had the same vote. But maybe it would be more fair if it was different but not as much as it is now. So the lower countries will have more votes and the bigger countries will have less.
STUDENT: I don't agree with writing laws by commissioners. Like Commissioner or Justice can write a law for agriculture…
PAUL TILL: Well, that was part of our game. That was because it was real.
PAUL TILL: Another thing that isn't realistic about our game is that MEPs for a country don't all vote together. They are divided along party lines.
PAUL TILL: I am going to ask a couple people some very specific questions.
PAUL TILL: Daniel, especially last week. You were so energetic. You were so motivated. Why? What succeeded in getting you so excited?
STUDENT: I don't know, I just like it.
PAUL TILL: Why do you like it? Daria, you were running around. You were shrieking. You were trying to make deals What about this got you excited?
STUDENT: [laughter] I don't know… I needed points.
PAUL TILL: So the point system caused you to be motivated?
STUDENT: Maybe…
PAUL TILL: Pavel, you seemed like you were having a good time. Why?
STUDENT: Because it was a fun game…
PAUL TILL: Why? What engaged you?
STUDENT: Because I am interesting in this kind of stuff and I will probably study it in the university and will need it. So, I was trying to learn something from it.
PAUL TILL: Now I am going to embarrass Martina. Martina, you have excellent English. But you almost didn't participate at all. Why?
STUDENT: I don't know.
PAUL TILL: Is there anything I could have done better that would have got you more involved?
STUDENT: For example, I didn'r understand how you select commissioners. So I don'r know…
PAUL TILL: So at the beginning there were some important things you didn't understand so then will was just…
STUDENT: Yes
PAUL TILL: Did you come late? Did you miss the first two days of the game?
STUDENT: Yes
PAUL TILL: Does anyone else have a comment about what was exciting?
STUDENT: Something you could change in this game is a real understanding by atleast 90% of people because let's say 30% of people don't understand you can just go to them and say, "It would be really nice of you to vote 'yes'" and they will vote "yes."
PAUL TILL: So it is almost like we had two kinds of students. We had students who understood and were active and were trying to make deal. And then we had students who were just sitting there. What made the difference? English language?
STUDENT: Maybe some people just need more specific explanation. Everyone is different. Some people just need more time to understand it.
PAUL TILL: What else would you like to say about improving the game?
STUDENT: Better computers…
PAUL TILL: How did the computer frustrate you?

STUDENT: A lot of the computers don't work so everyone couldn't be on a computer at once. I know it's not a problem with the game, but…
PAUL TILL: I'm going to go back to alliances or compromises. The way that we set up the game, what was the best thing you could do? If you really wanted a law, what would you have to do?
STUDENT: Come to classes.
[laughter]
PAUL TILL: Good answer. What else? Gabi, did you get the laws you wanted? How?
STUDENT: I was a commissioner, so I just wrote them. And if I wanted some laws, I just went to some people and talked to them.
PAUL TILL: And if you talked to them and they disagreed, what would you do?
STUDENT: Find other people.
PAUL TILL: And what would you do with these other people?
STUDENT: Just make some plans or some deals.
PAUL TILL: Pavel, how did you get what you wanted?
STUDENT: Tried to find some friendly countries and make an alliance. And it was good to be friends or have a good influence on the president.
PAUL TILL: Tell me about influence?
STUDENT: Well…
PAUL TILL: For example, some people have influence because they have money.
STUDENT: You can say, I will vote you in as president if you will later be kind to my country. Or I will vote for some of your laws if you will vote for some of my laws, especially if you are a commissioner.
PAUL TILL: Did anybody say, "I want three things, but I will give up this one if I can get the others"? Did you have that experience?
Many Students: Yes. All the time.
PAUL TILL: All the time. OK.
JONATHAN LOBEL: Tyler, I noticed that you introduced a package law with two or three things. What was your strategy.
STUDENT: It was what he said. If you only wanted one, then you would have to decide how much you wanted it. If you voted for the one it came with the other. It was to convince them that if they really wanted one, they would have to pay for it.
STUDENT: They would have to make a compromise. People who would not normally vote for your law, it would give them inspiration to do it.
PAUL TILL: What is the secret to success in this game? What would you tell someone to succeed in this game?
STUDENT: You need a strong personality. You have to get out there and do it and and not wait for it to some to you. You have to be strong and if you really want something, get out there and fight for it.
STUDENT: I would tell people to promise people to agree and then afterwards change your mind.
PAUL TILL: Anything to get power? Haha. Martin, any recommendations for future students?
STUDENT: Make sure you understand everything and persuade someone else that it is good for them.
PAUL TILL: Last comments…
JONATHAN LOBEL: How do you see the EU differently after playing this game?
STUDENT: It's unfair. We talked about if before with how many votes each country has. It isn't fair to small countries.
STUDENT: It's a miracle it exists because the way they decided on laws is just unpredictable and corrupted.
STUDENT: I think that we can't trust politicians.
STUDENT: I must be hard to be hard… there must be lots of lying and backstabbing. Even in the game it was very temping to turn something your way a little. Lots of corruption…
JONATHAN LOBEL: How many people trust the EU? Two or three… How many don't Six or seven… ok. How many people thing the EU irrelevant? None? How many think it is important? Seven… Ok.
STUDENT: In the future it depends on job somewhere in the EU…
STUDENT: The EU confiscated Czech production because they made too much. This isn't fair. They gave them a big fine.
JONATHAN LOBEL: Thanks very much!

Appendix E: Student Surveys

Game Survey

Country

At this time, do you have any ideas or strategies that will help you win this game? If so, please explain.

Are you extremely excited about or terribly frustrated with any aspect of this game? Please explain.

What key information or skills have you learned through this game that might apply to real life?

Final Survey Results

Country

What was your plan to get points? What worked and what didn't work?

What was most difficult about this game?

What did you learn by playing this game?

What would you improve about this game?

Appendix F: Survey Results

Game Survey Results

Survey Taken 26.01.2007

Country
Sweden
At this time, do you have any ideas or strategies that will help you win this game? If so, please explain.
Yes, we of the Swedes have a surefire strategy that will not only win us the game, but gain us enough money to retire rich amid a daze of wine, Swedish folk music (http://youtube.com/watch?v=MaONBn8AZPY), and ice fishing (and of course, Swedish women). Our strategy is to convince countries to vote our leader into the Presidential position. We will offer to grant them high offices if they accept. We also have a propaganda campaign running against the evil Nazis (Germany). We send mass messages slenderizing their axis of evil. This will undermine their following.
Are you extremely excited about or terribly frustrated with any aspect of this game? Please explain.
We feel frustrated by the small starting GDP of Sweden. We deserve much more for our wonderful timber, iron ore, and hydropower exports.
What key information or skills have you learned through this game that might apply to real life?
We Swedes have learned the value of spam and what the heck hydropower is.

Country
Germany
At this time, do you have any ideas or strategies that will help you win this game? If so, please explain.
I (Germany) become a first president of EU, so I know that I have been have a easiest role to get more points that any states because I am primary looked for my objectives, but very important thing is to debate about objectives and make promises that if someone will vote yes for one of my objectives, I can also give a chance to agree with others objectives, so that is what I did in the elections and maybe that's why I got so many positive votes. So point of the game is not just play for yourself and don't care about others, because if you want points, you have to care and I think that I do.
Are you extremely excited about or terribly frustrated with any aspect of this game? Please explain.
Yeah I was sometimes excited because I think not everyone really understand the point of the game, and If someone votes for some laws, because they just read they have it in their objectives and really don't care (or don't know) that if they voted for some law and get points, they closed the way to some other laws, that equal no other points. Sometimes I detected that someone just said, OK I don't care about my position of the game, so just tell me for what I should vote, kind of sad, but otherwise, if they do not care about their grade in EU class, that is just their problem, not mine or yours.
What key information or skills have you learned through this game that might apply to real life?
As I thought before we start this game, life is not easy in this ways, if you want something to make happen, you should not became to a person, who don't care about anything or anyone, because always you have to have a people around you that can support you in some ways. Its same like in this game, if I want points for my objectives, I had to speak with others, make promises that if they will vote for mine, I can vote for their objectives and make their objectives happen, otherwise as I said, if I was just person who wanted points and have his objectives completed, I don't know if I could that without others.
PS. Great game, I really like it and I appreciate that you probably worked so hard to make this EU game system happen and do something like that for us, because you can't see this stuff on traditional Czech schools and high schools.

Country
United Kingdom
At this time, do you have any ideas or strategies that will help you win this game? If so, please explain.
I really like how the game gets more complex each week. It makes you have to think through your strategy and keep working on your economy constantly. Important factors with having a good strategy are: being a persuasive person and being able to make deals, constantly tending to your economy (updating your budget every week, which I forgot last week and is the reason my economy is suffering) and making alliances with other players. I didn't realize this from the beginning, but now it's starting to catch up in my mind.
Are you extremely excited about or terribly frustrated with any aspect of this game? Please explain.
I'm extremely excited about it! The only thing that I can think of that I would change is more a design thing and I don't know if you'd be able to fix it...We'll see. Anyway, when you receive a new message, it would be great if it would show you have a new message on the status bar or whatever you call it. Like next to the received messages if it would show a 1 or a 2 or just be bold so you wouldn't miss any new stuff. Otherwise I have nothing to criticize!
What key information or skills have you learned through this game that might apply to real life?
If you want something you have to do what you can to make it happen, you can't just sit back and wait and hope that things will go your way. But, in order to achieve your goal, you can't forget about everyone else, you have to learn to work together even though you may have different views on things.

On the game website you said you'd raise the GDP of anyone who wrote in one of these, so I expect a raise =) If you have any more questions or want me to expand on anything I've said, just let me know!

Coutnry
Italy
At this time, do you have any ideas or strategies that will help you win this game? If so, please explain.
Increase my tourism % by special projects and invest all money in there.
Are you extremely excited about or terribly frustrated with any aspect of this game? Please explain.
I am wonder how can somebody make up this huge game.. yep I am excited
What key information or skills have you learned through this game that might apply to real life?
That you need to have good relationship with president and exploit stupidity of other EU members... :D

Country
Poland
At this time, do you have any ideas or strategies that will help you win this game? If so, please explain.
My strategy is to make all my laws be passed by good influence at the commissioners and president and then try to invest successfully to tourism (by luck) and use specials offers by EU (grants etc.)
Are you extremely excited about or terribly frustrated with any aspect of this game? Please explain.
This game is basically well made but some things could be ever improved for example sending messages or intergame mail just made for this game (it would make it easier without using specials own emails)
What key information or skills have you learned through this game that might apply to real life?
Through this game I found out some new information about EU and systems in there how it really works and some new information overall.

Final Survey Results

Survey Taken 04.04.2007

Country

Czech Republic

What was your plan to get points? What worked and what didn't work?

My plan was to find out which country wanted the same laws as me, make a treaty and add all the votes that we needed so that the law could be carried out. And if there was to small an amount, I promised that I would vote for the laws of different countries but then they would have to vote for my laws. And it worked until he last game where I failed because everybody waned to change all the laws and nobody could agree.

What was most difficult about this game?

Probably the last game. For me definitely. I wasn't able to negotiate with anyone because they were either against or there weren't enough votes. Otherwise I enjoyed the game.

What did you learn by playing this game?

I learned how to negotiate with people, make compromises, and bargain. It was pretty fun. Occasionally I would learn something interesting about certain laws.

What would you improve about this game?

I would change that each person has a different number of notes. Each person has the right to be the same so that no one has an unprecedented advantage. That happened a lot. I would also change the laws that you are never allowed to change, like it was in the last game.

Country

Poland

What was your plan to get points? What worked and what didn't work?

My plan was to become a commissioner of something and then have an influence on other people and pass the laws that I need. My sometimes faked influence didn't work every time but sometimes it did.

What was most difficult about this game?

At the beginning it was quite difficult to understand the system, but finally I understood it. Sometimes when some people didn't understand it I explained some things to them.

What did you learn by playing this game?

I learned how the EU system really works and difficult in all this system from the beginning to the end.

What would you improve about this game?

I don't really know how but I would improve absolute understanding for all people in class because if some people don't understand the whole meaning of the game in unfair. And I would also improve communication between teachers an students and more interesting playing to spend more time in the game.

Country

United Kingdom

What was your plan to get points? What worked and what didn't work?

My plan was to create as many deals and compromises that would help me advance in the game. Sometimes the deals went sour though… and things didn't always go my way.

What was most difficult about this game?

Trying to beat the alliance of other big countries was pretty tough. And trying to get as many votes as possible was frustrating at times.

What did you learn by playing this game?

That even though sometimes it's easy to lie and cheat to get your way, it's not always (actually ever) good. It made me glad that I'm not a member of parliament in the real EU. I would go crazy!

What would you improve about this game?

If there was a way to make it more fair it would be good, but I understand that it's like that in real life too and that small countries get overrun sometimes by bigger ones. Also, as I mentioned before, it would be nice to have a thing on the homepage that showed you how many unread messages you have so you wouldn't have to keep checking, etc.

Country

France

What was your plan to get points? What worked and what didn't work?

Make as many agreements with the people with the same goals as possible.

What was most difficult about this game?

I believed that [Portugal] wouldn't betray us all in the end.

What did you learn by playing this game?

Making treaties.

What would you improve about this game?

Editable country system for new students.

Country

Italy

What was your plan to get points? What worked and what didn't work?

Putting all money (budget) into trade which was positive % growth. And to make alliance of states which has most votes and can beat other countries.

What was most difficult about this game?

Persuade people to vote for your new law.

What did you learn by playing this game?

That if it works similarly in EU something should change. Because big countries will have power all over Europe and small countries will disappear.

What would you improve about this game?

Check if everybody understands how to get more points and how it works. Because I hated the question "why?" When I said for somebody to vote yet for some law because it was good for him or her.

Country

Greece

What was your plan to get points? What worked and what didn't work?

Pass the laws, put some money into the budget, it works.

What was most difficult about this game?

To understand the game.

What did you learn by playing this game?

Special English words and how the EU government is going.

What would you improve about this game?

More fun.

Country

Belgium

What was your plan to get points? What worked and what didn't work?

I needed to approve all the laws. It worked.

What was most difficult about this game?

It was difficult to agree on the laws.

What did you learn by playing this game?

I learned information and foods for EU countries.

What would you improve about this game?

Interesting storyline

Country

Portugal

What was your plan to get points? What worked and what didn't work?

I didn't really have a plan. Maybe just that I wanted to complete as many objectives as I could. I think that it worked out pretty well.

What was most difficult about this game?

I don't know, I think that there wasn't anything that difficult. I think that there always was a way of solving a difficult problem or task.

What did you learn by playing this game?

For example, when I promised to someone that if they vote for my then I will also vote for them, the thing I learned is that I don't have to keep my promise and they will still vote for me, even if I don't. A also learned better how it works in the EU government.

What would you improve about this game?

Probably nothing. I think it was a really good game and I personally liked it.

Country

Denmark

What was your plan to get points? What worked and what didn't work?

I thinked that I will be last because my English isn't good like students in the 2^{nd}, 3^{rd}, and 4^{th} classes.

What was most difficult about this game?

The most difficult was making (voting) laws.

What did you learn by playing this game?

I learned a lot of things about European Union, mainly lot of laws.

What would you improve about this game?

Maybe I would improve or repair budget RESEARCH BOX because we couldn't put cash into this.

Country

Netherlands

What was your plan to get points? What worked and what didn't work?

My plan was to do each of the law that I had. It was very difficult because for example the UK has more power than the Netherlands. So if the UK didn't agree with my law then I lost points.

What was most difficult about this game?

The most difficult was maybe to agree with laws, which I didn't want, but most of the people wanted it.

What did you learn by playing this game?

Now I know the capital cities of each country in the EU. But the most important thing is that I know a lot about the EU.

What would you improve about this game?

I wouldn't improve anything because I think that this game was excellent. I like it very much. And I think that this was for you very difficult.

Country

Germany

What was your plan to get points? What worked and what didn't work?

From the beginning I was president of the EU so it was easier for me to get points and objectives because I could offer to my schoolmates commission roles and get by that votes for my objectives. Later is was just a member of the EU so it was much harder but I did if for second place in the game.

What was most difficult about this game?

I didn't find this game or game rules difficult but I'm sure that others did. There were many people totally confused for all the game time who didn't understand the game sometimes just by their laziness or stupidity or whatever.

What did you learn by playing this game?

That is you want to get something right you also have to sometimes sacrifice yourself. For example, objectives in the game. Sometimes I lost points on one and got more points on another.

What would you improve about this game?

Nothing, I think it was just great and everything worked out as I expected. It's just about people how they love the game and want to be part of the game.

Country

Sweden

What was your plan to get points? What worked and what didn't work?

My strategy was try and do as many of the extra stuff as possible. In addition I attempted to become president so I would have a direct influence on which laws were passed. As president I could suggest a law and often get it passed, if enough people agreed with it. TO become President I promised key people positions of power in the new regime.
Unfortunately in the end my power as President of a puppet government failed as I was overthrown by the powers of Satan (France, Germany). As much larger countries they were able to kick me out and pass most of their laws. Their only mistake was they tried to choose a puppet president, but the president had her own twisted plans.

What was most difficult about this game?

Convincing enough people to agree with you.

What did you learn by playing this game?

I learned that, firstly, the EU is just a playground for the larger powers. The smaller countries are in it because their GDP shoots up for a few years after entry into the EU. But their freedom is checked. The larger powers control the EU. But

without the EU the smaller powers will be crushed. No one will trade with them, because import export taxes are less in between EU countries. Being a part of the EU is dangerous but necessary for a smaller, poorer country.

What would you improve about this game?

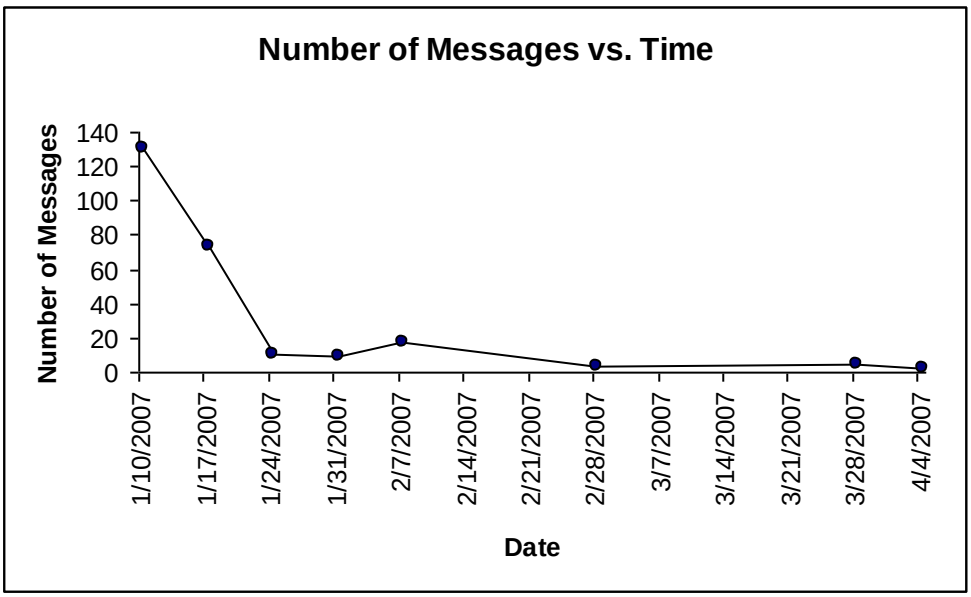
I would make the chat system something like AIM...Bit more time...every body speak same language fluently

Appendix G: Electronic Messages

For a complete record of electronic messages, please see the included data CD.

Date	Number of Messages
10/01/2007	131
17/01/2007	74
24/01/2007	10
31/01/2007	9
07/02/2007	18
2/28/2007	3
28/03/2007	5
04/04/2007	2

Table: Number of Weekly Messages



Graph: Number of Messages vs. Time

Appendix H: CAQDAS Coding

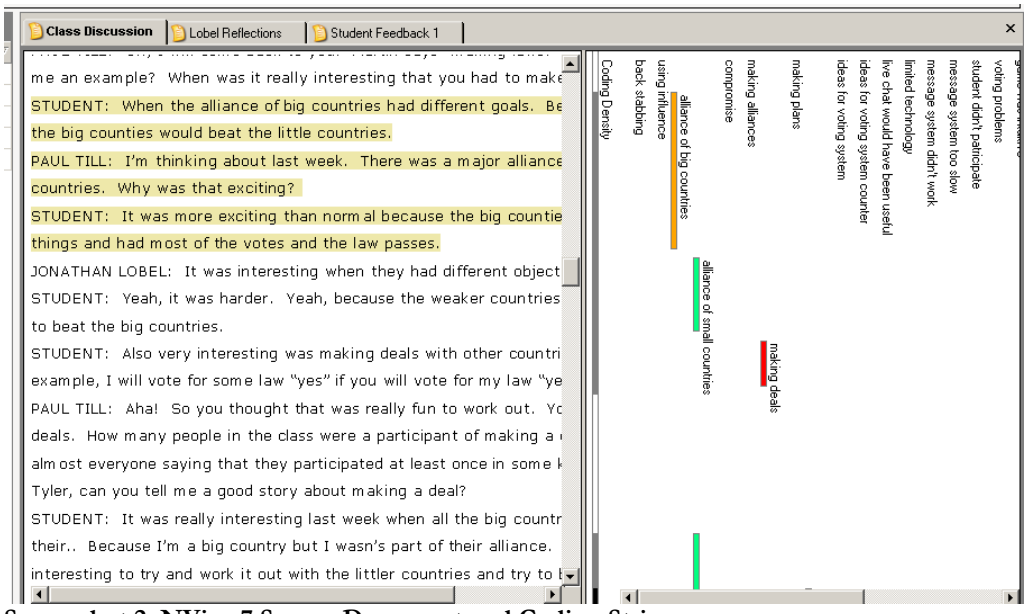
CAQDAS NVivo 7 was used to code and theme six data sources. Included below are screenshots of the coding process and a complete sample node with source references. Complete project and node summaries are available on the included CD.

Nvivo Screenshots

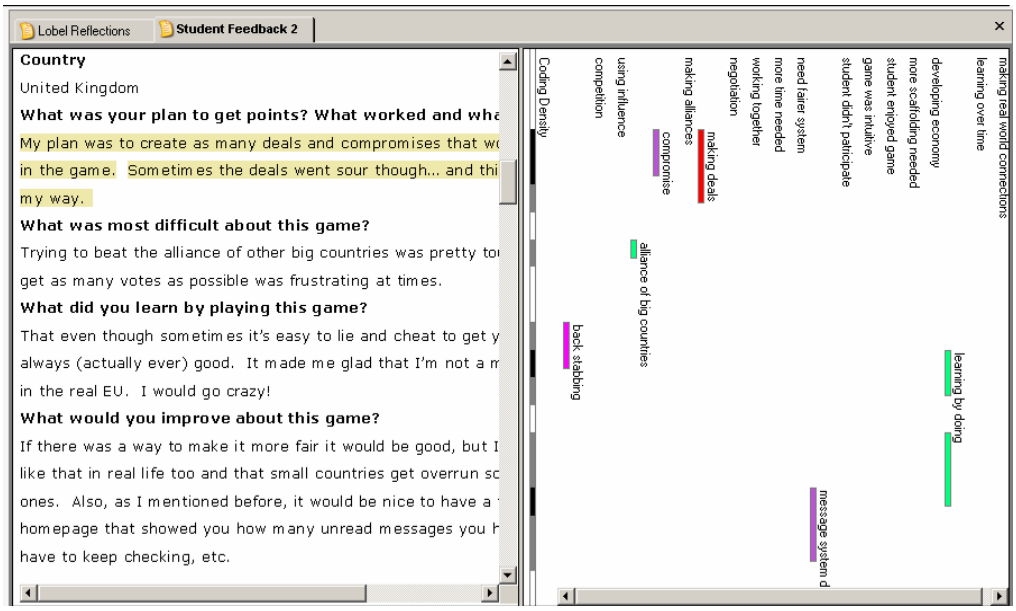
Tree Nodes

Name	Sources	References	Created	Modified
Cooperative Activities	0	0	4/25/2007 1:47 AM	4/25/2007 1:47 AM
alliance of big countries	4	20	4/25/2007 1:50 AM	4/25/2007 10:03 AM
alliance of small countries	3	7	4/25/2007 1:50 AM	4/25/2007 9:55 AM
compromise	4	18	4/25/2007 1:52 AM	4/25/2007 9:57 AM
cooperation at the outset	1	1	4/25/2007 1:52 AM	4/25/2007 1:52 AM
discussion	2	12	4/25/2007 1:52 AM	4/25/2007 9:56 AM
making alliances	4	5	4/25/2007 1:52 AM	4/25/2007 9:50 AM
making deals	5	18	4/25/2007 1:52 AM	4/25/2007 10:03 AM
making plans	2	3	4/25/2007 1:52 AM	4/25/2007 9:50 AM
negotiation	5	22	4/25/2007 2:03 AM	4/25/2007 9:55 AM
support from others	1	1	4/25/2007 2:03 AM	4/25/2007 2:03 AM
working together	4	13	4/25/2007 2:03 AM	4/25/2007 9:41 AM
Competitive Activities	0	0	4/25/2007 1:48 AM	4/25/2007 1:48 AM
back stabbing	4	7	4/25/2007 1:50 AM	4/25/2007 10:04 AM
competition	4	15	4/25/2007 1:50 AM	4/25/2007 9:59 AM
exploiting game	2	8	4/25/2007 1:50 AM	4/25/2007 9:57 AM
pressure	2	3	4/25/2007 2:12 AM	4/25/2007 9:57 AM
using influence	4	14	4/25/2007 2:13 AM	4/25/2007 2:13 AM
Game Failures	0	0	4/25/2007 1:48 AM	4/25/2007 1:48 AM
Scaffolding	0	0	4/25/2007 1:51 AM	4/25/2007 1:51 AM
Student Learning	0	0	4/25/2007 1:53 AM	4/25/2007 1:53 AM
Game Successes	0	0	4/25/2007 1:56 AM	4/25/2007 1:56 AM

Screenshot 1: NVivo 7 Coding and Themeing with Nodes



Screenshot 2: NVivo 7 Source Document and Coding Strips



Screenshot 3: NVivo 7 Source Document and Coding Strips

NVivo Node: Negotiation

<Documents\Class Discussion> - § 6 references coded [5.51% Coverage]

Reference 1 - 0.62% Coverage

one of the things was that the big countries had a law that included something that I wanted and something I didn't want.

Reference 2 - 0.99% Coverage

PAUL TILL: Natalie, can you tell us why Patrick lost the presidency?
STUDENT: Because he didn't agree with Daniel and he wanted some laws to pass but Patrick didn't want those laws to pass.

Reference 3 - 0.66% Coverage

STUDENT: I was a commissioner, so I just wrote them. And if I wanted some laws, I just went to some people and talked to them.

Reference 4 - 1.08% Coverage

STUDENT: You can say, I will vote you in as president if you will later be kind to my country. Or I will vote for some of your laws if you will vote for some of my laws, especially if you are a commissioner.

Reference 5 - 0.89% Coverage

PAUL TILL: Did anybody say, "I want three things, but I will give up this one if I can get the others"? Did you have that experience?
Many Students: Yes. All the time.

Reference 6 - 1.27% Coverage

STUDENT: It was what he said. If you only wanted one, then you would have to decide how much you wanted it. If you voted for the one it came with the other. It was to convince them that if they really wanted one, they would have to pay for it.

<Documents\Lobel Reflections> - § 4 references coded [2.64% Coverage]

Reference 1 - 0.66% Coverage

Most students are now engaging each other, finding ways to get things done, and seem to enjoy the game.

Reference 2 - 0.39% Coverage

One or two dissidents throw any progress back to ground zero.

Reference 3 - 1.08% Coverage

The representative from the Netherlands replaced Sweden as president of the commission and selected five new commissioners (Portugal, France, Italy, Poland, and Denmark).

Reference 4 - 0.52% Coverage

Most students were involved in frantic negotiations for forty-five minutes today.

<Documents\Student Feedback 1> - § 2 references coded [2.74% Coverage]

Reference 1 - 2.12% Coverage

Our strategy is to convince countries to vote our leader into the Presidential position. We will offer to grant them high offices if they accept

Reference 2 - 0.61% Coverage

debate about objectives and make promises

<Documents\Student Feedback 2> - § 6 references coded [5.52% Coverage]

Reference 1 - 1.47% Coverage

And if there was to small an amount, I promised that I would vote for the laws of different countries but then they would have to vote for my laws.

Reference 2 - 1.21% Coverage

For me definitely. I wasn't able to negotiate with anyone because they were either against or there weren't enough votes.

Reference 3 - 0.70% Coverage

I learned how to negotiate with people, make compromises, and bargain.

Reference 4 - 0.41% Coverage

Persuade people to vote for your new law.

Reference 5 - 0.95% Coverage

For example, when I promised to someone that if they vote for my then I will also vote for them

Reference 6 - 0.79% Coverage

TO become President I promised key people positions of power in the new regime.

<Documents\Till Reflections> - § 4 references coded [1.17% Coverage]

Reference 1 - 0.32% Coverage

Most kids were out of their seats, looking for commissioners, making proposals, correcting each other, and conducting negotiations.

Reference 2 - 0.23% Coverage

When Natalie saw that they were approaching Gabi, she called out – no, don't agree with them!

Reference 3 - 0.21% Coverage

Dariua and Natalie then began a strong press to persuade Gabi not to work with them.

Reference 4 - 0.40% Coverage

But apparently Michal did some quick figuring and realized that his bloc had only 296 votes when 297 were needed to beat 50%. Negotiations with Patrick reopened.