3-11-2015

Navigating Collective Activity Systems: An Approach Towards Rhetorical Inquiry

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by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
Department of English
College of Arts and Sciences
University of South Florida

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Date of Approval:
March 11, 2015

Keywords: professional and technical communication, formative intervention, design, rhetoric

Acknowledgments

I would like to thank Dr. Staggers, Metzger, and Schneider, who each contributed vital perspectives to this research project. Without the specific contributions of each member, this project would not have been possible. I am appreciative of Anne Anderson for recommending interdisciplinary work, and I am grateful for the feedback I received from Gail Brock. I would also like to thank my parents, Charles and Myra Owens, my partner, William Brock, as well as my two best friends, Melissa Daigneault and Claudia Mezzich, for being supportive during my entire academic career.

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Abstract

The purpose of this formative intervention was to design a professional and technical communications course around rhetorical inquiry. The participants, undergraduate health sciences majors (N=22 for section A, N=20 section B), were observed throughout the fall semester of the 2014-2015 academic year. A rhetorical inquiry framework was applied via activity systems, and data were collected using several methodologies including participant observations, research questionnaires, as well as participant deliverables, and were transcribed using Daisy Mwanza's Eight-Step Model. Results demonstrated students successfully used activity systems as a means of approaching rhetorical inquiry. Furthermore, students indicated a high level of engagement in the course. This study demonstrates how rhetorical inquiry can be utilized in Professional and Technical Communication for Health Sciences as a means of advancing student agency and participatory learning environments. The study also suggests rhetorical inquiry should be part of the professional and technical communication curriculum and other academic disciplines as well as utilized in the workplace.

Introduction

Rhetoric is the art, the fine and useful art, of making things matter.

- *Thomas Farrell, 2008, p. 470*

Rhetorical Inquiry

In *Distant Publics: Development Rhetoric and the Subject of Crisis*, Jenny Rice, Associate Professor of Writing, Rhetoric, and Digital Media at the University of Kentucky, discusses the negative impact of equivalence claims. According to Rice (2012), equivalence claims "take the position that [a topic] is both good and bad, a paradoxical position that effectively writes itself out of any interventionist role. Equivalence claims help to create exceptional public subjects by substituting the feeling of undecidability for judgment (*krisis*)" (p. 131- 132). Rice argues, "the troubling effect of such discourse is that patterns of equivalence rhetoric serve to cultivate subjects who retain a public orientation without writing themselves into the scene of public change" (p. 132). Rice believes "undecidability and equivalence… shut down true public debate before any kind of critical inquiry can take place" (p. 150). Specifically in education, students avoid genuine engagement in class discussions and assignments when they use equivalence claims. Rice suggests students can stop using equivalence claims by learning "what 'critical engagement' actually means, and how one appropriately responds to previous conversations" via rhetorical inquiry (p. 156).

According to Rice, rhetorical inquiry involves "an endless survey of networks within which a crisis is embedded" (p. 168) in which "the inquiring subject seeks to uncover the composition of a given scene" (p. 169). Using this approach, students "are capable of imagining

themselves as situated within many complex networks" in order to envision the "incongruent and asymmetrical networks within which… [their] agency is lodged" so intervention is possible (p. 163).

Rice believes rhetoric classrooms have consistently neglected to teach inquiry and introduced the concept in her English course titled "The Rhetoric of the Midwest". Rice's students read William Least Heat-Moon's *PrairyErth: A Deep Map.* In the book, the author creates "what he calls a 'deep map' of Chase, County, Kansas" (p. 189). Heat-Moon "collects geological fragments, social histories of floods and displacement, linguistic and etymological details, personal portraits of current residents, the histories of workers who are rooted to the land, and even discourse about Kansas" via photographs, letters, interviews, and figues (p. 190). His juxtaposition of the collected materials reveal how the space is constituted across networks. Rice adapted the assignment by having her students create their own deep maps as a method of rhetorical inquiry. The texts students produced did not rely on conclusions or solutions, but rather focused on detailed collections and networking. Rice contends "emphasizing inquiry as a legitimate mode of relating to the world can help to cultivate citizens who avoid writing themselves out of the public scene of crisis" (194). Therefore, Rice considers rhetorical inquiry as "its own telos" (p. 168).

For this research project, I decided to explore rhetorical inquiry in professional and technical communication courses by designing a class around the theoretical framework. Thereby, my research question is twofold:

1. Why/how is rhetorical inquiry implemented in Technical Writing for Health Sciences?
2. What are the outcomes for implementing rhetorical inquiry?

With the aim of answering these questions, I first discuss inquiry in formal education by citing scholars such as Musallam (2013), Robinson (2013), Rice (2013), and Latour (1996). Then, I explain how I implement rhetorical inquiry in my Technical Writing for Health Sciences course by purposely changing the method from network tracing to activity systems analysis and by applying Engeström's (2011) formative interventions. Finally, I describe the course outcomes related to rhetorical inquiry coupled with recommendations for course adjustments. By offering a detailed account of my course design, my aim is to advance rhetorical inquiry in higher education, specifically in professional and technical communication courses, provide examples of rhetorical inquiry in practice, and offer strategies instructors can employ to help students actively engage with concepts in the classroom and workplace.

Inquiry in Formal Education

Before I describe the project in more detail, I must first establish a brief rationale for the use of rhetorical inquiry in education generally, and in professional and technical communication courses specifically. Ramsey Musallam (2013), a chemistry instructor who incorporates multimedia into interactive inquiry-based learning models, believes children are inquisitive before they enter school. Children are innately curious about the world around them, but they stop asking questions as their formal education progresses. According to Ken Robinson, children stop becoming inquirers because formal education "is a culture of compliance. Our children and teachers are encouraged to follow routine algorithms rather than excite power of imagination and curiosity" (Robinson, 2013). In order to encourage learning in education, school systems should "engage [students], their curiosity, their individuality, and their creativity" (Robinson, 2013) by providing spaces for children to begin exploring their interests. In *Digital Detroit*, Jeff Rice (2012) insists spaces make up a variety of experiences including feelings, memories, and dreams. In these spaces, students can navigate the networks that would allow for a better understanding of their world. Students can create connections among their experiences, and as Latour (1996) would argue, begin composing from disjointed pieces.

Unfortunately, students are not accustomed to these types of spaces or composition processes. In the traditional model of education, students are given a framework so they can solve predetermined issues with fixed problem-solving strategies. This current structure in curriculum design does not teach students how to recognize inventive possibilities, how to be critical thinkers, or how to translate skills to other educational or professional settings.

During the spring of 2014, I took a practicum to teach professional and technical communication courses at the University of South Florida, and an instructor came to talk about her experiences with teaching Technical Writing for Health Sciences. During a meeting, the instructor reiterated the struggle she had trying to get her students to actively participate in the course. By every definition, her students were demonstrating characteristics of exceptional public subjects because they were avoiding critical engagement and writing themselves out of important conversations, which is a concept Rice opposes in *Distant Publics*. Unfortunately, instructors do not critically evaluate the curriculum design and often blame students for their indifference. Rice (2012) argues teachers can use "pedagogies that tacitly endorse ways of relating to the world by helping students imagine themselves as inquires" (p. 196). Therefore, professional and technical communication courses should implement inquiry-based curricula to discourage students from becoming exceptional public subjects. My hope is to provide students with vital skills they need to become active participants in the classroom as well as develop into successful professionals in public environments.

Methodology

A Change from Network Tracing to Activity Systems Analysis

The next step for creating this research project was to determine how I could implement rhetorical inquiry into a professional and technical communication course. Rice draws from Actor-Network Theory and defines network tracing as a method for approaching rhetorical inquiry in her course, "The Rhetoric of the Midwest." According to Rice, "tracing a network requires one to reflect on the relational processes and linkages that form a network" (p. 171). Furthermore, "the telos of network tracing…is located within the process itself. Inquiry is the rhetorical goal" (p. 173). As shown in *Distant Publics*, Rice easily implemented rhetorical inquiry in her English classroom, but can instructors transfer the concept into professional and technical communication courses? Rice's theoretical framework utilizes network tracing, but this method is problematic in professional and technical communication courses because students must demonstrate success in constructing outcome-specific deliverables, which is not a goal of rhetorical inquiry.

According to James Porter, "technical communication has traditionally been defined primarily by the product or document perspective, that is, with the emphasis being on the genres and types of documents that technical writers produce" (A Heuristic for Technical Communication, 2013, para. 3). From that perspective, technical communicators create results-oriented texts, such as instructional manuals or content management systems, without analyzing the process for producing those documents. Based on this instrumental definition of technical communication, rhetorical inquiry does not appear easily transferable to professional and

technical communication courses because of its' process-based orientation. However, in order for a technical writer or communicator to effectively solve a client's problem, he/she needs to fully understand "the solution...lies in the relationship between process and product" (A Heuristic for Technical Communication, 2013, para. 12). Porter defines process as a method of composing that includes inquiry and collaboration with others. Thus, instructors in professional and technical communication courses should also teach students the importance of analyzing the process for composing outcome-specific texts.

Therefore, I can adopt rhetorical inquiry into professional and technical communication courses if I expand the scope of rhetorical inquiry. As stated previously, Rice's method, network tracing, limits students' ability to also focus on solutions, conclusions, and results, all of which are vital in professional and technical communication courses. In order for me to promote rhetorical inquiry in my professional and technical communication course, I needed to find a method that would allow students to trace networks and systems as well as encourage results-oriented outcomes. After reading Clay Spinuzzi's (2008) *Network: Theorizing Knowledge Working in Telecommunications,* a book that discusses Activity Theory and Actor-Network Theory in workplace settings, I decided to focus on activity system analysis.

Activity systems analysis is grounded in Cultural-Historical Activity Theory (CHAT), and Lisa Yamagata-Lynch explains and condenses 95 years of CHAT in her book, *Activity Systems Analysis Methods*. According to Yamagata-Lynch (2010):

> CHAT is the foundation of activity systems analysis and it has a rich history, owing much of its original work to L.S. Vygotsky during the 1920s and 1930s and post-Vygotskian scholars who worked with A.N. Leontiev and A.R. Luria. The foundation of activity systems analysis is mediated action that Vygotksy conceptualized as an alternative to the

> Associationist perspective, which explained human development as a progressive experience of stimulus and response associations. Mediated action assumes that the interactions between the organism and the environment are inseparable – that individuals, or subjects, find new meaning about their world by interacting with artifacts, tools, and social others in their environment. This interaction helps the subjects attain the object or the goal, motive, or reason for participating in activities. The results of these activities influence the subjects' understanding of the world in which they are situated. Activity systems analysis extends mediated action by identifying and including sociocultural aspects of human activity as critical elements of the units of analysis. This allows investigators to examine human activity within its complex environment. (p. 129-130)

In 1987, Engeström developed a graphic model for an activity system in *Learning by Expanding: An Activity-Theoretical Approach to Developmental Research* (see Figure 1). According to Mwanza and Engeström (2003), "the *activity triangle model* represents an outline of the various components of an *activity system* into a unified whole" and "this approach to modeling various aspects of human activity can draw the researcher's attention to important factors to consider when analyzing teaching and learning activities" (p. 458).

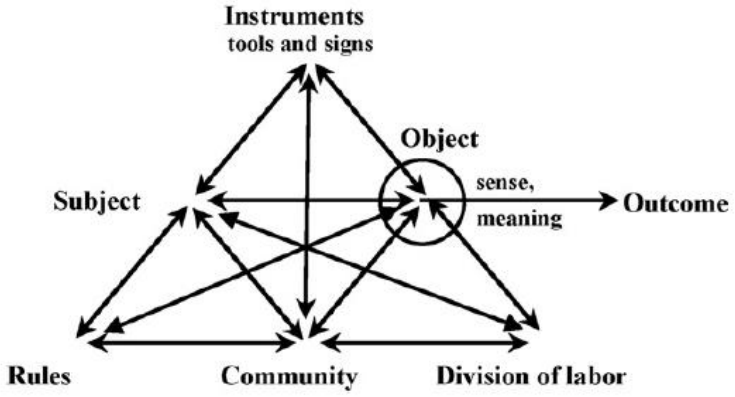


Figure 1. Activity System (Engeström, 1987, p. 78)

As shown in the figure, each section of the activity system is interconnected with one another, and "the purpose for using an activity systems analytical method can be…for an action research oriented approach intended to bring about change in practice" (Yamagata-Lynch, 2010, p. 62). Course objectives and learning outcomes for professional and technical communications courses rely on students producing outcome-specific texts, and activity systems analysis promotes that objective.

Rice's original method, networking tracing, limits how we define and implement rhetorical inquiry. Conversely, our understanding of the theoretical framework expands if we use activity systems analysis because it allows students to transition into an interventionist role, which can promote an actual change in practice. Specifically for this research project, activity systems analysis is a more beneficial approach than network tracing because it maintains discipline-specific objectives for professional and technical communication courses via results-oriented texts, while still promoting the fundamental features of rhetorical inquiry which are process-based.

Formative Intervention

After determining activity systems analysis was a more practical method in professional and technical communication courses, I needed to develop my methodological approach for designing this research study. After extensive research on design experiments, I discovered Engeström's work. According to Engeström, design experiments "share the basic linear methodology of traditional randomized controlled trials, and thus ignore resistance and agency of learners as a source of surprise and novelty" (2011, p. 598) Engeström also notes design experiments neglect terms such as "'struggle,' 'strategy,' 'power,' 'position,' 'agency,' 'motivation,' and 'resistance'" (p. 603). Due to the blatant disregard for those concepts, I could

not create a design experiment for this research project because the primary goals of rhetorical inquiry were to help students position themselves within complex networks and elicit agency.

Instead, I needed a methodology that purposefully facilitates learners' agency, and I identified formative interventions as a viable approach. Engeström states:

> In formative interventions, the subjects (whether children or adult practitioners, or both) face a problematic and contradictory object which they analyze and expand by constructing a novel concept, the contents of which are not known ahead of time to the researchers…The contents and course of the intervention are subject to negotiation [*sic*] and the shape of the intervention is eventually up to the subjects…A key outcome of formative interventions is agency among the participants…[and] the researcher aims at provoking and sustaining an expansive transformation process led and owned by the practitioners. (p. 607)

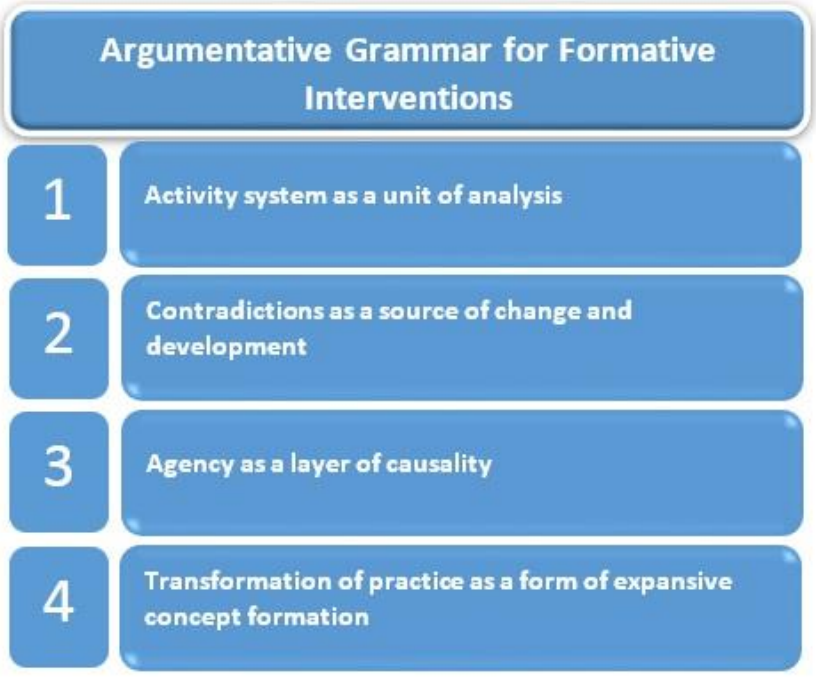
After I thoroughly analyzed formative interventions, I decided this methodological approach was the most appropriate methodology for this research project because the starting points and outcomes closely align with the primary objectives of rhetorical inquiry.

Since I sought to implement rhetorical inquiry into professional and technical communication courses using a formative intervention, I needed to decide which classes and sections would be used for this research study and what the curriculum would look like. The University of South Florida's English department provides three courses in professional and technical communication: Communication for Engineers, Professional Writing, and Technical Writing for Health Sciences. In the spring of 2014, I was registered to teach two sections of Technical Writing for Health Sciences (Sections A and B) for the fall of 2014 and decided to use my sections for this study. After receiving approval from the Director of Undergraduate

Professional Writing, Rhetoric, and Technology, I spent the summer designing the course. However, I had to follow specific requirements which included adhering to the argumentative grammar for formative interventions, the professional and technical communication course objectives and learning outcomes of the University of South Florida, as well as implementing three specific projects developed by the English department, two of which were collaborative projects.

Argumentative Grammar for Formative Interventions. Engeström (2011) describes argumentative grammar as the "set of basic epistemic ideas or threads that run through and connect theory, methodology, and empirical research in any serious research approach" (p. 607). To frame the feasibility of formative interventions, Engeström identifies the four elements of an argumentative grammar for this methodology (see Table 1).

Table 1. Argumentative Grammar for Formative Interventions



To ensure the viability of this formative intervention, I needed to adhere to the four tenets shown in the table. Since Technical Writing for Health Sciences prepares students for communication in their workplace environments, I focused the intervention on students' making sense of their chosen employment positions in Health Sciences fields because "the first tenet…requires that formative interventions are embedded and contextualized in the participants' meaningful life activity" (p. 622). "The second tenet of the suggested grammar requires that formative interventions respond to and build on the energy of contradictions in the affected activity systems" (p. 622). In this research study, I designed the intervention to get students to respond to problems they found in their future workplace environments. In this research project, I also needed to identify forms of student agency and participation because "the third tenet requires participants' agentic actions to be recorded and analyzed as an important outcome of a formative intervention" (p. 622). "Finally, the fourth tenet of the suggested argumentative grammar requires the analyst to trace steps of expansive concept formation" (p. 624). Therefore, I needed to assess students based on whether their solutions realistically solved their problems and to have them evaluate their solution models.

Class Introduction. I used the three projects given by the department as frameworks to begin rhetorical inquiry. To introduce students to the theoretical framework on the first day of class, I told students we were doing a demonstration for rhetorical inquiry as our icebreaker. Standing at the front of the classroom, I held a yarn ball. While I was holding one end of the yarn, I threw the yarn ball to a student in the classroom. Once the student caught the yarn, I requested she introduce herself to the class and asked her what she wanted to learn in Technical Writing for Health Sciences. The student responded by saying she was not sure what professional and technical communication was, but wanted to find out. The same individual

continued to hold her strand of yarn and tossed the ball to another student across the room. Once the second person caught the yarn ball, the student introduced himself and answered a question from the previous student. Questions ranged from the following: what is your favorite color, what do you like to do for fun, what is the craziest thing you have ever done, and why did you decide to attend the University of South Florida? Afterwards, everyone was still holding onto his/her yarn filaments, which created complex connections between the students. This activity showed students how they can make inquiries, trace networks, and collect information, while providing a visual of subsequent class material (see Figure 2).

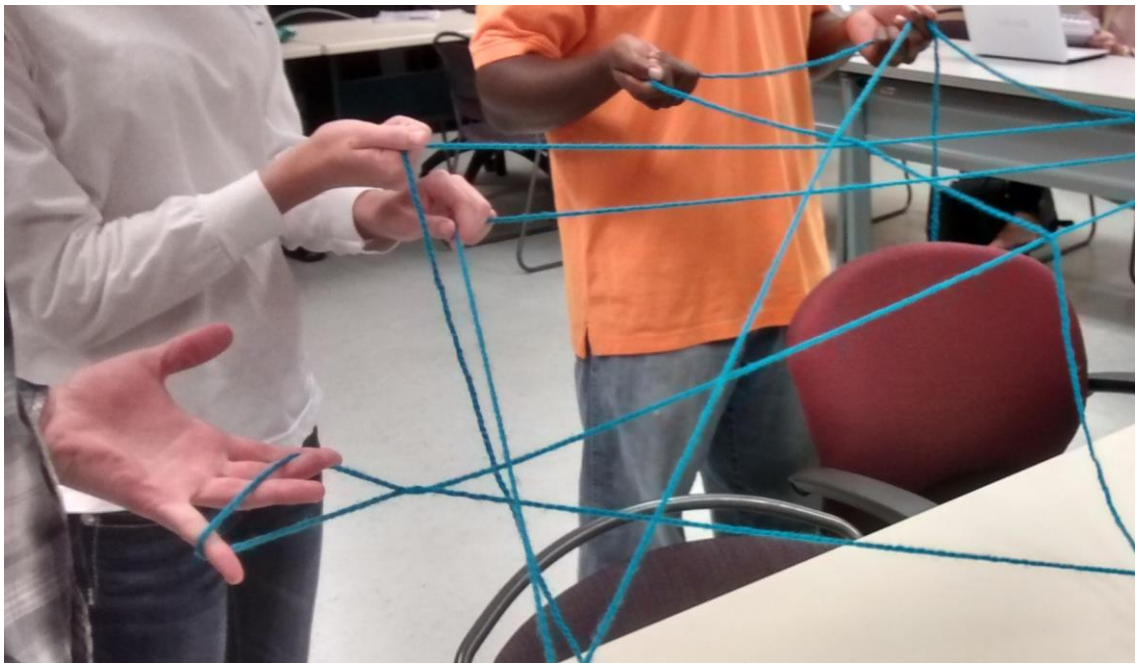


Figure 2. Icebreaker: Rhetorical Inquiry

Afterwards, I introduced students to the research study. Students asked questions about the research project and signed Institutional Review Board (IRB) consent forms.

Employment Project Overview. The Employment Project introduced students to the rhetorical and ethical nature of professional and technical writing. This project gave students the opportunity to create rhetorically situated documents typically used for gaining employment.

However, designing this project around rhetorical inquiry was the most difficult because it was the first time I introduced the theoretical framework via activity systems. Therefore, I needed to strategically design the project so students would not feel overwhelmed or confused. In order to provide a more specific focus, I asked students to research job advertisements in Florida and select a position in Health Sciences for which they were qualified. Students were limited to Florida because they would be graduating from a Florida university and there needed to be continuity between all three projects, which I will explain further during the Communication Technologies and Case Project overviews.

Even though the department did not mandate collaboration until the last two projects, I placed students into groups during project one. I grouped students into teams of four to five based on their concentrations in Health Sciences which included Biological, Health Management, Health Information and Technology, Aging Health, and Social and Behavioral. If students had two concentrations, they were able to choose which group they would like to work with throughout the semester. I followed this format because the success of the research project depended on students' personal investments in the activities they would be analyzing. In order to increase student agency, the activity systems students developed needed to be an integral part of their experiences in Health Sciences.

I assigned students "Studies of Expansive Learning: Foundations, Findings and Future Challenges" by Engeström and Annalisa to aid in their understanding of activity systems. Afterwards, students constructed a visual activity system of their specific employment positions alongside their Workplace Analysis Reports. Students also created traditional employment documents including cover letters and resumes. However, before students developed additional deliverables for the project, I constructed an activity system of the Employment Project to

provide a clearer understanding of rhetorical inquiry and a rationale for creating other assignments for project one. In the activity system, I asked, "How do job-seekers set themselves apart from other applicants?" After deciding technological skills were integral for most employment positions in the Employment Project activity system, students constructed resume remediations using digital tools and wrote analyses of their remediations. I defined remediation to my students as a change in medium. Thus, students changed the medium of the resumes to a digital format. In order to reflect on the effectiveness of the remediations, I placed students into employment teams to analyze the employment deliverables of other groups.

The employment project closely resembled other sections of Technical Writing for Health Sciences because it was the first time I introduced rhetorical inquiry and activity systems. Instructors in other sections of this course asked students to construct a digital profile, such as LinkedIn, to support their employment documents. However, I wanted my students to understand why they were supplementing their employment documents, especially with digital resources, so I created an activity system. By creating the activity system of the employment project for my students, I was able to provide a clear explanation of why students needed to supplement their traditional employment documents. The example activity system also provided a sample of what I would be looking for in the next two projects. In my sections specifically, I allowed students to create any type of digital resource based on the justifications of their specific workplace activity systems, and asked students to evaluate the effectiveness of their remedations through the analysis assignment and the development of Employment Teams.

Communications Technologies Project Overview. The English department developed the Communications Technologies Project using hypothetical scenarios regarding communication technologies. Students were given three to four scenarios and solved one of the

problems. However, this framework was not conducive for rhetorical inquiry and there was an apparent disconnect between project one and two. Therefore, students in my sections (A and B) were not given problems to solve, but were required to uncover communication technologies issues themselves.

Also, I wanted the projects to maintain continuity; therefore, project two built upon project one. In the Communication Technologies Project, students solved communication problems by researching communication technologies within their employment positions. For the purposes of this project, "communication technologies" refers to any tool people use to communicate (including, but is not limited to, record-keeping and scheduling). Using activity systems, students analyzed all the communication technologies used within their employment positions and/or organizations. After a collaborative examination, students located and proposed tenable solutions in order to solve and/or alleviate a problem the group discovered, while reflecting on the effectiveness of their solutions.

Case Project Overview. The Case Project in all sections of Technical Writing for Health Sciences varied depending on which template instructors chose. I was able to design my own case for this project. Therefore, this specific case project was unique to my sections (A and B). However, instructors can easily modify case projects to accommodate the needs of different participants and should be updated in order to accommodate current issues.

The purpose of a case is to immerse students in a real-life scenario where the technical channels of communication are extreme. Working through this case, students identified many intersections between various stakeholders, ethical issues, and communication. Students were given a brief background regarding opioids in Florida which suggests these medications are crucial for the welfare of pain management patients, but are better recognized as addictive drugs

associated with overdose and death. I asked students to analyze the complexities of medical and public communication, ethical dilemmas, and stakeholder interests with regards to how the case affected their employment company using activity systems. Students had to develop plausible solutions based on how their employment organizations were affected by the case.

Again, the Case Project relied on the employment organizations students chose from project one in order to create a cohesive structure between all three projects. By this point, students were fully immersed in the activities of the organizations they would like to be employed by in the future. Once students decided on a company in project one and had a clear understanding of its operations and expectations, students recognized what and how activities are used within the organization in order to make appropriate decisions regarding communication in

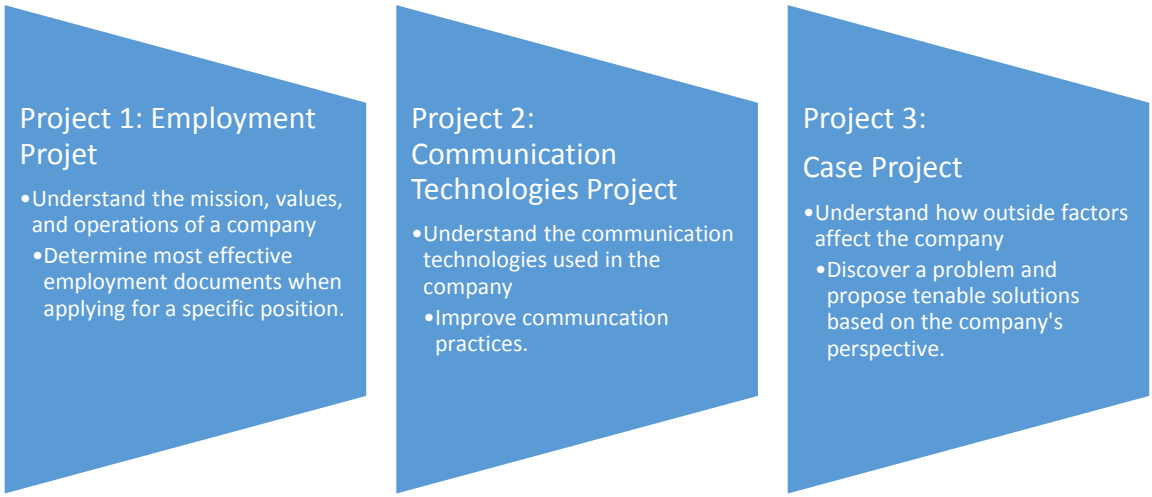


Figure 3. Course Design

projects one and two. Meanwhile, project three allowed students to comprehend how outside activities affected their chosen organizations and how to handle those issues (see Figure 3).

I provided detailed descriptions of each project in the appendices to allow for a more comprehensive understanding each project. The project descriptions listed in the appendices were written to students as directions for completing each project

Data Collection

Observations. In the fall of 2014, I observed students in Technical Writing for Health Sciences, sections A and B, during their allotted class times. Students met twice a week for 75 minutes for the duration of a 16 week semester in a registered computer lab. I used classroom observations to examine how students engaged with the assignment material as well as interactions with other students. In addition to classroom observations, I used Canvas, an online space used for class management, as an additional tool for observation. I evaluated the extent to which students utilized Canvas spaces for collaboration.

Research Questionnaires. Students responded to a series of questions about their experiences with creating project deliverables and producing activity systems in the form of reflective memos. Students completed four research questionnaires approximately every five weeks. I administered the questionnaires at the conclusion of each project and at the end of the course. These questionnaires assessed participants' understanding of specific project deliverables and their engagement in the course.

Document Collection. I collected texts relating to the theoretical approach and practices. The texts included the following deliverables:

- Collective Activity Systems
- Proposals with samples
- Research Reports
- Textual Archives

Data Analysis

According to Yamagata-Lynch (2010) "The purpose for using an activity systems analytical method can be to achieve a descriptive analysis or for an action research oriented

approach intended to bring about change in practice" (p. 62). In this project, I used both approaches.

Participant. Since I discovered network tracing was not the most effective method for utilizing rhetorical inquiry in professional and technical communication courses, I purposely implemented activity systems analysis as a way of expanding the scope of rhetorical inquiry. I had students construct activity systems for themselves because this method gave students a unique technique for navigating the activities they were examining, while encouraging them to develop outcome-specific deliverables.

Researcher. As the researcher, I also used activity systems analysis to achieve a descriptive analysis of student work and agency. To analyze data from the course, I used an approach taken from Daisy Mwanza, lecturer for the Institute of Educational Technology at The Open University. As part of her research for Human Computer Interaction, Mwanza (2002) developed the Eight-Step-Model in order to transfer information from the triangular model created by Engeström. Table 2 is an adaptation of Mwanza's Eight-Step-Model that uses open-ended questions corresponding to a section in the triangular activity system (see Table 2). I chose Mwanza's Eight-Step-Model because it offers an approach for me to thoroughly analyze the

Table 2. Eight-Step-Model

	Identification	**Inquiry**
1.	Activity	What sort of activity am I interested in?
2.	Object[ive]	Why is the activity taking place?
3.	Subjects	Who is involved in carrying out this activity?
4.	Tools	By what means are the subjects performing this activity?
5.	Rules and Regulations	Are there any cultural norms, rules, or regulations governing the performance of the activity?
6.	Division of Labor	Who is responsible for what, when carrying out the activity, and how are the roles organized?
7.	Community	What is the environment in which the activity is taking place?
8.	Outcome	What is the desired outcome from carrying out this activity?

triangular systems students produced for their assignments (Mwanza & Engeström, 2003) as well as provided a prompt for identifying themes I find when I evaluate student work and participation (Yamagata-Lynch, 2010).

To increase the reliability of the research project, I analyzed ten groups throughout the semester (N= 5 groups section A, N=5 groups section B) and each group was treated as its own case. For each group, I analyzed two sets of information at the end of each of the three projects. The first set included information from project deliverables and the second set of information came from research questionnaires, classroom observations, and team minutes. I did not use a second coder for this research study because activity systems analysis is descriptive by design and the process is time-consuming.

Groups created visual activity systems and deliverables for all three projects. After students completed a project, I coded corresponding information from their activity systems and deliverables into an Eight-Step-Model. This means I developed one model for each of the groups for all three projects, except for project three. More information was transcribed into additional models for the Case Project. If students did not answer the questions posed in the Eight-Step Model via project deliverables, the corresponding space in the model was left blank. Empty spaces indicated a lack of research and/or understanding from the students. I assessed groups based on the rhetorical effectiveness of the overall project, which means the objective in their activity systems needed to correlate to the problem solving strategies (outcome) each group developed for the project. The outcome for each case was considered effective if groups understood the activity via the construction of an activity system, discovered a problem with the system, solved the issue using relevant research, and tailored texts to their intended audiences using design strategies for the genre most appropriate for the specific situation.

Additionally, I transcribed another set of information using research questionnaires, classroom observations, and team minutes into an Eight-Step-Model in order to gauge student participation and engagement. For each of the three projects, I created an Eight-Step-Model for each group to determine how students divided as well as organized work and to assess student engagement with the course material. At the end of the research project, I also made a general assessment based on all ten cases using an Eight-Step-Model.

Although I collected and analyzed data from each group in both sections, I chose one group, Health Information and Technology (section B), to illustrate examples of student work and to demonstrate methods of data collection. Health Information and Technology is a representative sample of both sections (A and B).

Project Results

Employment Project

Students created a Workplace Analysis Report for their employment companies, which included the activity system (See Figure 4). Students also developed traditional employment documents such as a print resume and cover letter, and they created a resume remediation.

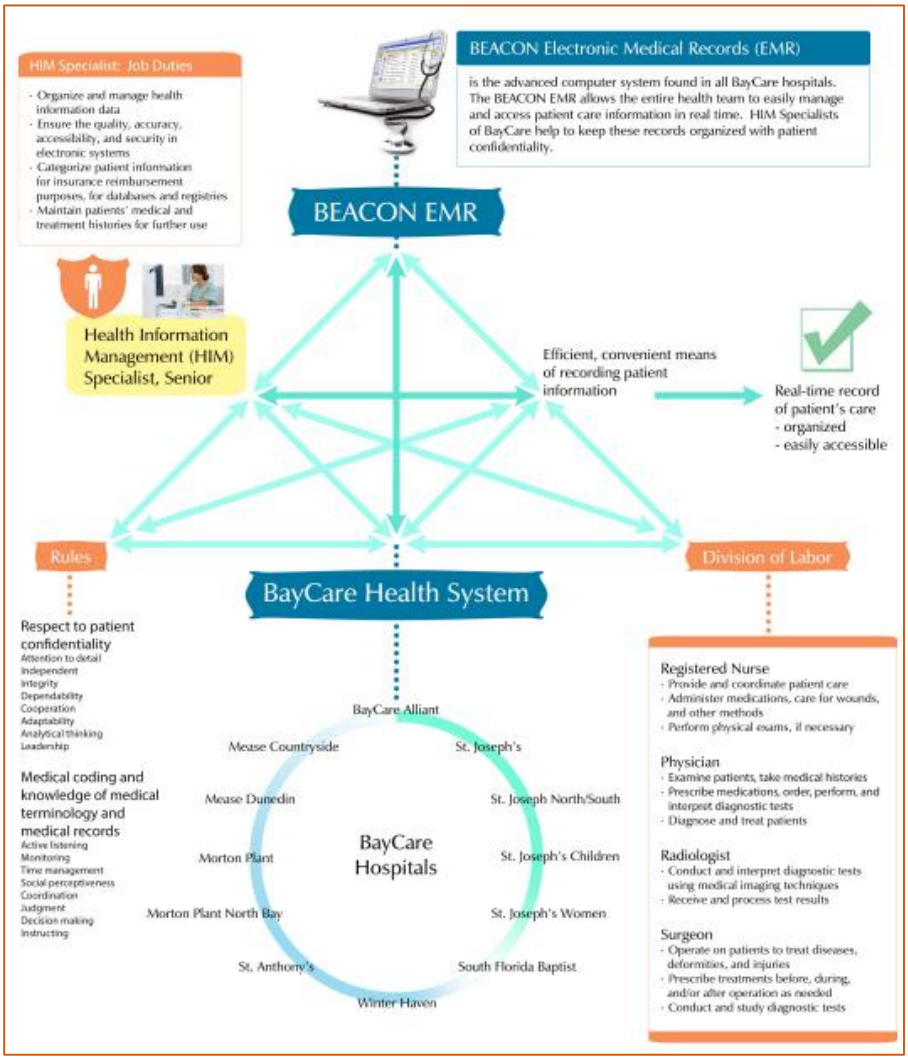


Figure 4. Workplace Analysis Report: Activity System

Students examined their activity systems to determine what format would be best suited for the activity they were interested in pursuing. For Health Information and Technology, the activity

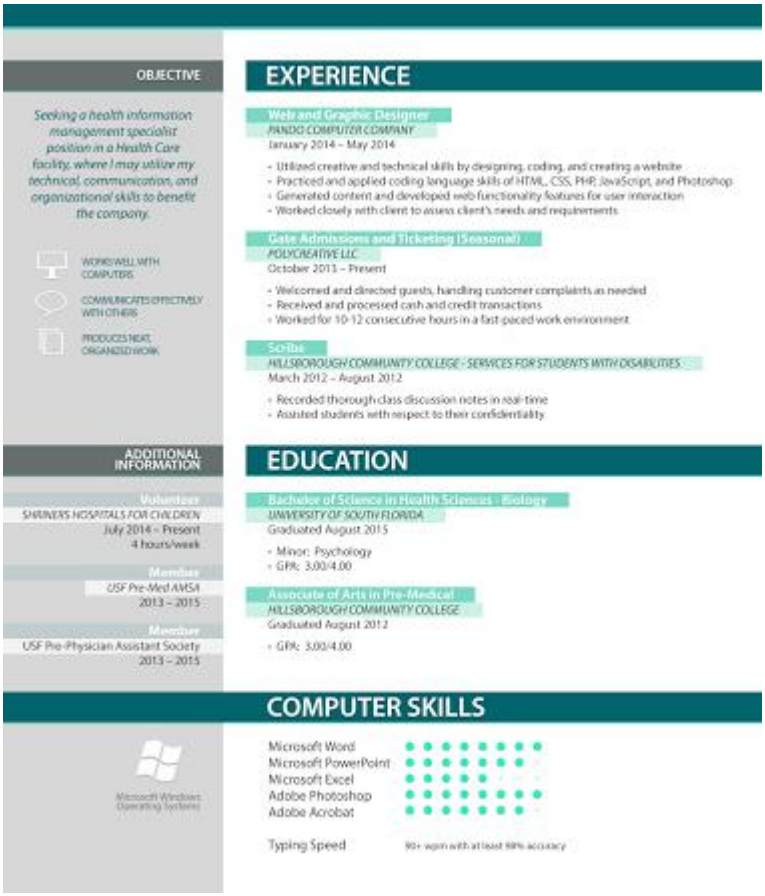


Figure 5. Infographic Resume

system emphasized technology. Therefore, students in the group created infographic resumes to include with their traditional documents (see Figure 5). Students explained why they used various formats for their remediations, and Health Information and Technology successfully identified the technological theme running through the activity system. After the resume remediation production, students had to reflect on the remediation as if they were potential employers. To decrease bias, a different group had to examine the resume remediations of another group to determine the effectiveness of the texts (see Table 3).

Table 3. Human Resource: Employment Teams

Human Resources Team	**Applicant Group**
1. Aging Health	1. Health Management
2. Biological	2. Aging Health
3. Health Information and Technology	3. Biological
4. Health Management	4. Social and Behavioral
5. Social and Behavioral	5. Health Information and Technology

The human resources team had to determine which individual in the applicant group it would invite for an interview based on the company's requirements. In an invitation letter, the human resources team explained why the resume remediation was effective and how the document correlated to the needs of the company. The human resources team explained why other applicants' resume remediations were not as effective and provided recommendations for future success. However, for the human resource team to successfully choose an applicant for an interview, it had to thoroughly analyze the workplace analysis report and activity systems of the applicant group.

Project Deliverables. After the group submitted all the Employment Project deliverables, I transcribed corresponding information into the Eight-Step-Model below from the Workplace Analysis Report and other deliverables (See Table 4). Health Information and Technology successfully identified and analyzed all components of an activity system in order to create effective employment documents. However, students were apprehensive about creating activity systems because they did not fully understand their scope.

Table 4. Employment Project: Eight-Step-Model for Deliverables

Activity of interest	What sort of activity is the participant interested in?	Obtaining a job in health sciences, Health Information and Technology
Objectives	Why is the activity taking place?	BayCare needs an efficient, convenient means of recording patient information
Subjects	Who is involved in carrying out this activity?	• Health Information Management (HIM) Specialist, Senior • Human Resources: Employment Team
Tools	By what means are the subjects performing this activity?	BEACON Electronic Medical Records (EMR)
Rules and Regulations	Are there any cultural norms, rules, regulations governing the performance of this activity?	• Patient confidentiality • Medical coding • Knowledge of medical terminology and medical records
Division of Labor	Who is responsible for what, when carrying out activity, and how are the roles organized?	• Registered Nurse • Physician • Radiologist • Surgeon
Community	What is the environment in which this activity is carried out?	• BayCare Hospitals (12) • Florida
Outcome	What is the desired outcome for carrying out this activity?	Work at BayCare as an HIM Specialist by creating effective employment documents to demonstrate technical skills: Resume Infographic

As students started constructing their visual activity systems for their organizations, they were able to better understand their positions and companies. As a result, students' employment documents were tailored accordingly. Other groups with activity systems illustrating an emphasis on verbal communication created video resumes, while groups with activity systems indicting a need for personalized activities for patients created Pinterest boards. The more information groups included in the activity system, the more detail they put into their employment

documents. The effectiveness of the group's genre choices reflected their understanding of rhetorical inquiry.

Participation. In order to gauge the participation of students working on the project, I gathered research questionnaires, classroom observations, and team minutes. After each project, I transcribed the information into an Eight-Step-Model. The data collection from Health Information Technology is listed below (See Table 5).

Table 5. Employment Project: Eight-Step-Model for Participation

Activity of interest	What sort of activity is the participant interested in?	Student interaction with the course material and team members for the Employment Project
Objectives	Why is the activity taking place?	To determine agency and participation of students
Subjects	Who is involved in carrying out this activity?	• Students ○ Health Information and Technology
Tools	By what means are the subjects performing this activity?	• Classroom observations • Questionnaires • Team Minutes

Rules and Regulations	Are there any cultural norms, rules, regulations governing the performance of this activity?	• Health Sciences Degree
		• Position in Florida
		• Deliverables
		  ○ Workplace Analysis Report
		  ○ Resume and Cover Letter
		  ○ Resume Remediation and Analysis
		  ○ Human Resources: Employment Team
		  ○ Team Minutes
		  ○ Reflective Memo/Research Questionnaires

Table 5 (Continued) Employment Project: Eight-Step-Model for Participation

Division of Labor	Who is responsible for what, when carrying out activity, and how are the roles organized?	• Student A- Research and Timeline. HR-Wrote 1 letter • Student B- Research and Organization. HR- Wrote 1 letter • Student C- Research and Editing. HR- Wrote 1 letter

		• Student D- Research, Design, and Submission. HR- Wrote 2 letters
		  ○ All students worked during class.
		  ○ Student D helped another group with formatting and word processing questions.
		  ○ Student D became the team leader.
		• Students A, B, and C openly praised student D for taking the leadership role.

	What is the environment in which this activity is carried out?	• Primarily in the classroom
Outcome	What is the desired outcome for carrying out this activity?	• Although students evenly distributed work in the classroom, student D took on the most work outside of the classroom. • Students C and D utilized Canvas group page to relay information. • All students had a positive reaction to the employment project. Students C and D believed the workplace analysis report was most beneficial, but enjoyed the resume remediation. Student B enjoyed the Resume Remediation, while student A enjoyed receiving feedback via the HR assignment and instructor. • Student A and D came to office hours. • Student A and D expressed interest in being able to choose their remediation genre.

Students C and D in Health Information and Technology placed more emphasis on the workplace analysis report, which included the activity system, than the other two members. Students C and D actively engaged on their Canvas group pages and were constantly posing questions to the other members. All group members discussed material during class, but one

member, student B, seemed uninterested during the project, but provided a positive reaction to the resume remediation in the research questionnaire.

Most students believed the workplace analysis report was the most beneficial component of the employment project. However, a majority of students showed high levels of engagement and agency during the Human Resources: Employment Team assignment. Students were excited to view others' resume remediations and took the time to openly discuss the effectiveness of each remediation they viewed. Without being prompted, students researched examples of acceptance and rejection letters to aid in their understandings of the assignment. Each group experimented with document design, and the final texts resulted in work students were willing to share.

Communication Technologies Project

The Communications Technologies Project was an extension of the Employment Project. I asked students to consider all communication technologies used in their employment positions and/or in the organizations they chose from the Employment Project. Students found these communication technologies by researching via the internet and calling their respective companies directly. Health Information and Technology created an activity system for all the communication technologies available at BayCare. The group took the time to elaborate, color coordinate, and examine each and every communication technology. After creating the visual collective activity system, the group discovered a communication error resulting from the sheer number of interactions between the patients and physicians. As a result, the group developed a feasible solution specific to BayCare. Health Information and Technology designed a portable notification and priority system:

> The incorporation of the portable NAP (Notification and Priority) system eliminates the time it takes for people within the divisions of labor to update and notify each other on a

patient's health information. Often enough, patient history, current treatments, and diagnosis'[*sic*] are entered incorrectly or not entered at all because of the time it takes for a physician or nurse to travel to the designated area where they are expected to enter information into the EHR system after each encounter with a patient. (Health Information and Technology)

After the group determined a need for the portable notification and priority system at BayCare, Health Information and Technology pitched the idea. The group completed an extensive amount of research and designed a sample to include in the Elevator Pitch (See Figure 6), which was appropriately tailored to BayCare representatives. After presenting the pitch, another group in the class examined Health Information and Technology's research report in order to reflect on the effectiveness of the portable notification and priority system and decided the solution was not only practicable, but providing a prototype of the technology in the handout demonstrated ingenuity.

Figure 6. Elevator Pitch Handout

Project Deliverables. After the group submitted all Communication Technologies Project deliverables, I transcribed corresponding information into the Eight-Step-Model from the activity system and other deliverables (See Table 6). The group successfully identified and analyzed numerous communication technologies available at BayCare. As a result, Health Information and Technology had a clear and broad overview of the activities examined. Thus,

the group located a problem discovered via the activity system and proposed a new portable software to help alleviate the communication technologies issue.

Table 6. Communication Technologies: Eight-Step-Model for Deliverables

Activity of interest	What sort of activity is the participant interested in?	Examining all communication technologies BayCare utilizes • Stationary computer stations
Objectives	Why is the activity taking place?	Health Information Technology wants to improve communication practices at BayCare Improve workplace efficiency and aid in patient well-being.
Subjects	Who is involved in carrying out this activity?	• Receptionist • Nurse • Physician

Tools	By what means are the subjects performing this activity?	• Computers
		  ○ BEACON EMR
		  ○ Websites and Social Media
		  ○ Instant Messaging
		  ○ E-mail
		• Telephones
		  ○ Voicemail
		  ○ Call back services
		  ○ SMS/Text Messaging
		• Paper
		  ○ Fax machine
		  ○ Files and folders
		  ○ Patient applications and forms
		  ○ Memos and announcements
		  ○ Postal services
		• Notice Boards and Screens
		  ○ Alert Systems
		  ○ Televisions
		  ○ Bulletin Board
		• Communication Devices
		  ○ Intercom system
		  ○ Walkie Talkies
		• Medical readings
		  ○ Diagnostic exams
		  ○ Prescription medications
		  ○ Laboratory tests

Table 6 (Continued) Communication Technologies: Eight-Step-Model for Deliverables

Rules and Regulations	Are there any cultural norms, rules, regulations governing the performance of this activity?	• Patient confidentiality • Medical coding • Knowledge of medical terminology and medical records
Division of Labor	Who is responsible for what, when carrying out activity, and how are the roles organized?	• Patient • Receptionist • Nurse • Physician
Community	What is the environment in which this activity is carried out?	• Communication within the company • Communication with patients • Communication outside of the company • Sorting information
Outcome	What is the desired outcome for carrying out this activity?	Create more efficient communication practices at BayCare via a portable notification and priority system Evaluation team determined the group's solution was effective and creative.

Participation. In order to gauge the participation of students working on the Communication Technologies Project I gathered research questionnaires, classroom observations, and team minutes. After each project, I transcribed the information into an Eight-Step-Model. The data collection from Health Information Technology is listed below (See Table 7).

Table 7. Communication Technologies Project: Eight-Step-Model for Participation

Activity of interest	What sort of activity is the participant interested in?	Students' interaction with the course material and team members for the Communication Technologies Project
Objectives	Why is the activity taking place?	To determine agency and participation of students

Table 7 (Continued) Communication Technologies Project: Eight-Step-Model for Participation

Subjects	Who is involved in carrying out this activity?	Health Information and Technology
Tools	By what means are the subjects performing this activity?	• Classroom observations • Questionnaires • Team Minutes

Rules and Regulations	Are there any cultural norms, rules, regulations governing the performance of this activity?	• Deliverables
		  ○ Activity System
		  ○ Corporate Research Report
		  ○ Elevator Pitch
		  ○ Community Connections and Reflections
		  ○ Team Minutes
		  ○ Reflective Memo/Research Questionnaire

Division of Labor	Who is responsible for what, when carrying out activity, and how are the roles organized?	• Student A- Worked on activity system • Student B- Worked on activity system • Student C- Worked on activity system and communicated with student D • Student D- Worked on activity system and the document design of all documents
Community	What is the environment in which this activity is carried out?	• Primarily in the classroom
Outcome	What is the desired outcome for carrying out this activity?	• All students in the group agreed the activity system was the most beneficial component of the project. • All students worked on the activity system and came to a group consensus regarding the project problem. • Student D completed the majority of the work for the Research Report and Elevator Pitch with some help from student C.

As stated earlier, other instructors who taught sections of this course followed a template which gave students communication technologies problems, and students were told to solve the issues. However, the goal of this research project was to help students become active agents of their own learning by encouraging students to discover problems for themselves. Using this new method, students struggled and complained they did not know what types of communication technologies their companies used and refused to do the required research to find those answers. The expected student struggles with the project reiterated Rice's point in *Distant Publics* that rhetorical inquiry is a difficult skill to learn. Most students did not know where to begin, but instructors need to teach students this technique in order to produce critical thinkers and problem solvers.

Despite the struggle, students continued to create visual activity systems for the Communication Technologies Project. All of the students in Health Information Technology believed activity systems were the most beneficial component of the project because the systems allowed them to visualize the problems. Student D said:

> The collective activity system forced us to dissect the company in great detail and single out any and every possible area where there may be an issue in the communication technology. In doing so, we were able to physically see how every area of our company affects the other. In turn, seeing this made it effortless to see where the biggest problem lied [*sic*] and tackling which solution would have the most impact on the company. I would deem this activity as the most beneficial in the entire project because without it our group would have only taken general problems or problems that don't have a great influence on the company into consideration. (Student D)

For student D, the construction of the activity systems reiterated the complexities of the spaces she was examining. The technique provided student D with a method for organizing non-linear information and promoted a deeper understanding of the space's composition. Surprisingly, student B noted, "[The activity system] was a great way for finding the problem, but not actually solving the issue" (Student B). Student B's observation is important because the groups appeared uninterested at this point in the project. Two of the students in Health Information and Technology stopped contributing work after they discovered the problem. Despite the lack of collaboration, students C and D completed the project and met with me to discuss possible courses of action within the group. During the meeting, the students came to their own conclusions; active encouragement and a change in leadership roles could improve the engagement of the other two students in the group.

Although this project seems relevant to students because they should be aware of the communication technologies they will be using in their desired employment positions, most students were adamant this project did not correlate to their lives. As stated previously, I required students to find a job in Health Sciences, specifically within their concentrations. Students were even told to choose positions and organizations they were interested in pursuing. Problems with finding a position in Health Sciences did not arise during the Employment Project, but students communicated issues during project two because I asked them to analyze their positions and companies in more detail. Students believed the Communication Technologies Project was not relevant to them because they would not be pursuing jobs in Health Sciences. Instead, they would further their education in a Physician Assistant program or Physical Therapy school, and Health Sciences was simply a stepping stone for future aspirations. Unfortunately, the complaints students made demonstrated a lack of understanding of their major. Nonetheless, I was obligated

to prepare students in Health Sciences with communication skills specific to fields in their major. I repeatedly informed students communication is a vital component for all jobs regardless of the position, organization, or field. I explained a comprehensive understanding of communication technologies would increase their efficiency in any workplace setting. However, the project still did not garner as much active participation as the first project and would need adjustments for future courses.

The recommendation most students made despite the primary objective of the course being on communication in the workplace was to place the emphasis on all technologies within their respective field rather than specifically on communication technologies. Students successfully argued they could still be effective communicators while discussing other technologies related to their chosen employment positions. Regardless of the limited interest in the subject matter, students still comprehended the value of constructing activity systems and understood the difficulties of inquiry as shown through their answers on the project questionnaires and classroom observations.

Case Project

Analyzing the case project was slightly more difficult because it was more expansive than the other two. I asked students to construct a visual activity system analyzing the entire case of opioids and pain management, which meant they created multiple activity systems. Health Information and Technology focused on four different activity systems: laws, pharmaceuticals, technologies, and addiction. After students had a clear understanding of the entire case, they shared their activity systems with the class via oral presentations. Although students shared the same information, each group organized its activity systems differently and focused on different activities. Afterwards, each group constructed a Textual Archive by considering how the case correlates with the group's employment organization. I adopted the Textual Archive deliverable

from Rice's deep map assignment. Instead of using Heat-Moon's *PrairyErth: A Deep Map*, I had students read sections from Latour's *Aramis: Or the Love of Technology*, a book written from various perspectives to tell a story. I told students to use Latour's book as a formatting guide. For this assignment, some students asked if they could combine a fictional story with factual information as an alternative to a creating a nonfictional piece. I agreed to their requests because students were limited in their abilities to uncover tangible information regarding their specific organizations. After some research, the Health Information and Technology group discovered a recent story about a nurse who was over-prescribing pain medication to patients, and the incident resulted in devastating consequences. The group took that story and applied the incident to the company, BayCare.

Project Deliverables. I transcribed the Textual Archive into the Eight-Step Model, which is shown below (See Table 8).

Table 8. Case Project: Eight-Step-Model for Deliverables

Activity of interest	What sort of activity is the participant interested in?	BayCare's connection to the case.
Objectives	Why is the activity taking place?	• Patient died from pain medication overdose.
Subjects	Who is involved in carrying out this activity?	• Patient • Nurse • Family • Doctor • Police • Coroner • Paramedics
Tools	By what means are the subjects performing this activity?	• Journal • Tweets • E-mail • Coroner's report • Police report • Interrogation records

Table 8 (Continued) Case Project: Eight-Step-Model for Deliverables

Rules and Regulations	Are there any cultural norms, rules, regulations governing the performance of this activity?	• Laws
		  ○ Federal
		  ○ State
		  ○ Local
		• Pharmaceuticals
		• Dosage

Division of Labor	Who is responsible for what, when carrying out activity, and how are the roles organized?	• Patient
		  ○ Admitted to hospital for intense pain due to spinal osteoarthritis
		• Doctor
		  ○ Prescribed prescription medication
		• Nurse
		  ○ Monitored patient
		• Police
		  ○ Investigated death of patient
		• Coroner
		  ○ Identified cause of death

Community	What is the environment in which this activity is carried out?	• BayCare ○ St. Joseph's Hospital in Tampa, Florida
Outcome	What is the desired outcome for carrying out this activity?	• Stop similar incidents from occurring by making patients more aware of prescription side effects and dosage amounts via personalized brochures for each medication.

Health Information and Technology developed one of the most comprehensive activity systems out of both class sections. Each student in the group created an activity system pertaining to the case and connected all the systems together. Since the group created an expansive activity system, members had a clear understanding of the entire case and were able to determine how their organization, BayCare, fit into the project. The group then created a detailed and creative Textual Archive demonstrating the various perspectives within BayCare, which was a fictional situation based on factual information. In the Textual Archive, the students described a story about a patient who had been admitted for severe pain into one of BayCare's hospitals. The

doctor prescribed the patient pain medication, and the nurses were there to monitor the patient. Unfortunately, the patient was found dead, and the coroner discovered the deceased patient had too much pain medication in his system. Police investigated the death and uncovered a horrifying truth about a nurse who took care of the patient. The group created archival information such as e-mails (See Figure 7), twitter comments (See Figure 8), journal entries (See Figure 9), a coroner's report (See Figure 10), and a police interrogation transcript to help tell the story. Each component the group created was rhetorically situated within the larger text, and a tremendous amount of detail went into the design of the Textual Archive. After creating the deliverable, Health Information and Technology discovered the patient should have been informed about the medication he was being prescribed. Therefore, the group created a policy requiring doctors and nurses to give patients information regarding their medications via a more accessible language and format.

The Textual Archive was one of the most rhetorically effective documents students from all groups produced during the semester. Another group wrote a Textual Archive using the perspectives from addicts, family members, and employees from Unity, a drug rehabilitation facility. Since their organization was dependent on the rehabilitation of addicts, the group discovered their company did not offer outside resources to aid in the recovery of its patients who leave the facility. To help patients from relapsing, the group created a free mobile application for patients to use. The application offered inspirational quotes, event reminders, a blog space, and access to a 24 hour hotline. To uncover problems, groups adequately traced the activities needed to develop and analyze each perspective in order to propose and create solutions specific to their organization’s needs. Students’ extensive research and understanding of the activities they were analyzing increased their rhetorical awareness and resulted in well-

designed texts. The Textual Archive was one of the most rhetorically effective documents students from all groups produced during the semester.

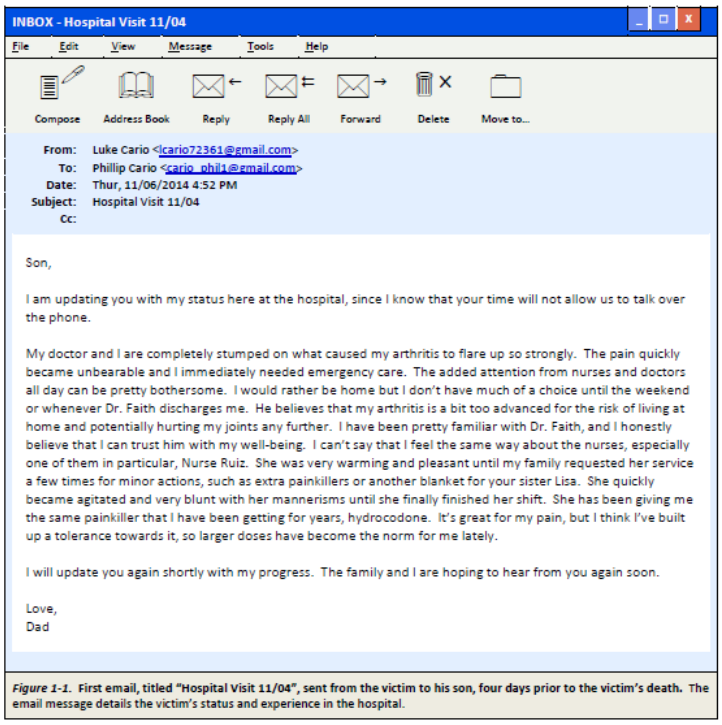


Figure 7. Textual Archive: E-mail

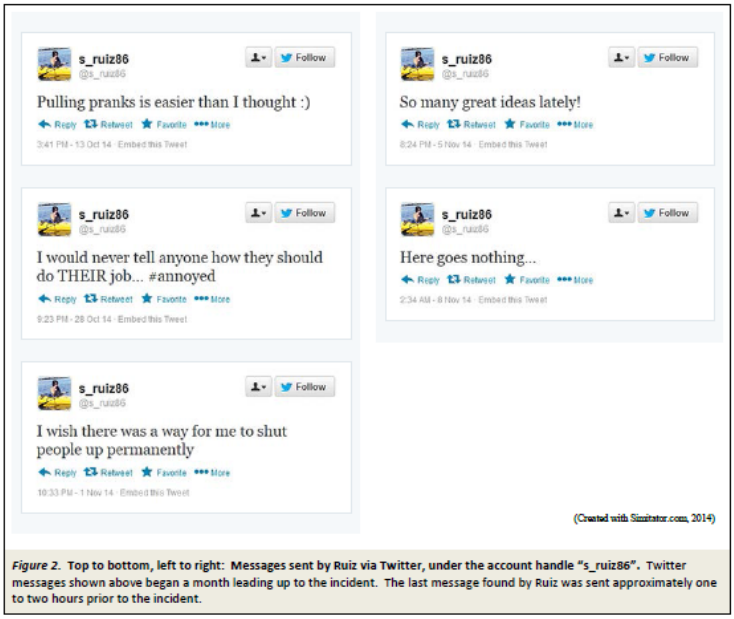


Figure 8. Textual Archive: Twitter Feed

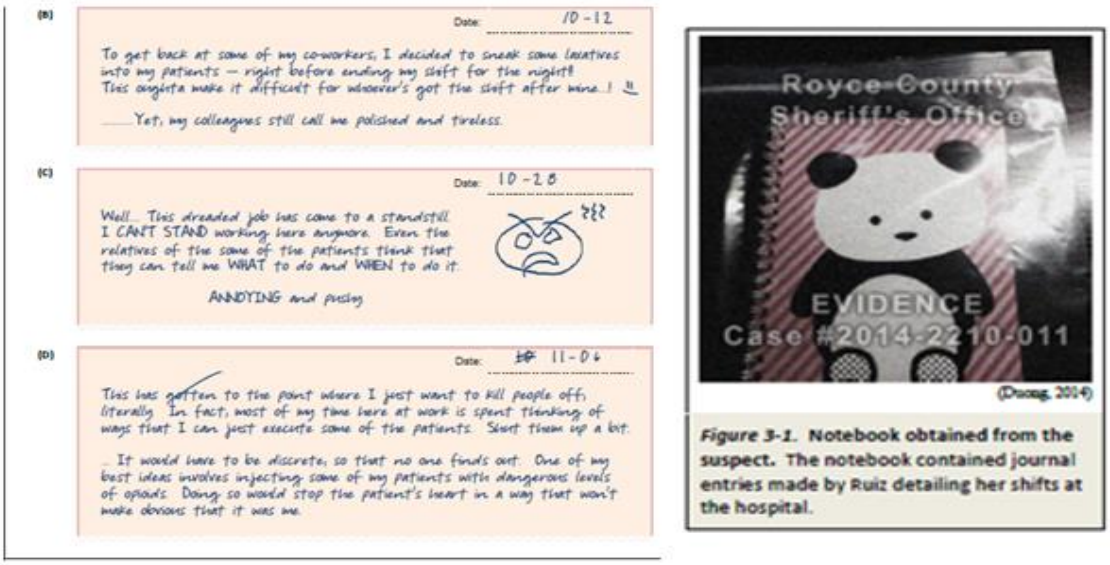
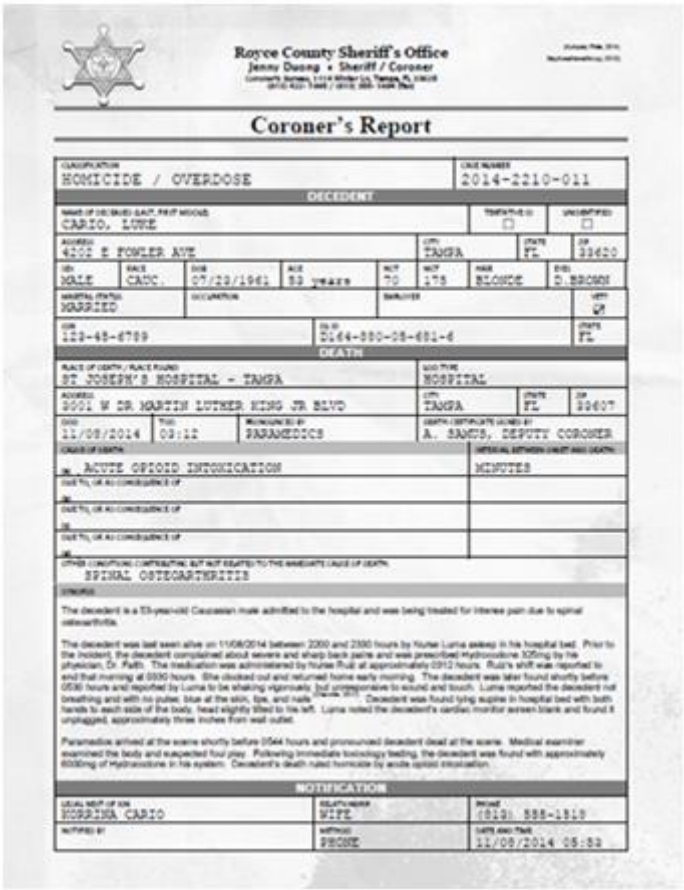


Figure 3-1. **Notebook obtained from the suspect. The notebook contained journal entries made by Ruiz detailing her shifts at the hospital.**

Figure 9. Textual Archive: Journal Entries



Royce County Sheriff's Office
Jenny Duong • Sheriff / Coroner

Coroner's Report

HOMICIDE / OVERDOSE	2014-2210-011

DECEDENT

CARIO, LUNA							
4202 E FOWLER AVE				TAMPA	FL	33620	
MALE	CAUC.	07/28/1961	53 years	70	175	BLONDE	D. BROWN
MARRIED							☑
123-45-6789		D164-880-08-681-6					FL

DEATH

ST JOSEPH'S HOSPITAL - TAMPA			HOSPITAL		
3001 W DR MARTIN LUTHER KING JR BLVD			TAMPA	FL	33607
11/08/2014	09:12	PARAMEDICS	A. SAMIS, DEPUTY CORONER		

a. ACUTE OPIOID INTOXICATION	MINUTES
b.	
c.	
d.	

OTHER CONDITIONS CONTRIBUTING BUT NOT RELATED TO THE IMMEDIATE CAUSE OF DEATH:
SPINAL OSTEOARTHRITIS

The decedent is a 53-year-old Caucasian male admitted to the hospital and was being treated for intense pain due to spinal osteoarthritis.

The decedent was last seen alive on 11/08/2014 between 2200 and 2300 hours by Nurse Luna asleep in his hospital bed. Prior to the incident, the decedent complained about severe and sharp back pains and was prescribed Hydrocodone 325mg by his physician, Dr. Faith. The medication was administered by Nurse Ruiz at approximately 0912 hours. Ruiz's shift was reported to end that morning at 0930 hours. She clocked out and returned home early morning. The decedent was later found shortly before 0530 hours and reported by Luna to be shaking vigorously, but unresponsive to sound and touch. Luna reported the decedent not breathing and with no pulse, blue at the skin, lips, and nails. Decedent was found lying supine in hospital bed with both hands to each side of the body, head slightly tilted to his left. Luna noted the decedent's cardiac monitor screen blank and found it unplugged, approximately three inches from wall outlet.

Paramedics arrived at the scene shortly before 0544 hours and pronounced decedent dead at the scene. Medical examiner examined the body and suspected foul play. Following immediate toxicology testing, the decedent was found with approximately 600mg of Hydrocodone in his system. Decedent's death ruled homicide by acute opioid intoxication.

NOTIFICATION

NORRINA CARIO	WIFE	(813) 555-1819
	PHONE	11/08/2014 05:53

Figure 10. Textual Archive: Coroner's Report

Participation. In order to gauge the participation of students working on the Case Project, I gather research questionnaires, classroom observations, and team minutes. After the project concluded, I transcribed relevant information into an Eight-Step-Model. The data collection from Health Information Technology is listed below (See Table 9).

Table 9. Case Project: Eight-Step-Model for Participation

Activity of interest	What sort of activity is the participant interested in?	Student interaction with the project and other group members.
Objectives	Why is the activity taking place?	To determine agency and participation of students
Subjects	Who is involved in carrying out this activity?	• Students ○ Health Information and Technology
Tools	By what means are the subjects performing this activity?	• Classroom observations • Questionnaires • Team Minutes

Rules and Regulations	Are there any cultural norms, rules, regulations governing the performance of this activity?	• Deliverables
		  ○ Activity System
		  ○ Oral Presentation
		  ○ Textual Archive
		  ○ Proposal
		  ○ Team Minutes
		  ○ Reflective Memo/Research Questionnaire

Division of Labor	Who is responsible for what, when carrying out activity, and how are the roles organized?	• Student A- Created the activity system for addiction and the twitter archive • Student B- Created the activity system for laws and e-mail evidence • Student C- Created the activity system for pharmaceuticals and the police report • Student D- Created the activity system for technology and the coroner's report • All members put information on the Canvas group page and contributed the proposal and brochure.

Table 9 (Continued) Case Project: Eight-Step-Model for Participation

Community	What is the environment in which this activity is carried out?	• Primarily in the classroom
Outcome	What is the desired outcome for carrying out this activity?	• Student A had a personal connection to the case project because she lived in the area the documentary discusses • All four members researched information during class • Members actively engaged with other groups • Members were excited to share information with the class and with me • Oral presentation: Popplet was not working, but students were able to give their presentations because they knew the topic so well

As stated previously, students in Health Information and Technology were disengaged in project two. However, the Case Project revitalized student engagement and participation. I showed *The Oxycontin Express*, a documentary demonstrating the pill mill epidemic in Florida, to introduce the project. After the documentary, students asked questions about the case and discussed the different perspectives shown in the film. Student A, from Health Information and Technology, even admitted she was from the county the documentary discussed and said she was interested in working on this project.

As shown in the Eight-Step-Model, all members from Health Information and Technology contributed to the Case Project. The work was evenly distributed, and all members spent additional time outside of class working on the project. All members also contributed information via their Canvas group pages and wanted to share information with the class. During the oral presentation, Health Information Technology's software was not working. Regardless of

the technological malfunction, all members were able to present the information on their activity systems and admitted they were able to finish the presentation because they knew their activity system so well.

Not surprisingly, students in the course had personal connections to the Case Project. One student was a cancer patient who used opioids for pain management, and another had a family member who suffered from pain medication addiction. However, Rice would disagree with allowing personal feelings to enter into the conversations. Rice (2013) questions, "Rather than seeing ourselves as subjects who could only respond from feeling, could we not also be subjects who discover and uncover connections, linkages, and relations within and across these texts?" (p. 189). Surprisingly, one student noted her personal biases:

> What I initially viewed as reality (or, the truth) was often based off of my own personal bias. I learned that there was information that in the past, I may have ignored or not discovered, which contradicted what I thought was reality. The collective activity systems, and the research required to complete them, forced me to move outside my personal thoughts, which resulted in an expansion of my knowledge on the topic at hand. (Student 11)

However, the students who had personal feelings towards to the case were the ones who openly shared their connections with the class and/or their groups without being prompted. Personal investment increased agency, which is why activity systems need to be an integral part of students' experiences. Therefore, it is problematic to completely divorce personal feelings and investments from rhetorical inquiry when the purpose of the theoretical framework is to increase student agency. Instead, instructors should teach students how to navigate both processes. As the student stated above, she began the process with prior notions, but as she developed the activity

systems, her notions were transformed. Thus, beginning with personal feelings is an effective strategy as long as rhetorical inquiry helps students expand and/or change their ideas.

Findings

The outcome-based deliverables students produced as a result of utilizing activity systems were successful and rhetorically effective. Students who took the time to develop their activity systems had a better understanding of their topics, were able to find problems in the system, and proposed plausible solutions by tailoring texts to their intended audiences, while reflecting on the effectiveness of their ideas as well as examining their own processes. However, this does not mean students did not struggle with this course dynamic. Students often complained about the workload and were, at first, confused by the visual activity systems, but found the construction of the systems beneficial. According to one student:

> Collective activity systems have presented themselves as a necessary evil. They are not fun to compile, and are quite tedious, but the outcome certainly justifies the means. While the task can be time consuming, the end product helps complete and analyze works for other projects, while encouraging us to view issues through the prism of others' experiences and perspectives. They improve one's ability to think critically and draw connections between seemingly unrelated concepts. (Student 12)

Another student said she had a love/hate relationship with activity systems because she could continuously add information, but she discovered new concepts to add to other deliverables when she expanded the systems.

However, not all students understood the design or purpose of activity systems. Fortunately, students who were not as confident with the method had other peers in their groups who could help them develop a clearer understanding of activity systems, while sorting through

points of inquiry as a collaborative team. One student informed me, "I don't know what I am doing or what I am going to find, but the more connections I draw, the more sense it's starting to make" (Student 7). Therefore, most students were willing to delve into these networks, even if they were hesitant about the actual construction of the visual system. Out of ten groups, one group did not fully grasp the fundamental principles of rhetorical inquiry or how to construct an expansive activity system and consistently produced subpar work in the course. Clay Spinuzzi (2014) argues, uncovering the problem is not difficult for technical communicators, rather discovering solutions is the challenge. However, this group demonstrated difficulty executing course requirements because of an unwillingness and inability to uncover issues. Individuals in this group wanted answers without having a thorough understanding of the activity they were examining. Two of the three group members came to office hours and admitted they were not comfortable with this type of course design and workload. Despite constant encouragement and feedback, the group did not take the time to develop activity systems for any of the projects and did not produce rhetorically effective documents suitable for the course.

Unfortunately, this group revealed significant struggles students encounter with the method I used in this research project because previous education has not prepared them to become active participants in their own learning. By the time students reach higher education, specifically in Health Sciences, they are accustomed to lecture-based courses and are conditioned to follow specific patterns. In the current traditional model of education, students are told which problems to solve and how to resolve the issues. However, the current structure is not practical for helping students translate broader skills necessary for success in other educational or professional settings. Additionally, the current educational framework does not facilitate critical engagement.

After completing the inquiry-based course in this research study, I asked students to rate their overall engagement in the course, a ten indicating actively engaged and a zero signifying not engaged. The average response was an eight and the most frequent reply was a ten (see Figure 11). Unfortunately, students did not quantify their engagement until the end of the course.

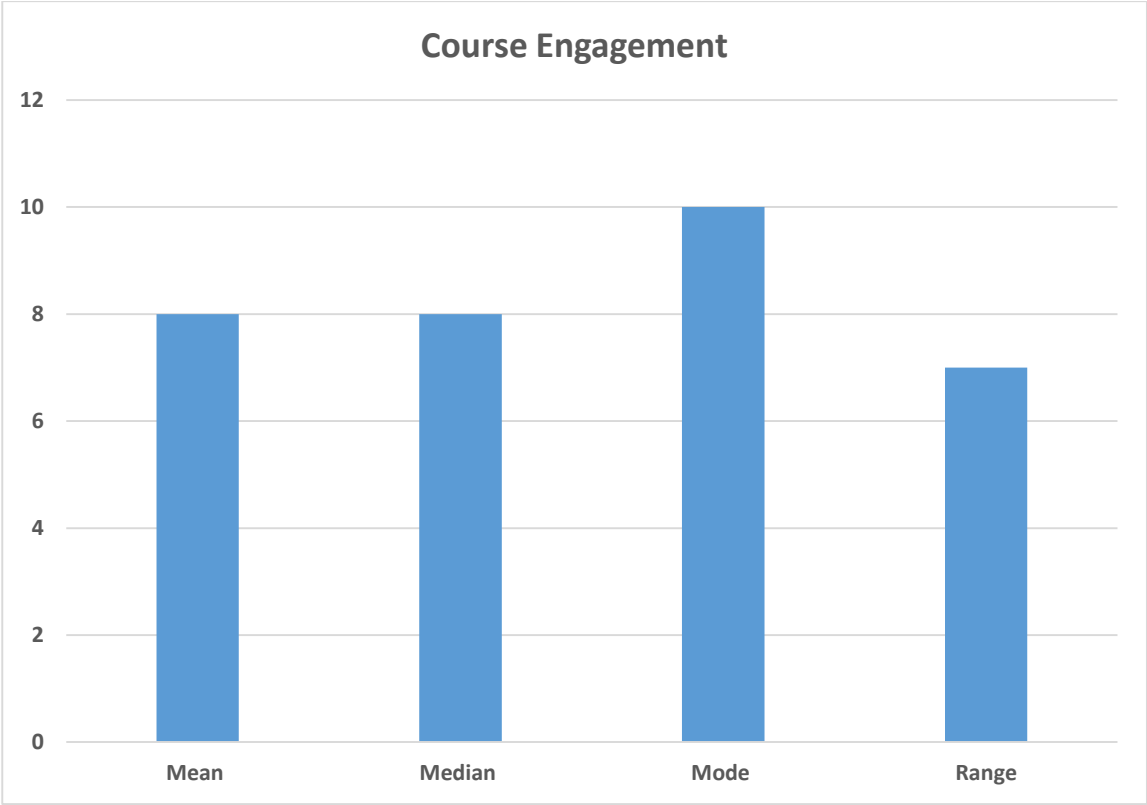


Figure 11. Course Engagement

Quantifying their engagement throughout the semester would have yielded more measurable results, but students provided written and verbal responses to aid in qualitative evaluations. Based on classroom observations and written responses, students' understanding of rhetorical inquiry increased throughout the semester, but their overall interest level and participation varied with each project. Students believed the Employment Project was the most beneficial, but the Case Project was the most engaging (see Figure 12).

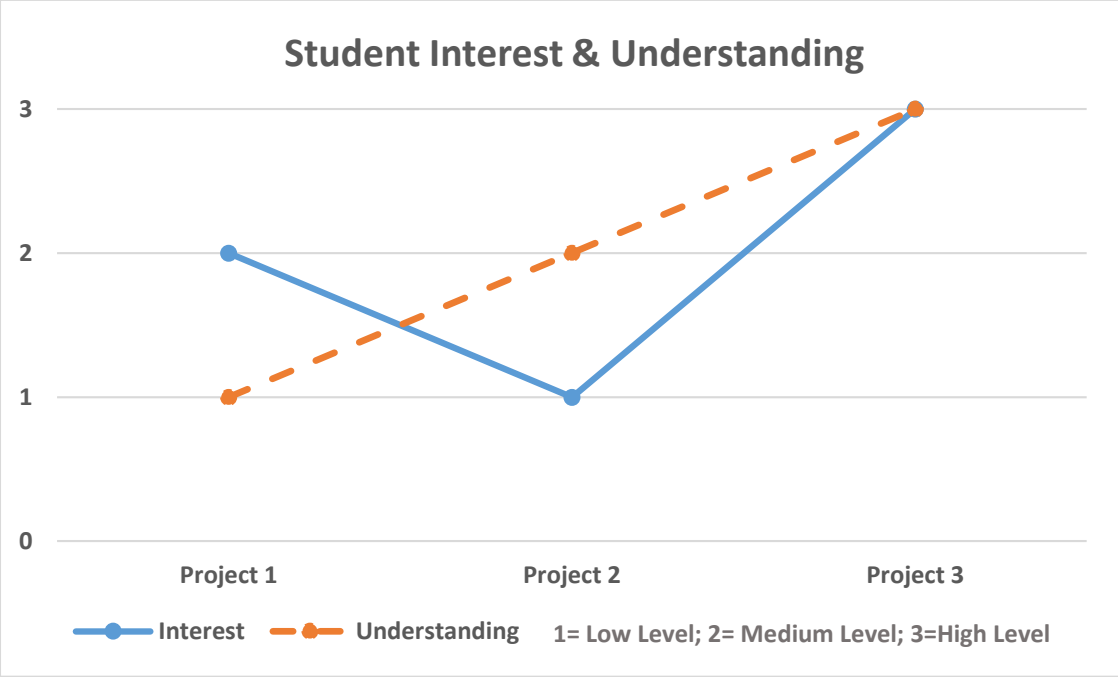


Figure 12. Student Interest and Understanding

Some students chose not to participate in the research project. Students did not provide explanations for why they did not join the study, but their responses would have provided valuable insight on their perspectives regarding the curriculum design. Regardless, all students in sections A and B had to learn a new skill which required a significant amount of work and patience. As this study demonstrates (See Table 10), instructors have an obligation to teach students rhetorical inquiry via activity systems, even in professional and technical communication courses such as Health Sciences, because inquiry-based curriculum encourages students to uncover issues for themselves. Students become active agents in choosing what information is vital for their own personal and professional development as well as learning to write themselves *in* to important conversations within their fields.

Table 10. Professional and Technical Communication for Health Sciences: Eight-Step-Model

Activity of interest	What sort of activity is the participant interested in?	Rhetorical inquiry via activity systems
Objectives	Why is the activity taking place?	To determine if rhetorical inquiry can be implemented into PTC for Health Sciences
Subjects	Who is involved in carrying out this activity?	PTC for Health Sciences (Section A and B)
Tools	By what means are the subjects performing this activity?	• Rhetorical Inquiry ○ activity systems • Employment Project • Communication Technologies Project • Case Project

Rules and Regulations	Are there any cultural norms, rules, regulations governing the performance of this activity?	• PTC learning objective and outcomes
		• Three projects
		  ○ Employment Project
		  ○ Communication Technologies Project
		  ○ Case Project
		• Participants construct activity systems

Division of Labor	Who is responsible for what when carrying out activity, and how are the roles organized?	• Instructor
		• Students
		  ○ Concentrations
		  ▪ Biological
		  ▪ Health Management
		  ▪ Social and Behavioral
		  ▪ Aging Health
		  ▪ Health Information Technology

Community	What is the environment in which this activity is carried out?	• University of South Florida ○ Computer lab classroom
Outcome	What is the desired outcome for carrying out this activity?	• Effective outcome-based deliverables • Rhetorical inquiry • Participatory learning • Student Agency

Further Discussions

Replication

According to Makel and Plucker (2014), "If education research is to be relied upon to develop sound policy and practice, then conducting replications on important findings is essential to moving toward a more reliable and trustworthy understanding of educational environments" (p. 313). Although the replication of this project is necessary for the reasons Makel and Plucker stated, it is important to note I designed this research project around formative interventions. Unlike design experiments where "the aim is to control all the variables and to achieve a standardized solution module" formative interventions do not always produce nicely linear outcomes because "the shape of the intervention is eventually up to the participants" (Engeström, 2011, p. 606). Consequently, formative interventions "generate new concepts that may be used in other settings as frames for the design on locally appropriate new solutions" (Engeström, 2011, p. 607). Therefore, the concepts I provided in this research project, such as activity systems analysis, should be viewed as a general framework which can be applied to other educational setting and workplaces.

Additionally, it is important to note experts like Yamagata-Lynch (2010) argue the aim of activity systems analysis is "particularization and not grand generalizations" (p. 32). Yamagata-Lynch's observations are accurate. The outcomes each group formed via activity systems analysis were specific to each group. For example, the solution Health Information and Technology formed in section A was not the same resolution Health Information and

Technology developed in section B. The "action research oriented approach intended to bring about change in practice," (p. 62) which was different for each case.

Nevertheless, just as the design of the research project was twofold, the purposes for activity systems analysis can be as well. In order to determine if rhetorical inquiry increased agency and encouraged a participatory learning environment, "the purpose for using an activity systems analytical method was to achieve a descriptive analysis" of participants' behavior and responses to the curriculum design (p. 62). In this case, the aim was not necessarily to change practice, but to determine if the outcomes were consistent with results from similar projects. In *Rhetorics, Poetics, and Cultures: Reconfiguring College English Studies*, Berlin (2003) states, "successful use of the problem posing and dialogic method usually leads to increasing participation by students" (p. 112). In *Distant Publics*, Rice also claims rhetorical inquiry teaches critical engagement. The descriptive analysis from this study revealed consistent results. Therefore, if rhetorical inquiry is implemented in other academic or professional settings, the outcomes would be similar.

Professional and Technical Communication Courses.

The University of South Florida provides three courses in Professional and Technical Communication: Communication for Engineers, Professional Writing, and Technical Writing for Health Sciences. As data showed, I was able to implement rhetorical inquiry into Technical Writing for Health Sciences, and instructors should utilize the theoretical framework in the other two classes because the study yielded outcomes all three courses strive to achieve.

During the summer of 2014, the department of English created a curriculum development team to produce a more standardized curricula for all three professional and technical communication courses. Although some instructors might view the term standardization as a

negative concept, the consistency between classes supports more reliable evaluation practices and aids in course accreditation. As stated previously, I had to adhere to the course outcomes and learning objectives as well as implement three projects when developing this research study. Nevertheless, I was still able to successfully implement rhetorical inquiry via activity systems analysis under the requirements.

Technical Writing for Health Sciences. My recommendations for Technical Writing for Health Sciences would be to revise the project two framework by allowing students to focus on any technology or removing the Communications Technologies Project altogether. Since the project did not garner as much success and the methodological framework is time-consuming, I would suggest students spend more time on the Employment and Case Projects. Students would have more ability to examine their composition processes in more detail and learn how to use tools they might use in other courses or workplace settings.

STEM Courses

Although I am unfamiliar with course goals and learning outcomes in STEM courses, this study demonstrated the adaptability of rhetorical inquiry. Network tracing was not a practical methodology for approaching rhetorical inquiry in professional and technical communication courses. Thus, STEM teachers may find employing activity systems analysis as a more effective methodological approach because it encourages a change in practice. Nonetheless, STEM instructors can incorporate inquiry-based learning into their classes by utilizing methods that are more reflective of their fields in order to encourage student agency and produce a participatory learning environment.

Workplace Practice

In Technical Writing for Health Sciences, sections A and B, students learned how to navigate rhetorical inquiry via activity systems by examining workplace practices of companies they would like to work for upon completing their bachelor's degrees in Health Sciences. Although students found hypothetical problems for their chosen organizations, the theoretical framework is transferable to real workplace settings. Once students gain professional employment, they will need to complete job-specific tasks, and/or they will need to solve problems with patients and coworkers. Students must think critically and become active participants in order to accomplish key responsibilities within their employment positions. Rhetorical inquiry can help students navigate professional spaces by exposing the complex activities they will engage with on a daily basis.

Future Study. However, to determine if students utilize rhetorical inquiry in workplaces, I would like to develop an observational study of the students who have taken Technical Writing for Health Science, sections A and B. I would observe students in their professional positions to analyze how they approach job-specific tasks and issues as well as evaluate their thought processes behind their problem-solving strategies by using direct observations, interviews, questionnaires, and collecting any relevant documents. Students in Technical Writing for Health Sciences, sections A and B, would need to approve the additional research study, and their employment organizations would need to allow on-sight observations. Results from this observational study would yield essential information on whether or not students transfer rhetorical inquiry into professional settings. The additional research would also aid in the evaluation of the curriculum design used to promote rhetorical inquiry in Technical Writing for Health Sciences. The evaluation would help determine if the methodological framework used in

the course needs adjustments in order to facilitate the transfer of inquiry-based skills to workplace settings.

Significance

In order to be effective, rhetorical inquiry "must prompt and push deeper thinking; it must be powerful in the respect that it enables you to see in a new way- to see events, texts, processes, positions, and people in a way that deepens your understanding and leads to more productive action" (Porter, 2014, Conclusion, para. 1) The method needs "to be simple, memorable, and portable [so it can be] transferable across a wide variety of situations and contexts" (Conclusion, para. 1). We can use activity systems analysis as a way to expand our definition of rhetorical inquiry and as a method "for researchers and practitioners to extract the essence of complex data sets in a graphic model that they can communicate with others" (Yamagata-Lynch, 2010, p. x).

Rice is adamant resolution is not the final step in the process because networking invites further mutual exploration. Therefore, reflection and revision are important components of learning, and instructors need to remember learning does not stop. Students should continue questioning, embrace the complexity of networks, and use reflective practices in order to navigate within rhetorical spaces. Rhetorical inquiry encourages critical engagement and helps students avoid being exceptional public subjects. Instructors are responsible for being cultivators of curiosity and encouraging students to care about the world around them, which, according to Thomas Farrell, is the definition of rhetoric.

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Appendix A:

Employment Project Description

The Employment Project is intended to introduce you to the rhetorical and ethical nature of professional and technical writing. Professional documents need to be carefully tailored to a specific audience for an ethical purpose. Producing rhetorically aware documents require analysis and critical thinking. A resume, for instance, should not be a contextless list of accomplishments; rather it should be carefully tailored for a specific position at a particular company. This assignment gives you the opportunity to create rhetorically situated, ethical documents typically used for gaining employment.

You will research job advertisements in Florida and select a position in Health Sciences for which you are qualified. You will analyze the advertisements as well as the companies' websites to determine their rhetorical situations and create several deliverables clearly fitting this rhetorical purpose. You are expected to complete all research and compose each deliverable individually or with your assigned group. For this assignment, you will:

- Locate and discuss ethical issues within the field
- Apply and evaluate ethical considerations to a realistic professional scenario within the field
- Identify and explain current local and global discussions and trends within the field
- Describe and explain benefits of information literacy in relation to field of study
- Identify professional/technical genres, organizational strategies, and appropriate tone and style
- Describe the effect of tone, organization, and style in professional/technical communication while employing these principles appropriately in various writing situations
- Identify and differentiate conventions and genres in various professional/technical documents and professional presentations
- Identify audiences and analyze their perspectives while creating various professional/technical documents
- Operate current technologies in order to produce effective documents
- Recognize and explain basic visual design strategies
- Demonstrate audience and rhetorical awareness in visual design while creating professional/technical documents visually appealing to appropriate audiences

Course Objectives addressed by this project are to:

- Demonstrate ethical insight in issues of Health Science
- Develop a familiarity with current social cultural contexts for the field of Health Science
- Design and implement information literacy skills

- Apply and adapt professional/technical writing conventions, including genre, tone and style, for specific writing situations
- Utilize current technologies to compose professional/technical documents and oral presentations for multiple audiences and specific purposes
- Employ visual design strategies to produce rhetorically effective documents, data visualizations, and presentations

You will create the following deliverables for this project:

- Workplace Analysis Report
- Print Resume
- Print Cover Letter
- Resume Remediation and Analysis
- Human Resources: Employment Team
- Team Minutes
- Reflective Memo

Workplace Analysis Report (Group Assignment)

This document must contain the two content areas. 1) You must analyze the job advertisements and the companies' websites (including both content and visuals) to get an overall sense of the companies' ethics, environments, employee demographics, and client/patient demographics. 2) You must create a visual Collective Activity System, which includes all the activities, networks, or connections the student would encounter while working in this position. Students may use GroupMap, Popplet, Prezi, or another collaborative tool to complete this deliverable.

Print Resume (Individual Assignment)

Develop a one-page resume (for an advanced applicant [e.g, a college graduate with work experience or an applicant with extensive relevant experience]). The content of the resume should reflect a close reading of the job ad and knowledge of the company as a whole. This "print" resume will be submitted online, but it should be composed with a word processor so printing is possible.

Print Cover letter (Individual Assignment)

Develop a one-page cover letter (for an advanced applicant [e.g., a college graduate with work experience or an applicant with extensive relevant experience]). The content of the cover letter should match the applicant's credentials to the job advertisement. This "print" cover letter will be submitted online, but it should be composed with a word processor so printing is possible.

Resume Remediation and Analysis (Individual Assignment)

Print Resumes and Cover Letters provide an effective and efficient way for employers to search for potential employees. The majority of organizations will ask for these traditional documents, and by this point, students should understand key elements for designing and creating these deliverables for their intended audiences. When searching for applicants, employers look for individuals qualified for the positions and who can set themselves apart from other candidates.

Now that you have a clear understanding of traditional employment documents, you should create one additional deliverable setting yourself apart from other applicants. You should

reference the Workplace Analysis Report and the Collective Activity System to gauge the needs of the organization. In order to quickly receive interview requests, you must create innovative, effective, and efficient deliverables designed to get employers to notice your qualifications. You should reimagine the traditional deliverables by creating entirely new documents through remediation.

In addition to the deliverable, write a one-page polished, analysis of the process, based on the Workplace Analysis Report, addressing the rhetorical choices related to your (1) chosen audience and purpose, (2) medium, and (3) design and arrangement.

Human Resources: Employment Team (Group Assignments)

You will be placed in employment teams to assess incoming applicant deliverables. Each team will examine another group's Workplace Place Analysis Report and Collective Activity System. After examination, the team will receive remediation deliverables from four to five students from the same group and will assess the texts. Based on the deliverable, the team will then decide which applicant it would invited for an interview. The team will provide feedback for each person who submitted a remediation. The feedback should be a one page document explaining why the person's deliverable was/was not suitable for the particular position. You should look to the Workplace Analysis Report to assist in formulating the appropriate feedback. This document should have a professional tone/design, and you should be mindful of your audience.

Team Minutes (Group Assignment)

Team Minutes are an important part of team planning and collaboration. A running log helps group members synchronize project tasks, record collaborative decisions, record delegation of tasks, etc. In professional settings, these logs are often referred to as Gantt charts, a type of bar chart illustrating a project schedule. Gantt charts display the start and finish dates of the terminal and summary elements of a project. Terminal and summary elements comprise the work breakdown structure of the project. For the purposes of this course, you will record each meeting, including those in class, on the Gannt chart located at https://teamweek.com/. Team Minutes will be used to determine group and individual grades for the project. Refer to *Team Writing: A Guide to Working in Groups* by Joanna Wolfe for an in-depth explanation of Team Minutes and collaborative work.

Reflective Memo (Individual Assignment)

Prepare a one-to-two page memo detailing the process used to complete each deliverable described above. Use appropriate memo format to guide the reflective memo. Draft this memo as the Employment Project nears completion. Use the following questions to guide your analyses or add your own:

- What were your overall impressions of project 1?
- How did developing the Workplace Analysis and Collective Activity System shape your understanding of the employment position
- Did the Workplace Analysis and Collective Activity System make you want the position more? Explain.
- Which of the deliverables were most beneficial? How so?
- Which deliverables were the most difficult to comprehend? How so?

- How well did you manage your time for Project 1? What might you do differently next time?
- Was the work load fair and balanced across all team members? Explain.
- How well did the group plan for Project 1? What might you have done differently?

Appendix: B

Communications Technologies Project Description

In the workplace, intervention typically involves a diverse group of competent practitioners who must discover a novel solution that cannot be found in textbooks or through established canons. This project is intended for you to solve real-world communication problems by researching communication technologies. For the purposes of this project, "communication technologies" refers to any tool people use to communicate (including, but is not limited to, record-keeping and scheduling).

The composition of each group will be the same as for project one. Using a Collective Activity System, you should research all the communication technologies used within your employment position and/or organization. After a collaborative analysis, you must locate and propose tenable solutions in order to solve and/or alleviate a problem the group discovers. You may implement a new or change an existing communication technology.

Research must include a broad overview of current conversations and attitudes in Health Sciences about the communication technologies relevant to the organization. Solutions must 1) clearly solve or alleviate the problem presented, 2) be realistic given the explicit and implicit confines of the situation (e.g., a large-scale hospital will typically have more money to spend than a small family practice. Therefore, factors like cost need to be considered in the solution). You are expected to work collaboratively in groups and produce one set of deliverables per group (except the Reflective Memo). For this assignment, you will:

- Locate and discuss ethical issues within the field
- Apply and evaluate ethical considerations to a realistic professional scenario within the field
- Develop professional/technical documents with a clear awareness of ethics
- Recognize and discuss important elements of how culture affects communication in collaborative workplaces
- Describe and generate strategies for effectively planning and working on collaborative projects
- Demonstrate amiable and productive collaboration in team projects
- Identify and explain current local and global discussions as well as trends in the field
- Describe and explain benefits of information literacy in relation to field of study
- Assemble relevant research in order to recommend an evidence-based solution
- Identify professional/technical genres, organizational strategies, and appropriate tone and style

- Describe the effect of tone, organization, and style in professional/technical communication while employing these principles appropriately in various writing situations
- Identify and differentiate conventions and genres in various professional/technical documents and professional presentations
- Identify audiences and analyze their perspectives while creating various professional/technical documents
- Operate current technologies in order to produce effective documents.
- Recognize and explain basic visual design strategies
- Demonstrate audience and rhetorical awareness in visual design while creating professional/technical documents visually appealing to appropriate audiences

Course Objectives addressed by this project are to:

- Demonstrate ethical insight into issues of Health Science
- Collaborate effectively as a member of a multi-disciplinary writing team
- Develop a familiarity with current social cultural contexts for the field of Health Science.
- Design and implement information literacy skills
- Apply and adapt professional/technical writing conventions, including genre, tone, and style for specific writing situations
- Use current technologies to compose professional/technical documents and oral presentations for multiple audiences and specific purposes
- Employ visual design strategies to produce rhetorically effective documents, visuals, and presentations

You will create the following deliverables for this project:

- Digital Collective Activity System
- Corporate Research Report
- Elevator Pitch and Handout
- Community Connections and Reflections
- Team Minutes
- Reflective Memo

<u>Digital Collective Activity System (Group Assignment)</u>
Record detailed connections related to all communication technologies by using any digital mapping tool that best fits the group's needs. (i.e., GroupMap, Popplet, Prezi, etc.). However, look for a mind mapping instrument allowing for collaboration. Map all communication technologies used within the group's employment position and any information relevant to these technologies. As connections are made, begin thinking about issues within the network. Where does the group see a problem? What are tenable solutions for this problem? (Focus on one problem).

<u>Corporate Research Report (Group Assignment)</u>
Construct a Corporate Research Report that provides the organization with an overview of the communication problem and documents research findings. This report should demonstrate a working understanding of the technology being discussed. To that end, use library and primary research techniques as well as industry knowledge to compose a detailed report (content, images,

appendices, data visualizations, etc.) giving relevant data to facilitate a decision about implementing a new and/or adjusting a communication technology. The report should also address policies and procedures necessary for organizations to function. Policies reflect the philosophies of the organizations in which they exist (e.g., a dress code); a procedure is a series of steps for accomplishing a task (e.g., how to schedule an appointment for a patient).

The report should indicate why the client should use the technology, how to use/implement the technology in the organization, the economic implications of using the technology, strengths and limits of the technology for the organization's needs/goals, as well as training and human resource implications of using the technology. This document may also include other relevant policies and/or procedures not listed here.

The report should include the following features:

- Introduction. This introduction should prepare the reader in more detail for the main issues of the report by making the purpose and relevance clear.
- Data. This report's intent is to both present and interpret data found on a communication technology's uses in business for the intended audience (assume they are not familiar with the technology). Data or research does not speak for itself; explain the relevance of this data clearly and directly to the audience. Note: "data" is not an appropriate section title. Subheadings should be determined by the topics the report addresses and should be used throughout the report.
- Data Visualizations. There must be at least two visualizations in this report with at least one created by the group. The visualization the group creates may be based on primary data or on data found in a secondary source which was not previously represented visually. It should be designed in a visual form and for easy data interpretation.
- Source Citations. Use APA style format. Make the source of the data clear in the report, including visualizations.
- Binding. Place the report in any professional binding (binder, spiral binding, clear folders, etc. Documents stapled or paper clipped will NOT be accepted)

<u>Elevator Pitch and Handout (Group Assignment)</u>
The handout is a summary of the current state of affairs of the topic; condense the research, data, and evidence then craft a statement informing the audience of the current pulse of the topic. Imagine the audience for this document as being professionals in Health Sciences who are looking to make investments of time and/or resources in this communication technology. The document should be well-designed and be no more than one page (front and back). This handout will accompany a team, in-class presentation. This presentation is very brief (30 seconds to 2 minutes) and is called an "elevator pitch." The handout should be written concisely enough so its main points can be competently covered in the time it takes to ride an elevator. Bring 23 hardcopies of the handout to the class for the elevator pitch. Both the handout and the presentation will be due the same day.

<u>Community Connections and Reflections (Group Assignment)</u>
Rather than closing down investigations, the work of reflection encourages a sustained and ongoing investigation. By tracing, collecting, and archiving, this work exposes a space of

complexity not always ending with a solution. Examine another group's Corporate Research Report. Using a digital mapping tool, draw connections to who/what are affected (positively or negatively) by the communication technology solution the other group formulated. Connections can be made within the organization as well as outside the corporation. Please be detailed and as comprehensive as possible.

After developing the detailed community connections, write a one-to-two page reflection based on the group's findings. Think about how these connections facilitate further exploration or conversation. This reflection is open to interpretation based on where these connections lead each group.

Team Minutes (Group Assignment)

Team minutes are an important part of team planning and collaboration. A running log helps group members synchronize project tasks, record collaborative decisions, record delegation of tasks, etc. In professional settings, these logs are often referred to as Gantt charts, a type of bar chart illustrating a project schedule. Gantt charts display the start and finish dates of the terminal elements and summary elements of a project. Terminal and summary elements comprise the work breakdown structure of the project. For the purposes of this course, you will record each meeting, including those in class, on the Gannt chart located at https://teamweek.com/. Team Minutes will be used to determine group and individual grades for the project. Refer to *Team Writing: A Guide to Working in Groups* by Joanna Wolfe for an in-depth explanation of Team Minutes and collaborative work.

Reflective Memo (Individual)

Prepare a one-to-two page memo detailing the process used to complete each deliverable described above. Use appropriate memo format to guide the Reflective Memo. Draft this memo as the Employment Project nears completion. Use the following questions to guide your analyses or add your own:

- What were your overall impressions of project 2?
- How did developing the Collective Activity System shape your understanding of the problem you discuss in the project?
- How did the background information shape your policy and your procedure?
- Which of the deliverables were most beneficial? How so?
- Which deliverables were the most difficult to comprehend? How so?
- How well did you manage your time for Project 2? What might you do differently next time?
- Was the work load fair and balanced across all team members? Explain.
- How well did the group plan for Project 2? What might you do differently the next time?

Appendix C:

Case Project Description

Medical care is a complex arena, a mix of business and service, caring and profit. Mistakes cost more than dollars. Mistakes cost, or at least dramatically change lives. Currently, medical care often involves many people, including several different levels of actual medical practitioners, in addition to the management and business professionals involved in both the practice and insurance arenas. Issues in health or medicine related communication can become far more complex than what first meets the eye.

The purpose of case projects is to immerse you in a real-life scenario where the technical channels of communication are extreme. Working through this case, you will identify many intersections between various stakeholders, ethical issues, and communication. Be mindful of the role communication—particularly writing—plays in the facilitation of this issue from different perspectives such as addiction, treatment, doctors, pharmacies, pain management patients, policies, Drug Enforcement Administration, Controlled Substance Act, HIPPA, etc. For this assignment, you will:

- Locate and discuss ethical issues within the field
- Apply and evaluate ethical considerations to a realistic professional scenario within the field
- Develop professional/technical documents with a clear awareness of ethics
- Recognize and discuss important elements of how culture affects communication in collaborative workplaces
- Describe and generate strategies for effectively planning and working on collaborative projects
- Demonstrate amiable and productive collaboration in team projects
- Identify and explain current local and global discussions as well as trends in the field
- Describe and explain benefits of information literacy in relation to field of study
- Assemble relevant research in order to recommend an evidence-based solution
- Identify professional/technical genres, organizational strategies, and appropriate tone and style
- Describe the effect of tone, organization, and style in professional/technical communication while employing these principles appropriately in various writing situations
- Identify and differentiate conventions of and genres in various professional/technical documents and professional presentations
- Identify audiences and analyze their perspectives while creating various professional/technical documents
- Operate current technologies in order to produce effective documents

- Recognize and explain basic visual design strategies
- Demonstrate audience and rhetorical awareness in visual design while creating professional/technical documents visually appealing to appropriate audiences

Course Objectives addressed by this project are to:

- Demonstrate ethical insight in issues of Health Science [engineering, professional writing]
- Collaborate effectively as a member of a multi-disciplinary writing team
- Develop a familiarity with current social cultural contexts for the field of Health Science
- Design and implement information literacy skills
- Apply and adapt professional/technical writing conventions, including genre, tone, and style for particular writing situations
- Compose professional/technical documents and oral presentations for multiple audiences and specific purposes by using current technologies
- Employ visual design strategies to produce rhetorically effective documents, visuals, and presentations

Background. Regularly, opioids, which are crucial for the welfare of pain management patients, are unfortunately recognized as addictive drugs associated with overdose and death. The treatment these patients receive is dependent on a myriad of factors and involves a broad range of stakeholders. There is an emotional debate over opioid analgesics. Federal health officials and others are concerned about the rising number of Americans who are becoming addicted to the drugs and overdosing on them, while pain specialists and their patients fear restrictions risk making prescription medications too difficult to obtain. You will analyze the complexities of medical and public communication, ethical dilemmas, and stakeholder interests with regards to opioid use for pain management. You will create the following deliverables for this project:

- Digital Collective Activity System
- Oral Presentation
- Textual Archive
- Proposal
- Team Minutes
- Reflective Memo

<u>Digital Collective Activity System (Group Assignment)</u>

Investigate this case by analyzing every perspective. On the pages located in Canvas, you should collect and archive the various observations, quotes, images, and/or articles related to the case. If connections are noticed, you should link them together. You may add and edit any information you see fit. These pages are designed to help everyone in class easily locate material on this particular case and should be viewed as a class wiki.

In addition to adding material to the Canvas pages, create a digital Collective Activity System. You can use any digital mapping tool best fitting the group's needs. (i.e., GroupMap, Popplet, Prezi, etc.).

<u>Oral Presentation (Group Assignment)</u>

After the group completes the Collective Activity System, the group will provide a professional presentation utilizing the case material. Success in this presentation requires a clear understanding of the connections the group formed. The content of the presentation should clearly reflect the purpose and audience. Each presenting group must:

- Wear professional attire
- Speak professionally
- Include each member in an active role
- Include the Digital Collective Activity System

Textual Archive (Group Assignment)
Using the Collective Activity System, write a five-page minimum textual archive using layout, font changes, images, and headings in order to perform a detailed investigation of this case by analyzing how this case correlates with the group's employment position or the organization. There are a number of ways to perform this inquiry for readers, but the group must consider the various effects such layouts will have for the audience. The group should include any relevant images, records, documents, or illustrations. The deliverable will be graded based on how the group creates a thorough archive using the available resources. When constructing this Textual Archive, the group should start thinking about the primary problem it like to address. Use APA citations.

Proposal (Group Assignment)
Compose a Proposal giving the audience a brief background of how the case affects the organization and the most plausible solution. This document should explain how the problem will be solved as well as why this particular solution is better than other options and feasible for the audience to adopt.

The topics each group is dealing with are broad, but the challenge is to find ways of expressing the argument visually. The group will include visual samples in the Proposal. These samples could be original websites, brochures, infographics, practitioner manuals, magazines, databases, or other creative and rhetorical products. The group should employ visual design strategies to produce rhetorically effective texts. Use APA citations.

Team Minutes (Group Assignment)
Team Minutes are an important part of team planning and collaboration. A running log helps group members synchronize project tasks, record collaborative decisions, record delegation of tasks, etc. In professional settings, these logs are often referred to as Gantt charts, a type of bar chart illustrating a project schedule. Gantt charts display the start and finish dates of the terminal elements and summary elements of a project. Terminal and summary elements comprise the work breakdown structure of the project. For the purposes of this course, you will record each meeting, including those in class, on the Gannt chart located at https://teamweek.com/. Team Minutes will be used to determine group and individual grades for the project. Refer to *Team Writing: A Guide to Working in Groups* by Joanna Wolfe for an in-depth explanation of Team Minutes and collaborative work.

Reflective Memo (Individual Assignment)

Prepare a one-to-two page memo detailing the process used to complete each deliverable described above. Use appropriate memo format to guide the Reflective Memo. Draft this memo as the Employment Project nears completion. Use the following questions to guide your analyses or add your own:

- What were your overall impressions of project 3?
- How did developing the Collective Activity System shape your understanding of the problem you discuss in the project?
- How did the background information shape your policy and your procedure?
- Which of the deliverables were most beneficial? How so?
- Which deliverables were the most difficult to comprehend? How so?
- How well did you manage your time for Project 3? What might you do differently next time?
- Was the work load fair and balanced across all team members? Explain.
- How well did the group plan for Project 3? What might you have done differently?

Appendix: D

Overall Class Reflection

Complete an overall class reflection at the conclusion of all three projects.

- What were your overall impressions of the class?
- How do you feel about creating Collective Activity Systems?
- Do Collective Activity Systems reshape your understanding of a topic? Explain.
- How well did you engage with your classmates?
- How well did you understand the materials in the course? (readings, deliverables, expectations, etc).
- What was your favorite aspect of the course? Explain.
- What was your least favorite aspect of the course? Explain.
- Do you feel more involved in Health Sciences? Explain.
- Rate your engagement in the course: 0 being not engaged and 10 being actively engaged.
- What are your recommendations for the course?

Appendix: E

IRB Approval

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SOUTH FLORIDA

RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-7091

September 30, 2014

Katherine Royce
English
Tampa, FL 33612

RE: **Expedited Approval for Initial Review**
IRB#: Pro00018837
Title: Navigating Collective Activity Systems: An Approach Towards Rhetorical Inquiry

Study Approval Period: 9/29/2014 to 9/29/2015

Dear Ms. Royce:

On 9/29/2014, the Institutional Review Board (IRB) reviewed and **APPROVED** the above application and all documents outlined below.

Approved Item(s):
Protocol Document(s):
Research Protcol_Royce.docx

Consent/Assent Document(s)*:
Informed Consent Forms.pdf

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab. Please note, these consent/assent document(s) are only valid during the approval period indicated at the top of the form(s).

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review category:

(5) Research involving materials (data, documents, records, or specimens) that have been collected, or will be collected solely for nonresearch purposes (such as medical treatment or diagnosis).

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

Kristen Salomon, Ph.D., Vice Chairperson
USF Institutional Review Board