PEOPLE POWER- COMPUTER GAMES IN THE CLASSROOM

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Abstract. *In the subject Theory and Analysis of International Conflict, the students participated in a day-long workshop using the computer game People Power.*

Keywords: Computer Games, Workshop, Edutainment,

1. INTRODUCTION

As the great science-fiction writer Isaac Asimov once wrote: 'new problems, and a new series of wars'. A comment on the foolishness of humanity, and its continual regression into warfare to solve problems, it also points to the uniqueness of each conflict. No two are the same, and for that reason, the subject, which usually forms part of International Relations degrees, is both an interesting and complex one. As a result, in recent years students have worked with a computer game to aid their understanding of the subject.
This paper sets out to explain how the game has been used, the advantages it offers, as well as the problems related to the introduction of a very different learning system. The first part of the paper is structured as follows- the advantages of computer games in the classroom are discussed, followed by an identification of problems that arise from their use, as well as a brief breakdown of the most common types of games used in classrooms.
The second part describes one particular game and outlines how it was used in an undergraduate degree course, then presents the results of a short student survey on the same, and finishes by analyzing how the problems and issues mentioned in the first part of the paper were dealt with.

1.1. OBJECTIVES

The principal objective of this activity was to offer students an opportunity to understand the dynamics of social conflicts, in a format not possible in a traditional classroom setting. As the game revolves around the management of conflict scenarios based on real-life situations, with the ultimate objective of resolving them in a non-violent manner, and where each action leads to consequences which change the socio-political landscape as one plays, the student has the opportunity to study and experience the conflict from the inside, as well as being required to analyze in depth the multiple social factors at play.
A secondary objective was to provide the opportunity to apply theoretical concepts, both in the field of conflict and conflict resolution, and demonstrate the knowledge gained during the course.
Thirdly, by working in groups where a high level of decision-making and collaborative

effort were necessary (the game is highly complex and contains streams of information that needs to be constantly revised, and requires decision-making on hundreds of tactics), the activity provides ample opportunities to practice the competencies of team-work, responsibility, decision-making and leadership.

2. COMPUTER GAMES IN THE CLASSROOM

The use of computer games in the classroom has grown extensively in recent years, mainly due to the massive increase in their use and popularity outside the classroom, and as a result, increasing research is being conducted regarding their impact as learning tools (Kirriemuir and McFarlane, 2003; Prensky, 2005; Rapeepisarn et al., 2006). It can be argued that computer games, like every experience in life, can serve to educate, yet questions arise as to how much can be learnt, in what way, and how effectively (Egenfeldt-Nielsen, 2006).

2.1. ADVANTAGES OF COMPUTER GAMES IN THE CLASSROOM

Their popularity suggests that there may be clear gains from using computer games. Practically all commentators emphasize (or take for granted) the increased freedom and participation available through their use, as well as the control which the student gains over their own learning.

On a more specific level, a key advantage is that games offer a structure of rules, penalties and objectives, meaning that while they can incorporate flexibility and decision-making on the part of the player, they also provide a type of roadmap for both teacher and student (Lee et al., 2004). Games can rapidly identify mistakes and miscalculations, and through a trial and error approach, enable the player to learn quickly while maintaining interest (Garcia, 2005).

A second advantage is the entertainment nature of such programs, hence the common term ‘edutainment’ (Garcia, 2005; Rapeepisarn et al., 2006). For example, one study by the British Education and Technology Agency (BECTA) in 2002 found that while teachers were sometimes frustrated by the level of non-relevant content in the games, they understood that it was useful in attracting the attention of students, being similar to the games they are accustomed to playing outside school hours (BECTA, 2002). Generally, such design has a positive impact on the student, and as a result, can lead to improved motivation and immediate reward (Haugland and Shade, 1994)

Another plus is the link with the professional world. As pointed out by Floeter (2009), game-based learning is becoming increasingly common as a vehicle for company training (due principally to cost and flexibility gains, particularly in large multinational firms), so naturally the incorporation of such technologies into the educational development of future employees should be considered a positive advance.

2.2. DISADVANTAGES OF COMPUTER GAMES IN THE CLASSROOM

However, a number of issues remain to be resolved, and require further attention and research. Firstly, there are issues of a teacher’s competencies- the capacity of each one to choose relevant games, how to effectively link the game to the academic objectives, and the correct evaluation weight to apply to the gaming activity (Williams et al., 2004). As a result, it may be harder to adapt them to the learning objectives due to their structured nature, highlighting the necessity to choose well.

This brings us to the second issue, regarding the quality of games. It appears that the

rigorous quality control processes used by editorial companies for their 'traditional' educational products (principally books) have not always been applied in the development of educational games (Shiratuddin and Landoni, 2002; Williams et al., 2006). The two issues are clearly related, as the reduced emphasis on suitability at the design level often means less guidance and flexibility available to the teacher at the moment of incorporating the game into the course program.

Thirdly, partly due to the explosive growth in software games generally in society, efforts to introduce any material of such a nature may face skepticism from both students and teachers. In many ways it has been assumed that students would always react in a positive way to such a development, yet it appears that a number of conditions need to be taken into account. One of these is time constraints, due to both course and class length, where the time required to learn how to play the game or use the software may be limited, meaning that the student is 'immediately learning', and may not have time to master all the controls (Kirriemuir and McFarlane, 2003). Compounding this is the fact that many students will be aware of a game's potential (it is common for games to unlock extra features as the game progresses) and may wish to continue playing, and not doing so can learn to a loss of learning momentum, and create resistance to future instances where game playing is offered (Kirriemuir and McFarlane, 2003).

A series of other issues require mentioning at this point, and include the different skill levels amongst students of the same group (meaning that some may pick up the games intricacies more quickly than others); levels of compatibility and licensing issues between the academic institution and the game producers as well as the quality of the school's hardware (improving graphics often require quite recent software which the school may not have or be willing/able to purchase); and finally, the need to differentiate between learning how to use the game, and learning from using the game.

Based on the above, it could be said that the gains possibility outweigh the problems that may be faced, but that more work needs to be done. For example, there appear to be a limited number of studies comparing learning outcomes in the same course, where computer games were and were not used with different groups (Egenfeldt-Nielsen, 2006).

Positive Aspects	**Negative Aspects**
Providing a structured framework	Choosing right game, and effective incorporation into course
Entertainment value and motivational appeal	Design issues, and quality control in regards to learning effectiveness
Link to professional level training	Time and space considerations
	Legal and compatibility issues

Table 1: *Issues surrounding the use of computer games in the classroom*

2.3. TYPES OF COMPUTER GAMES IN THE CLASSROOM

The study by the British Education and Technology Agency (BECTA) mentioned above identified a number of different types of computer games and hardware used in classrooms (BECTA, 2002). There was a distinction made between games with an educational emphasis, and what the authors refer to as 'pure' games'. Generally, the pure games were used more as a reward tool for good behavior or outstanding performance (and were more likely to be available in console format), whereas the

educational games were mostly simple simulations, and used in PC format.

3. PEOPLE POWER- THE GAME OF CIVIL RESISTANCE

People power is the second generation of a game developed by a New York based company, York Zimmermann, in association with the International Center on Nonviolent Conflict. The principal objective is to teach players the skills and techniques of a non-violent resistance strategy. Each player (or group of players) is in effect the strategic coordinator behind a popular movement in conflict with an oppressive political regime. Players don't appear in the game but instead control the tactics of the different groups (and their leading members). These tactics are based on the influential teachings of the scholar Gene Sharp, considered by many to be one of the fathers of non-violent civil resistance.

The game contains a number of scenarios, each one representative of a real civil conflict where issues may include religious, ethnic and cultural differences, competition for valuable resources, and asymmetrical political access and control. For example, one scenario appears to reflect a transition to democracy in Cuba, another the struggle for equality in a theological Islamic state, and a third deals with the problems of entrenched corruption in Central Asian former Soviet states. Within each scenario there is a detailed breakdown of the society and its key groups, including the government, police and military institutions, business, religious and media associations, political parties, student groups, and non-governmental organizations. For each of these groups data is provided on their level of support for both the regime and opposition, as well as their viewpoints on key issues, the resources they control, and their influence over other groups. Each of these groups is also represented by their leading members, and there is also a mine of information available on individual skill levels and competencies, their motivational levels, and their social contacts with other groups and individuals.

The broad outlines of the conflict are given, but it requires a substantial amount of research (inside the game) by the player to analyze and interpret the information outlined above. Players need to set specific objectives, prepare a political manifesto, and develop a strategic plan before beginning to take action. Each action (be it a meeting, a social or fund-raising event, or more direct action such as a demonstration or sit-in) requires time, money, people, and certain competencies, and will create some impact, giving instant feedback to the player. Consequences can range from loss of popular support or falling motivation by activists due to a badly planned or executed activity, through to suppression, imprisonment and ultimately death for those involved.

The main objective is to bring individuals and groups into the opposition camp through a carefully coordinated strategy of continuous action, thus weakening government support and resolve, to the point where they are forced to concede the objectives set at the start of the game.

3.1. PLAYING THE GAME

Due to the games complexity and also to avoid the problem of a loss of learning momentum, it was decided to play the game in a day-long (8 hour) workshop format. A computer lab was prepared several weeks beforehand, which meant that each team of 4 students had access to a number of computers, being able to have the game open on several monitors as the same time, playing on one while using the others to constantly revise information (individual and group resources, competencies, political affiliations etc.) as their strategy and tactics evolved.

Based on personal experience playing, plus trails with a small number of students from an earlier course who took the game home, it was estimated that the timeframe would be sufficient to reach the objectives chosen within each scenario. There would also be enough time for those who made serious strategic errors (with the game ending quickly and unsuccessfully), to reactivate the scenario, work with the same or a slightly modified strategic plan, and use a new combination of tactics.
The date of the workshop was published in Moodle early on in the course so that students could resolve any timetabling issues, and one class of 2 hours in the days before the workshop was given over to learning how to use the software. The software comes with a useful tutorial of how one might play a scenario (there is a separate mini-scenario used for the tutorial), as well as a detailed glossary of what each heading means (e. g. each person has a fear level, and the higher the level the less likely they are to engage in public demonstrations of discontent with the regime, even though privately they may support the aims of the opposition).
The morning of the workshop (11am-2pm) was set arise for analysis and strategic planning, and the afternoon (3pm-8pm) for playing.

3.2. EVALUATION PROCESS

Firstly, attendance was obligatory in the 2 hour preparation class as it was felt that anyone who turned up for the workshop without understanding how to play the game would negatively impact the team's performance, due to the game's complexity and high level of decision-making required throughout the activity. It was also felt that this would reinforce the fact that the activity was a team-based one, and hence each player was also partially responsible for the learning process and evaluation grade of the others.
This, plus a general observation of each person's behavior and attitude during the workshop by the teacher made up 15% of the total grade. The remaining 85% of the grade was in the form of a report complied during the activity and handed in at the end of the workshop. The report obliged each group to do a number of things:

- Demonstrate knowledge gained during the course firstly by identifying a real and ongoing conflict with similar characteristics to each of the scenario. (This also meant they had to read the outline of each scenario before they chose which one they wanted to play). Secondly, explain in detail the conflict chosen using different theoretical concepts presented during the course (e.g. instrumental and symbolic theories of ethnic conflict; resource scarcity and resource abundance conflict theories).
- Analyze in depth the social panorama by preparing a detailed SWOT analysis for both the regime and the opposition, and then using this to write the opposition manifesto, as well as a short description of the perceived legitimacy levels of the movement they were coordinating. A related question asked them to justify the positions taken in the manifesto, which meant linkage to the SWOT analysis.
- Identify mistakes they had made and consider what they would do differently next time. In this way they were obliged to consider what they had learned playing the game.

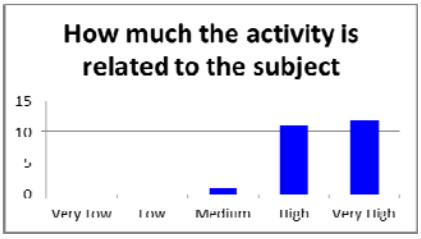
It is important to note that the grade was in no way determined by how far into the game a team got, or how successful they were in reaching the objectives they'd set.
Each member of the team received the same grade for the report, and an individual

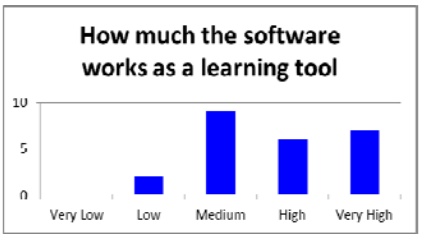
grade for the 15% related to attendance in the training session and general behavior on the day of the workshop.
The activity formed part of the subject Theory and Analysis of International Conflict, and was worth 25% of the total subject evaluation.

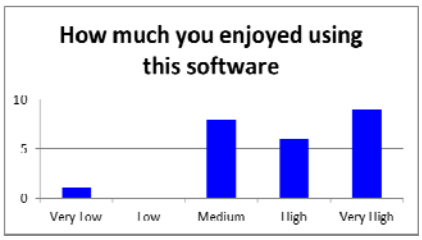
4. OUTOMES AND STUDENT PERCEPTIONS

At the end of the workshop, and after handing in the group report, the 24 participants (6 groups) were asked to complete a short survey of the activity. The survey was divided into three areas, the game itself; skill development; and the workshop organization. The results are as follows:

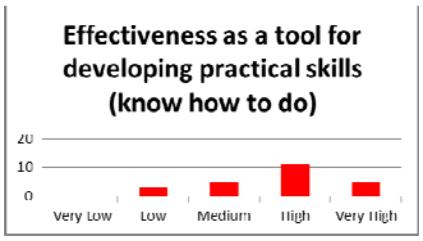
THE GAME

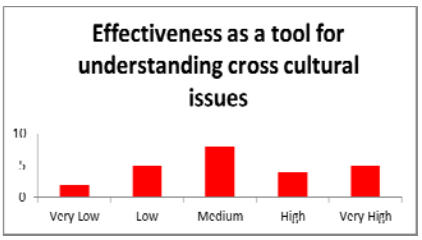


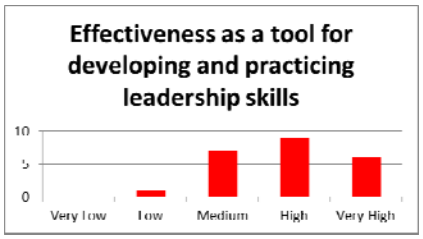


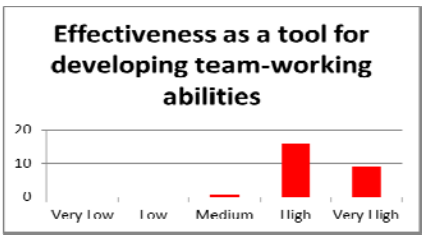


SKILLS AND COMPETENCIES

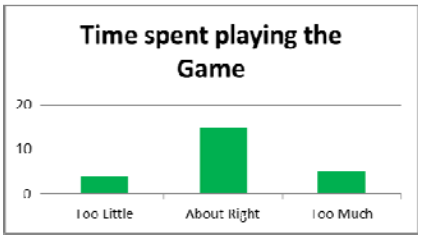


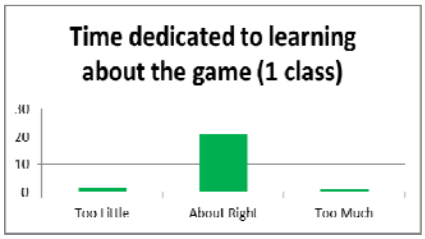


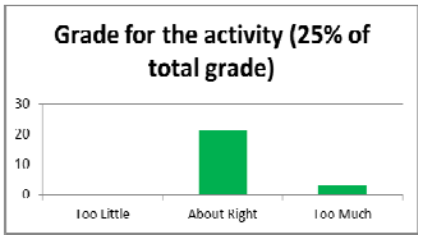




ORGANIZATION







There is clearly a very strong relation between the activity and the course content, as well as a strong feeling that it works well as a learning tool and is enjoyable (over 50% of responses for these two questions were high or very high). In skills and competencies development, the scores for team work are extremely positive (over 90% rated it as high or very high), and the scores for both practical know-how and leadership were good

(with over 60% high or very high for both). The scores for cross-cultural understanding were more modest, perhaps due to the fact that each group, although studying all the scenarios early on in the game, spent 90% of the workshop focused on one specific one.
The organization seemed to be spot on, with both the preparation time and the weight of the activity scoring over 85% in the 'about right' category. Only the length of the workshop was disputed, with about 20% preferring a shorter time frame, and about the same percentage wishing they could have played more.

5. CONCLUSIONS

Returning to the positive and negative issues of video games mentioned in the first section, it could be argued that the People Power workshop took advantage of the positive aspects, without suffering from the negative ones. The game contains a solid structure, requiring players to prepare a political manifesto and a strategic plan, which means studying in depth the conflict parameters before beginning playing. In terms of entertainment and motivation, both the survey results and teacher observation suggest they strongly enjoyed the activity (for example, bathroom visits and breaks were kept to a minimum despite students being allowed freedom of movement due to the length of the activity). The evaluation of the activity was intentionally separated from progress in the game, which meant that the success achieved by some groups (a number of them succeeded in reaching all the objectives) was based on intrinsic motivation, rather than any desire to improve their grade.
Concerning the first of the negative points, increasingly game-makers are producing high-quality games tailored to specific learning objectives. People Power has been used by the International Center on Nonviolent Conflict to train civil society groups in countries such as Tunisia and Egypt, and therefore the issue of the teacher's effectiveness in choosing a relevant game was minimal. As the game was designed by experts in the field, with the specific intention of being used as an educational tool, neither was the design issue a problem (the very high survey results for the first question reflect both these points).
The points regarding spatial and time issues /legal and compatibility problems were not a problem- the game was installed on the flexible cloud laboratory of the university, MyLabs, which meant that all the students had access; and being an educational game created by a non-governmental organization, the university as granted a license for a large number of users. Finally, the positive response in the survey to the length of the workshop, and the fact that a number of groups achieved their objectives, suggest that loss of learning motivation was not an issue.
Broadly speaking, there are 4 learning theories in the field of game playing, namely behaviorism, cognitivist, constructionism and the socio-cultural approach. (For a full explanation see Egenfeldt-Nielsen, 2006). A game such as People Power is located somewhere between the cognitivist and the constructionist approaches. (As mentioned by the author, both approaches have a lot in common). It increasingly appears that these types of games, correctly used, can provide highly effective learning experiences. Rather than reward a certain type of behavior (not necessarily the learning objective aimed for), and focusing on extrinsic motivation, these games draw in the player, and create intrinsic motivation through combining learning and the game experience itself. From a cognitive perspective, such games challenge a player's perceived mind-frame. In the case of international conflict studies, where every social conflict is a unique set of dynamic variables, yet students will often have strong (theoretical) experience of a

reduced number of conflicts (Cold War, War on Terror, Israel-Palestinian conflict), such a learning experience can be enormously useful. From a constructionist approach, the game obliges the player to interact with the material, discuss it, and use it to build knowledge. In the case of People Power, the constant debates and discussions during play revolved around the long tactics list, and the impact of each one, with the game allowing the players to see the outcomes of their discussions, in a very different format to that possible in a theoretical class.

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