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Role immersion in a history course: Online versus face-to-face in *Reacting to the Past*

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ABSTRACT

This article assesses *Reacting to the Past*, a humanities role-immersion pedagogy that is popular at many colleges and universities in the United States. This pedagogy has been found to have many learning gains compared to traditional face-to-face teaching, but has not been adequately compared to online versions of the course. The findings of the article suggest that while learning gains can be achieved that are comparable to face-to-face versions of the course, student satisfaction was lower. The article concludes not by rejecting the online *Reacting to the Past*, however, but by suggesting possible ways to incorporate successful elements of it within a blended approach. These findings will be of interest to people interested in this particular pedagogy, but also to those who are interested in the general comparison between online and face-to-face learning and teaching.

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1. Introduction

This paper evaluates whether a popular humanities face-to-face role-immersion pedagogy can effectively be reproduced online. *Reacting to the Past* is based in Barnard College at Columbia University. The extended, immersive role-playing games they have developed are now featured in hundreds of colleges and universities in the United States. The founder, Mark C. Carnes, has pitched the *Reacting* method in part as an effective defense of face-to-face teaching. But can this successful pedagogy be effectively reproduced online? This article will be the first to test the learning efficacy and student perceptions of *Reacting* in online and face-to-face environments. Carnes' book *Minds on Fire* illustrates how successful the pedagogy is in face-to-face settings, but there is no clear analysis of whether that success is dependent in some way on this mode of delivery.

There are two levels of comparison in the study. First, the article analyses the learning and satisfaction of students in a 2015 *Reacting to the Past* course who played games both in online and face-to-face modes. Second, the article compares student perceptions and learning in a previous iteration of the course (2013) that had two face-to-face immersive game sequences with the 2015 version.

These comparisons are rooted in analyses of assessment results and student evaluations. The paper analyses student learning performance across the two learning environments in the 2015 version, but also when appropriate with assessment elements that were in common with the 2013 version. Analysis focuses on overall academic performance, including failure rates and class mark distribution. It also analyses student perceptions of the experience through student evaluations in 2013 and 2015, and via a student survey designed around the issues discussed in this article, and focus groups for the 2015 cohort.

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The study contributes to the broader issue of applying role play/role immersion to the online environment. The educational literature indicates that this can be carried out successfully online (Blanco-Fernández et al., 2014; Kirkpatrick, McLaughlan, Maier, & Hirsch, 2012; Maier & McLaughlan, 2001; Russell & Shepherd, 2010), but it has not been rigorously compared to a face-to-face version—particularly in the developed, immersive form of role play that *Reacting* delivers.

2. Review of literature

Role play as a learning tool has been in existence for many years. At its heart, role play requires learners to play the role of a character in a scenario and to respond and interact within the defined parameters of that role. Whilst students can expect to learn factual information, role playing is primarily designed to develop new perspectives (Westrup & Planander, 2013) and enhance critical thinking around the issues covered in the role play. In essence, role play is an active strategy to engage students in their learning. Rather than passively assimilating knowledge from a variety of sources, students are actively engaged in learning about and playing their roles, defending their position on issues and actively trying to convince others about issues relevant to their role. A good role-play scenario may involve students emotionally as well as intellectually and this can improve engagement and lead to a greater understanding of the issues related to the role (Huber & Hutchings, 2004; Sweeney, O'Sullivan, & McCarthy, 2015).

The role-immersion pedagogy studied in this article is one end point of a long history of the use of role play in various educational settings. A psychologist, Jacob Moreno, developed the modern version of role play in the early 1900s. Moreno labeled it 'psychodrama' and used actors to play out the roles of key people in significant events in a patient's life. It was used as a tool for analysis and treatment of social problems for individuals and groups. Role play gained in popularity and was extended to uses including leadership training (Lippitt, 1943) and education (Coleman, 1948) to provide a real world context to learning and thus provide an authentic learning environment for students. It has been used in such disparate areas as business training (Corsini, 1957), selecting the best candidates for jobs (Hartsell, 1959) and in training managers of water supplies (Hertzog, Poussin, Tangara, Kouriba, & Jamin, 2014). In higher education, role play has been utilized with success in disciplines such as medicine (Luttenberger, Graessel, Simon, & Donath, 2014; Nikendei et al., 2007), nursing (Chan, 2012; Soares, Gazzinelli, Souza, & Araújo, 2015), environmental science (Belova, Eilks, & Feierabend, 2015; Serman et al., 2015), construction education (Bhattacharjee, 2014), psychology (DeNeve & Heppner, 1997), finance (Brown, 1994), politics (Gorton & Havercraft, 2012; Lightcap, 2009), and languages (Burenkova, Arkhipova, Semenov, & Samarenkina, 2015) as well as in tackling challenging issues including racism and prejudice (McGregor, 1993).

Role play is also well suited to the history discipline. Role-playing scenarios have been used with primary school students (Cruz & Murthy, 2006) and at tertiary level there has been wide use. Beidatsch and Broomhall (2010) state 'Within history curricula, role-play techniques have been lauded specifically, not only for the qualities above but also for their ability to enable students to understand the complexity of human motivations in past events'. It is partially for this reason that role-playing scenarios seem so appealing for history teachers, despite limited evidence about their efficacy. Attempting to address this gap, Beidatsch and Broomhall (2010) assessed the activities and understandings of 51 students in a history course, finding that students in role plays had strong recall of knowledge gained in that environment. They also found that role plays on their own were not likely to provide a sufficient learning environment and that they would provide the best learning when supported by other experiences such as lectures and reflective exercises, such as journals.

Currently in the field of history the *Reacting to the Past* pedagogical movement is shaping the tertiary education field, in part because its embrace of role immersion as a particularly engaging form of role play. The founder of this pedagogy, Mark C. Carnes, provides a broad analysis of the pedagogy in his book, *Minds on Fire* (Carnes, 2014). Carnes argues that *Reacting* succeeds because it works within a subversive play world, in much the same way as university social life and online gaming communities. Thus competition, rather than traditional rationalist pedagogy, is central to the endeavor. By trying to achieve character objectives, students unlock emotional forces that allow for intense work and achievement. Overall, while Carnes does not seek to supplant rationalist pedagogical techniques, his book provides a powerful example of the benefits of moving away from lecturing (and even discussion based courses) and toward role immersion, as a key learning technique.

While Carnes clearly wishes to prod traditional teachers to move toward a more interactive learning approach, he is also aware of the perceived threat of online learning to traditional campuses. In this context Carnes also pitches *Reacting* as a way to revitalize campus learning and teaching. Carnes writes: 'Now as never before, faculty and administrators are determined to make the classroom experience more vital ... They are looking to ensure that students want to come to their (bricks and mortar) institutions'. (Carnes, 2014). This bricks and mortar focus was reaffirmed in 2013 when the *Reacting* Consortium Board voted to maintain their focus on face-to-face instruction and to not embrace online learning in the mission of their organization (which aims to encourage adoption of the Board's peer-reviewed games).

Carnes' book overviews a growing body of literature that indicates the success of *Reacting*. Research by Higbee (2009) has found *Reacting* more engaging for students by a number of measures, including demonstrated higher levels of participation and attendance. He also found improvements in student evaluations compared to normal university courses. Researchers Stroessner, Beckerman, and Whittaker (2009) have made important findings regarding enhanced oral communication skills compared to control groups and also to an enhanced ability to empathise with others as a result of taking a *Reacting* course. The effects of such positive experiences have been found to have an impact on students' institutional careers. Researchers have noted that students who took one *Reacting* course were more likely to be retained by their institution compared to a control group of students who had no such experience (Olwell & Stevens, 2015).

While the *Reacting* literature is entirely based on face-to-face teaching, which it seeks to defend against other forms of face-to-face learning, the broader educational literature has been occupied with understanding the comparison between online and face-to-face teaching for some time. On balance, the educational literature on this topic endorses the efficacy and student satisfaction of online learning as on par with face-to-face instruction (McGinley, Osgood, & Kenney, 2012). In many ways, scholars have found new forms of online education to be more interactive than traditional face-to-face teaching (Chen, Gonyea, & Kuh, 2008). One study reports higher levels of participation in online discussion environments compared to face-to-face discussions, particularly for shy or anxious students (Hamann, Pollock, & Wilson, 2012), whilst another (Heckman & Annabi, 2005) shows that cognitive activity in online discussions can be equal or exceed that in face-to-face activities. Performance has also been appraised to be as good as face-to-face in online education (McCutcheon, Lohan, Traynor, & Martin, 2015). Some even report better performance online (Campbell & Stasser, 2006). While student evaluations have not been as often studied in a comparative context, Dziuban and Moskal (2011) argue that student surveys are not affected by mode of delivery, when comparing online, blended, and face-to-face methods.

While the general direction of the literature seems clear, there have been some concerns raised about online performance and student satisfaction. The issue of retention continues to be an issue for online education, particularly for disadvantaged students. Thus one study analyzing different learning modes (online, blended, face-to-face) at a community college found that online was best for those that finished the course, but that when completion rates were factored in, face-to-face was the best (Ashby, Sadera, & McNary, 2011). For online learning using a discussion board, there have been important findings showing that the ability to persuade is reduced because of the lack of face-to-face visual cues (Lipinski-Harten & Tafarodi, 2013). Another study found that problem solving was not as effective in an online chat environment compared to both face-to-face or video conferencing formats (Graetz, Boyle, Kimble, Thompson, & Garloch, 1998). Thus while online performance and student satisfaction is sometimes found to be strong, it does appear to depend on the technology used.

Role play does lend itself to online implementations (Russell & Shepherd, 2010), and sometimes has been used with sophisticated tools such as Second Life for a more immersive experience (Childress & Braswell, 2006). However, with relatively simple tools such as discussion forums, effective role-playing scenarios can, and have been established in fields such as engineering (Kirkpatrick et al., 2012; Maier & McLaughlan, 2001) and have also been successful in the field of History with the elaborate REENACT approach (Blanco-Fernández et al., 2014) and to some extent in engaging with the First Fleet database in Wollongong, Australia (Wills & Ip, 2002). Yet issues such as the time required and the overall cost have been raised (Russell & Shepherd, 2010) as well as concerns around meaningful student engagement in role plays (Ludewig & Ludewig-Rohwer, 2013). Despite these important efforts, there remains no rigorous analysis of this technique across different learning environments, and it has not been studied at all in the context of *Reacting to the Past*.

Given the high quality of the face-to-face educational experience and learning outcomes reported by Carnes (2014) and Stroessner et al. (2009) the authors were unsure that the highly interactive, embodied, and theatrical learning environment of face-to-face versions of *Reacting to the Past* could be effectively transferred to the online environment. Thus, the hypothesis of this study was that the high quality face-to-face learning outcomes could not be effectively reproduced online in an LMS system.

We therefore anticipated that student learning, as measured by assessment results, might be reduced in the online component of the 2015 course. We also anticipated student evaluations and focus groups would show the online portion of the course in a negative light. Similarly, we believed therefore that a 2013 version of the class that was entirely conducted in the face-to-face mode would have higher student satisfaction and greater learning.

3. Methods

3.1. Participants

The study involves students at an Australian university in two versions of the course *New York City in Revolution: Reacting to the Past*. One was offered in 2013 and the other was offered in 2015. In order to keep class sizes small, the instructor offered multiple versions of the course in each of these years with class sizes ranging from 14 to 30 students. But all students in each year experienced the same course design. The course was open to students in their second and third years.

The 2013 course, which had three different sections, included 51 total students who had a range of characteristics. They included 29 students who identified as female in university records and 22 students who identified as males. The university collected information on residency status, but not race and ethnicity. Thus records revealed forty-eight students who were Australian citizens and three who were temporary residents. The median age of the students was 22 and the average age was 23. The university also collected information on the grade point average of students by term of study. The average grade point average (GPA) for the students, for the spring term in which they took the course, was 5.02 (average) and 5.0 (median). These figures equate with middle marks in the Australian university system, where 4.0 is a pass average and 7.0 is a high distinction average.

Students in the 2015 course had a similar profile. The 2015 course, which had four different sections, totaled 87 students. They included 45 students who identified as female in university records and 42 students who identified as male. There were 85 Australian citizens in the course, one permanent resident, and one temporary resident. The median age of the students was 21 and the average age was 23. The GPA for the students, for the spring term in which they took the course, was 4.75 (average) and 5.0 (median).

3.2. Intervention programs

Both the 2013 and 2015 classes played the same games in the *Reacting to the Past* series. In both years students played *Trial of Anne Hutchinson: Liberty, Law, and Intolerance in Puritan New England* (Carnes & Winship, 2005) and *Patriots, Loyalists and Revolution in New York City, 1775–1776* (Offutt, 2010). Each unfolded in identical stages. As Fig. 1 illustrates, the 2013 class played both classes face-to-face while the 2015 student cohort played the Anne Hutchinson game entirely face-to-face, with minimal LMS support, and then played the New York City in Revolution game entirely online via the LMS, with minimal face-to-face contact.

The face-to-face Trial of Anne Hutchinson game (2013/2015) was organised in stages (Fig. 1). The first two weeks (stage 1) of the role play involved some lecturing and discussion of the historical context and discussion of key primary source documents that all students needed to understand in order to play the game. The third week of the role play (stage 2) involved game set-up. Students in this phase were given individual characters role sheets from the era of Anne Hutchinson and were instructed not to share these with other students. These included biographical materials, but also the goals and objectives that students were to achieve in the game. Students were also given a chance at this point to engage in group work with students who had similar goals.

In week 4 the role play entered the 'game phase' (stage 3). There were 3 face-to-face contact hours per week. Student leaders ran proceedings and all students engaged in debate and negotiation as they attempted to realize their individual goals. The Anne Hutchinson game involves a religious controversy, and so students debated whether new arrivals to the colony had been saved and whether they should admit them to Boston Church (some students play immigrants testifying to their religious experiences). At the same time, the colonists debated whether or not the convicted heretic Anne Hutchinson should be retried (students are for/against/and unsure). Overall, students were motivated to win the game (reaching all their objectives) and many sessions crackled with the excitement of live theatre as students fully immersed themselves in the spectacle.

The organic nature of the pedagogy means that the game phase can end at various points, but all section groups in both the 2013 and the 2015 ended stage 3 at some point during week 6. Each class then engaged in a class reflection or 'post-mortem' period (stage 4) in which students talked about what they had learnt.

Both the 2013 and 2015 courses then played the game *Patriots, Loyalists, and Revolution in New York City, 1775–1776* (Offutt, 2011) in weeks 7–12 of the course. The first two stages of this game were taught with the same teaching arrangements as they had experienced with the Anne Hutchinson game. In stage 2 roles were distributed to students and they were given their only chance to meet face-to-face and arrange communication strategies. The 2015 version of this game put stage 3 of the sequence

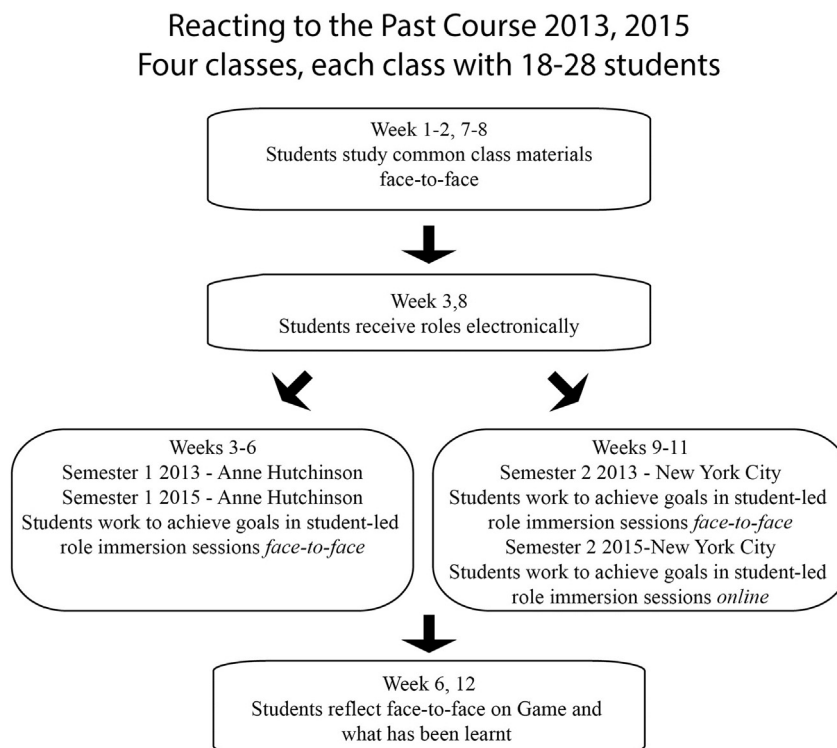


Fig. 1. Layout of reacting to the past 2013 and 2015.

online. All game-phase class sessions took place in structured learning environments created within the local Learning Management System (LMS). Instead of live debate, and informal face-to-face negotiation in pursuit of game objectives, students were now encouraged to communicate through asynchronous discussion board threads that were open for several discreet 24 hour periods during the week. These discussion board forums corresponded to key issues that had to be decided in the game and followed the general timing of the face-to-face class sessions from game 1. Instead of live speeches, students were instructed as to how to post videos and engage in online debate. They were also given instructions on how to conduct a 'vote' on the discussion boards in ways that mirrored face-to-face decision-making processes.

While the content of the two games was obviously different, it is important to emphasise that in many ways the games are comparable in terms of game mechanics and in their overall ability to generate engagement. Each involved debate, voting, and behind the scenes deal making, the results of which determine student success at achieving their goals.

Student learning was measured through assessment, and four different assessments were executed for each game in the 2015 course. Students were given an online factual quiz to test content knowledge in stage 1. They were then evaluated on the basis of a short paper that announced the views and arguments of their character in stage 3. They also were evaluated in two different ways for their participation during this stage. 'In-class' participation was rigorously evaluated using detailed rubrics that included quantity and quality of responses. The rubric rewarded moments of 'significant contribution', while also noting special high quality 'game changer' comments as well. Leadership characters, which had a more opportunities to participate, had higher participation thresholds to reach than ordinary characters in order to achieve a comparable score/mark. Students were only given leadership roles in one of the two games in order to distribute the workload evenly. This evaluation technique was applied in the same way for the face-to-face and online delivery modes. A second assessment task for each game, using the same rubric, evaluated 'behind the scenes' participation. Participation journals, which allowed students to record substantial conversations outside sanctioned game venues (classroom or online discussion board), were also submitted by students and evaluated. There was also a final assessment assignment at the end of the entire course where students reflected on the learning in one of the two games in the course.

The 2013 cohort experienced both games entirely face-to-face, and including it in the analysis allowed for further comparison on how altering the mode of delivery affected student satisfaction and student learning. Both the 2013 and 2015 courses each had a paper and quiz assigned for each game, and a final reflection at course end. Oral participation was not evaluated in 2013 and could not be directly compared.

3.3. Instruments

Student perspectives on the experience were gathered in a number of ways. First, the Student Experience of Learning and Teaching (SELT) questionnaire was compared for the 2015 and 2013 versions of the course. This is an institutional survey carried out for every course offered. Second, students were engaged via an end of course survey that specifically asked them to compare their experiences. Finally, two focus groups were organised to allow for further reflection about the learning experience. The questions asked were tested for face validity by a group of 3 academics not associated with the course. The surveys and focus groups were intended to measure student satisfaction. Learning outcomes were evaluated by comparing assessment performances in the two different modes.

3.4. Procedures

In this study the dependent variables were student satisfaction and student learning and the independent variable was the learning environment (online versus face-to-face). These variables were evaluated in two different scenarios. In the 2015 course the learning environment was altered from the first scenario to the second, allowing direct comparisons within the same cohort. We also compared two separate course formats, specifically the 2013 and 2015 groups, where the 2013 cohort only had a face-to-face experience.

Comparisons were made using Students' paired T-test where a p value of less than 0.05 was considered significant or an independent samples T-test when comparing results from two separate cohorts. Comparison of results from 2013 to 2015 used an ANCOVA analysis. The survey was administered to a convenience sample of students who self-selected through the course discussion forum, data was analysed through factor analysis. A measure of reliability was determined through Cronbach Alpha.

3.5. Data analysis

According to the data, the independent variable of course format had little effect on the dependent variable of student learning. Table 1 reveals academic scores for the major pieces of assessment for the course in 2013 and 2015.

For the paper assessment, the 2015 cohort showed a difference of three marks from the first paper (completed for the face-to-face role play) to the second (completed for the online role play). Student participation did not differ significantly with the online intervention. The switch from face-to-face oral participation to online participation (via an online discussion board) did not have a significant effect on marks. Similarly, the 'behind the scenes' journal, that allowed students to record participation outside of sanctioned venues, was not affected by the change in format. When analyzing the 2015 cohort, significant moderate correlations existed between face-to-face and online versions of the paper and journal (R ranging

Table 1
Comparison of outcomes from 2013 and 2015 courses.

| Outcome | Grade \pm standard error of mean | Comments |
|---|------------------------------------|--|
| Face-to-face oral participation 2013 (n = 51) | 72 \pm 2 | The oral participation marks were calculated differently in 2013 with a more impressionist approach so no direct comparison is made |
| Face-to-face oral participation 2013 (n = 50) | 76 \pm 2 | |
| Face-to-face oral participation 2015 (n = 84) | 65 \pm 1 | |
| Online discussion board 2015 (n = 83) | 68 \pm 2 | No significant difference between online and oral presentation 2015 |
| Paper 1 face-to-face 2013 (n = 51) | 72 \pm 2 | No significant difference in paper results between scenarios in 2013 |
| Paper 2 face-to-face 2013 (n = 50) | 71 \pm 2 | |
| Paper 1 face-to-face 2015 (n = 81) | 73 \pm 1 | |
| Paper 2 online 2015 (n = 76) | 70 \pm 1 | Significant difference between online and face-to-face version of paper (p = 0.016) |
| Quiz 1 face-to-face 2013 (n = 77) | 79 \pm 2 | Significant difference in quiz results between scenarios in 2013 |
| Quiz 2 face-to-face 2013 (n = 77) | 67 \pm 3 | |
| Quiz 1 face-to-face 2015 (n = 81) | 85 \pm 1 | |
| Quiz 2 online 2015 (n = 77) | 71 \pm 2 | Significant difference between online and face-to-face version of quiz (p < 0.001). Similar size drop to that in 2013 where no online quizzes occurred |
| Face-to-face-journal 2015 (n = 78) | 68 \pm 1 | No journal assessment in 2013 |
| Online journal 2015 (n = 76) | 67 \pm 1 | No significant difference between online and face-to-face journal 2015 |
| Exam 2013 (n = 49) | 69 \pm 2 | No significant differences between exam results 2013 to 2015 |
| Exam 2015 (n = 75) | 71 \pm 1 | |

between 0.4 and 0.69, $p < 0.001$). A significant difference was detected, however, in the difference between quiz 1 and quiz 2, with student scores dropping from 85 to 71.

Comparison with the 2013 class provides further evidence for the online intervention's lack of effect on learning outcomes. The same two-paper sequence in 2013 (both written in support of a face-to-face classroom) showed no significant difference in marks. In both years the quiz for the second role-play scenario had lower outcomes for students (a drop of approximately 15% from the first quiz result). Further, the exam results from 2013 and 2015 also showed no significant difference. Overall, learning outcomes were similar in 2013 and 2015. When adjusted for performance on the first scenario using ANCOVA, the differences in scenario one to scenario two grades from 2013 to 2015 for quiz, paper, and exam were found to be non-significant.

The biggest effect was on failures rates. The 2013 class showed a loss of one student over the course. The 2015 cohort, however, lost eight students, approximately ten percent of the group.

The change in course format did, however, have an impact on student satisfaction, as hypothesised. Student experience survey results between years 2013 and 2015 are shown in Table 2. Students were less satisfied with the 2015 version of the

Table 2
Student experience survey comparison from 2013 to 2015.

| Question: Staring with 'This course ...' | 2013 | 2015 |
|--|------|------|
| Has clearly identified learning outcomes. | 6.4 | 6.0 |
| Is well organised. | 6.3 | 5.5 |
| Has a workload that is appropriate for the achievement of its learning outcomes. | 6.4 | 5.8 |
| Uses appropriate strategies to engage me in my learning. | 6.8 | 6.3 |
| Uses appropriate online resources and technologies to help me achieve its learning outcomes. | 6.1 | 5.8 |
| Uses methods of assessment that help me achieve its learning outcomes. | 6.4 | 6.3 |
| Helps me to develop my thinking skills (e.g. problem solving, critical analysis). | 6.8 | 6.5 |
| Has a learning environment that takes into account student diversity. | 6.6 | 6.4 |
| Overall, I am satisfied with the quality of this effective feedback. | 6.2 | 6.0 |
| Overall, I am satisfied with the quality of this course. | 6.8 | 6.1 |

course. Scores are out of 7 for each category with 6 being considered to be excellent from an institutional perspective. So the course still performed very well, but was less well regarded in most areas.

In order to further understand student perceptions of the different formats, students completed an additional survey in 2015. Table 3 probes their perceptions of the different delivery modes in the two halves of the course. The students found the course worthwhile but clearly favored the face-to-face experience over the online intervention in terms of enjoyment and perceived learning. Online role immersion was regarded as taking more time than the face-to-face version with technical issues being identified as a concern. Interestingly, students considered online group work to be easier than face-to-face group work, the only category where the online medium was preferred.

Questions 3,5–11 contributed to a factor explaining 34% of the total variance of the responses with a reliability of 0.8. The authors identified that this factor measured the acceptance of online methods in the course (questions 8,9 and 11 had their responses transformed to compensate for the opposed meaning of the questions). When responses to these questions were summed there was an overall class average approval of the online methods = 30 with a standard deviation of 5.6 out of a possible 40.

Fig. 2 reveals student responses to the survey question 'online role-playing scenarios were important for my learning'. This was the only question in the survey to show a bimodal distribution with an equivalent number of students favoring and not favoring the idea.

There were two open-ended questions in the survey that focused on comparing group work in the two formats. A key finding was that when considering the course as a whole, students thought the group work was effective. A large percentage (28%) of participants indicated that the presence of group work aided their learning by providing additional understanding and helpful feedback and was overall beneficial to their learning. Ten percent of participants believed that group work was a reason that the topic was enjoyable, and 22% felt that the group work component improved their social skills. A small group of participants (9%) felt that group work was restrictive or detrimental to their learning. When asked to compare the two formats, most student perceptions favored the face-to-face format. Students found the online component time consuming (16%), stressful (10%), beneficial (10%) and a large percentage (25%) identified the online component as difficult or disengaging. Thirteen percent suggested that face-to-face was better overall with 7% suggesting that a mix of online and face-to-face would be useful.

Focus groups provided evidence to support the survey responses (Table 4). As in the survey, there was general appreciation for the learning in the class. Thematic analysis showed that key themes were that role immersion was interesting and engaging, and that it encouraged group bonding and the development of transferable skills such as self-confidence, teamwork, and active thinking.

The focus groups indicated that the traditional face-to-face mode was more popular. The strong prevalence of the theme 'more benefit from face-to-face' represents the general student view. According to the focus groups, the face-to-face version of the role-playing game was more enjoyable, beneficial, and engaging for participants. Students felt the face-to-face game allowed students to engage more with content and other students' characters.

Some students valued some elements of the online intervention. These students enjoyed the creative aspects of the online play and they felt that the online role immersion was accessible. The parts of the online game that participants enjoyed were the ability to look at content in their own time, and at their own pace. They also enjoyed the creation of video content, as it allowed for more freedom in their presentations, as well as providing every student with the opportunity to contribute. One student stated:

You could spend a moment and say it exactly like you wanted to and get your point [across] and no one was interrupting you.

There were also fewer students who found the online rules and expectations unclear compared to the face-to-face experience. The fact that the online game followed the face-to-face game, however, may have facilitated this understanding.

Many students had negative comments about the online intervention. Some thought the online version of the game allowed students to 'slack off' and not follow-up with decisions or pursue research. It was also demanding of students to keep up with

Table 3
End of course survey results 2015.

| Question | Result (Median plus interquartile range) 1 = Strongly Agree, 5 = Strongly Disagree |
|---|---|
| 1. Overall, I found the course worthwhile | 2 [1–2] |
| 2. The face-to-face role-playing scenarios were important for my learning | 1 [1–2] |
| 3. The online role-playing scenarios were important for my learning | 3 [2–4] |
| 4. Working within a group was useful for my learning | 1 [1–2] |
| 5. Online role playing was a better learning experience for me than face-to-face role playing | 4 [4–5] |
| 6. Online role playing was a more enjoyable experience for me than face-to-face role playing | 4 [4–5] |
| 7. Face-to-face group work was difficult for me | 4 [3.25–5] |
| 8. Online group work was difficult for me | 3 [2–4] |
| 9. Online role playing took more time than face-to-face role playing | 1 [1–2] |
| 10. I prefer doing presentations online than face to face | 4 [3–5] |
| 11. Technical issues made the online role playing difficult | 2 [2–3] |

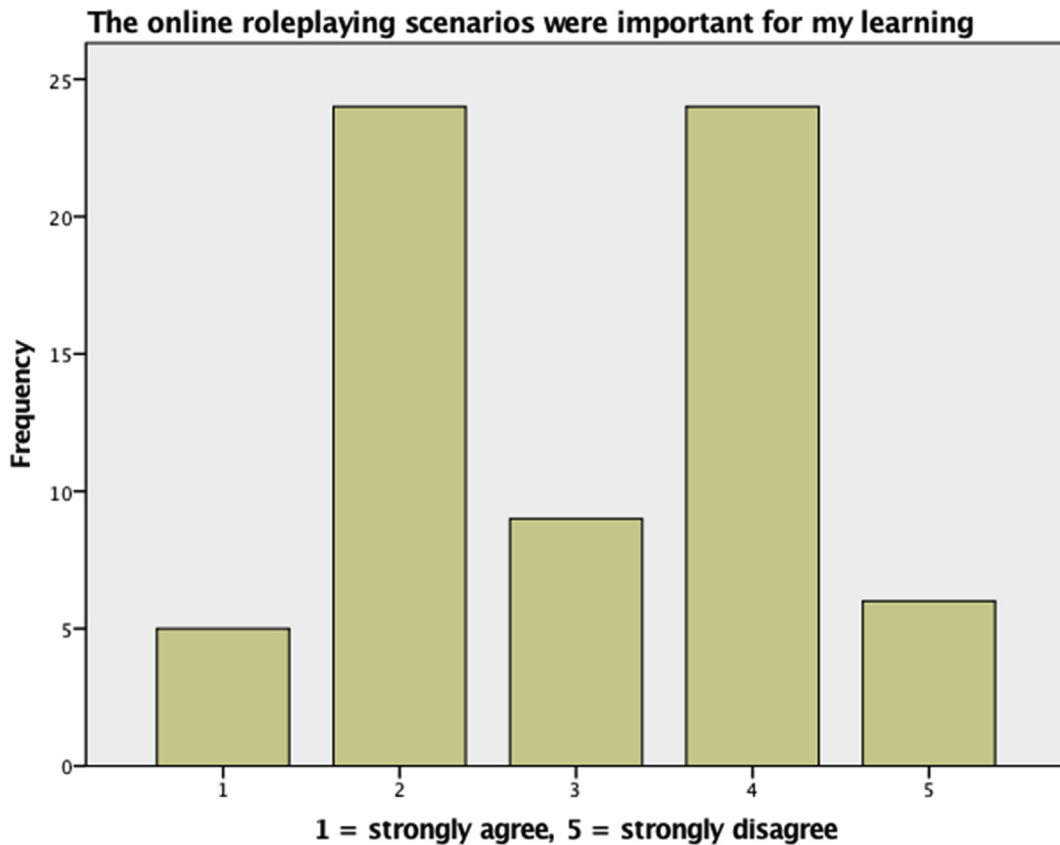


Fig. 2. Results of question: The online role-playing scenarios were important for my learning.

Table 4

Key themes from focus groups.

| Theme | Prevalence of theme as measured by number of times it was addressed in the focus group |
|---|--|
| More benefit from face-to-face (online more stressful, less pressure to engage online, harder to communicate online)) | 35 |
| Course was interesting and engaging | 17 |
| Rules and expectations unclear (online specifically) | 16 (4) |
| Taught transferrable skills (self-confidence, teamwork, critical thinking skills) | 14 |
| Online was accessible | 14 |
| Technology and communication caused problems online | 13 |
| Beginning lectures were engaging and interesting | 13 |
| Chaotic (Aggressive) | 12 (3) |
| Bonding through group cohesion | 12 |
| Creative elements of the online play were fun and helpful | 10 |
| Combine face-to-face with online | 10 |
| Presentations and sharing ideas aided learning | 7 |

intense periods of discussion postings. Others reported technology problems that diminished the experience (for example, difficulties accessing and posting). The reliance on the Internet was problematic for students who required Internet access on campus, or were away from their homes for extended periods of time. The large time commitment of the online game was also problematic for students as it didn't provide them with a chance to rest from the game. Some thought it stressful.

Students noted some special difficulties with adapting the complexity of *Reacting to the Past* game experiences to the online environment. Students noted that there were some unfair elements that they believed were specifically related to asynchronous decision making in the online LMS. One student recalled a situation where she used a game tactic to challenge another character and demand an outcome via a 'mob' of students. She recalled that while in the face-to-face *Reacting* class, that has a set hour or two meeting time, 'you can't do it (gather a mob) sneakily'. But the online environment offered opportunities to take advantage of the fact that everyone was not online at the same time. She recalled:

Like I remember I forgot to mob, so I did it on 4 o'clock on Friday, so it was an hour before the deadline [of the end of the asynchronous role immersion session]. So I messaged everyone on our side, [encouraging them to] join the mob, so [the other team] didn't really have much time [to defend the challenged student]. I didn't do it on purpose, but I realized that's a really good tactic.

She reflected later, however, that the face-to-face version would be 'more fair', because decision-making was constructed around time periods in which everyone was required to attend. Such comments indicate some special problems adapting *Reacting to the Past* to online asynchronous discussions.

To blend the online and the face-to-face sections of the topic together participants suggested that having discussions, preparation and video presentations online could be effective as long as there was face-to-face time to let the group make decisions.

4. Discussion

Overall, this study method has several strengths. It uses the same cohort of students in order to compare learning outcomes and student preferences for online and face-to-face delivery modes using the same *Reacting to the Past* role-immersion pedagogical approach. It also then compares their satisfaction and learning with an earlier cohort of students who experienced an entirely face-to-face class. The Learning Management System that provided the online environment is typical of many utilized in online learning, though its technical results are perhaps not as good as what can be achieved via group videoconferencing techniques.

There has been research that suggests learning outcomes from online and face-to-face teaching are comparable (Fishman et al., 2013; Kirtman, 2009; Warren & Holloman, 2005). The results here indicate that while median learning outcomes were roughly similar, the online assessments had larger standard deviations, as well as higher 'non participation' rates and failure rates. This reflects a much broader diversity in student learning achievement. Some students did very well within the online learning environment, indeed better than the face-to-face version, and others did far worse. The online version elevated certain learners to the fore, while leaving others behind.

Many students suggested that they performed better in the face-to-face environment. Nonetheless, evidence has shown that students get experienced and encounter fewer issues the more they use communication tools whether they be face-to-face or aided by technology (van der Kleij, Schraagen, Werkhoven, & De Dreu, 2009). It is quite feasible that the students in the online group became overwhelmed with the newness of the communication tools with some adapting faster than others. If given more time, or a consistent method of completing role-immersion games over the semester, students may have reacted more positively.

The reported tables all reveal roughly equivalent scores across the different types of assessment in the two learning environments. The exception to this was the online quizzes, in which the face-to-face version did significantly better. This finding, however, cannot be attributed to the online environment, however, as both quizzes were done online and both quizzes were prepared for face-to-face. But the papers, participation journals, and 'in-class/online LMS' discussions, all had scores that were roughly equivalent. When student satisfaction was considered, however, the face-to-face version was clearly superior. Thus when the two versions are directly compared, considering learning outcomes and student views, the result supports the usage of the traditional face-to-face *Reacting to the Past* format.

5. Conclusion

The conclusion of this study, however, is more subtle than the general finding of face-to-face success would suggest. Some students performed better in the online role immersion, and a significant number reported special strengths in this mode. There are also cost implications involved in the sort of small group face-to-face learning that is the subject of this study, which was at least in part the catalyst for the research. The question thus becomes how to harness the successes of the online version for integration into a blended format. It is possible that a blended format could utilize the successes of the online version (for some students) and allow for more forums of interaction, without compromising the overall enjoyment of the theatrical, embodied experience that face-to-face role immersion delivers. This could also potentially allow for modestly larger class sizes, which could enhance the ability of underfunded public institutions to embrace the new form of learning. The authors will take a blended approach in the next iteration of the course, where preparation for the scenarios is done online, and some video presentations and discussions occur online, but where decision-making is left to the face-to-face experience, where opportunities for sophisticated negotiation might lead to better student satisfaction. This should take the maximum advantage of the online environment and in many ways resembles a flipped approach to teaching the course. *Reacting to the Past* succeeds in its reinvigoration of face-to-face humanities learning, but there may be ways to augment the experience, and make it more cost effective, with online support.

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