Computerized Simulations of the Israeli-Palestinian Conflict, Knowledge Acquisition and Attitude Change: Comparing Global Conflicts and PeaceMaker

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Abstract

This article presents two cross-cultural experimental studies comparing PeaceMaker and Global Conflicts effects on knowledge acquisition on the Israeli-Palestinian conflict and on attitude change regarding key issues in the conflict. PeaceMaker and Global Conflicts are role playing computer games simulating the Israeli-Palestinian conflict. 307 undergraduate students participated in the two studies, including 68 Turkish students, 90 Israeli students of Jewish origin, 79 American students and 70 Palestinian students. The participants were required to fill in questionnaires measuring knowledge on the Israeli-Palestinian situation and attitudes regarding various aspects of the conflict before and after playing the game. Results suggested that participants who played PeaceMaker acquired more knowledge about the conflict after playing the game than those who played Global Conflicts. In addition, participants who played Global Conflicts became more impartial toward the Gaza operation after playing the game than those who played PeaceMaker. Finally, participants who played Global Conflicts became more impartial regarding key issues in the conflict including Jerusalem, settlements, water, borders, security and refugees, compared to those who played PeaceMaker. These results are encouraging to conduct further studies to understand under what conditions can technology be used as an effective cross-cultural intervention in teaching skills required for peace building.

Keywords: PeaceMaker, Global Conflicts, Israeli-Palestinian Conflict, Attitude Change, Conflict Resolution.

Introduction

We examined how effective and useful is technology as a pedagogical tool in teaching about conflicts and peace building. There is very little research on this question, and very few assessments involved cross-cultural experimental studies (e.g., Bhappu, Ebner, Kaufman, & Welsh, 2009; Ebner, 2008; Matz and Ebner, 2010). We conducted two cross-cultural experiments using PeaceMaker (PM) and Global Conflicts (GC) which are role playing computerized simulations of the Israeli-Palestinian conflict. We were specifically interested in the following questions: Will there be differences in knowledge acquisition between GC and PM? Will there be differences in attitude change between GC and PM? Knowledge acquisition about the conflict is an important requirement for attitude change regarding key issues in the situation (Maoz, 2011; Maoz and McCauley, 2005; Suleiman, 2004). Attitude change is considered as one of the most important outcomes in peace building activities as it is often regarded as the pre-requisite of developing empathy toward the "other" (Bar-Tal, 2001; 2004; 2013; Maoz and McCauley, 2005; Suleiman, 2004).

The literature examines the effectiveness of computerized simulations like PM and GC in educating about peace and conflict. For instance, Gonzalez, Saner and Eisenberg (2013) examined the use of PM in the classroom as means of studying the Israeli-Palestinian conflict focusing on game performance in the beginning of the semester and in the end of the semester

after studying a course on the conflict in the Middle East. Recently, Cuhadar and Kampf (2014) explored PM as a tool for teaching conflict resolution in a cross-cultural context with Israeli-Jewish, Palestinian, Turkish and American undergraduate students in order to identify the effects the game might have on enhancing knowledge about the conflict and the parties in conflict as well as generating attitude change and perspective taking. Another study of Kampf and Cuhadar (in press) with Israeli-Jewish, Palestinian, and Guatemalan undergraduate students used the scenarios of the Israeli-Palestinian conflict and of the Guatemalan civil war in the GC game to investigate the effect of different conflict contexts on student learning. Previous studies have already indicated GC's effectiveness as a pedagogical tool in teaching conflict assessment and resolution (e.g., Buch & Egenfeldt-Nielsen, 2007; Raphael, Bachen, & Hernández-Ramos, 2012), but they used self-reports and game score as measures of learning outcomes, while we use direct measures of background knowledge and attitude change. Our present study is important in that it is among the first to provide empirical evidence on the effectiveness of GC compared to PM in motivating learning and teaching skills required for peace building.

There are a few key differences between GC and PM which may impact their learning outcomes. First, PM focuses on the perspective of the Israeli-Prime Minister and the Palestinian President to the Middle Eastern situation, while GC focuses on the hardships experienced by both Israeli soldiers and Palestinian people in the conflict. The latter is a more personal and human perspective on the situation than the former and therefore young people like those participating in our study may find it easier to identify and empathize with resulting in more positive effects on attitude change (Bar-Tal, Halpern, & Pliskin, in press; Schori-Eyal, Halperin & Bar-Tal, in press). In addition, GC may be a more immersive game environment than PM. The immersion effect creates an environment in which the players submerge themselves and progressively increase their attention and concentration in this environment resulting in more positive effects on attitude change (Raphael et al., 2012; Yan & Cordry, 2011). Finally, in PM (unlike GC) the player can draw upon information about relevant events appearing on the screen in text, videos and pictures from real-time news broadcasts and by clicking on maps, cities and polls, enabling her to formulate an informed game behavior (Burak, Keylor, & Sweeney, 2005). Empirical evidence has already indicated that the combination of the two dimensions - interactivity and multimodality – is very effective in influencing people's levels of knowledge about sociopolitical issues (e.g., Bogost, 2007; Gee, 2008).

The PeaceMaker game

In PM a player can assume the role of either the Israeli Prime Minister or the Palestinian President and engage in a series of decisions with the aim of satisfying constituents on both sides of the conflict. PM can be played in English, Hebrew, and Arabic, on calm, tense, or violent conflict levels, differing in the frequency of events that appear on the screen and are beyond the player's control. In order to deal with these events, a player can select actions pertaining to three main categories: security, political and construction, each branching into a variety of sub-categories such as checkpoints and speeches. In order to resolve the conflict in the game, scores for both Israeli and Palestinian sides must reach 100 points each. If either score drops below -50 the player loses the game.

The Global Conflicts game

In the scenario of the Israeli-Palestinian conflict in GC, the player is represented by an avatar of a Western reporter who arrived to Jerusalem representing one of the following newspapers: Israeli, Palestinian, or Western. The player is expected to produce a news report geared to the audience of one of these newspapers based on the interviews she conducts with various Israeli and Palestinian characters at the checkpoint in the Palestinian territories. The player is challenged to keep her work objective while gathering important information to be used in the news report. The student has to form an opinion based upon her own actions and after meeting characters that represent different attitudes to the conflict despite the fact that she writes for a specific newspaper.

Research questions

RQ1. Will there be differences in knowledge acquisition between GC and PM?
RQ2. Will there be differences in attitude change between GC and PM?

Methodology

Participants

167 undergraduate students of Political Science participated in the PM study, including 38 Turkish students from Bilkent University, 50 Israeli students of Jewish origin from Tel Aviv University, 39 American students from the School for Overseas Students at Tel Aviv University and 40 Palestinian students from Bethlehem University.

The four groups did not differ in terms of gender (χ^2 (166, 3) = .40, n.s.). Israeli students of Jewish origin were older (M = 25.12 SD = 1.32) than American students (M = 22.7 SD = 2.39), Turkish students (M = 21.42 SD = 1.59) and Palestinian students (M = 21.1 SD = 1.17), F(3, 166) = 44.57, p = .0001. In general, Israeli students are older than the latter three groups due to service of 3-4 years in the army.

140 undergraduate students of Communication and Political Science participated in the GC study, including 30 Turkish students from Bilkent University, 40 Israeli students of Jewish origin from Tel Aviv University, 40 American students from Whicita State University and 30 Palestinian students from Al-Quds University.

The four groups did not differ in terms of gender (χ^2 (3, 136) = .37, n.s.). Israeli students of Jewish origin were older (M = 25.12 SD = 1.32) than American students (M = 22.04 SD = 4.45), Turkish students (M = 22.02 SD = 1.94) and Palestinian students (M = 21.17 SD = 1.44), F(3, 163) = 44.57, p = .0001.

Design and procedure

The two studies were conducted in 2013. The data on the PM study were collected in winter 2013 and the data on the GC study were collected in spring 2013. No major event happened between the data collection of the two studies that could bias the results.

Both studies were part of classes in political science and conflict resolution, took up to three and a half hours and included four parts. First, participants were introduced with the game and played a short demo. Second, they filled in a short questionnaire. Third, participants played the game. In the PM study, they played the Israeli role and the Palestinian role in random order at the calm conflict level (i.e., low frequency of inciting incidents). In the GC study, they were assigned to represent the Israeli or the Palestinian newspaper. The GC game provides both Israeli and Palestinian perspectives to the conflict no matter which role assumed, while the PM game provides either the Israeli or the Palestinian perspective according to the role played. Therefore, participants played both Israeli and Palestinian roles in PM in random order and either the Israeli or the Palestinian role in GC. Finally, after playing the game the participants filled in again a short questionnaire. The questionnaires used before and after the game were almost identical in content with the exception of a few additional questions in the post-questionnaire deliberating participants' experience with the game.

Measures

As our measure of knowledge about the Israeli-Palestinian conflict, students were asked a battery of 24 open-ended and closed-ended knowledge questions on various political and historical aspects of the Israeli-Palestinian conflict varying in degrees of difficulty, such as: "Name the parties to the 1993 Oslo agreement"; "What is the Green line"; "Who is covered in the Right of Return"; and "What is the meaning of the Nakba Day". We focused on the number of correct answers in the two questionnaires.

We had two measures for assessing attitudes in the conflict. The first one examined 'how right is each side' on key issues in the conflict including water, refugees, borders, settlements, Jerusalem, and security, using the following scale: 1. Palestinians are absolutely right, 2. Palestinians are somewhat right, 3. Both sides are equally right, 4. Israelis are somewhat right, and 5. Israelis are absolutely right. After conducting a factor analysis, the average of answers given on the six key issues was used as a measure of attitude change about key issues in the conflict before and after playing the game.

The second measure examined attitudes toward the Gaza operation by asking 'how right is each side' on the Gaza operation using the abovementioned scale. The studies referred to the Operation Pillar of Cloud in November 2012.

Statistical procedures

To test our research questions, we conducted a three-way ANOVA with game type (GC or PM) and nationality (Israeli, Palestinian, American or Turkish) as between-subjects factors and time (pre- and post-game) as a within-subjects factor. We investigated the effect of playing the GC or PM games on knowledge acquisition and attitude change at two separate time points: pre- and post- game intervention. We only present results concerning the effect of game type on knowledge acquisition and attitude change due to length limitations.

Results

Knowledge acquisition: Global Conflicts vs. PeaceMaker

The interaction between time and game type was significant ($F(1,286) = 20.25$, $p = .0001$, $\eta^2 = .18$). Participants playing PM acquired more knowledge after playing the game (M = 11.89 SD = 6.15 M = 17.94 SD = 5.89) than those playing GC (M = 10.97 SD = 6.22 M = 13.36 SD = 5.39).

Attitudes toward key issues in the Israeli-Palestinian conflict: Global Conflicts vs. PeaceMaker

The interaction between time and game type was significant ($F(1,286) = 32.13$, $p = .0001$, $\eta^2 = .26$). Participants playing GC got closer to thinking that both Israelis and Palestinians were equally right regarding key issues in the conflict after playing the game (M = 2.28 SD = 1.18 M = 3.42 SD = 1.04) compared to those playing PM who did not change their attitudes (M = 2.48 SD = .79 M = 2.65 SD = .81).

Attitudes toward the Gaza Operation: Global Conflicts vs. PeaceMaker

The interaction between time and game type was significant ($F(1,286) = 15.31$, $p = .0001$, $\eta^2 = .14$). Participants playing GC got closer to thinking that both Israelis and Palestinians were equally right regarding the Gaza operation after playing the game (M = 2.21 SD = 1.53 M = 3.48 SD = 1.33) compared to those playing PM who did not change their attitudes (M = 2.52 SD = 1.34 M = 2.79 SD = 1.29).

Conclusions and discussion

This study aims at assessing the impact of using technology in motivating learning skills required for peace building. The results are promising albeit requiring further assessment. First, participants playing PM became more knowledgeable about the conflict compared to those playing GC. In addition, participants playing GC became more impartial toward the Gaza operation compared to those playing PM. Finally, participants playing GC became more impartial toward long lasting historical issues in the conflict compared to those playing PM.

Further research is required to understand how PM and GC achieve their learning effects by singling out different dimensions of the two games to provide a more in-depth and comparative analysis of their impact.

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