ROLE-PLAYING, SELF-EFFICACY AND THE AT-RISK READING STUDENT

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Abstract

Academically at-risk students face difficult and unique challenges in higher education. In this study, we argue that *Reacting to the Past* pedagogy, a role-playing game, provides students the opportunity to learn effectively. The study focuses on a pilot program recently adopted by Middle Tennessee State University's Reading History Initiative, a corequisite program that links reading enhancement courses with required history surveys. The results of the study suggest that role-playing and specifically the Reacting to the Past pedagogy increases academic self-efficacy among at-risk reading students. This increase in self-efficacy leads to a deeper appreciation of learning and higher levels of achievement. This study bridges an important connection between Reacting to the Past pedagogy and at-risk students. Ultimately, this study enhances our understanding of the opportunities that emerging instructional practices, such as Reacting to the Past, can have among academically at-risk communities.

Keywords: self-efficacy, Reacting to the Past (RTTP, Reacting), academically at-risk, learning communities, student success, best practices, high impact practices, role-play

Statement of the Problem

Self-efficacy is an individual's belief in the ability to accomplish tasks, and academic self-efficacy implies that the tasks must relate to academic goals (Vuong, Brown-Welty, & Tracz, 2010). A student's self-efficacy contributes to academic development by determining his or her aspirations, level of motivation, and even academic accomplishments (Bandura, 1993). There is a positive relationship between self-efficacy and learning because the more a student believes he or she can accomplish a task, the higher the performance (Barry & Finney, 2009). Self-efficacy is a critical skill to develop for students who come to college underprepared (Hsieh, Sullivan, & Guerra, 2007). This study examines a cohort of at-risk reading students at Middle Tennessee State University (MTSU), a large regional public university with approximately 22,000 students. "At risk" in this study is students who score below a 19 on the Reading portion of the ACT. This project began as an honor's thesis in Fall 2017 (Miller, 2018). Our goal was to determine whether a role-playing game would build self-efficacy in our student population. Reacting to the Past (RTTP or Reacting), a sophisticated role-playing game, was chosen to test the hypothesis that this active learning would engage students and build their ability to accomplish academic goals. Reacting has been studied in traditional classroom settings but, to date, no studies have shown its impact in the at-risk cohort. Although this was a small pilot, we argue that role-playing and specifically RTTP can have a place in the developmental courses particularly because it builds academic self-efficacy. In the following sections we will give an overview of the relevant literature, describe the academically at-risk population at MTSU, and show how these students' needs have been addressed. Then we will describe the methods of the project and how it was adapted for the at-risk students using the Indiana University (IU) South Bend study measuring self-efficacy. Finally, we will discuss the findings and their significance for this population and potentially for other developmental programs in higher education.

The Relationship between Developmental Reading and Self-Efficacy

Higher education values reading comprehension (Tinto, 1993). By the time a student reaches university, he or she is expected to read a variety of texts and derive deep

meanings uniquely from those texts. While some students gain this reading proficiency, others struggle to attain the goal. This lack of reading skills in university age students is becoming more pervasive. The National Endowment for the Arts (2007) reports three alarming shifts: first, Americans are spending less time reading; second, reading comprehension skills are eroding; and third, these declines have serious civic, social, cultural, and economic implications.

Compounding low reading skills is the rise in the number of students who enroll in some form of higher education. Between the year 2004 and 2014, college enrollment nationally increased by 17% (US Department of Education, 2017). In the fall of 2016, 69.7% of high school graduates enrolled in college (U.S. Department of Labor, 2017) and many of these students were ill-equipped for college coursework. In their annual report on the "Condition of College and Career Readiness," ACT analysts reported only 44% of the class of 2016 satisfactorily reached the benchmark in reading (ACT, 2016). They are not alone in their findings; the National Assessment of Educational Progress reported that only 37% of students meet or exceed reading proficiency (US Department of Education, 2016). These reports indicate that universities are increasingly enrolling students under-prepared for the academic and professional road ahead.

Students in developmental reading courses have also been found to have lower self-efficacy attributes than peers in traditional college courses (Cantrell et al., 2013). This can have a significant impact on retention. Curriculum in developmental courses has the potential to increase self-efficacy (MacArthur, Philippakos, & Ianetta, 2015). Intentionally choosing curriculum and pedagogical methods that have the potential to increase student self-efficacy is important in developmental education because of the potential positive effects for increasing student success and retention. In a recent study, Han, Farruggia, and Moss (2017) investigated the relationships between non-cognitive, or mindset, factors among freshmen and student success. Mindset was found to predict academic achievement and retention, and self-efficacy was the specific mindset most-closely associated with academic success.

MTSU and the Reading History Initiative

Higher education administrators and faculty are addressing the needs of the under-prepared student and schools have instituted programs designed to assist these students in developing the necessary skills for a successful academic career. These programs vary in scope and complexity. Currently, a university seeking to implement a program for the academically at-risk often chooses from two popular approaches (Hodges & Agee 2009). The first is the designation of prescribed courses designed to meet needs demonstrated by assessment and the second consists of learning assistant services offered to the entire student population. MTSU uses a blended approach with linked classes. MTSU has a strong commitment to student success and has been proactive in identifying populations that need additional support to be successful. One of the programs to come out of that commitment is the Reading History Initiative.

The Reading History Initiative began in fall 2015 when MTSU directly linked (as corequisites) READ 1000 Reading Skills Enrichment, a three-hour prescribed reading course with sections of HIST 2020 Survey of United States History II, a general education requirement. The university chose HIST 2020 because it is a "gatekeeper" course; success in this course correlates highly with student retention. History 2020 is also one of the most challenging required general education courses, particularly for students who read below the college level. In this pairing, the READ 1000 course uses the history readings as classroom texts, employing a variety of strategies to aid student comprehension. The reading instructor and the history instructor also work closely to maximize the effectiveness of the pairing.

In 2017, the Reading History Initiative piloted a new course pairing, thanks in part to a Tennessee Board of Regents Student Engagement, Retention, and Success Grant. While preparing for the grant application, the investigators (Marva Lucas, Dawn McCormack, Rebecca McIntyre, and Timothy Nelson) discovered that an alarming number of at-risk students were not graduating because they failed to complete or even enroll in HIST 2010 Survey of the United States History I, a required course. At MTSU, as at other public universities and colleges in Tennessee, students are required to take two history surveys. At-risk reading students had taken the first required history but were delaying or not

taking the second required history. Only 35% of the students who took developmental reading in Fall 2010 had taken the second required history within six years. The six-year graduation rate for those students was also 35%. The funded project gave at-risk reading students the incentive to take that crucial second history course by providing any student who succeeded in the READ 1000/HIST 2020 sequence the opportunity to take the second required history survey HIST 2010 with a one hour paired reading lab. With this lab as extra support, we believe that more at-risk students will complete this general education requirement, allowing them to persist toward graduation. The pilot for the grant was 5 reading labs paired with 5 history 2010 surveys. All the instructors, both history and reading, decided to emphasize active learning and employ at least one High Impact Practice (HIP). For two of these paired sections, Reacting to the Past was chosen as one of the HIPs experiences.

Reacting to the Past

Reacting to the Past is a program initially created by Mark Carnes at Barnard College (Carnes, 2014). The Reacting program includes a host of simulations that allow students to role-play diverse historical events. One of the primary goals of Reacting is to introduce students to the complex decisions of the past (Proctor, 2011). Typically, these historical moments involve one to three key decisions. The game demands that students play a character who can influence those decisions, not just re-enact an event from the past with a derivative script. Students are given a role sheet that delineates their particular agenda and their faction. They must promote their agenda by using primary source materials as the basis for crafting arguments, making speeches, brokering deals, negotiating between factions, writing persuasive letters, and creating publications. In order to win, students must conduct intensive research, collaborate with peers, and sharpen key rhetoric skills through class debates. The simulations may be designed to last anywhere from one day to multiple weeks. Each game is highly adaptable to suit the objectives set by the instructor. The games are widely researched and vetted by leading professors in fields such as history, anthropology, philosophy, and political science (Carnes, 2014). Instructors have a wide variety of developed gamebooks from which to choose through the Reacting to the Past library (https://reacting.barnard.edu/the-curriculum). From Athens, Greece and the

debate over democracy to India's push for independence, many of the games are set in some of the most highly contested times of history. This game-based pedagogy uses students' desires to win as a motivator for engaging in the complexities of the past (Carnes, 2014).

The game is active learning at its best because it requires cognitive processing (Hagood, Watson, & Williams, 2018). The games emphasize teamwork and collaboration by using factions, deal-making, and discussion. This collaboration adds a social requirement or overt expectation (Hagood et al., 2018). Participation is more than simply taking notes or being in the class. Students are held accountable to their peers for knowing the material and participating in a manner worthy of their designated characters. Students also report feeling empowered to learn through the structure of the game. In order to win, they must defend an argument; a well-constructed argument consists of supportive evidence found in the primary documents. Therefore, Reacting emphasizes active learning by encouraging students to collaborate and internalize the material.

The Reacting pedagogy aligns with many of the characteristics of High Impact Practices. HIPs are defined as "...teaching and learning practices (that) have been widely tested and have been shown to be beneficial for college students from many backgrounds" (Kuh, 2008). The findings of high-impact research have led the Association of American Colleges and Universities (AAC&U) to adopt these practices into their movement for national Liberal Education (Hagood et al., 2018). George Kuh, a leading scholar on HIPs, believes that in order to enhance student engagement and increase student success we must, "...make it possible for every student to participate in at least two high-impact activities during his or her undergraduate program" (Kuh, 2008).

Table 1. AAC&U's ten high-impact practices

High impact practices	
First year seminars and experiences	Diversity/Global Learning
Common intellectual Experiences	ePortfolios
Learning Communities	Service Learning, Community-Based learning
Writing-Intensive Courses	Internships
Collaborative Assignments and Projects	Capstone courses and projects
Undergraduate Research	

Note: High-Impact Educational Practices (2013). Retrieved from: www.aacu.org

Reacting fits into four high-impact areas: a common intellectual experience, collaborative assignment and projects, undergraduate research, and intensive bursts of writing. Reacting also includes involvement in social learning with a high time commitment (taking weeks or months to complete). These aspects allow the student to craft individual learning and ongoing critical thinking and decision-making, both of which characterize HIPs (Hagood et al., 2018).

Reacting is also a good fit for many students including those from low socioeconomic backgrounds. In a study of Reacting at MTSU, Dawn McCormack and Karen Petersen (2018) concluded that "RTTP can engage students from diverse backgrounds without the often-prohibitive costs associated with other types of HIPs, such as study abroad and internship programs." Traditionally underrepresented students can still benefit from HIPs even if they can only participate in college and take courses that utilize Reacting curricula.

The Reacting pedagogy has many positive benefits. McCormack and Petersen's study suggests that RTTP is an effective pedagogical tool for student engagement, and that the experience helps students gain important skills (McCormack & Petersen, 2018). All of this, they argue, should aid in retention and appreciation for liberal arts education. Bernstein, Strasma, Olwell, and Higbee (2018) conducted a follow-up study of students that had participated in Reacting courses to understand the longitudinal effects of the pedagogy. They found that students' experienced increased empathy, saw multiple perspectives, and understood similarities among their academic pursuits. Another notable study that examined Reacting conducted by Hagood, Norman, Park, and Williams (2018) sought to

examine the pedagogy from both sides of the classroom: students and instructors through nation-wide surveys. Overall, their respondents believe that Reacting fundamentally changed how they learn and teach. They also found that the more classes a student takes the greater the impact.

Researchers have examined effects that Reacting can have on student self-efficacy. As mentioned earlier, the IU South Bend study delves into the complex relationship of Reacting and self-efficacy (Schult, Lidinsky, Zwicker, & Dunn, 2018). The results demonstrate that there was an overall increase in student efficacy with the largest improvements for women. The study also pointed to Reacting pedagogy being most powerful for students who find traditional classrooms least empowering (Schult et al., 2018).

However, Reacting has not been thoroughly studied in terms of at-risk populations or in the developmental classroom. A primary aim of this study was to determine if a complex role-playing game would engage students in the material and bolster their sense of accomplishment, their academic self-efficacy. Although commonly confused, self-efficacy is not the same as self-esteem or self-confidence, which tend to measure an individual's self-worth or value. Even the most intellectual of students may struggle to excel in the classroom. As noted by Bandura (1993, p. 119), "There is a marked difference between possessing knowledge and skills and being able to use them well under taxing conditions." Bandura suggests that there are two dominant ways a student may construe ability. Some students regard ability as an acquirable skill that can be improved through knowledge. They tend to judge their capabilities based on personal improvement rather than comparison with others. This view helps the student advance and adapt to changing academic intensities. Other students see ability as an inherent capacity. If they perform well, it is because they have the intellectual capacity; if they perform poorly, they lack this intellectual capacity. Moreover, the latter tend to judge their capabilities based on others' performances, which can belittle their view of advancement. Understandably, this can lead to a highly frustrated student with little adaptability.

Quantitatively, researchers have found the level of self-efficacy to be the single strongest predictor of GPA when examining academic success models (Faust, 2017; Solberg

& Villareal, 1997). Researchers have also found that self-efficacy measures are a useful predictor of continuing in a chosen field of study and even graduation (Vuong et al., 2010). Educational Psychologists have also shown that self-efficacy plays an important role in personal adjustments to college life, particularly in the first years (Chemers, Hu, & Garcia, 2001). Ultimately, measuring the impact a pedagogy has on student self-efficacy can reveal much about the effectiveness of the practice.

Reacting fits into the broad category of new literacies as an alternate and creative means of engaging students in what Hagood (2008) referred to as "alternative identity constructions" (p. 539). Although Reacting games do not currently include online components, there is considerable pedagogical overlap with Alternative Reality Games (ARGs), which are gaining attention in academic circles (Moseley, 2012). Specifically, Reacting shares at least four characteristics with ARGs: the use of narrative, the ability of participants to influence outcomes, problem solving in a time-limited format, and participation in a community. The alternative reality setting created in role-play allows for a blending of familiar discourses with historical conversations wherein educators hope to engage students. While the voices that students bring to the games is sure to affect game outcomes, it is plausible that engaging in new discourses in the game setting will affect how students participate in contemporary culture.

Method

This project examined students in two sections of the MTSU HIST 2010 course, both sections being paired with a one hour reading lab. The history course met for three hours per week, with the one hour reading lab following immediately after the history course. In total, the study includes 1,090 minutes (approximately 18 hours) of direct class observations.

During this study, the honors student (Miller) worked closely with the history professor (McIntyre), who chose the RTTP game *Patriots, Loyalists, and Revolution in New York City, 1775 -1776* because it best fit the learning objectives of the course (Offut, 2011). This game introduces students to the political and social chaos of colonial New York City. Patriots and Loyalists vie for an advantage in an undecided populace. Through the

experience, students begin to understand the strengths and weaknesses of both sides. They also begin to understand how the colonial environment (i.e. economic system, social structure, etc.) shaped the impact and power of the arguments. The main debate centers on whether colonial New York City should pursue a path of reconciliation with the British or independence (and possible war) from the mother country.

Table 2. Patriots, Loyalists, and Revolution in New York City, 1775-1776

Learning Objectives

Critical Thinking	Teamwork and Problem-Solving
Writing	Making "Citizens of the World"
Speaking	Building Community
Leadership	

The ultimate goal of each student is to gain control of New York City at the end of 1776, as well as achieve certain victory objectives specific to his or her role and background. Public political persuasion through effective argumentation strengthens the student's chances of winning. However, these are not the only forms of persuasion. Students may also choose to engage in private personal deals, pamphleteering, swaying a crowd, and even bribery when appropriate. The combination of these overt and covert activities determines the student's victory. Whether a student is victorious is based upon his or her character's role.

Throughout the game the students must also understand the rich philosophical debates of the time. Political ideologies such as liberalism, republicanism, and democracy really began to foment during the colonial era. Students must derive the core of their arguments from these schools of thought. To help students grapple with these deep concepts, the designer added a series of primary sources to the gamebook. These sources include extensive excerpts from John Locke's *Second Treatise of Government* and pamphlets from Samuel Johnson, Thomas Paine, and James Chalmers (Offut, 2011).

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Table 3. Patriots, Loyalists, and Revolution in New York City, 1775-1776
Key Concepts
Philosophical basis of government
Origin of, rights to, and governmental protection of property
Rule of law and the role of courts
Historical contingency
Right of rebellion and revolution under certain circumstances
Role and legitimacy of violence
Political legitimacy of a government and how it is gained, maintained, and lost

Each game is designed to be highly adaptable to the objectives of the instruction. Therefore, a decision was made to adapt the game to fit the needs of the academically at-risk students. For this pilot, Miller and McIntyre changed the time frame for the Reacting game. Typically the game is four weeks long. Because of the newness of the game to the students and the program, they decided to condense the game into a more compressed schedule that lasted three weeks because they wanted to give extra time laying out the context of the game. .

Context sessions, which occur prior to game play, were critically important. These sessions lasted two and one half weeks instead of the usual one week. Faculty members have observed that many at-risk reading students come with very shallow historical knowledge. Thus, Miller and McIntyre felt it important to have students understand the complex background that led to 1776. The context sessions were given as lectures with frequent quizzes interspersed. While the context sessions gave a valid overview, they later learned that the students wanted more context, particularly on economic and military matters. They also adjusted the role sheets before giving them to the students. Many of the role sheets included material that was more relevant to the eliminated sessions. They left the backgrounds and biographies of the characters intact and added some illustrations to the role sheets so the students could get a better idea of what their characters would have looked and dressed like.

Miller and McIntyre also adjusted the reading requirements. They directed the students to use Thomas Paine's *Common Sense* and James Chalmers' *Plain Truth.* Paine's

Common Sense addresses the shared grievances of the Patriots. Although a little less well-known, Chalmers wrote *Plain Truth* as a rebuttal to Paine's argument and strongly supports the Loyalists' cause. They gave students the text of the original document. To adapt this game for the students, McIntyre also created annotated versions of both pieces and showed an in-class video on Thomas Paine.

The game's original design includes a variety of assignment options. For this pilot, McIntyre decided to focus heavily on participation, speeches, and reflection. Participation involved more than just showing up to class; students had to be actively involved in the discussion and had to demonstrate that they understood the objectives of their roles. This was determined by the actions they took and the words they spoke in class. Speeches were required to be submitted before they were delivered. The grade assessed both the written speech and the oral speech. Another adjustment to the game was a final reflection paper. Students wrote and turned in a reflection on their character, their character development, how they played the game, and what they learned from the game.

To determine self-efficacy, Miller used the Indiana University South Bend study that measured the self-efficacy of college students enrolled in eight sections of their Literary and Intellectual Traditions Reacting courses from 2010-2013 (Schult et al., 2018). A pre-survey was administered after the context session but before the game play, and a post-survey was administered after the game ended. Surveys were the chosen instrument to measure changes in self-efficacy, primarily because self-efficacy is an individually perceived measure best captured by surveys. The survey was adapted from the IU South Bend study (Schult et al., 2018), which used an adjusted form of Barry and Finney's (2009) College Self-Efficacy Survey for RTTP.

The MTSU survey asked questions in three primary task areas. First, there were questions that specifically related to Reacting tasks such as speeches, identifying main points, and understanding different perspectives. Next, there were questions that evaluated student perception on academic tasks such as researching and writing papers, understanding readings, and managing time. Finally, there were questions that evaluated student perception on social tasks such as making friends, working well in a group, and

joining a class discussion. Because some of the tasks were essential to multiple areas, there was some overlap in questions.

While the study is based on the IU South Bend project, it is important to note some key differences. First, the size of participant pool for the IU South Bend study was 134, for the MTSU study it was 25. Additionally, the participants of the IU South Bend study were in typical class settings; the MTSU study includes participants that are academically at-risk. The results of the IU South Bend study indicated that the students who benefited the most from the Reacting pedagogy were those who found traditional forms of instruction ineffective, which proves promising for the MTSU academically at-risk community.

The self-efficacy surveys used by the IU South Bend study (Schult et al., 2018) were adapted to fit the MTSU study by reducing the number of questions and adjusting the wording of the open-ended response question. The primary three-fold layout of the survey questions focusing on Reacting, academic, and social skills remained the same. Like the IU South Bend study (Schult et al.), students were asked to indicate their confidence about the questions on a 1-10 scale.

The distribution of surveys occurred at different times in the two studies. The IU South Bend study (Schult et al., 2018) gave the pre-survey at the beginning of the semester and the post-survey at the end. The MTSU study gives the pre-survey and the post-survey only 3 weeks apart. We believe conducting the surveys centered on the Reacting component helped isolate the effects of this particular pedagogy, rather than the 15-week class as whole. This was particularly necessary since the MTSU study did not use a control group for comparison of results.

Reflection papers were the other method used to determine of self-efficacy. The reflection prompt asked students to assess how the game changed how they thought of history and game playing. They were encouraged to write about what they perceived as beneficial or not beneficial about the game.

Results and Data Analysis

The survey's open-ended responses provide more detail about the students' personal observations of growth in self-efficacy. The responses centered on two areas.

While 34 out of the 35 eligible students agreed to participate, only 25 completely filled out the surveys. As tables 4, 5, and 6 illustrate, the students experienced an overall increase in self-efficacy.

Table 4. Combined (Class 1 & 2) Pre-test/post-test comparisons for RTTP tasks

Question	Pre-test		Post-Test		Mean Difference	t (25)	
	M	SD	M	SD			
Make a speech	5.4	2.12	7.92	1.63	2.52	1.673E-05	*
Understand Different Perspectives	7.4	1.61	8.52	1.00	1.12	0.229	*
Identify main points	7.6	1.66	8.52	1.23	0.92	0.598	*
Reading	6.64	1.96	8.08	1.38	1.44	0.041	*
Support POV	7.88	1.74	8.8	1.26	0.92	0.334	*

Note: n = 25, *p <0.05

Table 5. Combined (Class 1 & 2) Pre-test/post-test comparisons for academic tasks

Question	Pre-test		Post-Test		Mean Difference	t (25)	
	M	SD	M	SD			
Research for Paper	6.76	2.13	7.84	1.95	1.08	0.681	*
Write Papers	6.36	2.40	7.76	1.90	1.4	0.008	*
Understand Readings	6.84	2.10	8.24	1.59	1.4	0.071	*
Manage Time	7.36	2.46	8.32	1.57	0.96	2.250	*

Note: n = 25, *p <0.05

Table 6. Combined (Class 1 and 2) Pre-test/post-test comparisons for social tasks

Question	Pre-test		Post-Test		Mean Difference	t (25)	
	M	SD	M	SD			
Make Friends	7.28	2.19	8.4	1.87	1.12	0.076	*
Work Well with Group	7.64	1.89	8.44	1.69	0.8	2.198	*
Join Class Discussion	7.68	2.01	8.72	1.43	1.04	0.033	*

Note: n = 25, *p <0.05

Students demonstrated growth in all twelve tasks. The largest gains were made in two Reacting specific tasks: *make a speech* (+2.52) and *reading* (+1.44). Other Reacting specific tasks, such as identifying main points and supporting points of view, also saw significant increases in self-efficacy. The area with the third-highest gain was tied between two general academic tasks: w*rite papers* (+1.40) and *understand readings* (+1.40). All four of the general academic skills saw increases in self-efficacy. There was an increase in the social tasks in all three of the areas: *making friends, working well with a group,* and *joining a class discussion.*

In the class specific analyses, class 1 had the greatest increases in the areas of *making a speech* (+2.88), *researching for a paper* (+1.75), and *writing for a paper* (+1.75). Ten of the twelve task areas indicated a significant increase. Class 2 also had the greatest increase in *making a speech*, but at a more modest amount +1.89 (versus Class 1 of +2.88). The next largest increase was in *understanding different perspectives* (+1.44). Seven of the twelve areas indicated a significant increase in self-efficacy. Class 2 had only 9 out of its 15 students complete both surveys—a 60% participation rate. Class 1 had 16 of its 20 students sufficiently complete both surveys—an 80% participation rate.

Table 7. Pre-test/post-test comparisons for Class 1

Question	Pre-test		Post-Test		Mean Difference	t (16)	
	M	SD	M	SD			
Make a speech	5.44	1.79	8.31	1.40	2.88	0.001	*
Understand Different Perspectives	7.69	1.49	8.63	1.15	0.94	6.440	
Identify main points	7.75	1.65	8.88	1.09	1.13	1.067	*
Reading	6.56	2.25	8.25	1.39	1.69	0.403	*
Support POV	7.88	1.78	8.94	1.24	1.06	1.619	*
Research for Paper	6.38	2.16	8.13	1.78	1.75	0.088	*
Write Papers	6.00	2.45	7.75	1.73	1.75	0.058	*
Understand Readings	6.94	2.21	8.50	1.59	1.56	0.849	*
Manage Time	7.19	2.81	8.56	1.55	1.38	2.547	*
Make Friends	7.38	2.00	8.81	1.38	1.44	0.166	*
Work Well with Group	7.94	1.73	8.44	1.93	0.50	26.114	
Join Class Discussion	8.06	1.53	9.13	1.15	1.06	0.036	*

*Note: n = 16, *p <0.05*

Table 8. Pre-test/post-test comparisons for Class 2

Question	Pre-test		Post-Test		Mean Difference	t (9)	
	M	SD	M	SD			
Make a speech	5.33	2.74	7.22	1.86	1.89	0.800	*
Understand Different Perspectives	6.89	1.76	8.33	0.71	1.44	0.499	*
Identify main points	7.33	1.73	7.89	1.27	0.56	30.156	
Reading	6.78	1.39	7.78	1.39	1.00	3.997	*
Support POV	7.89	1.76	8.56	1.33	0.67	11.143	
Research for Paper	7.44	2.01	7.33	2.24	-0.11	82.430	
Write Papers	7.00	2.29	7.78	2.28	0.78	4.311	*
Understand Readings	6.67	2.00	7.78	1.56	1.11	3.036	*
Manage Time	7.67	1.80	7.89	1.62	0.22	59.426	
Make Friends	7.11	2.62	7.67	2.45	0.56	21.446	
Work Well with Group	7.11	2.15	8.44	1.24	1.33	2.220	*
Join Class Discussion	7.00	2.65	8.00	1.66	1.00	6.588	*

*Note: n = 9, *p <0.05*

The reflection papers demonstrated that students in both classes gained the most confidence in making speeches. One student stated, "I have always had a problem with introducing a speech before a crowd. This project really helped me. I wouldn't say I have

fully overcome speaking in front of people, but when I made my speech, and I got an applause, I felt like I really did something." The student recognized a weak skill that could be improved with experience. The student also indicated that *peer* feedback such as applause helped to boost and strengthen beliefs about abilities. Another student found the power of words really impactful, "I believe I gained the most confidence in forming a speech. Particularly a speech to make a certain point or to try and get people to think a certain way or vote on a certain thing." For this student, speaking while participating in Reacting was not just another assignment, it was an opportunity to take a stand for something important.

The second area that most students chose to discuss was the peer-to-peer interaction. For many, the opportunity to interact with others challenged them to go beyond. One student stated, "Working with other students helped me come out of my comfort zone and learn about different characters in the game." A different student understood the importance of working with others in the pursuit of something bigger. The student stated, "I believe I gained the most confidence in engaging with classmates in physical class activities. I feel more comfortable working with other people to complete one goal."

In both the survey and the reflection, the largest increase in self-efficacy across the board was in *making a speech.* This supports previous literature, particularly the IU South Bend study. We believe that these students have had limited practice with public speaking up to this point, and the opportunity to practice helped them feel like they could do it better or more often in the future. Also the collaborative atmosphere created by Reacting encouraged students to step out in this area.

We also believe that there was an increase in reading. These were difficult texts that students were grappling with, but it was obvious through their speeches that they understood the 18th century prose. This finding is particularly important for this group of students. Much of the reading occurred outside the classroom, which means very few in-class observations could help identify growth. For future research, we recommend using an instrument that can more accurately determine the growth of learning for out-of-class activities.

Of interest is how this game playing pedagogy worked well in two classes that had very different classroom cultures. From the beginning, the differences between the classes were evident and sharp. Behaviorally, Class 1 adopted a highly vocal and engaged approach to the new material. In contrast, Class 2 adopted a quiet and reserved approach to the new material. Despite these differences, the Reacting pedagogy achieved an increase in self-efficacy in the majority of task areas for both classes. Logically, one of the marks of an effective pedagogy is its adaptability to a variety of contexts, and this proves true for Reacting.

In terms of peer-to-peer interaction, the students tended to work well with each other as indicated by the social task section on the surveys and the in-class observations. Interestingly, based on the pre-survey scores, students expressed the greatest confidence in the social area tasks. So, from the beginning, the students generally felt confident in collaborating and working with their peers. This finding bodes well for student-centered curriculum. Students have a lot to learn from each other, and as indicated by the surveys and observations, they are eager to do so.

Limitations and Implications for Future Research

While this project's findings could prove beneficial to the academic community, it is limited in its size. This project was not originally intended for publication outside of an honors thesis, however, the success of the program was such that several members believed it deserved a wider audience. Even though it is difficult to project these findings as comprehensive for at-risk students nationwide, it suggests that Reacting is beneficial to at-risk students.

Much education research focuses on the standard student, and even Reacting research until recently has primarily focused on its impact in traditional classrooms. However, we posit that the academically at-risk communities in universities and colleges around the country today are ripe for more research. As higher education begins to focus more on degree completion, rather than simply high enrollment numbers, this community should gain attention. The diversity of these students uniquely tests the durability and functionality of educational practices. We suggest conducting additional studies that focus

on academically at-risk communities, Reacting, and game playing. These studies can help identify the unique differences of these students and the way that they learn.

Due to limitations in class access, this study lacked having a control group for comparison. As a result, it is not possible to ascertain the degree that perception of growth was based on participation in Reacting as opposed to other factors. This limitation was partially addressed in the close proximity of the surveys to the game. The design and the wording of questions apparently tied student perception of growth to participation. The degree to which this perception will be sustained or will translate to better academic performance, however, is unknown.

For future research, we suggest similar studies with larger sample sizes that use a scientific or quasi-scientific design. Collaboration among universities and colleges would be very beneficial and the implications far-reaching. Additional research in this field could be conducted with different adjustments to the game we used or a different game entirely. Do some adjustments help the students learn more effectively? What degree should these adjustments be made, if any? Do some Reacting games work better than others? What games do these students prefer or learn the most from? Researchers could also examine the use of this pedagogy in relation to other educational practices, such as concept-mapping or reading management. If an instructor wanted to introduce concepts from Reacting in a smaller way, he or she could incorporate character roles. For example, McIntyre introduced character roles in a limited way in an earlier assignment where students researched a historical figure and when prompted in class told their peers about that character. They then had to figure out what other character roles assigned in the class would have a connection to their character. This small foray into role playing was extremely beneficial to students as evidenced by their reflection papers and the test results on identifying and understanding the significance of these historical figures.

Finally, we suggest conducting longitudinal studies to examine the full and long-term impact of Reacting for at-risk students. There are several questions that should be answered in order to validate the effectiveness of the Reacting pedagogy: What difference does Reacting make on reading comprehension or other skill-based tests? Do students seek out additional Reacting classes? Are these students retained at higher rates than

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peers in similar courses? Do students who participate in courses that include Reacting achieve higher GPAs than peers who do not? Do these students show greater interest in history, perhaps to the extent that some select history as a major? Do these students complete their degree programs at comparably higher rates? How do students remember and utilize the lessons they learned from Reacting*?*

Conclusion

This project examined the impact of Reacting pedagogy on the self-efficacy of academically at-risk students. The study included surveys, free-responses, reflections and in-class observations to determine growth. The findings suggest that this pedagogy may be a useful practice to increase self-efficacy among at-risk students, particularly those who struggle with reading. As researchers continue to study effective pedagogies that engage at-risk students, we suggest that Reacting to the Past is worthy of further consideration for effective instruction in history.

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APPENDIX A: SURVEYS

Self-Efficacy RTTP Survey (Pre-test)

SCALE:

    1   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**   **10**

Not at all confident   **Extremely Confident**

Indicate your confidence to the following statements:

RTTP Questions

1. I feel _____ in making a speech.

    1   2   3   4   5   6   7   8   9   10

2. I feel _____ in understanding different perspectives.

    1   2   3   4   5   6   7   8   9   10

3. I feel _____ in identifying important points.

    1   2   3   4   5   6   7   8   9   10

4. I feel _____ in reading.

    1   2   3   4   5   6   7   8   9   10

5. I feel _____ in using evidence to support a point of view.

    1   2   3   4   5   6   7   8   9   10

Academic Questions:

1. I feel _____ in researching for a paper.

    1   2   3   4   5   6   7   8   9   10

2. I feel _____ in writing papers.

    1   2   3   4   5   6   7   8   9   10

3. I feel _____ in understanding readings.

    1   2   3   4   5   6   7   8   9   10

4. I feel _____ in managing time.

    1   2   3   4   5   6   7   8   9   10

Social Questions

1. I feel _____ in making friends.

    1   2   3   4   5   6   7   8   9   10

2. I feel _____ in working well in a group.

    1   2   3   4   5   6   7   8   9   10

3. I feel _____ in joining a class discussion.

    1   2   3   4   5   6   7   8   9   10

Adapted from "Strengthening Students' Self-Efficacy Through Reacting to the Past." By Carolyn A. Schult, April Lidinsky, Lisa Fetheringill Zwicker, and Elizabeth Dunn

Self-Efficacy RTTP Survey (Post-test)

SCALE:

1   2   3   4   5   6   7   8   9   10

Not at all confident   **Extremely Confident**

Indicate your confidence to the following statements:

RTTP Questions

6. I feel _____ in making a speech.

    1   2   3   4   5   6   7   8   9   10

7. I feel _____ in understanding different perspectives.

    1   2   3   4   5   6   7   8   9   10

8. I feel _____ in identifying important points.

    1   2   3   4   5   6   7   8   9   10

9. I feel _____ in reading.

    1   2   3   4   5   6   7   8   9   10

10. I feel _____ in using evidence to support a point of view.

    1   2   3   4   5   6   7   8   9   10

Academic Questions:

5. I feel _____ in researching for a paper.

    1   2   3   4   5   6   7   8   9   10

6. I feel _____ in writing papers.

    1   2   3   4   5   6   7   8   9   10

7. I feel _____ in understanding readings.

    1   2   3   4   5   6   7   8   9   10

8. I feel _____ in managing time.

    1   2   3   4   5   6   7   8   9   10

Social Questions

4. I feel _____ in making friends.

    1   2   3   4   5   6   7   8   9   10

5. I feel _____ in working well in a group.

    1   2   3   4   5   6   7   8   9   10

6. I feel _____ in joining a class discussion.

    1   2   3   4   5   6   7   8   9   10

Open-ended Response:

In what area or skill do you believe you have gained the most confidence through your experience with Reacting to the Past?

Adapted from "Strengthening Students' Self-Efficacy Through Reacting to the Past." By Carolyn A. Schult, April Lidinsky, Lisa Fetheringill Zwicker, and Elizabeth Dunn