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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

PROJECT SUCCESS: A METHODOLOGICAL AND EVALUATIVE CASE STUDY OF THE EARLY ALERT PROGRAM INTERVENTIONS

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

Randy James Larkins

College of Education and Behavior Sciences
Department of Applied Statistics and Research Methods

August 2015

This Dissertation by: Randy James Larkins

Entitled*: Project Success: A Methodological And Evaluative Case Study Of The Early Alert Program Interventions*

has been approved as meeting the requirement for the Degree of Doctor of Philosophy in College of Education and Behavioral Sciences in School of Applied Statistics and Research Methods

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ABSTRACT

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The purpose of this study was twofold. First, to methodologically examine the use of three types of focus groups 1), traditional face-to face, 2), online video and audio, and 3) online text only. Second, to examine the impact of academic intervention attempts offered by university and department support services. Methodologically, the three types of focus groups were compared in terms of ease of use, comfort, richness of data and ethical considerations. Contextually, support services for a general chemistry course taken primarily by new students were examined using an evaluation method involving effort, monitoring, process, component and treatment specification types of implementation. For this research, fourteen students enrolled in the general chemistry course at Rocky Mountain University in fall term 2014 participated in one of the three types of focus groups to discuss support services for the course.

Since the increase of technological advances in the late twentieth century, the use of electronic focus groups has been viewed as a viable alternative to traditional in-person meetings. However, different methods within a methodology might produce different results for both students and researchers. This study inspected differences in ease of use for participants and the researcher, comfort in terms of using technology and in

discussing academic issues and support services, richness of the data, and ethical issues surrounding privacy and confidentiality. For this case study, methodological findings were that in-person groups still had relevance in this age of advanced technology. Audio-video groups were more limited than in-person groups in terms of interaction and administration, while text-only groups were easiest to transcribe, but seemed to be the most limited in terms of all other aspects of the research. Finally, ethical concerns were not considered important by members in any group; therefore, it is incumbent on the researcher to provide the best ethical environment possible in whatever form the focus group takes place. Suggestions for future research include recruiting participants from online classes and attempting to engage more disenfranchised students in other studies.

Similar to new types of focus group methods due to technological advances, academic interventions for students facing failing grades are also increasing due to the internet and new methods of service delivery. The contextual aspect of this research involved asking students to participate in an initial focus group session, four weeks of email updates, and a final focus group session in which students participated in the same group as the initial session. The purpose of the focus groups was to evaluate whether or not the universities' attempts to help students succeed in a course known in the past for high failure rates through a program known as the Early Alert Project was succeeding. Interview data were analyzed using thematic coding to evaluate available support services using a comprehensive implementation evaluation model which included effort, monitoring, process, components; and treatment specification. The primary findings were although students believed the university was trying to help them succeed, Early Alert Project efforts were adversely received. In addition, participants felt that although

there were enough support services to help them succeed in the course, the components of the support system were confusing and not organized in any systematic manner. Suggestions for further research included researching delivery of this type of communication that might be more amenable to the students who received it and applying this research to other courses to examine whether the same results occur. Finally, implications of the use of traditional methods and academic support services are discussed in addition to the effect of the research itself upon its participants.

ACKNOWLEDGEMENTS

This dissertation is dedicated to my parents and first teachers, James and Bonnie Larkins. They offered me gifts of reading, writing, story-telling, education, faith, love of family, which sustained me through my doctoral program and this writing. I also wish to acknowledge my nuclear family and friends. My wife Diantha has stayed with me and supported me through many years that have not always been easy. My sons Andy and Nick took time from their busy lives to act as technical assistants for my focus groups. My daughter Renee paid for a motel room to give me some quiet time, and my son Brian encouraged me from a distance in Minnesota – we graduated within one week of each other. My grandchildren were my source of inspiration when I was too tired to go on. My friend Dr. Rodney Troyer has been with me throughout all of our post-high school experiences; thank you Rod, for also being an inspiration to me. My love for all of you is limitless.

The faculty at the University of Northern Colorado Applied Statistics and Research Methods is incredibly thoughtful and caring, and I appreciate their support through my doctoral program. I would like to thank Dr. Trent Lalonde, who acted as a committee member through my proposal defense, and Dr. Krystal Hinerman, who unselfishly stepped in to finish the work of committee member. Dr. Kathryn Cochran has inspired me with her method of teaching and content; Kathy, I will carry your ideas throughout the remainder of my life. Dr. Lisa Rue has offered me work, teaching skills

and moral support at times when my life seemed barren. And finally, Dr. Maria Lahman has been my mentor and my friend for a very long time, helping me to understand fully the depth of qualitative research and working through her sabbatical to help me. Words cannot express how much in debt I am to these instructors. God bless you.

Finally, I would like to acknowledge three sets of students. My fellow ASRM graduate students at UNC have given me hope, inspiration and comradeship throughout my doctoral academic career. There are too many students to mention by name, but I would especially like to thank Michael Floren for travelling a long distance to act as a note-taker for one of my focus groups. To the graduate students at UNC who sought my help as a research consultant – your questions helped me to clarify my thoughts, and your friendliness and thanks helped me through the process of my dissertation. Above all, however, this dissertation would not have been written if it weren't for the brave students who volunteered to be my participants and stayed on to finish it because they wanted to help students who came after them. Again, mere words are not enough, but I thank you all.

TABLE OF CONTENTS

CHAPTER

CHAPTER

CHAPTER

CHAPTER

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Qualitative research involves data in the form of words – words that must be gathered, comprehended, structured, and interpreted in such a way the intent of the original speaker or speakers is left intact. A methodological concern in qualitative research, then, is to find ways in which speakers individually or as a group are able to present their stories in such a way the telling is as authentic as possible and the re-telling is meaningful and honest to the original intent. Focus group methodology is one way to gather people who share a common characteristic together to present their understanding of how they feel about an issue (Krueger & Casey, 2000), but the almost century-old traditional focus group method and newer forms of focus groups involving technology may not always represent the best ways to initiate honest, rich discussions, and authentic conversations (Rodriguez, Schwartz, Lahman, & Geist, 2011).

There are two considerations in a focused qualitative research study. First, researchers want to be sure speakers are using words that convey true feelings. Secondly, the words must be gathered, held and re-told by the researcher in as ethical and sincere manner as possible. Researchers who interview single individuals must use these considerations to guide their interviews – for instance, should the individual's privacy be protected through anonymity or does the telling of the story necessitate the telling of the

speaker's name? What are the consequences to the interviewee of re-telling the story even if the name is kept anonymous? In a traditional focus group setting, these considerations become even more pronounced. If people are gathered together who share a common characteristic or interest, the chance they may know each other is great, and anonymity becomes difficult or impossible even with assigned names. The consequences of the re-telling are multiplied by the number of participants who will be affected if the re-telling is perceived as inaccurate or (even if accurate) harmful in some way.

With the advent of modern technology, even more issues arise. If group members are not together in the same room, they may be able to remain anonymous. However, if Krueger & Casey (2000) are correct in stating in face-to-face focus groups, "the discussions are relaxed, and often participants enjoy sharing their ideas and perceptions" (p. 5), the fact that electronic focus group members are not in the same room within eye contact of each other may detract from the relaxation and enjoyment felt by a common experience. Even if the technology allows for facial and vocal interaction, there may be constraints felt by the participants that would not be felt if they were physically in the same place. Rodriguez et al. (2011) note a culturally responsible focus group (CRFG) environment "… is developed to reflect the naturally occurring discussions that happen over a shared meal with families or friends, not as a contrived way to lure participation" (p. 410), yet with electronic focus groups, the chance to share food together (a traditional tool in focus group methodology) is gone, and the artificiality of the environment may detract from the participants' feeling of a naturally occurring discussion.

Description of this Study

There were two aspects to this research. The first was methodological, involving the study of three different types of focus groups in terms of richness of data and ethical considerations of each method. The second was contextual, involving the study of college students enrolled in an introductory freshmen chemistry course with a high failure rate. I will discuss both aspects in terms of the problem and research questions while providing definitions for both in Appendix A.

Statement of the Methodological Problem

Focus group methodology has centered on a group of participants meeting in a physical location and discussing issues for a specified amount of time. In a world that is increasingly communicating electronically, focus group methodology can be adapted to virtual groups comprised of people who are geographically located at great distances from each other with advantages such as the use of electronic images or websites to stimulate discussion and/or elucidate concepts. However, issues of comfort, authenticity, richness of detail and ethics are not likely to be equivalent in the different forms of focus groups available today.

Purpose of the Methodological Research

In this research, I used three types of focus group to compare methodological issues such as the ease of use, comfort level of the participants, the depth of conversation, and the ethical considerations surrounding each method. As a researcher and moderator of focus groups in the past and in the foreseeable future, I have a personal interest in the question of effectiveness, authenticity, and ethics of using these types of focus groups.

For researchers it should not be enough to know various techniques exist; we need to know they are tools resulting in valid responses.

Methodology Research Questions

Two methodological questions guided this research.

Q1 How do online focus groups compare methodologically to a traditional focus group?

Q2 What ethical considerations arise during the administration of online versus traditional focus groups?

Statement of the Contextual Problem

"There seems to be a lack of nation-wide information studying the effectiveness of advising center practices to student retention (Gordon, 2007)."

Many factors are involved in the academic success of students. Hutson (2006) stated understanding this phenomenon comes from several sources:

> While there is a dearth of comprehensive theoretical models outlining factors impacting at-risk students and strategies for facilitating recovery students on academic probation, theories concerning student learning, theories explaining student persistence, and models used in college student retention shed light on understanding this particular group of students and the strategies that may be used in aiding their academic improvement (p. 215).

At Rocky Mountain University (a pseudonym, also referred to as RMU), students in high-fail courses have been offered intervention services designed to help these students succeed. However, five years of quantitative data showed little to no difference between students who use these services and students who do not. This research was an attempt to find the reasons underlying these earlier findings in order to inform student success.

For many years, I have watched students struggle to succeed in freshmen courses at this university, only to fall short of the elusive 2.0 cumulative grade point average they need to be able to remain enrolled. I have talked to students about their difficulties, assisted in creating and organizing interventions designed to raise their GPA, and conducted quantitative research to look at long-term trends and characteristics of failing students. I know from my previous research, for instance, that students who are most likely to fail are new freshmen who have not yet built the skillset to survive in college. Like Tinto (1993), I recognize demographic characteristics such as race and gender affecting the likelihood of success, and I know from my experience as an administrator at a university that enrollment in certain freshmen courses is more likely to lead to failing grades than other courses, especially if those difficult courses taken concurrently with each other.

Purpose of the Contextual Aspect of the Study

In this case study, I utilized a popular freshmen chemistry course to study the effectiveness of interventions designed to help college students succeed in this course. For an intervention to be successful, the student must recognize the offer of assistance, accept the assistance, and gain benefit when the assistance is given. I investigated specifically what offers of assistance were being made to students, how students perceived the value of each offer and whether or not the offer was accepted, and how students benefitted from the accepted assistance..

Contextual Research Question

Q1 What are students' perceptions of the impact of Early Alert university and department interventions on students' academic performance in a freshman course known as General Chemistry?

Because chemistry is such a pivotal course to many students who wish to pursue medical and scientific fields, their success in this beginning course will set the foundation for their future academic careers. If students are successful in their courses, they can choose to continue their planned careers and graduate to fill needed positions in the world today. On the other hand, if students are unsuccessful in earning a satisfactory grade in this beginning course, they may make the decision to either pursue a different major or withdraw from academics altogether (depending on the severity of their poor performance. Rocky Mountain University staff have already determined that they wish to put the effort in helping these students succeed by providing an early alert system and corresponding interventions. What was needed, then, is to know whether these interventions were worth the university and department's time and cost of planning and implementation.

I wished to know how students perceived the impact of the intervention attempts made by the university; how sincerely and ethically students felt the university attempted to support their efforts; how interventions affected their academic study, attendance and test efforts; and how successful these students were after the interventions were completed. Rather than studying grade results at the end of the term as I did in previous research, I was able during the term to examine the meaning behind the final grades and the reasons the interventions were either successful or unsuccessful.

Rationale for Combining the Methodological and Contextual Aspects of the Study

Focus groups are intended to bring together participants who share a common issue. Methodologically, this study was intended to investigate whether or not different

types of focus groups were equally efficacious. However, for the methodological study to exist, a common issue must also exist. The contextual aspect –new freshmen college students trying to succeed in a Chemistry course and the way in which they utilize offered interventions – describes the common issue binding these participants together.

By combining the methodological and contextual aspects of the study together, another goal of the research was accomplished. I believe this study contributes to the wider conversation about student success occurring in many institutions of higher learning in the United States and abroad (Christie, Munro & Fisher, 2004; Hagedorn, 2005). In a time of increasing tuitions and assessment in the face of shrinking governmental assistance, administrators of institutions of higher education are feeling the pressure to produce successful students. To understand how to produce successful students, we must be diligent in examining models of programs designed to promote student success. However, my intent was not only to pursue and help to increase the intellectual knowledge of the field of research; it was also to be able to assist in knowledge of practical value to the staff who work with students enrolled in this course and others who are working in similar situations who may benefit from this knowledge. I wished to help them gain the needed knowledge to help students succeed in a course that is too often a stumbling block for future aspirations.

My Story

As a former academic advisor, I talked to many freshmen students each year who were placed on academic probation after their first semester at college. I began by viewing undergraduate student academic issues as self-induced problems – to me, these students were not actually as capable of being at the university as their high school grades

might have indicated, they chose the wrong major for which they were not qualified, or they did not want to be at the university for a multitude of reasons and were therefore disconnected with the academic atmosphere in which they found themselves. Then I began to hire and to know more students who were excellent in their positions, led teams with great independence and pride, and were either on academic probation or had been dismissed from the university at one point in their career and had obtained permission to return for another chance. Sometimes it seemed the more capable the person was, the more likely he or she was to be on academic probation at some point in his or her academic career! With this perspective, my approach to the current research was clearly different than it would be if I had conducted it in the beginning of my advising career; now I realize that students on probation come from many different backgrounds and abilities, and I believe many factors may be involved in the academic probation and success of students.

I re-examined some of the characteristics of students who were in academic difficulty in the new light of my perceptions and discovered some majors including difficult courses that must be taken simultaneously to maintain the chance of a timely graduation. If taken separately, these courses may not be unsurmountable, but taken simultaneously the courses became stumbling blocks for many students. In my re-examination, I also saw students who were failing who were students the university sought to enroll for their diverse characteristics of race and/or nationality. I wondered, why should a university spend so much time, money, and effort to recruit these students, only to lose them to poor grades in the first term of enrollment?

I then talked to students about what was occurring in their academic lives, and found many of them blamed themselves for their poor performance. I also talked to other administrators and professors in the university and consistently found two opinions as to why students fail courses. One opinion was that students fail for the reasons I had originally espoused – they were not meant to be there because the students were not academically prepared to face the rigorous nature of the university. The other opinion was that these students were among the best students in the state and nation, and the university was not doing a good enough job of support to offer them the chance to succeed. After several years, I became convinced that while there were students who were simply not prepared for university courses, many more students simply needed direction and some assistance to get through the complexities of adjusting to the academic life of a university student, and they would succeed given the proper support. Thereafter, I spent my professional career trying to understand more about what would help students to succeed.

I became involved in the Early Alert program in its inception over five years ago. All staff participants in the program were volunteers, and because my interest in student academic success and my expertise in research and assessment was known, I was invited to join the program as a volunteer staff member in charge of assessment. From the beginning, I was involved in gathering statistical data to assess the impact of the program on over 10,000 students each year. As time progressed, I was able to go beyond statistical data to conduct interviews and focus groups with different types of staff members, and with this research, to talk to students about their experiences with the program. As a result of these years of investigation, I have found qualitative research,

particularly the use of focus groups, to be useful in leading me to answers that more adequately satisfy my desire to know the reasons behind the grades.

Why did I choose focus groups as the methodology for this study? As a researcher who has been trained in the positivist tradition, I find explanations gathered through qualitative methods enhance to explain the phenomenon to a degree I had not expected after experiencing traditional, objective research. I have always looked for relationships among the elements that I have studied, and the use of case study methodology to explore dimensions of this intervention in its natural context enabled me to gain a richer, more intriguing description of aspects of the Early Alert program. Stake (1995) stated,

> We study a case when it itself is of very special interest. We look for the detail of interaction with its contexts. Case study is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances (p. xi).

To me, successive interviews may provide similar information given time, but focus groups allow for interaction in the form of discussion, agreement and disagreement in one hour, eliminating the need in successive interviews to return to a previous interview to see what their opinion might be of the response of a later interviewee. Having not conducted any electronic focus groups (although I have taught classes using virtual media), I was curious to find out how similar or dissimilar various types of electronic focus groups were in providing the interaction I value so highly in traditional focus groups.

Summary

This case study was a culmination of my attempt to discover how well students can succeed given proper university support in a research format (focus group

methodology) I feel can be a powerful tool for researchers who want to investigate the specifics of a case. The course I used in this case study is required of many future medical researchers and practitioners, and has been historically a course in which a large percentage of students fail. The university and department stated they were eager to discover new ways to assist students in this course, and I too was eager to see if their attempts would succeed.

There were two aspects of this research. Methodologically, I wished to know how traditional focus groups compared to focus groups using newer technology, and how ethics were affected by the use of each type of focus group in order to further the knowledge of focus group methodology for myself and other researchers. Contextually, I wanted to know how efforts made by the university using a program known as the Early Alert Program impact student success for purposes of helping administrators pursue successful intervention strategies. In Chapter Two, I will discuss both the methodological aspects of focus groups, including use and ethical considerations, and the contextual aspect of interventions utilized by colleges and universities in the United States to attempt to help students succeed. In Chapter Three, I will describe the methodology in terms of participants, types of focus groups, and research procedures I used. Chapters Four and Five are journal manuscripts which include findings and analysis respectively for the methodological and contextual aspects of the research. Finally, Chapter Six concludes the dissertation.

CHAPTER II

REVIEW OF LITERATURE

Introduction

In this research, I investigated both methodological and contextual questions. Methodologically, I wanted to know how traditional focus groups compared to focus groups using newer technology, and how ethics were affected by the use of each type of focus group in order to further the knowledge of focus group methodology for myself and other researchers. Contextually, I wanted to know how efforts made by the university using a program known as the Early Alert Program impacted student success for purposes of helping administrators pursue successful intervention strategies. In this chapter, I will first discuss the methodological aspects of focus groups, including use and ethical considerations. Then I will describe the contextual aspect of interventions utilized by colleges and universities in the United States to attempt to help students succeed.

Methodological Review: Focus Groups

A Description of Focus Groups

Focus groups are a systematic approach to research in which traditionally a group of usually 6 to 12 people were interviewed in a single setting at one time by a researcher regarding a specific topic, product or issue (Krueger & Casey, 2000). Morgan (1996) described three characteristics common of focus groups: first, they are a research method

designed to gather data for research purposes. Second, the vocal interaction of the group is the data being collected, and third, the researcher plays a key role in creating the group for purposes of the discussion. Using these criteria, Morgan also provided examples of non-focus groups: they are not groups such as therapy groups whose purpose is for a reason other than to collect data for a research project. They are not groups with no social interaction such as nominal groups, and they are not egalitarian groups because a leader (in the form of the researcher) is present.

Although the number of participants has varied, and settings have changed from single settings where all participants are in one room to electronic settings such as telephone conferences and internet chat rooms, the basic premise of what constitutes a focus group is still the same – it must be created and led by a researcher (or research team) for purposes of research, with the data being comprised of the interaction between the participants (Morgan, 1996).

Several considerations go into creating an effective focus group. The purpose of the research must be defined carefully, accompanied by enough interview questions to answer the research question and allow participants time to answer fully while being respectful of the time limitations. Design and analysis options must be considered, as should the size, composition, and recruitment of the focus group participants. Researchers must decide whether to moderate the focus group or select an experienced moderator or moderating team. Recruitment and reminder materials must be created, with contingency plans for unexpected occurrences (for example, weather conditions in traditional focus groups or internet outages in online groups). Recording devices must be checked and backed up by other devices (notes or other recording devices) in case of

failure. Checklists are essential for running a good focus group (Krueger & Casey, 2000).

While these considerations are true for both face-to-face and online focus groups, some differences exist. Face-to-face focus group researchers must consider an accessible location close to participants, and refreshments are often a consideration for those attending. For online focus groups, the medium (chat room, bulletin board, or other electronic medium such as Skype) must be chosen, and if keyboards are used, the participants' ability to type must be considered as well as the speed of the Internet where the participant will be located in case the connection is not fast enough to support video and audio communications (Fox, Morris, & Rumsey, 2007; Kroll, Barbour, & Harris, 2007; Link & Dinsmore, 2012).

History of Focus Groups: Use and Application

Focus group methodology has been utilized in many ways. From being paired with other quantitative and qualitative methods for confirmatory purposes, it has been used as a stand-alone method for data-gathering devices as well as a way to provide member checking to gain more rigor in a study (Asbury, 1995; Barusch, Gringeri, & George, 2011). Focus groups have been used in business to learn about consumer feelings on new products, military for marketing purposes, and social sciences to gain insight on specific issues. The first recorded use of the term "group interview" was by Bogardus in 1926 in his textbook The New Social Research (Lee, 2008; Morgan, 1996), where he described group interviewing as an extension of individual interviews. Merton (1987) and his colleague Lazarsfeld began focused interviewing in 1941 to understand

the impact of singer Kate Smith on her radio announcements to persuade Americans to purchase war bonds; this research led to the realization of the use of focused groups for further research in the 1940's, and thus the use of focus groups became a methodology from then on (Asbury, 1995; Merton, 1987). Although begun initially by these academicians for use in military marketing, focus group methodology was taken over by market research in the 1950's. From the 1980's on, focus groups have once more become an interest in academic circles for purposes of social science research (Morgan, 1996). Virtual focus groups, beginning early in market research, have also gained interest in academic circles since the advent of online technology in the 90's (Stewart & Williams, 2005), where issues of application of traditional focus group methods have been applied to online focus groups with varying degrees of success. However, there seems to be little research comparing the effectiveness and issues of face-to-face focus groups with online methods that are becoming much more sophisticated with every passing year.

Focus groups have been used as a way to focus on listening to groups of people simultaneously and observing not only the comments of the individual, but the interaction between people, providing a richer environment than speaking to individuals separately. As Barusch et al. (2011) stated, "The interaction between focus group participants has the potential to create a dynamic synergy that is absent in individual interviews" (p. 257). This interaction is key to what constitutes the research data in a focus group interview (Asbury, 1995; Morgan, 1996). Thus, a primary concern for utilization of technology is to preserve and at least maintain the level of interaction present in a traditional face-to-face focus group, or as Link and Dinsmore (2012) stated, "In a sense, the online focus

group researcher cannot rely on 'natural' participant instincts, and must deliberately craft an online space that is welcoming and creates room for meaningful social interaction among participants."

Online Focus Groups: Social Presence and Synchronicity

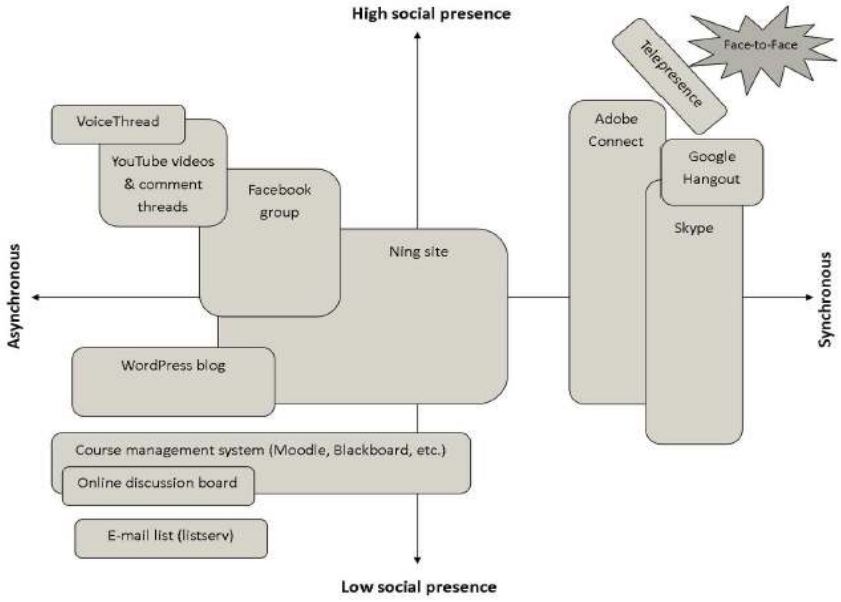

Figure 1. The time and presence continuums of online focus group methodology (Link & Dinsmore, 2012).

Figure 1 represents different types of online focus groups defined by their presence along two continuums (Link & Dinsmore, 2012) – social presence and synchronicity.

Social Presence versus Anonymity

According to Link and Dinsmore (2012), the continuum of social presence is an indicator of whether or not participants are allowed to see and converse via audio and visual communications with each other. High social presence indicates participants who

will be able to see and talk to each other through the use of video cameras and microphones. Very low social presence indicates participants who cannot see each other, and communication occurs through the use of a keyboard. Along this continuum may be the ability to speak to each other but not see each other visually (and although this could include the ability to see each other but not hear each other as in the case of sign language speakers, to date I have not found any research along this line, which may have implications for students with vocal issues who wish to participate in a visual focus group).

Synchronous and Asynchronous Group Communication

The second continuum defining differing types of focus groups is based on synchronicity – whether or not the interactions of the group take place simultaneously or are delayed. In delayed interactions or asynchronous communication, users are given the opportunity to respond at different times than each other (this is usually accomplished through an online bulletin board or continuous chat room). Synchronous communication means all users must be present in the online site at the same time to be able to participate in the focus group. Asynchronous communication is the oldest of the technologies and therefore is the method of choice in most published articles, although there is some debate over whether or not this form of communication should be considered a focus group or not (Bloor, Frankland, Thomas, & Robson, 2001; Fox et al., 2007). However, this type of communication fulfills all three of Morgan's (1996) requirements; it is created and monitored by a researcher to collect interactional data for research purposes.

Advantages and Limitations of Focus Group Methodology

Cost and time savings in research have been considered by many (for example, Barusch et al., 2011 and Krueger & Casey, 2000) to be advantages of focus groups over individual interviews. In one hour, the researcher can solicit information regarding a single topic from 6 to 12 people. Nevertheless, the hour spent conducting the actual focus group is only part of the time spent recruiting individuals, finding a space (even if it is a virtual space) and common time, organizing the event and transcribing the conversation of multiple people. Kidd and Parshall (2000) stated,

> To some extent, the increased interest in and the use of focus groups are based on pragmatic issues of time and cost efficiency relative to individual interviews. However, these presumed savings may be illusory. Properly conducted focus groups are not necessarily inexpensive; unless one is in the business of conducting and analyzing focus groups, the time saved in interviewing may be lost in recruitment, logistics, and trying to make sense out of data that are complex and messy. (pp. 293-294)

Whether or not the focus group is online, the primary advantage of focus groups is that people are able to converse with each other concerning a shared topic and thus may feel enjoyment, empowerment, or mutual support from the exercise. The synergy created from a successful focus group can lead to a richness of data not possible in individual interviews. Participants may find the interaction of a focus group more stimulating, and focus groups may be of value in studying marginalized or hard to reach groups of people (Tates et al., 2009). In fact, online chat rooms without video components may increase participation for participants who do not wish to be seen (Fox et al., 2007). Moreover, with the communication trend of teenagers today gearing toward

more electronic and less face-to-face speech, younger children and adults may feel more comfortable using online tools to participate in focus groups (Fox et al.).

While supporters of focus groups acclaim the value of focus group data in terms of its interaction, there is also some evidence that data from focus groups may not be superior to an equal number of single interviews in terms of generation of ideas (Kidd & Parshall, 2000). Focus groups can be noisy, participants' voices can be confused in transcription with one another, participants with disabilities may not be accommodated if not considered in the design, and one participant may dominate the conversation if not controlled by an experienced moderator. Online focus group researchers may face delays in video or audio communication creating a feeling of artificiality and discomfort, and online group communication tools may fail without any notice (Fox et al., 2007; Kidd & Parshall, 2000; Kroll et al., 2007).

The Role of the Moderator

Krueger and Casey (2000) listed several qualifications for moderators:

- Moderators must believe in the value and knowledge of the participants regardless of the participants' educational level or background.
- Moderators must listen attentively with sensitivity to what is being said, no matter how often it is said in multiple focus group sessions.
- Moderators must be respectful of the participants by showing interest, not only in what is being said, but in the lives of the participants themselves, speaking informally before and after the focus group to show they are not being dismissive of the individuals who chose to participate.

- Moderators must have empathy and positive regard while being strong enough in a respectful way to be able to lead topics, covering all of the questions needing to be asked, and ensuring participation by everyone and discouraging domination by anyone.
- Moderators must have enough knowledge of the topic to be able to converse with the participants and ask appropriate questions while not interjecting their own opinions.
- Considerations should be given as to the demographic characteristics of a moderator if the group is composed of certain characteristics – for example, a woman leading a focus group of all women may be appropriate if the participants' religious or moral values do not permit frank discussion of topics with a male moderator.
- Finally, Krueger and Casey suggested the moderator be friendly and use a judicious sense of humor to help participants feel comfortable.

Moderators can be alone or in a team of two or more researchers. Kidd and Parshall (2000) recommended at least two moderators to always be present at each focus group so one moderator can take extensive notes to help with later transcription.

Trustworthiness

Focus groups have a unique dilemma with issues of reliability and validity (Kidd & Parshall, 2000). Despite the method used in recording the session (audio or video recording, taking notes, etc.), it is sometimes difficult to identify the speaker, especially when more than one person is speaking at a time. The use of microphones or video cameras may not be able to identify the person who is speaking, and words and phrases

can become garbled when one microphone is trying to catch the words of all of the participants, especially if the room is large. Other problems exist in judging the trustworthiness of focus group data. For instance, one participant may agree with another participant to "get along", and another may disagree for the opposite reason; in either case, the truth about how the participant feels is obscured by their reaction to another. However, as Asbury (1995) states, "To appreciate the potential of focus groups as a social and behavioral science research technique, one must first appreciate the value of qualitative methods" (p. 414). Richness of explanation can only be discovered through qualitative data. Therefore, care is taken to be sure participants and moderator are chosen carefully, the questions screened to provide the best data, the moderator is alert to group dynamics obscuring participants' true feelings, and at least two forms of trustworthiness such as member-checking and audit trails are present. Further, at least two researchers should be present at each focus group to verify collection procedures, take extensive notes and to be available to ensure all aspects of the plan operate smoothly (Barusch et al., 2011; Kidd & Parshall, 2000).

One other feature unique to online focus groups beyond traditional types of focus groups is the issue of the have- and have-not situation (Tates et al., 2009), where some people are excluded from participation because they do not have the equipment others possess. In online focus groups, proper and sometimes expensive equipment is necessary to engage in the group. While this is a concern for others, in this study, since all students were part of the same university and had access to all necessary equipment free of charge, this was not a concern for this study.

History of Online Research Using Focus Groups

Online focus groups began at a time (1990's) when computer use was a novelty, researchers were having recruitment and response problems, and traditional methods were becoming more costly (Tates et al., 2009). Since then, with the increase of online communications, especially among younger populations, online research has increased, including the use of online focus groups (Fox et al., 2007). In many cases, researchers have simply attempted to apply traditional focus group procedures to electronic methods; however, the use of asynchronous communication has enabled focus groups to last longer, up to days in a session.

Advantages and Disadvantages of Using Online Methods

Time and cost is a major consideration of conducting online focus groups, especially when participants are immobile or not physically located in the same area (Bloor et al., 2001). Conducting online focus groups allows researchers the ability to research internationally without travel considerations. A virtual focus group may be more convenient for the moderator and participants. Furthermore, online focus groups can be of service to populations or individuals who do not wish to be present physically in the same room together (Fox et al., 2007). Asynchronous focus groups allow participants to reflect on questions being asked and respond at a time of their choice, which may allow for deeper, richer responses. Virtual focus groups seem to encourage freer discussion on sensitive topics. Additionally, the use of online focus group communication removes the difficulty and confusion of transcribing at a later date and aids greatly in identifying the speakers, which increases the trustworthiness of the data.

Disadvantages are related largely to issues surrounding technology (Bloor et al., 2001; Fox et al., 2007). Technical problems may develop, and both the moderators and participants must have a level of familiarity with technology and how to respond to difficulties. This can create a population bias due to the fact that even though technology is pervasive in today's world, many people are still without the means, knowledge and tools necessary to participate in a synchronous online forum. Bloor et al. suggest an electronic focus group moderator may find it more difficult to detect deceit or probe further into issues, rapport may be harder to establish between the moderator and each of the participants, and data may lack non-verbal cues. However, these criticisms may apply more to the low social presence media than the high social presence format.

The Role of the Moderator in Online Focus Groups

Besides traditional focus group moderation and note-taking, moderators who use online methods must be familiar with the technology and aware of potential technological risks involved with the software or site being used. In addition, the confidentiality of the connection as well as the ease of use in getting to the site and maintaining a presence during the group are all concerns of the online focus group (Fox et al., 2007). To address these concerns, an additional moderator such as an information technologist is required to work with technical issues before and during the session (Link & Dinsmore, 2012). This leaves the moderator who is conducting the interview to concentrate on the group and not be overly concerned with the technical issues. In addition, a third moderator can be present to record non-verbal cues without having to concentrate on taking notes (since the technology is recording the event).

Trustworthiness of Online Focus Groups

Using an online form of focus group can help with trustworthiness issues mentioned previously. Speakers are easier to identify. Participants who are unable to participate in traditional focus groups because of disabilities but who have adaptive technology are able to participate in an online focus group, allowing for more representativeness (Kroll et al., 2007). Finally, some types of online focus groups (such as asynchronous communication) offer the opportunity for anonymity, which lessens the likelihood of feeling the need to agree or disagree with another speaker because of group pressure.

Focus Group Medium - Use and Privacy Issues

Online focus group media can offer several alternatives to the user. If researchers want only keyboard communication, chat rooms could be used simultaneously or asynchronously. If audio and/or video are desired, options range from free programs such as Skype@, Oovoo@ and Google Hangouts@. However, if researchers want to be able to do more than connect with audio and video, they can select media similar to a virtual classroom such as Adobe Connect@, Blackboard Collaborate@ (a combination of Elluminate Live@ and Wimba Classroom@ acquired by Blackboard@). These programs can facilitate the use of different elements in the focus group session including two-way synchronous video, audio and text, as well as the ability to share files, watch presentations simultaneously, chat in a sidebar area and share a whiteboard where all participants can see and manipulate a document or drawing similar to a chalkboard (Quinn, Regan, & Schoech, 2008).

At the top of ethical issues in focus group methodology is the issue of privacy. In a traditional face-to-face focus groups, all members can see and hear each other, and especially if the moderator is not careful, a dominant participant can overshadow a less assertive participant. These issues can exist in a virtual focus group as well, especially if a virtual classroom method is utilized. An additional concern is that the method being used may either not be secure or the participants may not perceive it as secure and therefore may not be willing to disclose information. Fox et al. (2007) had two major concerns when conducting their online session. First, they tried several methods of obtaining consent to try to protect privacy. However, due to a lack of responses through the postal service and then emails, they finally created a secure online web form with a link to a website with guidelines on the safe use of the Internet. Secondly, they felt their session would be perceived as more secure to students and parents if the session was linked to a reputable institution (their university), so a member of the university's information technology department constructed a virtual chat room for their use.

Whether or not the media used is connected to the university, safety and privacy for all users must be a concern. Part of the current study addressed how secure participants feel using various forms of focus group media with varying degrees of social presence.

Another issue concerning ethical practices is the ability of focus groups to include disenfranchised or marginalized participants in discussions. Electronic focus groups are a reflection of our changing culture of being more technologically "plugged in" than ever before. They have been touted as being effective in reaching marginalized groups (Bloor et al., 2001). In addition, some students may consider themselves to be part of a

technology culture, being most comfortable in an electronic environment. Rodriguez et al. (2011) addressed six elements to consider for culturally aware researchers. Researchers are socially conscious, they regard participants' input as an opportunity for learning in an asset-based model, they are responsible for creating comfortable and familiar atmospheres, they are aware of social identities throughout the research process, they are reflexive about their impact of the research, and they view participant's input in co-constructing knowledge in the focus group. Though the authors address the issue of diversity in terms of demographics such as race and gender, an argument may be made that the virtual culture existing among young adults is very similar, and thus virtual focus groups may extend the feeling of comfort and familiarity with college students who spend much of their time in an electronic environment.

Contextual Review: New College Students, Academic Probation, and High-Fail Courses

New College Students

Academic probation affects a large percentage of new freshmen and transfer students, at times exceeding 20% of a new class of students (Ryan & Glenn, 2002). Attrition between freshman and sophomore year was 21% for public institutions in 2012 (National Center for Education Statistics, 2014), lower than the 27% reported by Perry, Hdlakyj, Pekrun, and Pelletier in 2001, but still affecting thousands of new college students each year. Academic probation, commonly defined as falling below a 2.0 cumulative grade point average (GPA) in college, incurs psychological and financial costs to the student including the loss of a student's financial aid and his/her potential dismissal from college. Institutional and state costs can also be high, including lower

retention, tuition dollars, state and federal funding, a lower educated population resulting in less skilled occupations and lower pay and tax bases (Hutson, 2006).

Research involving academic probation has focused on intervention strategies such as classes, mentoring, counseling, and tutoring designed to help students who are on academic probation succeed in raising their cumulative GPA to a 2.0 or better (Pionke, n.d). Research involving academic success, on the other hand, has sought to understand the factors predicting success and persistence in a college setting (Allen & Robbins, 2008; Walpole, 2008).

Factors Predicting College Success

A variety of factors can affect student grades in college. Without a clear understanding of factors related to individual grades and a thorough discussion about the changing nature of those factors over time, one is unlikely to decipher the facts from the myths in the college grading controversy (Hu, 2005).

There are three groups of factors predicting college success to varying degrees. The first group is academic preparedness – the strength of scores a student brings from high school upon entering college. The second group of factors is institutional – the type of school, instructor, and course the student is enrolled in. The third group is comprised of personal characteristics of the student predicting academic success.

Academic Preparedness

High school GPA and test scores have long been the standard in admitting students to a particular college and program, and have stood as predictors of collegiate success (Allen & Robbins, 2008; Hu, 2005). Yet high school GPA and test scores only

account for 19% and 5% respectively of the variance in college GPA (Wolfe & Johnson, 1995).

Institutional Factors

The type of institution, faculty and major of a student can affect a student's grades. The ASHE Higher Education report (Hu, 2005) states "academic disciplines and major fields can have substantial differences in grading practices. Grades for courses in the humanities and social sciences generally are higher than grades in other fields" (p. 13). In addition, the report found adjunct faculty tend to distribute higher grades than regular faculty, and public and selective institutions award lower grades than private institutions, while doctoral universities award higher grades than other types of academic institutions.

Personal Characteristics of the Student

Demographic and theories of psychosocial characteristics of students have also been used to identify differences in passing or failing grades. Females generally receive a higher percentage of C or better grades than males, white students have a higher GPA than students of color, and students of higher socio-economic status typically produce better grades than students of lower SES (Hu, 2005; Hedges & Thomas, 1980; Legg, Legg, & Greenbowe, 2001; Walpole, 2008).

Finally, theory and research have combined to suggest psycho-social issues (specifically depression) may affect students' grade outcomes (Allen & Robbins, 2008). For instance, Joiner, Metalsky, Lew, and Klocek (1999) studied students before and after midterms and found that students who were high in dysfunctional attitudes experienced

more depressive symptoms after midterms, but only if they also received a low midterm exam grade.

Midterm Grades as Predictors of Final Course Grades

In a study concerning midterm and final course grades, Nowakowski (2006) hypothesized "students will take adverse signals and respond positively, leading to fewer academic difficulties and higher retention" (p. 557). While Nowakowski found support for this hypothesis in his study, he reported

> The process of calculating, distributing and discussing early assessment grades [EAG] is time consuming. It is, therefore, incumbent on advocates to make a case that the process produces desirable results. The results here, that final grades do differ significantly from EAGs and that the most likely outcome is an improvement in the grade, provide evidence of a positive impact from EAGs. However, another result, that the probability that a failing student has of significantly increasing his/her final grade is lower than previously reported, is cause for concern. It may be that a different strategy would put faculty time to more effective use (p. 558).

In this study, Nowakowski (2006) computed the probability of each final grade by cumulative relative frequency across final grades given the midterm grade (EAG), or P (FINAL GRADE | EAG). However, no strategies were developed with the reporting of midterm grades, and students were expected (but not required) to meet with their advisor to obtain a report of their midterm grades and discuss their academic progress; thus, the study was based on a supposition that students were made aware of their midterm grades, which might not have in fact been true.

Intervention Methods as Predictors of Success

Intervention methods in working with students who are failing courses involve a combination of workshops, mentoring, and counseling services identified as serving the

needs of students to varying degrees of success (Johnson, Deming-Hodapp, & Johnsen, 2005; Pionke, n.d.). However, the percentage of students facing academic probation is constant or rising among most institutions of higher learning in the United States. If these strategies are effective, why do students continue to enter colleges with high expectations, only to find themselves on academic probation after the first semester of classes? Two possibilities occur to me - either these strategies are reactive rather than proactive - a student is usually on academic probation before services are offered - or these strategies seem to be based on little or no theory describing how to identify and retain students who fail academically. Hutson (2006) states "… no theory-driven model for retaining probation students has been identified and the effectiveness of probation programs has not been systematically measured" (pp. 11-12).

Summary

As a methodology for social science research, focus groups have existed since the early 20th century. The traditional face-to-face approach has been the mainstay of this method for most of the time; however, with increasingly sophisticated technology, the electronic use of research methods (including focus groups) has followed a path similar to the telephone of the last century in terms of increasing use by members of the population. Several forms of electronic focus groups are now available, varying in synchronicity and social presence, and modern technology has the additional benefit of offering resources in addition to texting, audio and video capabilities, including the ability to share files and work on a common space together. To be effective as a research tool, however, the various types of focus group possibilities must be explored, compared and understood in the context of the ever-increasing technological culture of today's

college student. Through this research I examined three types of synchronous focus groups in terms of efficacy in terms of time and cost, ethical considerations in terms of privacy and inclusiveness, and the quality of data coming from the different types of focus groups.

Focus groups are always conducted in context of a particular subject or theme. New college freshmen who are enrolled in high-fail courses were the participants of the contextual part of this research. New freshmen students are the most likely of all college students to fail courses their first term; they also experience high dropout rates between the first and second terms of their enrollment (Ryan & Glenn, 2002; Tinto, 1993). Institutions of higher learning recognizing and attempting to address the problem have tried several avenues of intervention, including tutoring services, study skills workshops and tutoring or mentoring. The university in this case created a model of intervention services known as the Early Alert program for students in high-fail courses involving mid-term monitoring, advertising existing services and using volunteer staff from many parts of the university to offer assistance in new ways. With this research, I utilized the focus group format as a vehicle to understand how students work within the Early Alert program and to explore how effective the model is for helping students to succeed.

CHAPTER III

METHODOLOGY

Two methodological and one contextual research questions guided this research:

Q1 How do online focus groups compare methodologically to a traditional focus group?

Q2 What ethical considerations arise during the administration of online versus traditional focus groups?

Q3 What are student perceptions regarding the impact of Early Alert university and department interventions on students' academic performance in a freshman course known as General Chemistry?

In this research, I used a case study evaluation approach based on the idea I was a co-constructionist with the participants in discovering answers to the research questions. In the following sections I will detail the study epistemology, the nature of the learner, the nature of learning, ethical considerations, methodological framework and methodology, and finally, the analysis and coding of the data.

Epistemology

Epistemology has to do with the manner in which we know things. Researchers cannot escape epistemology, because every decision they make– their choice of methodology, the method they choose to conduct their research, the form in which their data is represented, and even their value judgment of their data - is based on their understanding of what constitutes knowledge (Carter & Little, 2007). How do we know,

and what do we accept as knowledge? For instance, should researchers attempt to eliminate all bias by emphasizing objectivity of all aspects, or do they recognize their participants' (and their own) biases and report them as accurately as possible to help give readers a context in which to judge the analysis of the research? Another salient issue is generalizability – how will the readers "know" whether or not the study will apply to their circumstances and situation?

As a qualitative researcher, I believe knowledge is fluid, co-created by researchers and their participants to describe a certain point in time in a certain place and circumstance. Therefore, I also believe the knowledge I gathered from this research was affected by my values and beliefs as well as the values and beliefs of the participants at this point in time. What might be knowledge in this instance is therefore applicable to this event or circumstance and may or may not be applicable (generalizable) to other events. I believe this to be true of much of research, whether it be qualitative or quantitative: a sampling frame is only as good as its representation of a particular population in a specific point in time, and since most research does not cover the entire globe, it is only applicable to the group the sample does represent. Therefore, I believe it is my ethical obligation to report my biases (to the extent possible) and the biases of the participants. I also agree with Stake (1995) that it is also my obligation to try to find knowledge as it applies to this case (whether it be an individual or group), and let the readers determine whether or not elements of the case will apply to their situation.

The Nature of the Learner

Human beings learn from their birth how to confront the issues of their environment (French, 2007). As students, people learn more about their (and others')

environment and how to address issues that may or may not confront them in several ways. In 1956, Dr. Benjamin Bloom and a group of colleagues determined there were three domains (called cognitive, affective and psychomotor) in which the learner must operate to be able to make sense of the world (Krathwohl, 2002). Students must use cognitive processes (the acquisition of knowledge and intellectual skills) to develop logical reasoning to address issues confronting them. They must also learn how to understand and control affective issues affecting their judgment and reasoning skills. Finally, students must understand the abilities and limitations of their bodies and the human-made tools with which assessments and judgments of new information are constructed.

The importance of each characteristic (cognitive, affective, and psychomotor) is seen in an example of students confronted with needing to learn a new skill in a Mathematics course. If they hate Mathematics, they are biased against studying the subject, and this bias makes learning more difficult. A calculator may help them perform the necessary calculations faster, but they must make sure they are able to press the appropriate keys to provide the machine with accurate numbers to obtain the correct answer. While the operation is occurring, they are reasoning all the time by initially understanding the nature of the problem, assessing their movements as they go through each step of the problem, checking to make sure the steps are accurate, and (when the answer is arrived at) determining whether or not the answer sounds reasonable. If at any point, emotional, physical, or intellectual characteristics of the students become confused, inoperable or disjointed, they fail to learn the subject material and may fail the entire course if this occurs too often.

Successful interventions to help students succeed will address one or more of the cognitive, affective, and psychomotor challenges each student faces. In this study, I addressed these issues by asking questions to understand the intent and effectiveness of the intervention services as students perceive them. During these conversations, I attempted to understand what student characteristic(s) were being addressed by the services.

The Nature of Learning

As discussed in the previous review of literature, students use four different types of tools to learn academic material. First, there is a teacher who will either act as a source-giver, moderator or facilitator to help them understand new material. Students need to be able to understand how their particular teachers teach in addition to being able to understand what the teachers' expectations are for each course. Second, there is class material in the form of a book, slide presentations, articles, exercises, etc. With class material, successful students understand the organization of the material, how to identify key words or phrases and how to read and retain useful information. Third, there is assessment in the form of practical applications and/or tests where the student must be able to comprehend the nature of each question and either reply to, perform or pick the most appropriate response. Finally, there are students, who must understand their student characteristics and how they interact with the classroom setting to be successful in each course.

In this study, I addressed the issues surrounding learning by asking students how components of the course (the instructor, the material, the assessment or the student) seemed to affect their learning and grades. I also asked about the nature of the

nterventions to understand the process behind student intervention as perceived by the students.

Ethical Considerations

Ethics – the standard or character set up by any race or nation (root = ethos).

Ethos – the essential characteristic spirit, disposition or tendency of a people or community regarded as an endowment and as expressed in their customs (Marckwardt, Cassidy, Hayakawa, & McMillan, 1974).

Methodological Ethics: Ethical Considerations in Using Focus Group Methods

Focus group methods have been utilized in various organizational settings from education to business, for reasons ranging from scientific curiosity to market research and product implementation. Therefore, studying the ethics of focus group research is of paramount importance. In this research, I conducted focus groups using different mediums (in-person, electronically without video, and electronically with video). In some instances, ethical considerations were similar; in other instances, different ethical considerations might apply. In the following discussion, I summarize five principles suggested by the American Psychological Association (APA, 2010), including and expanding upon the Belmont Report (National Institutes of Health [NIH], 1979) for two reasons. First, psychology is my educational background and experience – the lens from which I view much of the world of research. Second, the field of psychology has experienced many ethical issues from its inception, and thus has contributed greatly to the nature of ethics as we understand it today.

Beneficence and Nonmaleficence

Researchers should not only do no harm, but provide some type of benefit to the participants as a result of the research. The nature of focus groups is that people who may have not met together will meet and discuss topics seemingly innocuous (or not) for some of the participants. Despite the best efforts of the focus group leader, participants may be vulnerable to verbal or (in the case of face-to-face focus groups) even physical harm. I felt (and students agreed) this research had the potential to benefit students by examining resources they might utilize to perform better academically in the course. How do we protect the participants from harm using this method? Electronic groups may provide some of the answers; by not having strangers sit physically in the same room together, physical harm is not possible during the session. Asynchronous message boards with a moderator allow for deletion of very insensitive messages from participants; however, this results in the moderator becoming the judge of what is qualified to be part of the group discussion and what is not part. With video and face-to-face groups, recognition of a person after the session is possible, and repercussions are not known.

Fidelity and Fesponsibility

"Psychologists uphold professional standards of conduct, clarify their professional roles and obligations, accept appropriate responsibility for their behavior and seek to manage conflicts of interest that could lead to exploitation or harm" (APA, 2010, p. 2). Regardless of the mode of focus group, what role do focus group moderators play in insuring their professional standards are upheld, they have professional roles and obligations, and that they accept appropriate responsibility of their management of a

focus group? In reflecting upon my role as a moderator, I considered dynamics possibly affecting the role I played in each mode of focus group.

Integrity

"Psychologists seek to promote accuracy, honesty, and truthfulness in the science, teaching, and practice of psychology" (APA, 2010, p. 3). As a focus group moderator, I was honest regarding my purpose with my participants. It was in my best interest to promote accuracy, honesty and truthfulness in my participants. However, due to the possible sensitive nature of the research, students who were failing in the course may not have wanted to share the complete truth. I have also found in my role as an academic advisor that poorer academic students often do not seem to understand their academic standing. Therefore, while I encouraged honesty, I also strived not to place my participants in such a position where they might be inclined to distort the truth because of the nature of my questions. I did not ask about sensitive topics such as individual grades or midterm progress.

However, as a researcher, I had access to information such as the midterm progress indicator and course grades that could potentially harm the participants if I were to indicate their academic status in any way. As a result, although I was honest in telling students I had this information, I assured them I would use it only as a method of triangulation and will not ask any questions or in any way disclose their academic information to any of the other participants.

Justice

"Psychologists recognize that fairness and justice entitle all persons to access to and benefit from the contributions of psychology and to equal quality in the processes…"

(APA, 2010, p. 3). In the process of designing this research, I chose different types of focus groups to try to accommodate different types of people who may not feel comfortable or able to travel to a specific location or may not want to be seen and heard. I also used the same questions for each group, gave food certificates to participants who would not be in the same room, and attempted in every way to make the process different but equal for each person.

Respect for People's Rights and Dignity

"Psychologists respect the dignity and worth of all people, and the rights of individuals to privacy, confidentiality, and self-determination" (APA, 2010, p. 4). Beside doing my best to preserve and protect the rights of all participants, including the right to determine they will no longer participate in the research, this research had a great deal to do with privacy and confidentiality issues. Do college students mind participating in a focus group in which their features and voice are recognizable? How does confidentiality hold in a group situation where others will be asked to respect others' confidentiality (but cannot be forced to hold to their promises)? Do college students perceive there is more privacy and confidentiality in text-only focus groups? These are the types of questions I hoped to answer with this research.

Contextual Ethics: The Ethical Stance of a Researcher in Collegiate Advising

The Historical View of Educational Ethics

The earliest profession in education to embody ethical principles was the religious cleric, who took a vow to "give up all self-interest to the glory of God and the promotion

of salvation" (Schurr, 1982, p. 319). No matter how the surrounding civilization or community behaved, this group of clerics who preserved and promoted knowledge in the middle ages were bound by a self-imposed ethical position relating to their salvation and the biblical teachings they espoused.

The profession of academic professor grew out of the tradition of the religious cleric, as one who imparted wisdom and knowledge to the learner in a communal relationship built on the essential search for truth and meaning (Schurr, 1982). The earliest professor was not bound by an ethical code imposed by any institutional or professional body, but by the simple mandate that truth above all was to be honored and imparted. According to Schurr (1982),

> For the academic professional, the promotion of knowledge in devotion to truth was essentially interpersonal…An author becomes an authority when others recognize that what he or she has asserted on his or her own authority bears the ring of truth. (p. 319)

In 1966, the American Association of University Professors (AAUP) developed a code reflecting their personal stance:

1. Professors'…primary responsibility to their subject is to seek and state the truth as they see it…. Although professors may follow subsidiary interests, these interests must never seriously hamper or compromise their freedom of inquiry.
2. As teachers, professors encourage the free pursuit of learning in their students. They hold before them the best scholarly and ethical standards of their discipline…. Professors make every reasonable effort to foster honest academic conduct and to ensure that their evaluations of students reflect each student's true merit.
3. As colleagues, professors have obligations that derive from common membership in the community of scholars.
4. …professors give due regard to their paramount responsibilities within their institution in determining the amount and character of work done outside it.
5. …as citizens engaged in a profession that depends upon freedom for its health and integrity, professors have a particular obligation to promote conditions of free inquiry and to further public understanding of academic freedom. (AAUP Committee on Professional Ethics, revised 2009)

This statement, while embodying the old tradition of imparting truth to the student, also incorporated another aspect of ethical behavior – the movement from individual internal principles to a set of guidelines derived from the common membership, a particular group of professional who espouse a particular branch of knowledge (Schurr, 1982).

The Researcher's Background

My educational training is psychology, which evolved from philosophy and was formulated in the late 1800s by such people as Wundt and James (Schultz & Schultz, 2007). Today, the American Psychological Association has an ethical code (APA, 2010) established after excessive abuses by researchers indicated the need for such a code. I remember when I first heard the story of little Albert, who as a child was subjected to shock whenever seeing a white rat to test the theory that fear can be conditioned and can generalize to such objects as white fur coats. When the experiment was over, Albert was not desensitized by John Watson, the "father" of Behaviorism and the researcher in this project, because Albert had left the hospital and could not be found (Watson & Rayner, 1920; Harris, 1979). I read literature in physiological psychology in which various parts of animals' bodies were permanently severed or disfigured to see what reactions other animals had; I also read behavioral psychology studies in which both animals and children were subjected to maternal deprivation (Cohen, Kaufman, Ruttenberg, & Fano, n.d.). Ethical principles seemed an afterthought in many of these experiments, and this dilemma continues today, up to and including research in the internet being practiced

before a thorough examination of a set of ethical guidelines for internet research can be discussed and codified (Walther, 2002).

In the field of philosophy and from my wife's relationship as a nurse to the medical field, I learned of the Hippocratic Oath. In history, I learned of the Nuremburg trials and subsequent discoveries of atrocious unethical acts of Nazi experimentation (Rees, 2006) and I read the code that developed from those findings (NIH, 1979). I grew up in the midst of the formulation of the Belmont report and discussed with others what it meant to behave ethically in the psychological realm. The ethics of Behaviorism and stimulus-response control weighed heavily in my mind and in the courses I took, one of the most frequent topics was by what means it could be determined to be ethically responsible to cure someone of a behavior resulting in self-injury without ever determining the cause of the behavior. Finally, I was raised in a religious home where the moral imperative to treat others as you would have them treat you was an immediate, real injunction to the way I behaved daily and tried to live my life and my social relationships.

The author's ethical stance. Everything I learned from courses, interactions with others, and personal religious beliefs grew into my ethical principles as an instructor and a researcher. I did not (and still do not) believe the ultimate goal of ethics is to "think and to reason" (Klugman & Stump, 2006, p. 181); I also do not believe that a sense of morality ("the set of beliefs a person has about what is right and wrong in the world" (Klugman & Stump, p. 181) is enough either. To me, ethics is the ability to critically evaluate moral positions based on prior beliefs and experiences and to develop a personal code of ethics while understanding this process will continue to develop in light of new

experiences. As a result of this belief, if I do not fully comprehend the ethics of a situation I am proposing, I am glad to participate in a system of checks and balances through the IRB process in which my mistakes can be caught and corrected before I accidentally harm myself or others through unintentionally harmful actions. I am also in favor of the stance taken by such individuals as Zubay (2007), who urges a more comprehensive curricular approach to ethical instruction, and Hill (2004), who argues for new models of ethics to adapt to current professional practices. However, I believe true ethical behavior does not exist because of such external checks, balances, instructions, or models, but from an internal set of guidelines or "framework for thinking" (Hugman, 2005, p. 535) that should be critically developed and established within each person. The larger canvas on which my ethical decisions are made was established through a critically processed development of a basic internal moral principle over thirty years ago – to live life ethically, I must understand that others possess unique individual worth. My goal in life and research therefore is to treat each person with a sense of worth, and if possible, to help them realize that sense of worth in themselves and others. Therefore, when I consider the principles of respect for others, beneficence and justice as laid out in the Belmont Report (NIH, 1979), I evaluate those principles from the lens of my ethical belief in the self-worth of others.

The author's advising ethical position. In 1989, I accepted a position in a university's new advising center as an academic advisor. I worked with students who were new to the university either as freshmen or transfer, and part of my responsibility was to advise them of courses they should take and ways to succeed in the challenging collegiate climate. I came soon to realize many of these students were vulnerable; as new

students, they were seeking for help from many different people, and some of their sources' advice conflicted with advice I had given them. The Buckley amendment (now known as the Family Educational Right to Privacy, or FERPA; U. S. Department of Education, n.d.) became a large part of my life as I tried to protect students' rights of privacy at the same time as I attempted to help parents with their need to know, especially in the cases of failing grades and financial aid, and I used whatever talents I had to help the students and the parents talk to each other to reach understanding and mutual agreement. As my position in the center advanced, I became the person responsible for formulating the list of students who had not achieved an acceptable 2.0 cumulative grade point average (GPA) and were therefore on probation and possible academic dismissal if they failed to raise their cumulative GPA. As organizer of the list, I soon found names of students whom I employed, and a new ethical dilemma grew from this fact: should I inform the students of my knowledge, or should I let them come to me? In fact, I never informed them of my knowledge, but through caring, one-on-one conversations with my employees, each one let me know of his or her situation, and I came to realize the depth of trust of the relationship I had with these students. I also realized what many other researchers or advisors must realize when working with vulnerable populations in distress: these individuals were not lazy, or stupid, or trying to take advantage of situations. On the contrary, they were often the brightest students I employed, with amazing leadership potential and gifted skills; people in whom I could depend to take whatever assignment I asked them to complete, and not only complete it, but enhance the task in such a way that many more people benefitted from the assignment than I had hoped.

It was in this advising/supervisory position I began to conduct research and write reports based on the students we advised. If a new program was initiated we felt could be of use to students who were undecided or were on academic probation, my task was to evaluate the program's effectiveness. If a new group of students (for example, students who were not regularly admitted to the university, but were given a one-semester trial enrollment) became part of our responsibility, I was the person who evaluated our effectiveness in helping these students accomplish their goals. I came to realize the same set of statistics could tell different stories based on interpretation, and funding and positions depended on my interpretation of the facts. Yet in every instance, I was aided by the support of a director who did not believe in doctoring facts to support our position. Rather, I learned to come to a deeper understanding of looking deeper into the superficial numbers I compiled, to learn the reasons for the numbers. Focus groups, interactions with students and professional advisors and other colleagues – all of these became valuable tools to me as I developed my ethical research position of protecting our center's budget and staff while discovering how our center could best help students strive for their potential while recognizing them as people of worth who deserved our respect and trusted us to preserve their dignity and privacy.

Ethical Principles in National Advising

The National Academic Advising Association (NACADA) has developed a set of core values for its organization its authors suggest is a

> framework to guide professional practice and reminds advisors of their responsibilities to students, colleagues, institutions, society, and themselves. Those charged with advising responsibilities are expected to reflect the values of

the advising profession in their daily interactions at their institutions" (NACADA, 2005).

Moreover, its authors state:

NACADA recognizes and celebrates the contributions of professional, faculty, para-professional, and peer advisors to the advising profession. NACADA acknowledge s the complex nature of higher education institutions and the role academic advising plays within them, the wide variety of settings and responsibilities of academic advisors, and advisors' diverse backgrounds and experiences. NACADA provides a Statement of Core Values to affirm the importance of advising within the academy and acknowledge the impact that advising interactions can have on individuals, institutions and society.

This set of core values include the following statements:

1. Advisors are responsible to the individuals they advise. Advisors need to recognize those individuals' diversity, including beliefs, goals, interests and tools for successful learning.
2. Advisors are responsible for involving others, when appropriate, in the advising process. This statement recognizes the community of the institution and the need for the advisor to utilize specialists who can be of the best benefit to the student.
3. Advisors are responsible to their institutions. This statement recognizes that the advisor, as an employee of the academic institution, is subject to policies and procedures of the institution, and must communicate with others who are responsible for the success of the institution.
4. Advisors are responsible to higher education. In concert with the institution's educational mission, this statement recognizes that there are many approaches to effective advising, and encourages advisors to pursue academic freedom by utilizing the best strategies to help with students' academic goals and success.
5. Advisors are responsible to their academic community. From local to global communities in which advisors and students take part, this statement recognizes the impact of the values and customs of communities surrounding the advisor-student relationships, from reporting student characteristics and success to locating opportunities for student growth.
6. Advisors are responsible for their professional practices and for themselves personally. This statement includes such values as personal and professional development and mental, physical and spiritual health. (NACADA, 2005)

The advisor is responsible to and can have ethical dilemmas stemming from interactions with students (including parents who are given permission either through the Family Educational Rights and Privacy Act or by the students themselves), colleagues,

institutional authorities, advising practices, the community (from local to global), and their own internal sense of ethical behavior and personal health and well-being (Fisher, 2005; Landon, 2007). According to Buck, Moore, Shwartz and Supon (2009), an advisor's moral behavior and decision-making exists upon a continuum upon which there are three dialectical tensions – from staying totally objective (neutrality) to becoming opinionated (prescriptive), from acting encouraging to acting discouraging, and from behaving judgmentally to behaving in a non-judgmental manner. These tensions guide advisors' daily decisions as representatives of the educational community. The impact of this responsibility can be minor – helping a successful student stay on the right track – to life-changing – trying to help a student in academic difficulty avoid dismissal or a foreign student remain in the country to finish his or her degree program.

Ethical Principles and Behavior of Educational Research

What of the researcher who works with this community of students and advisors – what ethical responsibilities does this person have to the people s/he is researching? Cheney (2008) stated

> There is obviously no right answer to the question of how to integrate ethics into our engaged research and practice. However, our disciplinary emphases on dialogue and process remind us that ethical pursuits are not to be separated from or conveniently added to our projects. (pp. 287-288)

I suggest there are three sets of ethical standards to guide the educational researcher: the ethics of his/her profession, the ethics of the advising community, and the internal ethical principles that should guide the steps of researchers as they conduct research.

By following the ethical guidelines of the researcher's profession (in my case, the American Psychological Association) and presenting my case before an Internal Review Board organized under the guiding principles laid out in the Belmont Report, researchers have checks and balances to turn to when ethical situations arise. Ethical practice is no longer just a matter of one's beliefs or allegiances; it is a standard upon which the research can be evaluated, both by the researcher and the Internal Review Board before the initiation of the research. Granted there are many standards followed by different academic disciplines and some of these standards conflict with each other; granted these standards are a stylized form of ethical behavior that may be little more than a restatement of the Hippocratic injunction to "do no harm" – still, these standards are a safeguard to the subjects, the researcher and the institution from which the research comes. As a researcher, I value colleagues who will participate in the evaluation of my research, and even though it is quite likely I will not always agree with the IRB decisions, I personally feel better knowing another set of eyes has seen the research I propose to conduct, gauged its potential risks and benefits, and alerted me to possible scenarios or risks I have not considered.

The second set of guidelines I propose for researchers in higher education and academic advising is to as closely as possible follow the guidelines established for and accepted by most of the advising profession by NACADA. By following these guidelines, the researcher becomes aware of the societal and cultural milieu of the advisor, and understands more closely the ethical struggles faced by advisors on a daily basis as they work with students, colleagues and others. The researcher also recognizes the stakeholders involved in his/her research by following the NACADA core value

statement, and therefore not only better protects the rights of the student, but is able to provide more cogent and timely reporting to the appropriate individuals and agencies based on the need to know as established by the Buckley Amendment.

By following these established ethical guidelines, researchers accomplish several practical steps. First, they can provide evidence to themselves and others that they have attempted to abide by ethical codes in at least a baseline manner. Second, researchers receive feedback through the process and gain agreement and endorsement from others that standards of ethical behavior are being met. Finally, following these codes can help to supply a defense when something in the research goes awry.

The final guideline – the internal ethical position of researchers and the will to live by their ethical positions –should not be ignored. When former Nazi soldiers were interviewed by a researcher, they confirmed that internal moral principles were the first ethical guidelines to be systematically erased from the soldier's way of thinking and behaving (Rees, 2006). If one's internal principles are removed, how much easier it becomes for a corrupt society or professional community to re-normalize communal ethical principles, turning unacceptable behavior into acceptable or even desired goals. The same is true for researchers today; they must develop, grow and maintain an internal set of ethical principles by which the research is conducted, or no external guidelines and principles will matter. This injunction of self-reflection and growth applies not only to researchers, but those who surround their work, as in the following description of social worker ethics:

> The social work student is shown to be the primary subject, but at the same time such a person only appears in relationship to service users, educators (academics and practitioners), other social workers, and so on. Each of these people has a

> role to play in learning about ethics of those around them. Therefore, in so far as anyone involved in any aspect of social work education does not continue to practice ethical reflectivity as a means of their own continued learning then they will be ill equipped to facilitate the learning of others. The implication of this is that ethical education is an often unrecognized example of life-long learning. (Hugman, 2005, p. 544)

In summary, it is the researchers themselves who must recognize and understand the history and events leading to the organization of ethical principles surrounding them, so the dilemmas and mistakes made along the way to this codification will not be repeated. Researchers must also read the principles and guidelines established by the authority of the government and professional organization to which they belong to understand the definition of acceptable practices; by following these guidelines, these researchers can prevent mistakes and are provided with a network to validate and support their research decisions. However, it is in the final analysis the researchers who establish internal ethical principles to deal with everyday experiences, who can use these principles as a lens to examine their daily practices, and who can safeguard the use of these principles in their profession by arguing for continual re-examination of the standards each profession sets.

I reflected upon my ethical principles as I conducted this research in three ways. First, I carefully considered what I was asking students to provide in terms of personal information and how it may affect their ability to respond honestly to my questions. Next, I considered the ethics of the interventions provided to these students to see if they properly addressed ethical principles in helping students who face possible academic probation status. Finally, I addressed the ethical consideration of holding focus groups in which fellow students can see and recognize each other.

Methodological Framework

Methodology: The Case Study

For this research I chose an explanatory case study approach (Baxter & Jack, 2008; Merriam, 1998; Yin, 2003). A qualitative case study is a co-construction of perspectives regarding a phenomenon or event occurring within a particular context using a variety of resources without researcher manipulation. In this case, the research context was a bounded unit (the Early Alert program and the staff and students who are involved in it) and I wanted to understand student perceptions of the effect of the unit in attempting to find solutions for the event of unsatisfactory midterm grades. Yin (2003) suggested that case study be used when the context is relevant to the phenomenon being studied. I chose to use a qualitative case study approach because I believed the participants and I (the researcher) could understand the phenomenon of the focus group environment together better than I could understand it alone. However, I framed this research study within the context of a group of people within a particular context.

Case studies can be utilized for a variety of purposes, including evaluative purposes. A descriptive evaluative case study is one in which an intervention is described within its context. Because this program is still young (entering its fifth year) and its implementation has not been evaluated thoroughly, no one as yet understands the students' perception of the impact of the program, and I believed an evaluative case study approach would advance understanding of student perceptions on more levels than a simple survey or experimental study would. As Stake (1995) stated, "It is a something that we do not sufficiently understand and want to – therefore, we do a case study" (p. 133). I used a constructivist view because this view in particular focuses on the

understanding of the struggles of new students in making sense of (socially constructing) their relationship to the academic environment surrounding them, rather than developing artificial, experimental methods or viewing it from a power or conflict perspective (Creswell, 2007).

The Case Study of Interest

The current research involved freshmen students enrolled in high-risk courses and a university program developed to respond to the needs of those students. In 2009, Rocky Mountain University (a pseudonym) instituted a program entitled The Early Alert Project, designing a midterm progress report identifying students with unsuccessful midterm grades and providing a list of resources to help them succeed in their courses through intervention. While many programs are designed to help the student who is already in academic probation status, too few programs attempt to keep a student from this status in the first place. It is therefore important to study the effectiveness of interventions designed to prevent academic probation. The preliminary year was mainly focused on gathering information and developing processes; however, initial statistical results indicated the program did not succeed in helping many students raise their final course grades. Through this case study I proposed to explain the reasons for this lack of success from students' perspectives.

An admissions index is calculated by combining the student's high school grade point average and college entrance exam (ACT or SAT) scores. At Rocky Mountain University, the average freshmen admissions index is 115 with a standard deviation of 10 points, yet according to school records, students in the preliminary year of the Early Alert Project who had unsatisfactory grades after the third week of the term had admission

indices as high as 142. Seven of ten of the majors at Rocky Mountain University with the highest number of unsatisfactory course grades at midterm were biology, physical science, and engineering students.

Since 2010, midterm grades have been compiled for a select group of students enrolled in freshmen courses with the highest numbers of final term D and F grades (known as high-fail courses). If a student received a U (unsatisfactory) midterm grade, the student was alerted by email. It is not known at this time whether the email alert was an effective way to alert students; however, the percentage of D and F grades at the end of the term did not decrease in many of the courses, with the implication being the awareness of the grade did not affect student outcomes to a great degree.

There are three main types of interventions for the university's students in general: 1) Tutoring services, including one-on-one and group tutoring, 2) Study Skills workshops, including time management, test and note taking, and reading, and 3) conversations with academic advisors, teachers or other staff members to monitor progress and offer assistance in other specific ways. In the second year of the Early Alert Program, a fourth intervention referred to in this document as Turn-Around was added. Turn-Around is a day-long event held in about the 8th week of courses. In this event, students are invited to come to a single building to meet with service providers from all over the campus. In addition, counselors are there to help students determine possible avenues to take if their grades are falling behind (choices include talking to the teacher, getting support from an intervention service, or dropping the course to concentrate on the rest of the schedule).

For the Early Alert Project at Rocky Mountain University, four specific avenues of intervention awareness for students with unsatisfactory midterm grades were suggested and implemented. First, emails were sent from the office of Student Affairs, resident hall directors and advising offices. These emails were followed by phone calls, postcards and/or personal meetings with the student. However, there was no systematic choice of which method to use with what student, and some interventions were offered to the same student more than once with no clear justification of why the intervention was offered to a particular student at all; therefore, analysis as to the effectiveness of the interventions was impossible.

Evaluation of the Case of Interest

Throughout this research, I asked questions regarding efficient implementation of the Early Alert program, specifically in the area of the interventions used by the university to assist students enrolled in courses participating in the program. According to Patton (2008), programs fail for two reasons: programmers either do not implement the program correctly, or fail to achieve the intended outcomes. In this formative stage of the program, the intent is to understand students' perception of what the program is designed to be. I asked questions regarding processes to see if the students understand them and how well they perceive those processes to be working. What components of the program are students actually participating in? If a particular process is not working well, how do the students provide feedback?

In a larger case study, this implementation evaluation would involve different types of stakeholders, including staff who actually conduct the intervention services and administrators who conceived the program components. However, although I had

conducted some evaluative conversations with staff from the Early Alert Program, student input had been minimal. This research contributed to the knowledge of this particular case study by filling a gap that has been missing thus far.

Focus Groups

For this research, I conducted six focus groups in tandem during the third week of the term – two traditional, in-person, two online chat and two online video groups utilizing Blackboard Collaborate@ as a virtual research space (see Appendix B for a list of focus group questions). I also offered all groups the opportunity to update their progress by email on a weekly basis for four weeks using an online asynchronous email message (Appendix C), followed by a summary focus group in the eighth week of the term for each group (Appendix D). These focus groups were designed to determine whether or not the students were aware of these services, whether they took advantage of the services, and whether or not the services were helpful (and how they could be improved). As part of each final focus group, I asked interview questions about the focus group format itself (Appendix D). Questions included whether or not the format of the focus group seemed comfortable, whether students felt they could answer questions honestly and whether or not students would have preferred a different medium than the group in which they chose to participate.

Methodology

Participants

Selection criteria and process. General Chemistry students at Rocky Mountain University were notified by email by the Assistant Vice President for Student Affairs that they would be involved in the Early Alert Project (Appendices E and F). This

announcement also offered a brief description of the midterm progress indicator (S – Satisfactory, or U - unsatisfactory) assignment procedure and a notification stating that if a grade of U occurred, the student may receive a notice about support services (Appendices G and H). Immediately after this email was sent, instructors in the General Chemistry course also received an announcement from the Associate Vice President regarding the Early Alert Project (Appendix I).

Before this research began, I asked for and received permission to conduct this study from both the Internal Review Board and the Chemistry department (Appendices J and K). Shortly before students were notified by email of their progress, I visited each class to read an announcement for participation in the study (Appendix L) and asked students to sign up for the study in the classroom, selecting the type of focus group in which they wished to participate by signing and returning a volunteer form (Appendix M). All volunteers were asked to sign a consent form (Appendix N). They were also given the opportunity to select a pseudonym for purposes of the research (which they declined to do). My hope was to enroll six students in each group for a total of 36 students for this study. However, I was only able to obtain 32 volunteers; out of those participants, only 14 students actually participated in the focus group sessions (table 1).

Table 1
Number of student participants by type of focus group (n = 14)

Type of Focus Group	Focus Group Number	Number of Participants
In-Person	1	3
In-Person	2	2
Audio-video	3	2
Audio-video	4	2
Text-Only	5	3
Text-Only	6	2

Despite emails the day before each session and phone calls on the day of the session, the last two initial focus groups (text-only and audio-video) had to be cancelled due to non-attendance, new incentives were arranged with approval from the IRB committee (Appendix O), and new volunteers were found. After the first focus groups were conducted, all but one in-person focus group participant stayed in contact until the end of the research, and one other text-only student was not able to attend her final meeting.

During the fifth week of the term, instructors of the course posted progress indicators of S or U, and university services providing intervention were informed of the student's progress. With the exception of the two online focus groups needing to be rescheduled, initial focus groups were held during the third and fourth weeks before students were notified of their progress. The research was continued throughout the succeeding five weeks with weekly student updates until the eighth or ninth week of the term, when the final focus group sessions were held. All focus group conversations were recorded digitally and transcribed. At the end of the term, final grades were recorded, and analysis began. The last two online groups were conducted in the same way, but started closer to the middle of the term in October and ended in November.

Demographics. Of the over 4,000 new freshmen enrolled fall term 2014 in RMU, approximately 650 students (about 16%) were enrolled in general chemistry in fall term 2014, with admission indices ranging from 95 to 142 and an average index of 121. Students were mainly white (85.7%), residents of the state (65.7%) who were required to live on-campus for their first year. The new freshmen population in this course had a higher percentage of males than females (54% to 46%), which is usual for this course but

opposite of the gender ratio of all new freshmen at Rocky Mountain University, where women outnumber men by 55% to 45%. During the course of the research, I was allowed to access grades received by the participants in this study to be used during analysis as artifacts for trustworthiness.

Participants in this study were students at least 18 years of age attending Rocky Mountain University in fall term 2014 and enrolled in the General Chemistry course (aside from the age requirement, no other restriction was given). Of the fourteen participants, twelve were freshmen with less than 30 credits, while one was a sophomore (30-59 credits) and one was a senior (over 90 credits). Eleven of the students were new freshmen, never having attended a university before, and the other three were continuing students (had attended this university in the past), although no student had taken more than 41 graded credits at this institution. The students earned between a 2.18 and 3.97 cumulative grade point average on a 4.0 scale (an average of 3.20) while taking from 10 to 18 credits (an average of almost 15 credits) this term. Students ranged in age from 18 to 25 (an average of 18.9 years), with a total of 8 females and 6 males. Ethnically, two students identified themselves as Hispanic, and racially one student identified as multi-racial, while all others identified themselves as white.

Potential Benefits to the Students, College and University

For this study to be of benefit, three groups of people at Rocky Mountain University were considered (Appendix P):

- Students received benefits from the study in compensation for their time, input and willingness to participate. I benefitted them in terms of practical

considerations (gift cards for coffee and pizza and a chance of a $35.00 gift certificate drawing for one person in each type of focus group). I also gave them gifts in the form of knowledge (they received lists of intervention programs and strategies used successfully by other students to improve their grades). In addition, students stated this study gave them an opportunity to voice their opinions without reprisal concerning the university's attempts to help them succeed; this opportunity was important to some participants.

- The college (specifically, the Chemistry department residing within the college wherein my research was conducted) benefitted from this research through knowledge of the interventions their students found useful (and if students found an intervention not to be useful, the department hopefully benefitted from the knowledge too).
- The university benefitted from the increased knowledge concerning the Early Alert Program, university and departmental interventions, and finding out how effective the different focus groups were for interviewing their students.
- In addition, I provided the university and the department artifacts in the form of reports and presentations to explain the case study in more detail.

Consent Forms

Before participation in the study began, all volunteers were asked to complete a consent form describing the research, outlining their participation (two focus group meetings plus four online email updates), stating the risks and benefits of participation to them, and providing a list of rights for participation such as the ability to withdraw at any time for any reason (Appendix N).

Student Selection of Focus Groups

Participants were able to select the type of focus group they would prefer unless the desired focus group was full. At the time they volunteered, they were asked to rank their first, second and third choices (Appendix M) and then were placed in an appropriate group depending on the size of the group and the need for additional participants in each group. In-person volunteers met in person as a group at a designated spot at Rocky Mountain University. High-social presence groups met virtually (with both visual, auditory and chat features) as a group over the Internet, and low-social presence groups also met as a group with just chat capabilities. Both types of online groups utilized Blackboard Collaborate@ for the online medium (for information on Blackboard Collaborate@ security, see Appendix Q)

Focus Group Questions, Processes and Instructions

Questions. I concentrated on three issues during each focus group session (Appendices B and D):

- First, I asked questions regarding the use and effectiveness of interventions.
- Next, I asked questions regarding tactics students use to succeed.
- Finally, I asked questions about the type of format and ethical considerations of the focus group

Process. One week before the focus group began, I called all of the students individually to verify their participation in the focus group (See Appendix R for script of general conversation script reminders). Two days before the focus group, I sent a reminder by email with directions for attending the focus group. The day before the

focus group, I called each participant, and on the day of the focus group, I sent another email to students to remind them of the meeting time and place with directions on how to attend (Appendix S). For the first focus group with internet students, hours before the event, I also met the students the day of the event at a specified location to give them each a laptop and to check their ability to log in without difficulties.

Instructions. In the first session, I began by showing participants pictures of three trains using Microsoft Clipart@ (Appendix T) in different forms of motion, asking them their impression of how the class was moving (e.g., slowly, very fast or in a train wreck), and talked about the course's pace and students' ability to keep up with the information. Then I offered flash cards with one intervention strategy listed on each card (in the case of electronic focus groups, I directed their attention to a whiteboard with a slide of each card sorted in the same manner as the in-person groups), ending with a total list of interventions (Appendix U) and asked the participants to describe each intervention and discuss how likely they felt they would use the intervention. In the last session, I began with the same process, asking for the current pace of the course and a description of each intervention, but asked how often each service was used and how the students felt about using the service. Examples of intervention strategies included (but were not limited to) talking with a professor or academic advisor, attending study skills workshops and attending test preparation sessions.

After the interventions were discussed, I asked the participants to produce a list of intended study strategies. Discussion focused on how effective each strategy might be and if there were different times to use different strategies. The final focus group was

similar with the exception that I asked what strategies were used and how effective they were for the student.

Finally, I asked students to discuss focus group participation in two ways. First, I asked questions about the ease of use and familiarity with the method. Then I asked ethical questions concerning privacy, anonymity and comfort in disclosing information to others.

After the final initial focus group session was finished, I thanked the students for their time and either hand or electronically sent them a list of Rocky Mountain University interventions with a list of suggested study strategies, and instructions on how to complete the weekly email updates.

Weekly Updates. On Friday morning of each week, I sent all participants an email asking them to tell me briefly what they did during the week (see Appendix C). The questions concerned the following areas:

- Did you receive any emails this week from Early Grade Feedback? If so, how did you feel about the email you received (for instance, did it help you understand more about the program and how it could help you)?
- What programs or services from the university, department of Chemistry or class did you use to help you with your homework, assignments or tests this week?
- Did you use any specific strategies to help you with these assignments or tests? How helpful were these programs, services and/or strategies that you used?

- How do you feel about your chances to receive a passing grade in this class (please briefly explain why you feel this way)?

After the first focus groups were finished, as a result of student consent before the research began (see Appendix N), a representative of the university gave me information regarding each student's progress in the course at the time of the progress report. I used this information at the end of my research to see how accurately students were able to describe their situation and predict their outcome in the course.

Data Collection Procedures

Focus groups. All conversation in all focus groups were recorded digitally on a password protected device for transcription and accuracy. In addition, a research assistant volunteered to take notes in case of electronic failure and to provide additional feedback on the process.

Weekly Updates. Each weekly update was stored in my university password protected email in a folder designated for this research.

After all data were collected, I transcribed each focus group using a transcription known as Transcribe@. This transcription software provides an audio player and text editor on the same page, allows for slower and faster speeds (up to three times normal speed) using the keyboard or foot pedal, inserts timestamps, provides dictation, auto-saves at every word, and is not connected online in any way, so it can be used offline and is secure. Furthermore, Transcribe@ provides assurance the text will not be sent to the company in any form (https://transcribe.wreally.com/).

Differences Between In-Person and Online Processes, Instructions, and Data Collection

To respect the participants and trustworthiness of the research, I attempted to differ between the in-person and online groups as little as possible while recognizing some differences must occur when meeting each other in very different conversational modes. All questions were similar, although subsequent follow-up questions differed in groups depending on the type of focus group and nature of each conversation.

Differences in instructions involved an email and an electronic map for in-person groups to direct them to their physical meeting room and an email and electronic list of instructions for online groups to log in to their site. In addition, I helped each online participant obtain and test a university laptop on the day of their meet to insure their successful log in to the site. All students were paid with a local coffee shop gift certificate and a pizza certificate (either hand-delivered in the in-person sessions or given through mail delivery after the end of each online session).

I used Blackboard Collaborate@ to record all online sessions, and two digital audio recorders to record in-person focus groups. Although Blackboard Collaborate@ has the ability to record both audio and video, I used only audio to transcribe both the in-person and high social presence groups. The low-social presence group used computer text as the medium of conversation, so I simply copied and pasted the conversations from the Blackboard Collaborate@ chat box without the use of audio equipment.

The presentation of the flash cards differed only in type of presentation tool depending on the focus group. For in-person groups, I used flash cards and paper to display images and types of interventions. For online groups, I used a white board to

show images and flash cards. However, the order of presentation was the same for all groups.

Data Analysis and Coding

Trustworthiness

To ensure trustworthiness of the research, I adopted the suggestion of Barusch et al. (2011) by using two forms of trustworthiness: member checking and audit trails. Member checking is a procedure by which data and summaries are taken back to the participants to ensure what was stated by the researcher accurately and credibly reflects their words (Creswell, 2007). I used this member check in three ways. I summarized each session to the participants at the end of each focus group to be sure I accurately captured the intent of the focus groups' statements. I also provided lists of interventions and strategies to each focus group in the final meeting to see if they agreed with the lists I had recorded during the first focus group and ensuing four weeks. Then I provided a written report to the members of all groups and asked them to review and respond with any comments they might have.

An audit trail provides transparency to the research steps and findings by keeping all records and information pertinent to the process. Lincoln and Guba (1985) describe six categories necessary to keep an accurate audit trail:

- Raw data
- Data reduction and analysis products
- Data reconstruction and synthesis products
- Process notes
- Materials relating to intentions and dispositions

- Preliminary development information

Audit trails can be both intellectual – helping the researcher to reflect on each stage of the research process – and physical – providing documentation of each step taken in the research. For this study, I kept electronic documentation of each step of the process, reflecting on the steps by keeping a journal of my progress. This process included keeping all emails associated with this research as well as keeping every draft of this manuscript separately and electronically recording my initial thoughts on the research before writing this paper.

For the contextual part of the research, I also used triangulation, in which the researcher uses multiple forms of documents to verify the veracity of or gain a new perspective of statements made in the session (Creswell, 2007). To accomplish this, I obtained information from the course, intervention services and the central data warehouse at the university to compare session statements to actual events (although individual grade information was not asked, some mention of class progress in general or intervention participation arose).

Comparative Framework for Methodological Analysis

The methodological component of the analysis consisted of efficacy (including time, cost and ease of use) and ethics (privacy and inclusiveness). I also compared the amount and richness of the data in addition to how well each group member contributed to the conversation. The latter was subjective in that I realized not everyone would contribute equally due to their personality, but I attempted to look beyond personal

characteristics to how well each type of focus group seemed to encourage dialogue and what obstacles there may have been.

Finally, for focus group questions related to my research questions, I used thematic analysis (Creswell, 2007) to identify common themes, describing agreements and disagreements within each theme. Thematic analysis is the most common of qualitative analytical methods, yet Braune and Clarke (2006) pointed out that with all of its use and flexibility, there is "an absence of clear and concise guidelines around thematic analysis [meaning] that the 'anything goes' critique of qualitative research (Antaki, Billig, Edwards & Potter, 2002) may well apply in some instances" (p. 78). They suggest the following guidelines:

1. Familiarize yourself with the data
2. Generate initial codes (themes)
3. Search for themes within the data
4. Review the themes
5. Define and name the themes
6. Produce the final analysis in form of a report

Braune and Clarke also identified five common pitfalls in thematic analysis for researchers to avoid:

1. Failing to analyse the data by merely stringing phrases together
2. Merely using themes from interview questions instead of actually examining the narratives
3. Using weak analysis to identify overlapping themes or failing to convince the reader of substantive analysis

4. Failing to back up analytic claims with supporting evidence from the data, and
5. Failing to match theoretical and analytical claims

Evaluative Framework for Contextual Analysis and Implementation

For data analysis of the evaluative component of this case study, I used NVivo 10 to thematically code my participants' responses along the lines of a comprehensive evaluative implementation model as described by Patton (2008). This model includes five types of implementation evaluation, including:

1. Effort – the level of activity involved in the intervention, including how many intervention services are actually occurring, what elements of the program are active and how students are utilizing the services
2. Monitoring – what mechanisms are being used to monitor the program and adjust or revise services when necessary
3. Process – how the intervention services are working in the eyes of the participants, and how the services work with each other to benefit students
4. Component – how each individual step of the intervention works independently to provide needed services to students
5. Treatment Specification – identifying the level of treatment needed to bring about a specific outcome.

Although these components helped me to generate questions and begin initial coding, my thematic grouping was not complete until all data were generated and conversation in the groups were analyzed.

Findings Presentation

For this dissertation, I requested and received permission from the graduate school (Appendix V) to present the findings from this study in the form of two journal manuscripts. Therefore, Chapter 4 is a manuscript based on the methodological aspect of this research, pertaining to research questions examining differences and ethical considerations of different types of focus groups. The title page and abstract are formatted according to the International Journal of Research and Education guidelines (Appendix W). Chapter 5 contains a manuscript based on the contextual aspect of this research, which pertains to the impact of university and department interventions on students' academic performance in a chemistry course known as General Chemistry. This manuscript follows guidelines established for the Journal of General Education (Appendix X).

Summary

In fall term 2014, six groups (with fourteen total participants) were selected to participate in three different types of focus groups (two face-to-face groups, two synchronous virtual groups with video and audio capabilities, and two synchronous virtual groups with only texting capabilities). The duration of these groups was over six weeks; first, an initial focus group meeting determined the extent of awareness of intervention programs offered through the University as expressed by the Early Alert program. Next, the groups responded to four weekly update requests through asynchronous email. Finally, the groups were gathered together for a final synchronous focus group session. Methodologically, these groups were used to discover differences in time, cost and thematic effectiveness of the different focus group types as well as privacy

and inclusiveness issues. Contextually, these groups were used to discover the effectiveness of interventions offered through the university and department. Specifically, the research questions were:

1. How do online focus groups compare methodologically to a traditional focus group?
2. Second, what ethical considerations arise during the administration of online versus traditional focus groups?
3. Finally, what are students' perceptions of the impact of Early Alert university and department interventions on students' academic performance in a freshman course known as General Chemistry?

Participants were asked to participate and were given the opportunity to select the type of focus group they desired based on the availability of spaces within the group at the time they volunteered. Blackboard Collaborate@ was used to conduct and record the sessions, and member checking, audit trails and triangulation were used for trustworthiness components of the methodological and contextual aspects of the research. I used theory to form initial codes and subsequent group member comments to thematically analyze the research questions. The following chapter 4 and 5 will describe the findings and analysis of the methodological and contextual questions respectively. Finally, Chapter 6 will be a brief overview of the entire dissertation.

CHAPTER IV

METHODOLOGICAL PAPER

From Ease to Ethics: A Methodological Study of Three Focus Group Types

Randy J. Larkins

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To be submitted to the International Journal of Research and

Method in Education (Appendix W)

Author Note

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Biography: Mr. Larkins is a doctoral candidate in Applied Statistics and Research Methods. His work includes teaching, researching students in academic difficulty, and acting as a research consultant to students and faculty. Previously, he helped to create a large advising center in another university, where he worked for many years as an administrator of student information, helping to create and assess programs for undergraduate students who were either undecided or enrolled in majors with prerequisites.

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Abstract

This research was designed to explore whether contemporary, online focus groups would produce the same or different effects in terms of ease, comfort, richness of data, and ethical considerations as a traditional in-person focus group. Participants were from a university beginning chemistry course, divided into two groups of three types of focus group: two in-person focus groups, two audio-video focus groups, and two text-only focus groups. Methodological consideration in the following areas are presented and discussed. 1). In-person groups still have relevance in this online age; they were preferred by most of the students, were easier to set up, and seemed to produce more comfort and richness of data among the participants as a whole. 2). Audio-video groups compared favorably with in-person groups, but were more limited in terms of interaction and were more difficult to set up and administer. 3). Text-only groups were easiest to transcribe, but seemed to be the most limited in terms of all other aspects of the research. Finally, ethical concerns such as the need for confidentiality and privacy were not considered important by members in any group; therefore, it is incumbent on the researcher to provide the best ethical environment possible in whatever form the focus group takes place. Suggestions for future research are that the type of group should be chosen careful around issues such as topic sensitivity and geographic dispersion of the participants.

Keywords: electronic; ethics; focus group; methodology; social presence; synchronicity

From Ease to Ethics: A Methodological Study of Three Focus Group Types

> I can video-chat from anywhere. Just because I'm in the building where I got [the computer for this study] doesn't mean that I have to be here. So that part of it's nice. I'd probably say that an interesting [in-person] meeting would be better, just because we have to pick up the computer. But not because I feel like I can't convey my information as well. (Trevor, an audio-video participant)
>
> One thing that I like about this group especially - it's just like "Oh, we're talking". I'll hear somebody else and it's like, "Same thing" - I've been doing that the whole time actually. Or "You said it a lot better than I could have thought it." And it's nice to see different experiences…. (Mary, an in-person participant)
>
> "Very comfortable, very easy to type and keep up. Getting the computer wasnt [sic] as easy but wasnt [sic] that big of a deal. I do like being able to participate in a location of my choice" (Rita, a text-only participant)
> (Responses to questions asked about how participants felt about their choice of focus group type)

Qualitative research involves data in the form of words – words that must be gathered, comprehended, structured, and interpreted in such a way the intent of the original speaker or speakers is left intact. A methodological concern in qualitative research, then, is to find ways in which speakers individually or as a group are able to present their stories in such a way the telling is as authentic as possible and the re-telling is meaningful and honest to the original intent. Focus group methodology is one way to gather people who share a common characteristic together to present their understanding of how they feel about an issue (Krueger & Casey, 2000), but the almost century-old traditional focus group method and newer forms of focus groups involving technology may not always represent the best ways to initiate honest, rich, and authentic conversations (Rodriguez et al., 2011). Therefore, the methodological research questions guiding this study were:

Q1 How do online focus groups compare methodologically to a traditional focus group?

Q2 What ethical considerations arise during the administration of online versus traditional focus groups?

Literature Review

Focus groups have been used as a way to capture not only the comments of the individual, but the interaction between people providing a richer exchange than speaking to individuals separately. As George (2011) put it, "The interaction between focus group participants has the potential to create a dynamic synergy that is absent in individual interviews" (p. 257). Focus group methodology has consisted of a group of participants meeting in a physical location and discussing issues for a specified amount of time. In a world of increasingly electronic communication, focus group methodology can be adapted to virtual groups, thus saving time and money, two vital concerns in research. However, issues of ease, comfort, richness of detail and ethics are not likely to be equivalent in the different forms of focus groups available today.

Although the number of participants has varied, and settings have changed from single settings where all participants are in one room to electronic settings such as telephone conferences and Internet chat rooms, the basic premise of what constitutes a focus group is still the same – it is a group of people who are interviewed in a single setting at one time by a researcher regarding a specific topic, product or issue (Krueger & Casey, 2000). A focus group must be created and led by a researcher (or research team) for purposes of research, with the data being comprised of the interaction between the participants (Morgan, 1996). While this is true of both in-person and electronic focus groups, some differences exist. Face-to-face focus group researchers must consider a

accessible and close location for participants, and refreshments are often a consideration for those attending. For online focus groups, the medium (chat room, bulletin board, or other electronic medium) must be chosen, and if keyboards are used, the participants' ability to type must be considered as well as the speed of the Internet where the participant will be located in case the connection is not fast enough to support video and audio communications (Fox et al., 2007; Kroll et al., 2007; Link & Dinsmore, 2012).

Methodology

Case Study Description

For this research I chose an explanatory case study approach (Baxter & Jack, 2008; Merriam, 1998; Yin, 2003). A qualitative case study is a co-construction of perspectives regarding a phenomenon or event occurring within a particular context using a variety of resources without researcher manipulation. In this case, the research context was a single introductory-level chemistry course in one university (hereafter referred to as "Rocky Mountain University" or RMU), consisting of five sections of students, with an enrollment of over 1,100 students in fall term 2014. The study involved researching how effective academic support programs were to the students in this course, and a total of six one-hour focus groups were used to elicit information from the participants.

Synchronicity and Social Presence

According to Link and Dinsmore (2012), there are two dimensions of online focus group methodology which must be recognized. The first dimension consists of levels of social presence –from low social presence, in which participants can only see typed words of the participants, but not interact with either a visual or auditory presence, to

high social presence, in which case participants can see, hear, and speak to each other electronically.

The second dimension consists of synchronicity – whether the group is conversing at the same time (synchronous) or in a delayed (asynchronous) interaction. Asynchronous communication is the oldest of the technologies and therefore is the method of choice in most published articles, although there is some debate over whether or not this form of communication should even be considered a focus group (Bloor et al., 2001; Fox et al., 2007).

For this research, I chose to look only at in-person and online synchronous groups, because I felt electronic groups meeting at the same time would be most similar to in-person groups. The first two focus groups were typical in-person focus groups meeting in the same room on different days. For the online groups, I chose to use a type of fully synchronized group which included audio, video, and text. I called this group "audio-video". I also chose to use a very limited sychnronous group with only text as a means of communication, which I called "text-only". There were two sets of each of the three types of focus groups in the study.

Participants

Participants in this study were students at least 18 years of age attending RMU in fall 2014 and enrolled in the course known as General Chemistry. The list of possible participants included about 1,100 names in five sections. From these names, I gathered 32 volunteers by attending each section and asking for participants. Aside from the age requirement, no other restriction was given.

Actual participation in the groups brought the total number to fourteen students (8 females and 6 males). Of these, all but three students were new freshmen approximately 18 years of age who had never attended a university before. Ethnically, two students identified themselves as Hispanic, and racially one student identified as multi-racial, while all others identified themselves as white. At the end of the term, this group of students earned a 3.20 grade point average (GPA) on a 4.0 scale while taking from 10 to 18 credits (an average of almost 15 credits) this term.

Method of Participation

During recruitment, students were permitted to select the type of focus group they would prefer unless the desired focus group was full. In-person volunteers met in person as a group at a designated spot at the university near the residence halls, while the participants in electronic groups were able to use university-supplied Windows@-compatible computers in locations of their choosing in order to meet over the Internet. Both types of electronic groups utilized Blackboard Collaborate@ for their online medium.

Participation was organized into three separate units. First, all participants met in their respective focus group sessions to discuss their initial course progress and the manner in which type of focus group addressed their ease, comfort, and ethical concerns. After the first focus group sessions, emails were sent out for four weeks to the participants, which served a dual purpose of keeping them in contact and monitoring their use of services. Finally, all participants met in their respective focus group one more time to make additional comments regarding the course and methodological issues. For their participation, I gave all students articles dealing with student success, a local coffee

shop gift certificate, a slice of pizza (either in person or a certificate by mail for a slice of pizza, depending on the type of group) and a chance to draw a gift certificate for $35.

Differences in Instruction and Participation Between the Groups

To direct the in-person participants to their physical meeting room, I sent an electronic map of the building and room number. For online participants, I sent both a link and initiated personal contact to help each person log in to the site before the first focus session. The software of choice for recording electronic participants was Blackboard Collaborate@ because of students' familiarity with Blackboard@; Collaborate@ has the ability to automatically begin recording audio, visual and text at the beginning of each session. For in-person focus groups, I purchased two digital audio recorders. Because the low-social presence group used computer text only as the medium of conversation, I was able to simply copy and paste the conversation from the chat room without the use of audio equipment; for the rest of the groups, I personally transcribed their sessions in full from the audio files I received from the recorder or Blackboard Collaborate@ sessions.

I also used flash cards to stimulate discussion between the groups. In-person groups were shown physical flash cards and were allowed to physically draw upon cards as they saw fit, while electronic groups were able to use a white board and electronic markers provided by Blackboard Collaborate@ to see and manipulate the same type of flash cards in electronic form.

Results

The methodological results of the analysis consisted of major themes in the areas of ease, comfort, richness of data, and ethical considerations. I also attempted to look beyond personal characteristics to how well each type of focus group seemed to encourage dialogue. For analysis, I employed thematic analysis (Creswell, 2007) to identify common themes, describing agreements and disagreements within each theme. Finally, I recorded journal thoughts which reflected my personal reflections and attitudes toward each type of group, as I felt this self-observation would help succeeding researchers to understand the benefits and challenges of each type of focus group they may face in their future research.

Ease

In my recruitment efforts, I found in-person groups and one text-only group to be full after I had met with two sections of students, while there were very few students who had volunteered to participate in the audio-video sections. After recruitment was over, the in-person and text-only were filled to capacity (six people in each of the four groups; one in-person group had seven participants), while the audio-video groups contained six people total for the two groups, despite my best efforts to obtain six more participants. This indicated to me that, although no one stated a dislike for audio-video sessions, participants did not feel at ease with an audio-video format as they were with the other groups.

Despite the groups' volunteer numbers however, only one-third to one-half of the volunteers appeared at each beginning focus group meeting despite the type of group and regardless of email or phone reminders. It is important to note, the farther away the focus

group date was set from my recruitment presentation, the less people appeared at their arranged focus group meeting despite emails the day before each session and phone calls on the day of the session, until the last two initial focus groups (text-only and audio-video) had to be cancelled, new incentives were arranged, and new volunteers were found. After the first focus groups were conducted, all but one in-person focus group participant stayed in contact until the end of the research, and one other audio-video student was not able to attend her final meeting. Therefore, my conclusion was while the focus groups differed in terms of volunteering, they did not seem to substantially differ in participation once the groups had met to conduct their first group session.

In-Person Participation. In-person participants did not need to bring or use computers, they were provided food and drinks, and most importantly, they could talk about the chemistry class in person, which they felt would be more interactive and would somehow emphasize their points better. As Mary (an in-person participant) stated,

> I really think that - with helping students succeed, that a face-to-face focus group would be the best way. I mean that's just my personal belief, and not on the Internet. That's why I wanted to be in it, just to kind of follow my own little beliefs on that.

Electronic participation. Electronically, students enjoyed the benefit of using computers anywhere an Internet connection existed. They appreciated the fact they did not have to travel; as Rita (a text-only participant) stated, "This is nice because you can provide feedback at a convenient location". As for recording, all sessions were automatically recorded by Blackboard Collaborate@ and could be saved as an .mp3 format which works well with all available transcription software and services. With the exception of three fraction of a second Internet losses, Blackboard Collaborate@ worked

well, without any difficulty during all eight sessions. The only difficulty at all technology-wise was a computer which did not turn on and needed to be replaced. Blackboard Collaborate@ also has a whiteboard feature in which the researcher can show a slide and participants can collaborate by using electronic markers to add information to the slide (in this case, marking which academic support services they did or did not prefer). This feature was highly popular with the electronic focus group participants. I was able to use Blackboard Collaborate@ for all eight sessions, since I could use the chat feature without audio or video capabilities for the text-only group. With this chat feature, I could also provide pre-typed lists to all groups so participants could comment on them. All in all, the students (and I) felt the software worked extremely well:

> I liked it pretty well. Like, the software's nothing you can control or that anyone can control, but I think the software works pretty well. And especially I liked it that I could be anywhere; I don't have to physically be in a room. I could be in any room I choose. So that part's nice. (Trevor, an Audio-video group participant)

Audio-video Participation. AV Participants appreciated being able to attend their focus group meetings anywhere they wanted to be. Philip noted that

> I think the software works really well… [for] the first focus group I had to be off-campus for a time in-between my classes and when the focus group started… it helped that I could just have the laptop off-campus. I'm not trying to rush to get back to the meeting and be on time and everything.

Aside from the ease of use and ability to meet in any location with an Internet connection, the participants also felt the ability to speak, write on the blackboard and see each other felt much like an in-person focus group, and if given the choice again between in-person and audio-video sessions, some would prefer the audio-video.

Text-only participation. Even though other groups considered text-only to be "…awful… absolutely terrible. Like everything would go wrong and nobody would say what they wanted to say and - it just wouldn't make sense", participants in the text-only groups felt differently: "Very comfortable, very easy to type and keep up…". In addition, because there was no audio, participants in other groups suspected text-only members of multi-tasking:

> …if we were just typing out our ideas - it would probably be easier - I could probably be doing some other type of homework and this at the same time. I definitely think that could be a factor, especially for college students who have a lot that's due all week and homework all the time. (Philip, an audio-video participant)

This was confirmed at least in part by text-only participants who stated they were "sitting here [eating] and nobody can see…glad it wasn't in person" and "I … feel like this was pretty low-commitment (which is a good thing)."

Challenges. Many of the challenges of each type of focus group occurred to me, as the researcher, rather than the participants. For the most part, while some participants might have preferred other types of focus group (most notably in-person), when they were in session, they found the software and hardware acceptable, although one electronic group member said newer computers would be helpful. Several participants would also have preferred using their own computers, but because of possible incompatibility issues with the software, university-issued Windows@-compatible computers were provided (the choice of Windows@ versus Macintosh@ laptops could have caused an issue with Macintosh@ users, but no concerns were mentioned by any student in this regard).

In-Person participation. Although participants in electronic groups said they did not want to have to come to a physical location, no one in the in-person groups listed coming to a physical location as a difficulty. In fact, no one in any in-person session stated any difficulties with this type of focus group. For me as the moderator, the main difficulties with in-person participation were the typical responsibilities involved in focus group preparation. For instance, because the university was far from my home, I needed to drive nearly forty miles one way to attend the meeting, hoping participants would show up, instead of turning on my computer and connecting to the Internet as I did with the other groups. Although I arranged for food for electronic groups by sending certificates via the mail, I needed to bring food to the in-person group, which involved estimating how many of the six or seven participants would arrive, buying the food and taking more trips to the room to set up. I also had to prepare paper presentations for the in-person meetings (including a trip to a copy center to obtain a large copy of a needed printout) in place of the electronic slides I used for the electronic meetings. In short, the in-person focus groups were more costly (an extra thirty dollars to buy food and materials for the participants I expected to see) and time-intensive (an additional two hours in driving time and setup per meeting) for me to actually prepare and attend than were the electronic groups.

Also, because this was not the university with which I was affiliated, I had to arrange for and drive to a locked campus room during evening hours. To be able to enter this room, I had to arrange either for someone to unlock the door to the room at night, or arrange for a key return after the session was over, which one time meant driving back to the university the next day (an 80-mile round trip) simply to return the key. Although

borrowing a key was not too much of a challenge, I was surprised in one session to find the entire hall had been locked while I was making my second trip to bring in food. Luckily, someone was still in the hall to unlock it for me.

Electronic participation. When testing the equipment and software for electronic participation, I discovered that a large file must be installed in the participant's computer. I also found if multiple sources of video or audio were found by the software program, video and/or audio capabilities were lost. The fix was to remove extra audio or video drivers on students' personal computers, which I was reluctant to do. Therefore, I chose to use university-supplied computers instead, which meant I had to find at least six laptops which were similar, load the file and make sure the audio and video worked on all laptops (thankfully, the center with which I worked was extremely helpful in this regard). This discovery led to having participants come to a university office to pick up and return computers, which minimized the benefit of being able to be anywhere to use the computer, and was the source of most of the electronic groups' complaints:

> It's more of a hassle, especially to get the computers, make sure your software's right, and make sure you even have the right software - it just seems like all the stuff you have to set up is a lot more of a pain than if we could just walk into a room. (Trevor, an audio-video participant)

To be sure the computers worked properly, I needed to drive to campus for the first six sessions, to obtain the needed consent forms and to show students how to use the computers. In the final sessions, I assumed students knew how to use the software (and I was right); however, students had difficulty with the computer batteries (which were not charged), and one student had to return a computer to obtain another one because the first one would not power up (something I checked when I came to the first sessions, but did

not check during the final sessions). Therefore, I spent a great deal of time setting up the computers and making sure they worked for students, which at times felt longer to me than preparing for the in-person sessions.

In addition, although Blackboard Collaborate@ worked well for all sessions, there were moments of concern. First, the initial testing of the software took 45 minutes for experienced technicians to be able to communicate with each other due to differences in the laptop configurations, lack of familiarity with the software, and the software driver problems mentioned above. This caused me a great deal of concern; I could not ask students to spend 45 minutes to set up their computers and then attend an hour session! Now I am much more comfortable with the software, and I am confident this time could be much shorter, but the driver conflict is still an issue. Students would have liked the electronic sessions better if they could have used their own computers.

Another issue was the loss of the Internet connection, which happened to me twice and to one student once during the eight sessions. The loss of connection was very short – less than two seconds – and did not interrupt the flow of the conversation, but it caused me concern over a possible longer interruption. In one instance, the students had just commented on how well the software worked, and everyone else was signed out of the session, when my connection was lost before I signed out. Whether it was due to software, computer or Internet issues, I am not sure, but I was glad to have the final session completed without a major connection problem.

Audio-video participation. This was the students' least preferred choice when signing up – when the other types of sessions were full after my recruitment visit, there were only six total volunteers for both of the audio-video groups. The worst problem in

the sessions, however, was the equipment. The microphones on the university computers were very poor – conversations were tinny, with echoes, noises, and sometimes sounding as if they were underwater. The poor sound was compounded when two students were in the same room. As a result of the poor recordings, transcription was very difficult and took much longer than any other type of focus group.

Text-only participation. Although the participants involved in the text-only groups did not mention any problems, participants in other groups such as the following in-person conversation shared why they did not want to be part of the text-only format:

> Sophia: "I would not have chosen text-only. Typing doesn't ever seem to get your point across."
>
> Nicole: "Yeah. And the messages get all mixed up because you try to respond to somebody else and someone gets their text done first. It's confusing."

Although these participants were not involved in the text-only group, their statements were proved correct. Answers were much shorter and abbreviated, and if one person's typing skills were slower than others, we would either have to wait for the response for a long period or continue the conversation, which caused the delayed response to be out of synch with the conversation.

Students in this type of participation displayed the lowest interaction. Even in a good conversational piece, there was an interim of several seconds while I waited for the participants to respond to a question, after which I would receive multiple responses that might or might not have any connection to each other. In some cases, even though I asked participants to raise an electronic hand if they did not wish to respond, I had to text participants to ask if they wished to respond (one person in particular would respond after I had waited for many blank seconds and had decided to go to the next question). This

low interaction could very possibly have been due to participants not being fully engaged in the discussion; as stated before, they might have in fact been multi-tasking. Most importantly for me, time delays made it difficult for me to use follow-up questions. When I did use follow-up questions, the conversation was out of order with other students' comments.

Comfort Level

Comfort level is defined as how willing the participants were to share with each other once they attended the meeting. In all types of focus group, everyone stated they felt comfortable sharing their thoughts with each other, mostly due to the fact they shared a common struggle in chemistry, whether or not they felt successful in the course, as the following conversations indicate:

> Emma: "I think that even with people I don't know, I would be okay. It's like, everyone struggled through the class together, so..."
>
> Sophia: "I think Chemistry bonds everyone struggling through it." (audio-video conversation)
>
> Nicole: "I feel like we're all in the same boat… it's not easy for any of us."
>
> Ryan: "So it's not like you feel super-comfortable with your S. And even if you are, you still have to work really hard to get them." (in-person conversation)
>
> Michelle: "I think you made the whole thing very comfortable and made it easy to share our opinions… and yes, I feel like I was able to say everything I wanted to." (text-only conversation)

To attempt to create collaboration among all participants, I used a chart of academic support services, asking participants to rank them in order from highest to lowest. All groups were able to work together to indicate which support services they preferred or did not prefer, but the conversation surrounding their preferences were again

related to the type of focus group in which they belonged – the higher the social presence, the more the interaction.

Richness of Information

If ease and comfort concerns vary between groups, might not the richness of information also vary among groups? I found the type of focus group played an important part in participants' interaction and my ability to follow up questions, especially with text-only focus groups. Because of the time delays between question and responses, this type of meeting took longer than the other types of meetings with the shortest amount of information (see table 2).

Table 2.
Length of transcription per focus group session.

	Number of transcribed pages	
Type of Group	First session	Last session
Audio-video (AV) focus groups		
1st AV Group	10	8
2nd AV Group	12	9
In-Person (IP) focus groups		
1st IP Group	20	15
2nd IP Group	11	7
Text-Only (TO) focus groups		
1st TO Group	9	8
2nd TO Group	5	6

Interactions and follow-up questions contributing to the richness of data could also be seen as having a relationship with comfort level; however, I found it to be more a function of the type of focus group in which the members participated – it seemed the less social presence the participant had, the less likely interaction would happen. Trevor, an audio-video participant stated this problem well:

> On your list, it said 'in person, video chat, and text chat'. And I feel like as you go down that list, you just get less and less personal. And there's less and less collaboration as you go down that list. So I feel like it's a little bit harder to discuss things. Even though we can hear and see each other, it's just not quite the same as someone sitting next to you.

Therefore, while laughter and interruptions abounded in the in-person groups, audio-video groups were less likely to interrupt and to respond to other's comments, and text-only participants were busy typing their own comments and did not interact much at all. As one text-only participant stated, "Honestly…[the focus group] could have just as easily been an online survey since we don't talk to each other that much during the group."

Ethical Considerations

When I began this research, I had thought ethical considerations and privacy might be important as to the choice of the type of focus group a student would make. For instance, students who did not like to talk in actual or electronic face-to-face groups might prefer text-only sessions, and therefore I would be able to be more inclusive by adding these participants. I found this was not the case; no one stated choosing their group because of this issue. Convenience as to time or location seemed to be more important than privacy issues to participants of all groups, and did not have anything to do with their choice of focus group. Privacy considerations such as sharing of email addresses or phone numbers came up as part of one conversation when I asked about privacy, but since contact information was not shared with anyone, the participants did not express any concerns regarding the research.

As part of the research, I also asked the students' consent to view their grades in this class. I assured them this was to be kept confidential; no one would know their

individual grades. I also asked questions concerning grades in the form of the entire class – what did they think students in this class were receiving as of the time of the focus group? Despite my repeatedly stating they did not need to share personal academic information in terms of how well they were doing in the course, participants freely shared the information anyway. It became my responsibility to protect the student by steering the conversation to the general person in the class and away from specific academic performance. As Trevor (an audio-video participant) put it, "I think… privacy - I mean, out of my group of friends, I can't speak for everyone, but I don't think privacy with the webcam makes much of an issue. Just because we grew up with it, we're kind of used to it."

No person considered privacy to be an issue in the choice of their focus group. The main reason they chose the type of focus group was whether or not they felt they could share everything they wanted to share. Among the non-text-only groups, there was a general consensus they could not type fast enough to convey everything they wished to express and therefore did not choose the text-only group for that reason. The idea they could use aliases and be completely private in the text-only group was also not an issue with anyone for choice of group.

Discussion

Time and cost are major concerns when researchers consider conducting online focus groups, especially when participants are immobile or not physically located in the same area (Bloor et al., 2001). Researchers can conduct online focus groups internationally without travel expenses. A virtual focus group may be more convenient for the moderator and participants. Furthermore, online focus groups can be of service

to populations or individuals such as teens who lack the "confidence to meet strangers in an unfamiliar location" (Fox et al., 2007, p. 540). Additionally, in this study, I felt the students might prefer electronic focus groups, since as university students who had many electronic assignments, they were comfortable with technology. However, if the participants do not have access to the technology (hardware and software) they need, cost and time in terms of equipment, software and training may result in higher than anticipated costs, and ease of use does not necessarily mean preference, as I discovered when many students claimed to prefer in-person to electronic groups.

Disadvantages with electronic focus groups are related largely to issues surrounding technology (Bloor et al., 2001; Fox et al., 2007). Technical problems may develop, and both the moderators and participants must have a level of familiarity with technology and how to respond to difficulties. Bloor et al. suggested a moderator in an electronic focus group may find it more difficult to probe further into issues, rapport may be harder to establish between the moderator and each of the participants, and data may lack non-verbal cues. However, they felt these criticisms may apply more to the low social presence media than the high social presence format. I found this to be the case; students were able to work easily with the technology, but probing questions were difficult with the text-only groups, and delays between texting made rapport difficult, whereas I did not find these problems in the audio-video groups.

Ease, Comfort, Richness and Ethical Considerations in Each Type of Focus Group

Ease. The ease of administering in-person versus electronic focus groups depends on the participants' proximity and the researcher's familiarity with the type of group. For instance, if the researcher and students are used to meeting in a particular campus or location face-to-face, the in-person focus group would be best used. Because I recruited from an in-person course, the students may have been more familiar with attending in-person meetings and therefore preferred the in-person mode of participation (even among the participants who chose electronic focus groups because the in-person groups filled so quickly). Thus, students in other forms of online classrooms, even if they were not too geographically distant, might prefer meeting online rather than walking or driving to a specific location on campus. For the in-person focus group, the researcher/moderator must considering printing time and costs, travel time and cost and food expenses and other factors such as allergies and amount of food needed. Electronic groups have been advertised as less costly and time-consuming in previous articles (for example, Bloor et al., 2001), but if computers are not available or adjustments need to be made to the participants' computers to enable the software to work, the time and possible cost might become higher than the time and cost of in-person groups.

Comfort and Richness of Data. Fox et al. (2007) have suggested with the communication trend of teenagers today gearing toward more electronic and less face-to-face speech, younger children and adults may feel more comfortable using online tools to participate in focus groups. Rodriguez et al. (2011) addressed elements to consider for culturally aware researchers, including being responsible for creating comfortable and

familiar atmospheres and viewing participant's input in co-constructing knowledge in the focus group. Though the authors addressed the issue of diversity in terms of demographics such as race and gender, an argument may be made that the virtual culture existing among young adults is very similar, and thus virtual focus groups may extend the feeling of comfort, familiarity and co-ownership with college students who spend much of their time in an electronic environment.

Despite these ideas and my effort to bring comfort and familiarity with the electronic participants, I did not find increasing comfort levels; on the contrary, Christina (an in-person participant) stated "I'm being kind of drowned in electronics lately. Emails, modules… I don't know." At any rate, despite all participants' agreement of comfort with their type of focus group, students seemed to be most comfortable interacting and sharing their thoughts within in-person focus groups. This comfort in fact led to a dilemma in terms of data; despite my attempts to keep them on focus, the in-person group conversations seemed to veer off-target more often than the other groups, jumping tangentially to subjects which were off-topic, requiring me to re-focus their thoughts back to the topic more than any other type of group. As a result, the actual information concerning the topics I was interested in was almost equal in the in-person and audio-video groups, while the richness of the text-only groups were far inferior to the other groups, possibly due to the limited time and effort constraints due to the effect of having to type everything and wait for everyone else to respond.

Ethics. At the top of ethical issues in focus group methodology is the issue of privacy (Krueger & Casey, 2000). In a traditional face-to-face focus groups, all members can see and hear each other, and especially if the moderator is not careful, a dominant

participant can overshadow a less assertive participant. These issues can exist in a virtual focus group as well, especially if a virtual classroom method is utilized (Stewart & Williams, 2005; Walther, 2002).

An additional concern is that the method being used may either not be secure or the participants may not perceive it as secure and therefore may not be willing to disclose information. Fox et al. (2007) felt their session would be perceived as more secure to students and parents if the session was linked to a reputable institution (their university), so a member of the university's information technology department constructed a virtual chat room for their use. I too felt this research would be perceived as more secure if the sessions were linked to online sessions in a reputable university with which the students were familiar. However, the students in this research suggested other popular audio-video online programs such as Skype@ and did not seem worried about issues of privacy. Whether or not the media used is connected to the university, safety and privacy for all users must be a concern for the researcher, which is why part of the current study addressed how secure participants feel using various forms of focus group media with varying degrees of social presence. In this age of social media which encourages people to be candid about many aspects of their lives, it becomes more the ethical responsibility of the focus group moderator and research to protect the privacy of individuals within the group.

Another issue concerning ethical practices is the ability of focus groups to include disenfranchised or marginalized participants in discussions (Bloor et al., 2001; Tates et al., 2009). Within universities, it has been my experience that often students who are disenfranchised and marginalized are non-white and/or have earned low cumulative grade

point averages. However, although I recruited all students in the course, there were very few volunteers in this research who represented themselves as other than white, and no students who were on academic probation or suspension. Although I was disappointed more diversity was not represented in the participant group, I still had to confront an ethical question when I was considering recruitment – should I even ask participants who were not passing the course to take time from their studies to be part of the research? I concluded I must include these students to represent their voices, but I would do my best to avoid all times when tests or assignments were due. In the end, all students who were still enrolled passed the course with grades of C or better, but I felt this was an issue which needed to be addressed as a methodological concern for this and future studies.

Areas for Future Research

As previously stated, although no one stated a dislike for audio-video sessions, participants did not feel at ease with an audio-video format as they were with the other groups (which seems counter-intuitive to today's technologically experienced student). I have speculated the reason in-person groups were preferred so highly is that the volunteers came from an in-person class setting. Familiarity with the mode of class delivery (in-person versus online) may be an important component in recruiting students for different types of focus groups and for the discussion and interaction within each focus group. Another reason for the in-person group preferences may stem from the possibility students are still not as comfortable with technology for group conversational work as I had believed. Future research could involve comparing online and in-person focus groups within their mode of delivery to see if differences still exist in ease, comfort and richness of data, especially in terms of interaction. Furthermore, this study may

involve students being able to use their own computers (which would enable Macintosh@ users to be more comfortable). In this research, I did not allow students to use their computers because of possible audio and/or video driver incompatibility with the software. However, if they have previously used their own computers with the electronic mode of classroom delivery the researcher is using, they could continue to use the hardware with which they are familiar. Alternatively, for students who have not used their personal computers in an electronic classroom mode before, a short training session could be provided before the research begins to help them feel comfortable with the interface and ensure the research will be able to proceed without complications.

In addition, I was not able to enroll volunteers who failed the course. Ethically, I was concerned the research might negatively impact low-performing students, so I attempted as much as possible to mitigate any potentially harmful consequences such as purposely holding focus group meetings on weeks that did not include chemistry tests. However, there is a possibility more ethnically diverse or academically struggling participants might contribute to an understanding of the methodology of these focus groups in a way not discovered in this research.

Methodological Recommendations. In future research, the following recommendations are suggested:

- Keep the focus group time of occurrence as close to the initial recruitment as possible.
- Use as high level recording equipment as you can obtain.
- Check microphone levels and clarity before starting

- If participants use their own computers, be sure to test their ability to participate before sessions begin in order to resolve any audio or video driver problems
- Experiment with popular other on-line meeting room software such as Skype@ or Google Hangouts@.
- Students exhibit little concern about privacy; therefore it is even more important the researcher be cognizant of this issue.

Summary

Two questions guided this research. First, I wanted to find whether or not the amount of information I gathered would be comparable in terms of ease (for both myself and the participants), comfort in sharing with others and richness and richness of data. I found the type of group should be chosen carefully around issues such as topic sensitivity and geographic dispersion of the participants. In-person groups were still relevant in this technological age; they were preferred by most of the students, were easier to set up, and seemed to produce more comfort and richness of data among the participants as a whole. Audio-video groups compared favorably with in-person groups, but were more limited in terms of interaction and were more difficult to set up and administer, with the possibility of Internet, equipment or software failure looming overhead. Text-only groups were also difficult to set up for both the researcher/moderator and the students; moreover, it seemed to be the most limited in terms of comfort and richness of data. The only benefits of text-only for the researcher was that the text was fully produced and did not need to be transcribed, and sound and audio disturbances were not present. However, these benefits

did not compensate for the lack of detail and richness of conversation found in the other two forms of focus groups.

Second, I wanted to find out how ethical considerations differed between in-person and the two electronic groups, especially in light of privacy issues. Students in all groups did not choose the type of group they wanted to join based on privacy, and they seemed willing to share details regardless of the medium they used. As one participant noted, privacy seems to be less of an issue in today's society due to the exposure college students have with online social networking. It therefore becomes more incumbent than ever before on the researcher to protect the ethical rights of the participants who have volunteered to serve in research.

Focus group research has a long history still popular today due to the important interaction between participants (Parker & Tritter, 2006). In this age of increasing modes of communication, it is important to find the differences between those modes while protecting the participants' privacy and ensuring their ability to tell their story in a safe and comfortable environment. Ultimately, these participants wanted to tell their story to future students, so those students may benefit from their experiences. It is therefore incumbent on the researcher to help them tell their stories in the best possible way.

> One thing that I like about this group especially – it's just like, 'oh, we're talking.' I'll hear somebody else and it's like, 'same thing – I've been doing that the whole time actually.' Or 'you said it a lot better than I could have thought it.' And it was nice to see different experiences…(Mary, focus group participant)

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CHAPTER V

CONTEXTUAL PAPER

To be submitted to the Journal of General Education (Appendix X)

How Much Help is Too Much Help? Student Evaluations of Support for a High-Fail College Chemistry Course

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Abstract

In this evaluative case study, I utilized a frequently required introductory freshmen chemistry course to study the impact of a university program known as the Early Alert System. This program was designed to inform students of their unsatisfactory progress and inform them of academic support services to help them succeed in this course. Available support services were evaluated according to Patton (2008), including accountability and compliance; formative, developmental, and summative components; and lessons learned. Fourteen volunteers participated in one of three types of focus groups (in-person, audio-video or text-only). The research included a beginning focus group, four weekly email updates and a final focus group. The evaluative implementation model's five primary components, of Effort, Monitoring, Process, Components, and Treatment Specification as described by Patton (2008) are the themes around which findings are organized. The primary findings were although students believed the university was trying to help them succeed, Early Alert System efforts were adversely received. In addition, participants felt that although there were enough support services to help them succeed in the course, the components of the support system were confusing and not organized in any systematic manner. Suggestions for further research included researching more amenable delivery methods of this type of communication and applying this research to other courses to examine whether the same results occur.

Keywords: academic intervention, academic support; chemistry education, focus groups, high-fail courses

How Much Help is Too Much Help? Student Evaluations of Support for a High-Fail College Chemistry Course

> I think they do want us to succeed...I don't think [they're using the right approach]. But I think with all the different resources they give us, and all the different exam reviews that they have, and all the [teaching assistants], that they do really want us to succeed. (Trevor, a focus group participant)

For the past six years, I have volunteered to help a university evaluate an academic support program's effectiveness (hereafter the university will be referred to as Rocky Mountain University, or RMU, and the program, the Early Alert Program). The Early Alert Program was designed by RMU to work with academic departments and instructors in courses with an annual history of the highest percentage of failure rates (D or F final term grades) to monitor students, and assign progress indicators of S (for satisfactory) or U (unsatisfactory) after three or four weeks in the term based on their initial work. The students were then notified by the Vice President for Undergraduate Retention as to their progress, and students with U progress indicators would be encouraged to use university and departmental intervention services believed to help them succeed in the course. After the first year of the program, an additional service (referred to as the Turn-Around program in this article) was added. The Turn-Around service was a one-day event occurring in the middle of the term; its purpose was to bring many resources together in one place to talk to 250 students individually about their unsatisfactory progress indicators and help them develop a plan of action for the rest of the term. Each student was assigned a person who walked them through certain stations designed to support their academic success.

Much of the evaluation over the past six years was conducted quantitatively; however, questions emerged that could not be explained quantitatively. Therefore, I began to investigate qualitative methods, which might answer some of the questions arising over the years. In particular, although the Early Alert Program was designed to help students become successful, the data were fairly consistent over the years in terms of the percentage of students who failed in each class and the percentage of students with midterm S or U progress indicators who failed or succeeded at the end of the term. After viewing similar patterns of success and failure for several years, I began to wonder if the program was actually helping at least some students to succeed despite the consistency in overall percentage rates of failure. As I spoke to university officials about my proposal to research this question in a qualitative manner, the department of Chemistry came up in the conversation as a department trying new interventions to help more students in their classes become successful. I spoke with a representative of the department, and she was amenable to having me conduct research in a class known as General Chemistry, an introductory high-credit course with a high failure rate, with over 1,100 students in five sections.

The research question, then, became specific to Chemistry:

Q1 What are students' perceptions of the impact of Early Alert university and department interventions on students' academic performance in a freshman course known as General Chemistry?

Because chemistry is such a pivotal course to many students who wish to pursue medical and scientific fields, their success in this beginning course sets the foundation for their future academic careers. If students are successful in their courses, they can choose to continue their planned careers and graduate to fill needed positions in the world today.

On the other hand, if students are unsuccessful in earning a satisfactory grade in this beginning course, they may make the decision to either pursue a different major or withdraw from academics altogether (depending on the severity of their poor performance). RMU had already determined they wished to put the effort in to helping these students succeed by providing an early alert system and corresponding interventions. What was needed then was to know whether these interventions were worth the university and department's time and cost of planning and implementation in the perception of the students enrolled in the course.

Literature Review

College and universities face two major dilemmas regarding new students – helping students to become successful and finding a way to retain students after their first year. Academic probation affects a large percentage of new freshmen and transfer students, at times exceeding 20% of a new class of students (Ryan & Glenn, 2002). Attrition between freshman and sophomore year was 21% for public institutions in 2012 (National Center for Education Statistics, 2014), lower than the 27% reported by Perry al al. in 2001, but still affecting thousands of new college students each year.

Academic probation, commonly defined as falling below a 2.0 cumulative grade point average (GPA) in college, incurs psychological and financial costs to the student including the loss of a student's financial aid and his/her potential dismissal from college. Institutional and state costs can also be high, including lower retention, tuition dollars, state and federal funding, a lower educated population resulting in less skilled occupations and lower pay and tax bases. (Hutson, 2006)

Research involving academic probation has focused on intervention strategies such as classes, mentoring, counseling, and tutoring designed to help students who are on academic probation succeed in raising their cumulative GPA to a 2.0 or better (Pionke, n.d). Researchers examining academic success, on the other hand, have sought to understand the factors predicting success and persistence in a college setting (Allen & Robbins, 2008; Walpole, 2008). Many factors are involved in the academic success of students. According to Hutson (2006), existing understanding of this phenomenon comes from several sources:

> While there is a dearth of comprehensive theoretical models outlining factors impacting at-risk students and strategies for facilitating recovery students on academic probation, theories concerning student learning, theories explaining student persistence, and models used in college student retention shed light on understanding this particular group of students and the strategies that may be used in aiding their academic improvement (p. 215).

Factors Predicting College Success and Services Designed to Encourage Success

A variety of factors can affect student grades in college. Without a clear understanding of factors related to individual grades and a thorough discussion about the changing nature of those factors over time, one is unlikely to decipher the facts from the myths in the college grading controversy (Hu, 2005).

There are three groups of factors found to predict college success to varying degrees. The first group is academic preparedness – the strength of grades and academic test scores a student brings from high school upon entering college (Allen & Robbins, 2008; Marsh, Vandehey, & Diekhoff, 2008; Wolfe & Johnson, 1995). The second group of factors are institutional the type of school, instructor, and course the student is enrolled

in (Hu, 2005). The third group is comprised of personal characteristics of students previously demonstrated to be able in part to predict academic success (Hedges & Thomas, 1980; Legg et al., 2001; Walpole, 2008). Programs and services used to help students succeed must take these issues into consideration.

Methodology

Case Study Description

For this research I utilized an evaluative case study approach (Baxter & Jack, 2008; Merriam, 1998; Patton, 2008; Yin, 2003). There are two distinct pieces to this type of approach: the case itself and the evaluation method of the case. The case was an introductory chemistry course at RMU involving five sections containing over 1,100 students with an enrollment of over 1,100 students in fall term 2014. This case was chosen because all elements for this study were in place: the course was in the list of high-fail courses, university and department academic strategies were functioning, and not only was the department willing to participate, but they wished to implement new academic support strategies to see if students would succeed in the course at a higher rate than previously, and were willing to participate in this evaluation to see how their new strategies impacted student academic success.

I chose to evaluate this course according to Patton (2008), who postulated programs fail for two reasons: personnel either do not implement the program correctly, or they fail to achieve the intended outcomes. In this formative stage of the evaluation, the intent is to understand if the program is working effectively. Questions in this research included asking what components of the program the students were actually participating in, what primary support activities were being utilized, and if a particular

process was not working well, what changes occurred to improve the operation of the program.

In a larger case study, this implementation evaluation would involve different types of stakeholders, including staff who actually conducted the intervention services and administrators who conceived the program components. In point of fact, over the period of time I have been involved in this case study, I have had conversations with various staff members throughout the university, but student input has been minimal. Therefore, this research contributed to the knowledge of the case study by filling a gap missing thus far – the voice of the students.

Participants

To obtain participants, I attended all five sections of the chemistry course, in which I read an announcement for participation in the study and asked for volunteers by passing volunteer sheets to all students and waiting at the end of class to receive the signed sheets. My hope was to enroll six students in each group for a total of 36 students for this study. However, I was only able to obtain 32 volunteers; out of those participants, only 14 students actually participated in the focus group sessions.

Shortly before progress report grades were sent to the students in the fourth and fifth weeks, initial focus groups were held to determine the extent of the students' knowledge regarding academic support services at the beginning of the term. The research continued throughout the succeeding five weeks with four weekly student email updates and final focus group sessions held with the same groups of students. All focus group conversations were recorded and transcribed. At the end of the term, final course grades were recorded, and analysis began.

Demographics. Because this chemistry course was an introductory course, all but three students in my research were new, freshmen students who had never attended the university before. No student had taken more than 41 graded credits at this institution. All students were in good academic standing (with a cumulative grade point average of 2.0 or higher). The average age of the participants was approximately 19 years, and the majority (eight participants) were female. Most students were identified racially as white (only one student was identified as multi-racial), and ethnically, two participants identified themselves as being of Hispanic origin.

Method of Participation

For this research, I offered students a choice of in-person, electronic audio-video, or electronic text-only focus groups to see which type of focus group might produce the richest details for evaluation purposes (in order to offer time choices, there were two focus groups of each type, for a total of six groups). All students in electronic groups were provided university-supplied Windows@-compatible PCs. With the exception of differences due to in-person or electronic participation (such as meeting in one room versus meeting electronically in one virtual space), all participants were involved in the same tasks and given the same semi-structured questions. There were three separate tasks involved with participation. First, all participants were required to attend a focus group session to discuss their background (such as their college major, experience and interest in the course), their initial course progress and how they understood and felt about a list of various support services I had obtained from university and department officials. Second, after initial focus groups were held, an email was sent each Friday for four weeks, asking questions regarding academic support service usage and strategies the

students used in their daily work. Third, the final part of the research culminated in focus groups again, in which participants met in the same groups to re-evaluate their perception and use of services. Finally, all participants were offered articles concerning student success in addition to certificates for a local coffee shop and pizza and an entry for a $35 gift certificate drawing.

Results

For data analysis of the evaluative component of this case study, I used the software program NVivo 10@ to thematically code the participants' responses along the lines of an evaluative implementation model as described by Patton (2008). This model has five primary components, including Effort, Monitoring, Process, Components and Treatment Specification around which I will organize the following sections.

Effort

> It makes it a little hard to keep track with all the different programs - like the recitation homework … and all the different…things you have to keep track of - it makes it a little hectic. Maybe if we could just combine it all? Like, I really like [one service] and I understand the use of [another service] but I think that having all the things going at once makes it a little difficult. (Sophia, study participant)

The first component of implementation evaluation according to Patton (2008) is Effort – the level of activity involved in the intervention, including how many intervention services are actually occurring, what elements of the program are active, and how students are utilizing the services. During the course of this research, the participants identified at least 21 programs designed to supplement or assist Introduction to Chemistry students. These programs served students in four ways:

1. General academic services – to help students become better students in general. These services were not specific to Chemistry, but applied to

strategies students identified as essential to doing well in the course, such as time management and note-taking.

2. University services – to help students become aware of their status in the course and to suggest services to help students who are struggling
3. Department services – specifically designed to help students succeed in this course.
4. External services – such as Khan Academy@ or Google@ searches, which are web-based and do not necessarily reflect the teachings of the department, but which students have found to be very helpful.

Of these four types of services, students utilized department and external services most. Comments such as Trevor's were typical of general services:

> I don't know much about the academic skills workshop. But it seems like something about how to study, I guess. Just too broad instead of specifically to your subject... like it's something that you could go to if you were not doing well in all of your classes.

As for university services such as the Early Alert Program and the program known as Turn-Around, these programs were initially not recognized by the majority of the participants. Only those students who had received a U indicator became aware of the programs when they received email notices about their performance. It is highly important to note, even at the end of this research (and therefore toward the middle to end of the course), these services were either misunderstood, mixed up, or unknown by the majority of participants.

Monitoring

> I know one of my friends - they got a 56 on this last exam, and they're like "oh, well...". And I gang up on them and say, "have you done your [assignment]" and

> they're like, "oh I'll just do it next week" and I'm like "DO IT NOW!" and they weren't interested in doing that. (Mary, focus group participant)

The second component of implementation evaluation according to Patton (2008) is Monitoring – what mechanisms are being used to monitor the program and adjust or revise services when necessary? Students did not state any program changed because their feedback or that programs were monitored to adjust services. Each service worked independently to support students and therefore had (or did not have) its own mechanisms to self-adjust when necessary to help student. For instance, ALEKS@ (Assessment and LEarning in Knowledge Spaces) is a web-based program used by the Chemistry department using "adaptive questioning to quickly and accurately determine exactly what a student knows and doesn't know in a course" (about ALEKS@, n.d.). While many of the students were not fond of the adaptive questioning at the beginning, they came to value it at the end, ranking it as one of the highest-rated services:

> (Beginning focus group session) Can we complain about ALEKS? (laughs) I really don't like ALEKS, and the thing is - I can understand the usefulness of it, because it is useful for review, and it does DRILL INTO YOUR HEAD stuff that you need to know, but it's very frustrating when you're just like…you'd have one of those problems, and there's 5 sections to it, and then you do it, and then you get it - right? Except for one problem, so then you have to answer it again and again and again, and you're just like "it was a mistake! Don't! Move past it. (Mary, a participant in the first group session)

> (Ending Group Sessions) "I think it's a pretty helpful tool. I like that it can explain a problem if you got it wrong instead of just saying I'm wrong and giving me a new problem."... "At first, I didn't like ALEKS, but now it's helpful."…"ALEKS I did because we had to, but it's how I learned most of the material." (Andrew, Robert, and Hailey, participants)

While students were not aware of monitoring, this does not mean monitoring did not occur in many of the provided services. It simply means that, aside from ALEKS,

participants were not aware of self-adjusting feedback mechanisms in any other service or program.

Process

> Most people seem to do bad on the test. Me personally, I've been telling others, people who have been asking me, "is chem hard?" I'll reply with "the actual material is not difficult, it's actually pretty easy to understand, but it's the tests that are really awful" (Mary, a participant)

The third component of implementation evaluation according to Patton (2008) is Process - how the intervention services are working in the eyes of the participants, and how the services work with each other to benefit students. Some services in this research seemed to work very well for students, while other services were perceived as being too general or not actually helping in the way students felt they needed help. This course was mainly graded on the results of course examinations; therefore in the eyes of the participants, the intervention should increase the test score in order to be helpful. However, almost all participants felt the services (including exam reviews) did not help them to understand the manner and wording of the test. One new service offered this year, with a title specific to helping students succeed in chemistry, was viewed very positively before the service's workshops occurred. As Philip stated: "…that sounds like it would help a lot. I've never heard of it, but just based on the title, it seems like it would help a lot." But afterward, the students did not seem to feel it was helpful. Mary said "…[the person in charge of the workshop] was like, here are some study techniques. And I'm like, I know how to study." This particular service was mentioned as important in the first focus groups, but the follow-up response was not favorable:

> I did go to the How to Excel and I remember it was after our first [focus group] session, I right afterward went to that…but I'm like "you've got to be kidding

> me"… cause they were like, 'here are some study techniques you can use, like do flash cards'...and the only useful thing I got out of that was a periodic table. (Mary, focus group participant)

With two exceptions, no participant mentioned any services or programs working together to complement another. The exceptions were the Early Progress Program, which notified students of their progress and suggested campus services, and the Turn-Around event, which brought services together to individualize a plan of action for each attendee:

> A lot of information [at the Turn-Around] is really, really helpful...They kind of focused a lot on, at least the sessions I saw, if you're not doing as well as you want to be, maybe the first step you want to take is to look at your study habits? And I know that I do have some bad study habits, like I have a tendency to cram before certain tests, …they give you a lot of helpful options, like how to study more effectively instead of just the cramming style. (Philip, focus group participant)

While some students found this event helpful, others found the results of the Early Progress feedback to be unsettling:

> I didn't like [the Early Progress email] one bit. Like it made me so depressed. Especially because it was…then one of my advisors from my college emailed me, and the [Turn-Around] emailed me, and I'm like, seriously guys, I'm not a failing student. You know, it's just a hard class and I have pneumonia! (Nicole, focus group participant)

Components

> I got so many emails from other people in other departments that were like, 'Oh, we're watching you now.' Like, you're going to be in our radar. And I was like, "I'm not one of those people. I'm not one of those people you need to be watching." And they did say a couple things about extra things you could go to, but I felt like I was one of those people who are like, I already know about these things…I'm already going to office hours three times a week and all this. I don't need you rubbing it in my face more! (Nicole, focus group participant)

The fourth part of implementation evaluation according to Patton (2008) is examining each component within the program. According to Patton, "the component approach to implementation involves a formal assessment of the distinct parts of a

program. Programs can be conceptualized as consisting of separate operational efforts that may be the focus of a self-contained implementation evaluation" (p. 326).

In this specific case, the components of this program might be to analyze a student's knowledge of basic academic skills such as time management or note-taking. A second component might be more specific to chemistry in general, such as assessment of previous experience or basic knowledge, and a third component might focus on being able to take or pass the examinations given in the course. But in this case, most students did not recognize there were components they might use to become successful; some services were either unknown or deemed to be unhelpful because they did not refer specifically to the course, and other services were considered essential because the students felt the service helped them do well on the exams. Some students did consider how the resources might work together for their benefit, however, as in the case of Rita:

> I think it would have been much more valuable to focus my time at [Turn-Around], talking to the teacher and the … study groups. For a similar class [biology], I have been using [a particular study group] and I think it is a great resource…I spent more time with people I knew, like mentors or friends and that was probably less effective.

Treatment Specification

> I think it might be good during recitation if they gave us things to practice on our own because I know … I do the practice problems in the book and stuff but even that isn't like the questions on the test - the format and the way that they word things? And so maybe if we got like - obviously not actual test questions but like questions that were made up by the teachers that were in the same format? Things that could be in a test and we could work through them on our own. (Emma, a focus group participant)

The final component of implementation evaluation according to Patton (2008) is Treatment Specification. According to Patton, "Treatment specification involves identifying and measuring precisely what it is about a program that is supposed to have an effect… identifying independent variables (the intervention dimensions) that are expected to lead to outcomes (the dependent variables)." In this study, the short-term outcome is passing the course with a final term grade of C or better. With the exception of one student who withdrew from the course, the participants in the research group all passed with C or better, even though four of them were found to have unsatisfactory progress indicators during the first part of the term. In this research, students identified resources they believed had a strong effect on their grades (mostly department or online services) and programs with little to no effect (mostly general services). However, I was not able through this research to determine the precise amount and type of service benefitting students the most.

Discussion

> I think the questions are really tough and the practice tests don't really let you know what you should be expecting on the test so much. It gives you the concept, so you don't ever get a study guide of things that you should know how to do. It's kind of like, memorize it and understand it but they don't really help you other than just giving you the information. (Emma, focus group participant)

New freshmen students arrive on campus often mentally and socially unprepared, unused to the rigor of studying required by difficult college courses, and unsure of resources they could use to make the transition to college easier for them. As a former academic advisor and administrator who worked with university-wide orientation sessions for many years, I often felt the students were at the physiological and safety levels of Maslow's (1943) hierarchy, while we were trying to provide them with

information at higher levels than they could assimilate at the time. For example, while we advised students to join groups and think about courses to help them graduate in a specific major, students were thinking "? Where is my residence hall? Where are these courses located?" Although these questions were also addressed at orientation, my feeling still remained that students were being overloaded with information at a difficult time for them to assimilate the most basic information. Of course, this information overload occurred because orientation was the only time these students would be together in one place for the remainder of their academic career, and we had to try to give them as many basics as we possibly could. And despite our best efforts to give complete and accurate information regarding campus life and academics, I often heard students talking to friends and parents about what "the real story is".

This course and the support mechanisms surrounding the course reminds me of those orientation sessions. There is an abundance of support systems the students are not able to understand or use effectively, because they are concerned with merely keeping pace with a course demanding rigorous study. This course has a negative reputation - they have all heard stories about how difficult the course and exams are, and they believe it to be a "weed-out" course. These stories add to their stress. They do not understand learning simple skills such as effective note-taking or time management could help them with their chemistry course, because general skills do not apply in their mind directly to the test they must pass to avoid the high amount of D and F grades they know are part of this course's reputation. When they study for the test, they are not sure which option among many options is the best to actually understand the wording of the questions asked on the test.

With the advent of technology and the growth of support systems to promote student success, universities and departments are no longer able to control where students obtain information and how accurate or applicable to the course the information is. Students are enrolled in a course moving at a fairly rapid pace, and they are unsure of the tests, the support systems, or (many times) even how to prepare themselves to study a rigorous course such as basic chemistry. As a result, they turn to any source they may feel or have heard will help them, whether or not the source is actually helpful or appropriate to their needs. They face their first test for which they are unprepared and are given a low grade they find later will be curved at the end of the semester, but they are not sure what their grade will finally be. At this point after the first test, some students are given a letter which (in the student's eyes) says, "drop the course; you will fail." What should students do at this point, especially when dropping the course means trying to find a 4- or 5-credit replacement in the middle of the term, and registration and financial aid are at stake? How will dropping this course affect their reputation and their dreams of becoming medical professionals, engineers and technicians?

The primary finding of this research is that enough support systems inside and outside of the university exist to help those students who wish to succeed. However, for the support to be effective, the university and department must recognize what those support components are and how they can be packaged into a system so students can intelligently pick and choose support components appropriate to their needs. This can be accomplished with very little effort or additional money by utilizing evaluation methods to ensure proper implementation of an overall chemistry support system. In this way, instructors who would like to help their students find appropriate services could point

their students to this system and guide them to the areas needed by each particular student. The university and the department are, to quote Emma, a participant in the study

> ...trying. I just don't think that they're necessarily doing it in the right way. Like they always have some sort of things like to help you, but a lot of them don't focus on what I feel you need to focus on.

Guidance to appropriate support is important to the student and the instructor who wishes to help students who are struggling. As a former academic advisor, I used to help new students navigate the myriad systems of a university, realizing how difficult it was to understand terminology and support systems while taking college classes for the first time. First-time science students may concentrate on the rigors of a difficult course load and not pay attention to possible services or strategies to lighten the load a little. This may lead to nights with little or no sleep for busy students; for instance Christina (a focus group participant) said, "I pull a lot of late nights where I go to bed at 12:30 or 1". A student's lack of knowledge regarding successful strategies or helpful services may also lead to illness (at least two of my participants had illnesses severe enough for a visit to the health center and bed rest for a few days during the term). Therefore, I was pleased to work with a department truly trying to provide students with support to succeed in a course with a high incident of failing grades. However, the more I listened to the list of services and how students used them, the more I heard their confusion mounting. Of the list provided to me by the university and departments, only half were known to the students, and the list provided by the university and department only comprised less than half of the list compiled by participant comments. The total number of services existing to help students is confusing, and the list is without explanation as to how each service might apply to a student's success. As a result, services are not known, understood,

utilized or as effective as they may be, and since no overall system of support exists, these services are allowed to continue despite their ineffectiveness.

In this case, an understanding of the implementation evaluation as described by Patton (2008) might help clarify services and how they work together. The following questions might also help students to understand where to go for certain help:

Effort

What services are utilized by chemistry students? How are they being used? How are they advertised? Are they available at any time online? A paper or online pamphlet which sorts services by category (for instance, academic skills, chemistry basics, and chemistry exam guides or workshops) might help with understanding and publicizing services which are under-utilized. In this pamphlet, services would be explained in relation to the course; for instance, "note-taking is one of the highest ranked strategies used by chemistry students in a recent research study. This workshop helps students develop note-taking skills that can be used to make your notes more meaningful and easier."

Another suggestion is to develop a search strategy for chemistry students who would like help but are not sure where to turn. For instance, students may type or select an option stating they don't have enough time to study or complete their homework, and a list of services helping with time management could appear.

Monitoring

How are the students using the services? How do the services respond to student needs? Although many services do not exist solely for the use of chemistry students, an effort could be made to identify the services used by the majority of successful students

to understand what characteristics or attributes are useful in a support service. As an example, this research involved monitoring students throughout six weeks of the course to see what services and strategies they used, and to at least one student, the monitoring process made a difference in his study habits. Philip stated

> I feel like [the research] was laid out pretty well, especially having to email you back and say, oh yeah, I used these resources this week. After the first week, knowing that's pretty much what the questions are going to look like every week, it makes you do kind of a mild check, like okay, I need to at least do something for [Chemistry] this week so I could put something down for an answer. But it also helps you do something, like 'Oh well, I should be doing more - using more of these resources because they will help me'… I think that [weekly monitoring] would push most people to utilize more of their resources which in turn would probably make them a better student. To me, [responding to the weekly email] wasn't time wasted.

While I am not saying the monitoring involved in this research alone helped Philip achieve a passing term grade, it is interesting to note that for him, monitoring may have played a role in helping him succeed.

Process

What are the successes and failures of a comprehensive system of support? What changes in programs or services are being made to help students better succeed? To understand the processes of a successful student service system, the system must be understood by both the university staff and students. Currently, neither the staff nor the students fully understand the processes, feedback mechanisms or changes involved in the intervention attempts, because an integrated system is not in place.

Components

What are the components of a system attempting to help students become successful? Patton (2008) stated, "Programs can be conceptualized as consisting of

separate operational efforts that may be the focus of a self-contained implementation evaluation" (p. 326). To be truly helpful, programs and services should be organized within a system, and the components should be examined to understand how they fit within the system.

Treatment Specification

If the short-term outcome is to help students succeed in a beginning chemistry course, what mechanisms are necessary to achieve the outcome? This treatment specification necessarily becomes individualized; for a course with over 1,100 students, how can this become an achievable goal? I believe the lack of organization and confusion due to too many services and programs can be structured to make sense of the existing support system. By using individualized planners such as is used in the Turn-Around event, students might be better able to understand what they truly need to succeed.

Student Perceptions of the Impact of the Study

The students who participated in this research, expressed a desire to help students who come after them. For instance, Patricia stated,

> I feel like [talking about services and strategies] may be easier for the next person taking this class. Like, maybe making recitation more helpful or like having the option of a study guide? Since study guides aren't available right now."

Emma thought the interaction was helpful:

> I really like being in this study. I like actually having someone to tell what I feel about it, I guess? And even hearing other people's views …like the stuff that they've been doing in the other research groups and being able to see what they said was helpful. Like what needed to be worked on as well - I feel like that's beneficial to me as well.

Suggestions for Future Research

Students involved in this research stated their belief that the university and department were trying to offer them support, but the efforts were somehow misguided or in some cases adversely received. As an administrator in an office responsible for delivering news of poor academic performance to students, I was often surprised at how vehemently students viewed letters sent by my department I believed were positive letters offering support. In this instance, although quantitative data over five years demonstrated that students with a progress indicator of "U" in the early part of the semester faced a high percentage of failure rates, students viewed the informational letter as a negative prophecy of failure. Further research could investigate how wording and delivery of this type of letter might be more amenable to the students who received it.

Lietz and Zayas (2010) stated "although qualitative researchers do not seek generalizability, transferability is achieved when the findings have applicability to another setting, to theory, to practice, or to future research" (p. 195). I believe this research has implications for other courses with high failure rates. It is possible these other courses also have a high number of support components without a guiding umbrella to organize and define the components in a comprehensive manner. Even though this was a case study regarding a single course, investigations of other courses might yield similar results.

Summary

Chemistry is a difficult course for students. Marsh et al. (2008) note that chemistry and mathematics courses "have low pass rates regardless of students' performance in other academic courses" (p. 253). Therefore, when a university and

department join together to attempt to help chemistry students succeed, it is incumbent on those performing evaluations of the attempt to understand how it impacts the stakeholders who matter the most – the students. When I first approached the university with the idea of using focus groups to investigate courses with high failure rates, I did not anticipate the richness of conversation I would obtain from the participants. Their comments were well thought out, insightful, and appreciated. As a result of talking to students in this case study, I believe the university and department are attempting to reach out to students to help them succeed. However, for a new student, the seemingly endless sources of support may be too overwhelming, without structure or explanation. Therefore, students may not access support avenues possibly making the difference in passing grades. Using implementation evaluation as a guide for change, these services could become more effective as a cohesive system students see, recognize and use.

> Mary: Well, for me I was having, like seriously after the 2nd exam, I was seriously considering dropping the class?
>
> Nicole: Me too.
>
> Mary: But then the problem is that it's 4 credits and I have a 5 credit thing that I no longer would be an official student so I was really - like, I had an anxiety attack and everything. It was really awful. And so that week I - it was nice to have that Turn-Around, admittedly?
>
> Robert: The email helped you understand the program, but it was hard to understand what could be done with the information.
>
> (conversation regarding course tests and Early Alert messages)

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CHAPTER VI

CONCLUSION

This research involved three questions:

Q1 How do online focus groups compare methodologically to a traditional focus group?

Q2 What ethical considerations arise during the administration of online versus traditional focus groups?

Q3 What are student perceptions regarding the impact of Early Alert university and department interventions on students' academic performance in a freshman course known as General Chemistry?

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Although the first two questions concerned methodological issues and the third question concerned contextual issues, a common thread exists for all three questions. Focus group research is almost one hundred years old, while academic support services have existed for many centuries. However, both research methods and academic interventions must adapt to the changing needs of present-day societal situations, especially in light of technological advances occurring in the last thirty years, and researchers must re-examine old methods in light of new adaptations. As Parker and Tritter (2006) state, "Despite this growing interest [in focus groups] and activity there has been relatively little critical discussion of the problematic aspects of conducting focus groups or analyzing the data derived from them" (pp. 23-24). Kidd and Parshall (2000),

when speaking of savings in terms of the time and cost savings using focus groups in general as opposed to conducting separate interviews stated,

> …these presumed savings may be illusory. Properly conducted focus groups are not necessarily inexpensive; unless one is in the business of conducting and analyzing focus groups, the time saved in interviewing may be lost in recruitment, logistics, and trying to make sense out of data that are complex and messy. (pp. 293-294)

With the increasing use of electronic focus groups, time and cost savings must be re-examined for all types of focus group methodology in respect to ease, comfort, richness of data and ethical concerns. I believe the same is true of academic interventions – past successful intervention models should be critically examined to see if the models still work in today's world. In both cases, traditional methods will continue to have relevance in a technologically advanced age, and more modern technological methods may not possess the needed qualities for the researcher's and academician's goals. In any case, the methods should be evaluated to find the best fit for the situation.

Focus Group Methodology

The use of focus groups is primarily to solicit interaction between research participants and to gather information from more than one participant at one time. With the advent of technology, participants no longer need to be brought to face each other in a single physical meeting place. Aside from cost and time savings, this freedom offers more participants the ability to participate in focus groups in which they might not otherwise be able to attend. However, there has been little research comparing the efficacy of electronic versus traditional focus groups. In this study, I found there were differences between three types of focus groups –traditional, in-person groups; the electronic focus groups with video, audio and whiteboard capability; and electronic focus

groups with text-only capability. My findings concerned four areas: ease, comfort, richness of data and ethical considerations. Overall, I found the in-person groups to be preferred by the population from which I obtained my participants, more comfortable for the participants to engage in conversation, and to produce the richest data, while text-only groups seemed to be the most limited in terms of everything but data transcription.

Ease

In terms of ease, electronic focus groups were easier for participants to attend, because they simply logged into the site at the appointed time from wherever they were, whereas the in-person focus participants needed to come to a specific room located on campus. For researchers however, the question of ease is more complex. In terms of preparation, if participants are not at a great distance from each other, setting up computers for electronic attendance and testing the software may be more difficult and time-consuming than simply coming to a physically located room. However, for the actual meeting itself, there was more time and cost involved for materials and food for in-person meetings than for electronic focus groups. Additionally, transcription for text-only groups was a matter of copying and pasting the students' actual typed words from the software into permanent documents in a matter of seconds, while transcription from in-person and audio-video took many hours and the accuracy of the transcription depended on the quality of the recording. These findings bring into question the "cost" savings – it may depend on how far the participants are from each other and how cost and time savings are defined by the researcher.

Comfort Level

Fox et al. (2007) stated that "adapting research methods to appeal to and suit young people might…require engaging with their online activities" (p. 540). I expected participants to be more comfortable with electronic groups than with in-person groups, but I found this was not the case. In fact, I was not able to fill the audio-video sessions at all, but the in-person focus group sessions filled with participants very quickly. When I asked if participants might have felt more comfortable in another type of focus group, the in-person type was the only type mentioned as a possible alternative among the electronic groups (and in-person participants stated they would not have chosen an alternative). This finding may be related to selection of the participants from an in-person course; future researchers may come to different results if the participants were selected from students attending online courses.

Richness of Data

Richness of data in focus groups is related to the essential interactive nature of a focus group and the ability to follow up on important points made by the participants. In fact, according to Parker and Tritter (2006) if the researcher merely asks questions and gets responses, this method should be recognized as a group interview, whereas the true focus group researcher acts as a moderator who facilitates discussion between the participants. For this research, I found in-person groups to be much more interactive and conversational, while audio-video groups were less interactive, speaking to the question and less to each other. The text-only group was by far the least likely to be interactive and I was less likely to follow up on comments due to the length of time it took for participants to answer questions. While I would not discount the advantages of audio-

video groups in terms of ease and ability to engage with distant participants, and I would encourage the use of audio-video focus group methods as a viable alternative to in-person focus groups, this research supported the notion of in-person groups being most like the idea of a true focus group according to Parker and Tritter than any other group.

Ethical Considerations

Among the ethical issues I considered were 1) what I was asking the students and how those questions may affect their ability to answer as honestly as possible, 2) whether the interventions I examined were addressing ethical principles in supporting students on academic probation and 3) whether or not asking these questions was appropriate in view since in most cases students were able to see and hear each other. I designed this research to incorporate the idea of social presence based on Link and Dinsmore's (2012) discussion of online focus groups. I thought high social presence (seeing and hearing other participants) might limit participants' voices. Therefore, students who wished to remain anonymous would choose to be part of the text-only focus group, in which they could be given complete anonymity without disclosing their faces, voices or their names. However, for students from all types of focus groups (including text-only), anonymity was not a consideration in choosing groups. Text-only participants chose the type of group based on convenience; their choice had nothing to do with privacy or anonymity. Ultimately, I came to realize that privacy and confidentiality were not only non-issues for the participants, but participants were willing to share more than I had asked for. It then became my responsibility to protect them from sharing more than I asked for, such as grades and performance in the class. The finding of participant non-concern regarding privacy does not apply to this research alone, however, and future researchers should

consider participants' human rights even more carefully if it is apparent the participants are not taking issues of privacy and confidentiality seriously.

University and Department Interventions and Academic Success

Intervention services have also undergone change with the advent and increased use of technology. Academic support for difficult courses abound in ways sometimes even beyond the control of the department or university, and students can be confused as to what services are best to use. As with different types of focus groups, time and money play a factor in students' choices of existing intervention services.

For this research question, I used Patton's (2008) suggestion for comprehensive implementation evaluation, including effort, monitoring, process, components and treatment specification to determine how impactful these services were.

Effort

Imagine customers walking into a restaurant filled with a buffet of choices where no labels exist for any of the food displayed (figure 2). If this is their first time in this restaurant, they may not know many of the dishes or the ingredients of those dishes. How will they decide what to eat? Their decisions may be based on familiarity with items they think they have been served before or the convenience of proximity to their location; they may also choose items that simply look good to them and hope for the best, or they may sample a small amount of some items first. In the same way, first-time college students are faced with support service labels with a limited idea of what many of those labels actually mean or what the services can do to help the students succeed.

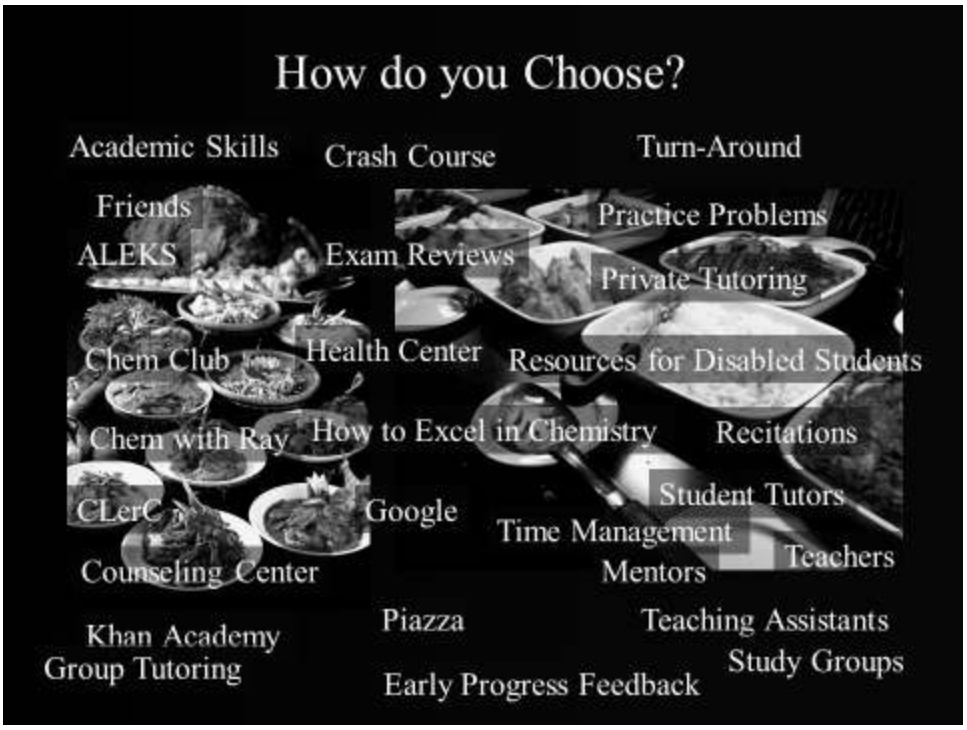

Figure 2. Food choices in a buffet and support service choices.

For students to engage in activities offered by the university or department, those activities should be advertised, understood, and used by the students for which they were designed and the faculty who teach the courses to which these activities are applied. My findings suggested many of the over-whelming number of intervention activities available to support students in General Chemistry were not understood well by the students. Instead, they chose support services more by what was convenient and familiar than by any logical method of pairing their needs to an appropriate support service. Thus, I suggested the university should consider some type of paper or electronic pamphlet (or both) organizing the services into components of general academic skills, basic chemistry concepts and specific services related to General Chemistry components such as test-taking for the course.

Monitoring

The university spends time and money developing services, but it is unclear how well these services are monitored or changed based on data or feedback regarding the impact of the services. Rather than develop more services, existing services should be monitored in a systematic way administrators and students can understand and provide feedback. In this way, services which have been used by successful students could be understood and explained to help other students succeed. I suggested future researchers might examine monitoring alone to see how useful it might be for students who would consider each week what services they are using and why.

Process

The process of intervention should be understood as successes, failures, adaptations and systems. However, in this case, interventions are not understood as a systematic process of support, but as individual programs which may or may not directly relate to academic success as understood by students. If the process is to be understood by students who can use this to their advantage, it must first be understood and described by the institution as an integrated system with processes, feedback mechanisms, and responsive adaptations.

Components

A systematic approach to academic intervention necessitates properly functioning components without gaps to help students succeed. There are many components in this case study operating as individual programs. I suggest these components be understood and evaluated in terms of academic success, and duplicates or inefficient services can be modified or eliminated. Without a systematic approach, however, the place of each of

these services cannot be fully understood, and services may be eliminated that could serve a useful service if examined in light of the whole.

Treatment Specification

How are primarily new students to understand what services to use and how often these services should be used? The university developed a program referred to in this dissertation as the Turn-Around Program, a day-long event in which students and university staff came together to discuss and develop individual plans of action. This program only occurs once a year and is mainly for students who receive an unsatisfactory progress report. This activity seems to be highly promising for all students in chemistry, however, and might be appropriate for use by more students given the high level of work expected during this course. How often should students study for this course? What services will students use based on their needs, and how often should those services be used? The students in this study stated they did not understand at the beginning of the course how difficult it would be and how important it was to keep up to date with assignments. An individualized plan of action for each student could be developed electronically and might help students understand better what is expected.

A Suggestion for Departments and Faculty Presenting Support Services to Students

The following is one suggestion for organization of the support services available to students in General Chemistry. Other organizational strategies such as search engines or lists of most frequently asked questions can be considered for their merit as well; the important issue is that some form of organization and description should be provided to students.

- Services can be organized into general categories. These general categories can be explained first, and students can see what services fit into each category (figures 3 and 4):

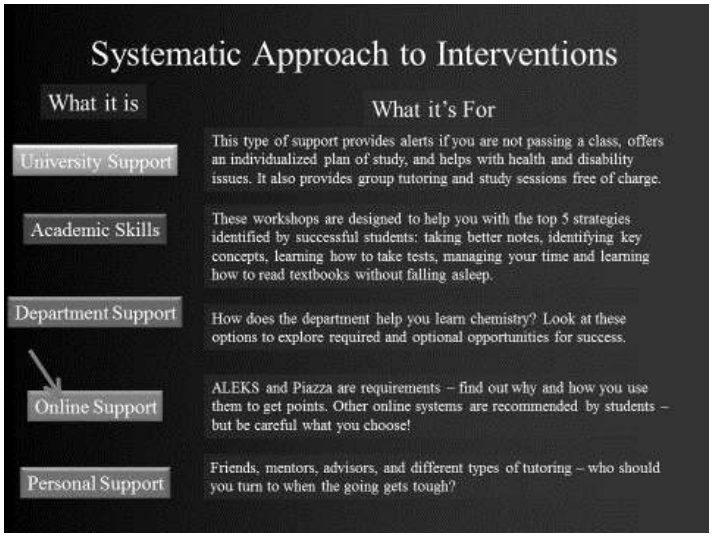

Figure 3. An explanation of major support service categories.

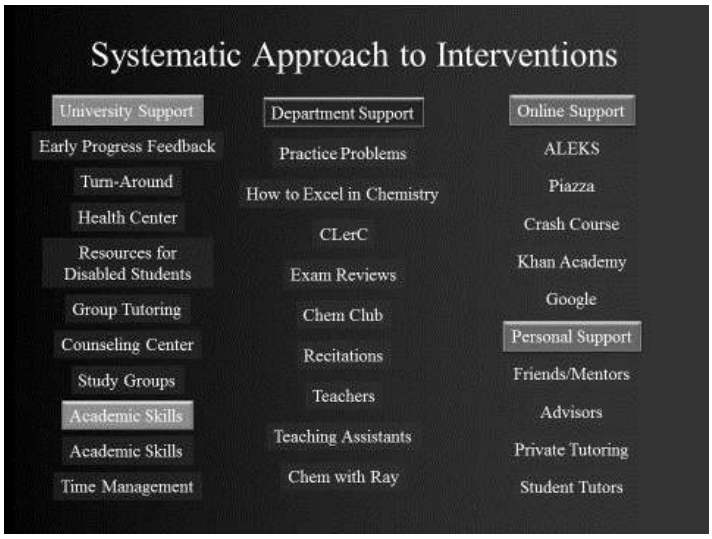

Figure 4. Support services organized in major categories.

- After a general category is chosen, student can see what services are required by the course and which services are optional but highly recommended by their peers (figure 5):

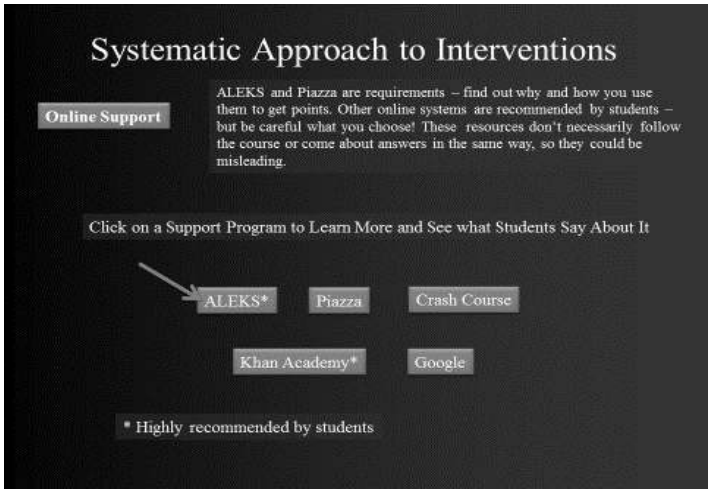

Figure 5. An example of a general category of support services.

- By choosing a selection, students are then able to see the support service description as described by the students as well as peer comments regarding their sense of the effectiveness of the service (figure 6):

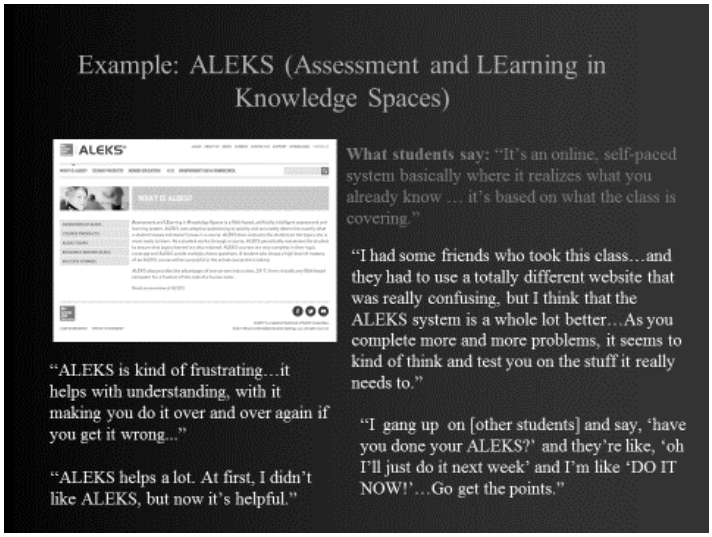

Figure 6. An example of a specific service offered to students in Chemistry.

Other items can be included such as selection of services to be organized in an individual learning plan which can be shared with an advisor or instructor. The major idea here is that if the student can identify and link individual learning needs to specific support services addressing those needs, then the instructor, advisor, and/or other campus staff

would also be able to discuss the potential effectiveness of the plan with the student if the student desired help.

Lessons Learned and Limitations

This study was designed to be a case study for one course comparing three different types of focus groups and examined student perceptions regarding the impact of support services upon academic performance. The General Chemistry course was chosen because it was a course with a history of high student academic failure rates, the department was attempting to improve support services and welcomed my research, and the size of the course was large enough to provide the number of students (36 out of a course of over 1,000 students) I needed. However, large freshmen courses are also recruited for many experiments, and (unknown to me at the time) much of the research includes extra credit for the course (which I did not have permission to do).

In this case, in the course I chose to study, all research but mine included extra credit. This fact was brought home to me two times. The first time was when I attended a class section to ask for volunteers and the instructor repeatedly stated that unlike other class research, this research would not provide extra credit. The second time was when I called a volunteer to see if she was coming to a focus group meeting and she said she would not be attending. She then asked, "but it's not required or for extra credit, right?" I had to assure her it was not required, nor would it provide her with any extra credit for the course, and the student did not appear for any other meetings. Compared to extra credit in a high-fail course, my incentives (even with the revised bonus of a chance of a $35.00 drawing) were not large enough to convince many students to volunteer. Although extra credit may be deemed as some (including myself) to be coersive, future

researchers might be warned to look at the competition and consider compensation very carefully before committing to a program in which their research might be considered less important than other research.

Before I began this research, I had carefully considered whether or not to include more than one course in the case study. I finally decided on one course for the reasons mentioned above; in addition, I did not know if or how many support services would overlap each course, and the resulting picture of total services might be confusing to me and the reader of this paper. Therefore, I stayed with my decision, even when the lack of participants was apparent. I still believe this decision to be correct. A phenomenological study might yield broader results across disciplines as to whether first, different types of focus groups yield the same amount and type of information or not, and second, whether or not students are put in situations where they might not be capable of making informed decisions as to seeking support.

Another limitation and lesson learned arose from purposely restricting the students' use of computers in this study to university Windows@-compatible computers. This decreased the on-line students' ease of use, because

- the computers needed to be picked up and returned by the students
- students who were familiar with Macintosh@ products would not feel as comfortable trying to become familiar with these computers, and
- even students familiar with this type of computer did not feel as much at ease as they would have on their own computer.

I have offered suggestions to researchers who want students to use their own computers, such as utilizing courses in which students already use their computers online to access

software such as this research used. A software training session given to all students involved in the electronic part of the research may also be very appropriate. In any case, students should in future be able to use their own computers if software compatibility issues can be resolved without having to significantly modify students' personal computers.

Conclusion

Beyond methodological and contextual issues and the limitations of this research, to improve research and academic support programs, participants are needed to provide answers and feedback in the safest, most comfortable and ethical way possible. Modern technology not only offers innovative ways to develop research methods and support services, it has affected the way in which today's youth view ethical considerations such as privacy issues. Today, participants are more willing to share thoughts and feelings than ever before, which make it even more incumbent upon the researcher to respect and protect each individual's privacy and dignity.

Most importantly, though, participants want to share their thoughts and impressions, given the right method and issue, to help themselves and others. I was given the impression by the participants the research was important and should be conducted to help students succeed. To some, the research affected their personal attitudes, such as Emma, an audio-video participant who stated it was "really helpful. I like to talk about it. I think it makes me mentally more sound, I guess (laughs)"; Mary, an in-person participant who felt the research was "very therapeutic", and Trevor, an audio-video participant who said he liked:

> … being in this study. I like actually having someone to tell what I feel about it, I guess? And even hearing other people's views like … or like the stuff that they've been doing in the other research groups and being able to see what they said was helpful. Like what needed to be worked on as well – I feel like that's beneficial to me as well.

The research also affected the way students viewed the efforts of the department and university:

> I think it's good they get some advice. I know that they try, but sometimes I don't think they try in the right way. It's nice to give your opinion on what might help you instead of what doesn't help but it's still offered. (Sophia, an audio-video participant)

Finally, participants were told the purpose of the contextual part of this research was to help future students succeed, and their response at the end of the research was exemplified by Rita, a text-only participant who said,

> I think I speak on behalf of all students in [General Chemistry] – even though many didn't want to participate, we appreciate you taking the time to see what is working and what isn't. It is nice to know that someone wants us to succeed in this intense class!

These words by the participants demonstrate the need for quality, ethical research to examine, evaluate and help to improve conditions people face in everyday life situations. It is therefore incumbent on researchers to not only conduct research, but to examine the ways in which their research is conducted, to be sure participants' voices can be given full expression.

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APPENDIX A

DEFINITION OF TERMS

Definition of Terms

Admissions Index: a combination of high school grade point average and college entrance exam scores (e.g., ACT or SAT scores). Used to determine students' eligibility for admission to the institution.

Asynchronous communication: communication not needing to occur simultaneously, such as email. In asynchronous focus groups, a question is asked and participants can respond at a later time.

Blackboard Collaborate@: an electronic service acting as a virtual meeting or classroom for online participants. Blackboard Collaborate@ is a combination of services from previous programs Wimba@ and Elluminate@, offering video and audio synchronous services as well as the ability for participants to chat using text, share files and work on a common space known as the Whiteboard.

Early Alert Program: a service provided by Rocky Mountain University where students are informed of their midterm academic progress and receive invitations to services and programs designed to help them succeed in their courses.

Focus Group: A specific type of group organized for the purpose of research with participants who share a common characteristic. The purpose of focus groups is to "better understand how people feel or think about an issue, product, or service." (Krueger & Casey, 2000, p. 4)

Social Presence: the amount of physical presence required in a meeting. Low social presence may mean lack of video and audio meeting (leaving keyboard communication only so participants can be anonymous), while high social presence involves both video and audio presence.

Synchronous communication: communication occuring simultaneously, as in a video conference. In synchronous focus groups, a question is asked of an online group and participants must respond then if they wish to voice their opinion.

Turn-Around: a one-day event (part of the Early Alert program) in which many advisors, department faculty and academic and student support services gather together in one building to talk to students about their semester and devise a personalized action plan to help each student decide on future academic strategies and directions.

APPENDIX B

INTERVIEW QUESTIONS: FIRST FOCUS GROUPS

Interview Questions First Focus Groups

For this research, there were two sets of focus groups separated by a time period of six weeks. The first week of the research, the focus group questions contained both methodological and contextual questions. Media in the form of flash cards and pictures were either offered physically (if students were in the face-to-face focus group) or through the internet (in the case of electronic focus groups).

Contextual: The focus group will cover the following topics pertaining to the contextual research question (What are students' perceptions of the impact of Early Alert interventions on students' academic performance in high-fail courses?):

Introductory:

Please tell me us the name you have picked for this session (not your real name) and what your major is. Then tell us why you enrolled in this class.

(After offering the students a choice of pictures) Here are some pictures. Pick one picture that describes how you feel about being in this class and tell us why you picked that picture.

High-Fail Course:

General Chemistry is ranked as a course with a high number of Ds and Fs. Why do you think this is the case?

Future Academic Performance Expectations:

How do you feel about the class right now – what type of grades do you think that most people are receiving so far?

(Follow-up if necessary) Why do you think that they are receiving those grades?

Awareness of the Early Alert:

What programs does the university or Chemistry department have for students who may need help succeeding in this class?

Have any of you heard about the Early Alert program?

(If they have heard of it) How does it work?

(If they haven't heard of it, explain which it is a program designed to help students become aware of their midterm progress and to offer services to students who have an unsatisfactory grade at the midterm point. Then show them a list of services offered by

the university and department). Here is a list of services that the university provides for students who may need help to succeed. As a group, I would like you to rank these services in order of the best to the least in terms of how you think they might help a student succeed in this course. As you're ranking them, please tell me why you think that this service may or may not help.

None of you has a midterm progress grade at this point, but I would like you to act as if you were a student who was notified of an unsatisfactory midterm grade. If you were that student, what services would you definitely use? Why?

If you were that student, what services do you think you might not use? Why?

Methodological: The remainder of the focus group questions pertained to the methodological research questions (How does an online focus group compare methodologically to a traditional focus group? and What ethical considerations arise during the administration of online versus traditional focus groups?):

Type of Focus Group:

You have chosen to participate in (explain the type of focus group; for example, a face-to-face focus group). There were two other types of focus groups you could have chosen: (explain the other two, for example, an online video and audio focus group and an online text-only focus group).

Can you explain why you chose this particular type of focus group?

Now that you have participated in it, how do you feel about participating in this type of focus group?

Ethical Considerations:

How comfortable did you feel sharing your thoughts with this group?

Did you feel your comfort level might have been different if you had participated in a different type of focus group? (Please explain)

(If not brought up) Did privacy issues have anything to do with why you chose this particular group? (Please explain)

(If online) Technology:

How comfortable did you feel using the technology to be in this focus group? (Please explain)

How easy was it to use the technology to participate when I asked a question?

APPENDIX C

QUESTIONS BETWEEN FOCUS GROUP SESSIONS

Questions Between Focus Group Sessions

After the first and before the sixth (final) week of this research, I sent emails to all participants requesting updates on their progress in General Chemistry in this way:

From: Randy Larkins

To: (Student Name)

Hi! I hope that your week is going well. As part of your participation in my research, I would like you to help me this week by answering a few questions. This is the (1st, 2nd, 3rd or 4th) week of this research. After this week, there will be (insert number here) more weeks of email requests, and your participation will end on (insert date here) in a final focus group session. Thank you for your cooperation! – Randy

Early Alert:

Did you receive any emails this week from Early Alert? If so, how did you feel about the email you received (for instance, did it help you understand more about the program and how it could help you)?

Class:

What programs or services from the university, department of Chemistry or class did you use to help you with your homework, assignments or tests this week?

Did you use any specific strategies to help you with these assignments or tests?

How helpful were these programs, services and/or strategies that you used?

Grades:

How do you feel about your chances to receive a passing grade in this class (please briefly explain why you feel this way)?

APPENDIX D

INTERVIEW QUESTIONS: FINAL FOCUS GROUPS

Interview Questions: Final Focus Groups

For this research, there were two sets of focus groups separated by a time period of six weeks. The final week of the research, the focus group questions contained both methodological and contextual questions. Media in the form of flash cards and pictures were either offered physically (if students were in the face-to-face focus group) or through the internet (in the case of electronic focus groups).

Contextual: The focus group will cover the following topics pertaining to the contextual research question (What are students' perceptions of the impact of Early Alert interventions on students' academic performance in high-fail courses?):

Introductory:

(After offering the students a choice of pictures) In the first focus group, you chose a picture that described how you felt about being in this class. Please tell me if you would pick the same picture or a different one.

(If different) That one would you pick now and why?

(If the same) Are your feelings about the same then as the first focus group, or have they changed in any way? (Please explain)

High-Fail Course:

In the first focus group, I said that General Chemistry is ranked as a course with a high number of Ds and Fs, and I asked you why you thought that was the case. What are your opinions now – why do you think that students may not succeed in this course?

Future Academic Performance Expectations:

How do you feel about the class right now – what type of grades do you think that most people are receiving at this point of the semester?

(Follow-up if necessary) Why do you think that they are receiving those grades?

Awareness of the Early Alert:

All of you should have received an email from the Vice President for Student Affairs and Undergraduate Retention telling you about the Early Alert program. Do you remember receiving that email, and (if so) how did you feel about the email – was it helpful? (If no one has heard of it, produce the email to remind them and ask if it would be helpful to them.)

Here is a list of services provided by the Early Alert program that the university and the Chemistry department said they would provide for students who may need help to succeed. Do you know of any of these programs or services that either you or others have used for help with this class (whether or not you're receiving good grades)?

(If they respond affirmatively) Please rank the program or service in terms of how effective you think it was in helping students in this General Chemistry class.

Did any of you visit the Turn-Around program?

(If they have heard of it) Can you tell the others about what happened during Turn-Around?

(If they haven't heard of it, explain which it is a one-day event where all of the academic support services are together). Would you have used Turn-Around if you had known about it? Why or why not?

I do not want to know if you received an unsatisfactory midterm grade or what your current grade is in General Chemistry, but I would like you to act as if you were a student who was notified of an unsatisfactory midterm grade. If you were that student, what services would you definitely have used? Why?

If you were that student, what services do you think you might not have used? Why?

The Chemistry department has focused on trying to help more students in General Chemistry succeed. Do you think the department is trying to support students in this class? Why or why not?

In the first focus group session, I gave you a list of strategies to use in this class that might help you to improve your grade. (Provide them with the list again.) If you've used these strategies, can you tell me if any of these strategies seemed to help you, or if you tried to use a strategy listed here, but it didn't help?

Methodological: The remainder of the focus group questions pertained to the methodological research questions (How does an online focus group compare methodologically to a traditional focus group? and What ethical considerations arise during the administration of online versus traditional focus groups?):

Type of Focus Group:

In the first focus group, I asked you why you chose the particular focus group that you did. There were two other types of focus groups that you could have chosen: (explain the other two, for example, an online video and audio focus group and an online text-only focus group).

Now that you have participated in it two times, how do you feel about participating in this type of focus group?

Did you feel that you could be open in your responses during this group? Why or why not?

Would you change your mind about the type of focus group you would join if you could do it again?

Ethical Considerations:

How comfortable did you feel sharing your thoughts with this group?

Did you feel that your comfort level might have been different if you had participated in a different type of focus group? (Please explain)

(If not brought up) Did privacy issues have anything to do with why you chose this particular group? (Please explain)

One of the benefits I said that you would receive was that you had an opportunity to express your opinions about how the Department, College and University supported you in this class. Do you feel that this group was beneficial in helping express how you felt?

(If online) Technology:

How comfortable did you feel using the technology to be in this focus group? (Please explain)

How easy was the technology to use when you wanted to say something or participate in any way?

APPENDIX E

STUDENT ANNOUNCEMENT FROM THE ASSOCIATE VICE PRESIDENT REGARDING THE EARLY ALERT PROJECT

Early Alert Explained

Early Alert Program

What is it?

The University is conducting an Early Alert Program to increase the level of feedback provided to students concerning their performance in the critical first weeks of the semester. Classes involved in the program include some, but not all course sections at the 100 level in CHEMISTRY, COMP SCI, LIFE SCIENCES, MATH, PSY, AND HIST. This feedback is intended to assist students in gauging their progress in the course, making adjustments and improvements, and succeeding in the course.

How will it work?

By September 26, course instructors will be making a judgment about the level of student performance in the course so far. The instructor may consider any or all of the following in which judgment: performance on assignments, tests, quizzes, papers; attendance; and effort and/or participation in class. The instructor will assign an "S" for "satisfactory" or a "U" for unsatisfactory to reflect this judgment of your progress. The S or U is not a grade (though it is based on your performance to date); rather, it's an indicator of your performance in the early weeks of the class. It is intended for feedback and improvement.

This indicator (the "S" or "U") will be shared with designated staff on campus in order to support students in their efforts. These include the Associate Vice President for Student Affairs/Special Advisor to the Provost for Retention, the Residence Hall Director and/or Assistant Director, Off Campus Life Sciences staff, and possibly your academic advisor.

If you receive a "U" (unsatisfactory), one or more of these persons will be in touch with you by email or in person to assist you in making adjustments and/or connecting with available campus academic support resources. You will also be invited to Turn-Around, an event designed to help students get connected to the resources they need to support their success and turn things around so they can receive the grades they want.

The entire purpose of this program is to provide useful feedback to you and to assist you in enhancing your performance and succeeding in your courses. We encourage you to make the best possible use of this feedback to make the adjustments needed to perform at your highest level.

We at RMU believe in your capacity for success and wish to support your progress!

APPENDIX F

SECOND EARLY ALERT ANNOUNCEMENT FROM THE ASSOCIATE VICE PRESIDENT

Email Letter to Students from Rocky Mountain University Concerning the Early Alert Program

Dear <Preferred Name>,

I am writing to let you know that you are enrolled in one or more class sections that are part of the Early Alert Program. (This program includes some, but not all, course sections at the 100-level in Chemistry, Computer Science, Life Sciences, Sciences, Math, Psychology, and History.)

The purpose of the program is to increase the level of feedback provided to students concerning their performance in the critical first weeks of the semester. We at RMU believe in your capacity for success and wish to support your progress. This feedback is intended to assist you in gauging your progress in your courses, making adjustments and improvements, and succeeding academically.

Early performance is important! Last fall, 49% of students with unsatisfactory ("U") performance in the first four weeks of the semester earned final course grades of D or F, while only 11% of students with satisfactory ("S") performance earned final grades of D or F. Knowing how you are doing and turning things around early in the semester are crucial!

How will it work?

By September 22, course instructors will be making a judgment about the level of your performance in the course so far. The instructor may consider any or all of the following in which judgment: performance on assignments, tests, quizzes, papers; attendance; and effort and/or participation in class. The instructor will assign an "S" for satisfactory or a "U" for unsatisfactory to reflect this judgment of your progress. The "S" or "U" is not a grade (though it is based on your performance to date); rather, it's an indicator of your performance in the early weeks of the class.

This indicator (the "S" or "U") will be shared with designated staff on campus in order to support you in your efforts. These include the Associate Vice President for Student Affairs/Special Advisor to the Provost for Retention, Residence Hall Directors and/or Assistant Directors, Off Campus Life Sciences staff, and possibly your academic advisor and/or college dean's office.

If you receive a "U" (unsatisfactory), one or more of these persons will be in touch with you by email or in person to assist you in making adjustments and/or connecting with available campus academic support resources. (If you hear from more than one person, it is because multiple people desire to support you in your efforts to succeed well.) You

will also be invited to “Turn-Around” (see Web Link), an event to help connect students to resources that will promote success and turn things around so they can receive the grades they desire.

Your success is the entire purpose of this program. We want to provide useful and early feedback to you so that you can enhance your performance and succeed in your courses. I encourage you to make the best possible use of this feedback to make the adjustments needed to perform at your highest level.

If you have questions, you are welcome to contact me at ...

Associate Vice President for Student Affairs

APPENDIX G

LETTERS TO STUDENTS WITH A "U" PROGRESS INDICATOR

Letter to Students with a "U" Progress Indicator

From: RMU Early Alert
Sent: Wednesday, October 2, 2014 10:54 PM
To: (Student Name)
Subject: Instructor Feedback on Your Early Performance in Class

Dear (Student's first name),

I'm sending this email to let you know that we are concerned about your success in courses early this semester, based on early feedback from instructors. Your instructor has indicated that the level of work you have completed in General Chemistry to date is unsatisfactory. The "U" is a progress indicator meant to assist you in improving; it is not a grade. To enhance your performance, though, it is critical that you take action right away to create a plan for improvement and utilize campus resources.

We recognize that your "U" reflects only work completed in the first few weeks, and that you may already be on a path to improvement. However, our experience tells us that early performance is critical. Last fall 48% of students who received a "U" continued on to receive either an F or a D as a final course grade. In light of these statistics, it is important to consider making adjustments and implementing a concrete plan with specific steps to produce improved performance.

What can you do to improve? First, it is important to develop an action plan for improvement. In addition, we strongly encourage you to attend an event called Turn-Around, a one-stop-shop event for anyone interested in improving their grades. Turn-Around will occur on Tuesday, Oct 15th, 11:00-4:00 (arrive anytime within those hours) in the Teaching And Learning Building on the Oval. You should plan to spend about an hour at Turn-Around.

Remember, staff and faculty members are here to support your academic success. We have confidence in your prospects for success, and wish to be supportive of your efforts. In addition to my email, your Residence Hall Director or Assistant Director, a member of the Off-Campus Life Sciences staff, and/or your academic (or scholarship) advisor might also be in touch and may offer suggestions and support. (If you hear from more than one person, it is because multiple people desire to support you in your efforts to succeed).

You were admitted to RMU because we believe that you can be successful here. We also realize that there are many things that can get in the way of student success and that no one can get through college alone, so please take advantage of the resources, faculty, and staff here at RMU to support you in reaching your goal and having a successful semester.

(Student's first name), we hope to see you at Turn-Around so we can help you turn things around.

Sincerely,

Associate Vice President for Student Affairs

APPENDIX H

I GOT A U; NOW WHAT (STRATEGIES FOR IMPROVING GRADES)

I Got a "U"—Now What?

Consider your performance:

Are you attending class regularly?
Are you prepared for lecture?
Do you read prior to class?
Do you take good notes and review or rewrite them after class?
Are you giving yourself 1-2 weeks to prepare for your exams?
Have you scheduled study time and a study space for effective learning?

Meet with your professor or instructor:

Prepare to discuss your thoughts on your performance (the topics above).
Prepare to discuss where your work is not measuring up.
Identify what you would need to do to complete the course with a good grade.
Adjust your performance in the course.

Meet with your academic advisor:

Identify areas where you are struggling.
Explore campus resources available to support you.
If you don't know your advisor, call your academic department to get your advisor's name or check RMUweb.

Utilize Resources:

Attend Turn-Around, Tuesday, Oct 15th, 11:00-4:00 (arrive anytime within those hours), in the Teaching And Learning Building!!

Workshops on study skills

The Learning Programs at Teaching And Learning offer free workshops on note taking, memory and concentration, time management, reading, and study skills and test strategies.

Academic Coaching

The Learning Programs at Teaching And Learning offer one-on-one academic coaching by appointment.

Tutoring

Free tutoring is available for many Math, Science and Liberal Arts classes.

Writing Center

Free writing assistance is available for any type of writing.
The Writing Center is located in Teddy Hall Room 6 and at the Library.

Resources for Disabled Students

Accommodations are available for students with learning and physical disabilities.

Counseling

Counselors are available to talk with students about stress, anxiety, and personal issues.

Access counseling through an initial walk-in appointment at RMU Health Network.

Understand University Academic Policy:

Students are responsible for understanding university policies.
To learn about individual course withdrawal deadline, incompletes, repeat/delete and other important policies, talk with your academic advisor or visit the Registrar Website.

APPENDIX I

EMAIL TO INSTRUCTORS REGARDING EARLY ALERT PARTICIPATION

Early Alert Program: Objectives

New students are unused to the university environment and expectations. They often misinterpret or miss important, even basic, cues about their performance early in their campus and classroom experience with the result that they may fall irrevocably behind in their classes. We know that feedback is an essential mechanism in the adjustment process. The program aims to:

- Increase the level of feedback on academic performance for (particularly) first-year students.
- Powerfully communicate to students that early effort and performance matter.
- Connect students proactively to relevant academic support resources.
- Identify students early who may be encountering severe difficulties that require more intensive intervention.

How will students be notified of the Early Alert Program?

- The Associate Vice President for Student Affairs/Special Advisor to the Provost for Retention will send an email to all students involved in one or more class sections involved in the program.
- More importantly, instructors for participating sections are asked to make an announcement in class describing the program.

Collection of Feedback Data from Instructors

How will Early Alert be collected?

The Colleges of Liberal Arts and Natural Sciences, with cooperation from particular departments and instructors, have volunteered a set of course sections for participation in the program. These include selected sections of HIST, MATH, CHEMISTRY, COMP, COMP SCI, PSY, and LIFE SCIENCES courses.

Instructors in these courses will enter S/U ratings in a specified column in RamCT ("EarlyCheck"). These ratings will be collected centrally and shared with those who will be communicating and intervening with students.

When will feedback be collected?

Feedback reports will be collected centrally from RamCT on Thursday of the fifth week of the semester, that is, after the close of business on September 26. The instructor may

include any evidence of performance, attendance, and/or effort up to and including that date.

What level of performance feedback will be collected?

- For the program, instructors will enter either "S" for "satisfactory, or "U" for "unsatisfactory.
- For the purpose of the program, "U" will include any or all of the following:
- Grades on assignments, quizzes, tests, or papers that are given a grade below C.
- Absences from class.
- Unsatisfactory class participation or effort.

Within the criteria specified above (performance, attendance, and/or effort and performance), the course instructor will determine the adequacy of performance. The S/U score is not a grade and is not recorded on a student's transcript. It is intended only as an early indicator of student performance for the benefit of student improvement.

Sharing Feedback Data with Students

Is it appropriate to share information on student academic performance with those responsible for the intervention?

The Office of Legal Counsel advises that sharing such information for this purpose is appropriate, since it shared within the institution for a legitimate educational purpose. (The sharing must not, however contradict any unit policy governing confidentiality.)

Who will be sharing the feedback data with students?

Those who will share the feedback with students will include:

- The Associate Vice President for Student Affairs… who will send an email to any student receiving one or more "U's."
- Residence Hall Directors and Assistant Directors,[1] as well as Off-Campus Student Life Sciences staff (for those freshmen residing off campus), who may send emails to students receiving "U's" and/or meet directly with such students.
- Academic Support Coordinators (including Undeclared Advisors at …), advisors in the College of Engineering, and other advisors who may contact or discuss the students' performance as part of their advising activities.

What is the nature of the intervention with students receiving "U's?"

[1] Residence Hall Directors are professional staff who hold at least a master's degree and have several years of experience in residence life. Assistant Directors are graduate students who perform staff leadership roles in the residence halls under the supervision of the Directors.

Residence Halls and Off Campus Student Services:
The intervention may be as little as an email, and as much as an individual meeting with students. Priority for individual meetings with students will be based on the number of "U's" a reported for a student, and/or the presence of other concerns such as those identified in the "Taking Stock at Mid-Semester" process.[2]

- Those providing the intervention will not attempt to interpret the instructor's assignment of a "U" except to reference the criteria provided to instructors. (See "What level of performance feedback will be collected," on page 1.) The intervener may, however, ask the student to think through the performance, attendance, and effort that may have contributed to the assignment of the "U."
- Those providing the intervention will not provide academic advising (unless they are in fact academic advisors) but will emphasize that early performance in a course is critical. They may also refer students to academic support resources, including the course instructors, TA's, academic advisors, campus tutoring services, and other relevant services.

Academic Support Coordinators/Academic Advisors:
Several of the academic colleges may be involving academic advisors in contacting and supporting students who receive U's on the Early Grade Check. Academic Support Coordinators will be providing active outreach to students who receive U's in their majors.

Turn-Around: [Date and Place]
"Turn-Around" is a campus event designed as a resource for any student wishing to improve their academic performance. While much of the advertising is targeted to students who received a "U" progress indicator, it is open to any student concerned about their academic performance.

Students will complete a self-assessment, meet with a campus staff member to review the assessment, meet with one or more of sixteen campus support offices that will be on hand, and develop a plan for improvement.

THANK YOU! Your involvement in the program and your efforts in support of its success are greatly appreciated.

[2] The "Taking Stock at Mid-Semester" program, conducted through … and the Office of …, assists students in assessing their early experience at the University and connecting with campus resources.

APPENDIX J

INSTITUTIONAL REVIEW BOARD APPROVAL FOR STUDY

UNIVERSITY of NORTHERN COLORADO

Institutional Review Board

DATE:	August 26, 2014
TO:	Randy Larkins
FROM:	University of Northern Colorado (UNCO) IRB
PROJECT TITLE:	[639402-2] Project Success: A Methodological and Evaluative Case Study of The Early Grade Feedback Program Interventions
SUBMISSION TYPE:	Amendment/Modification
ACTION:	APPROVAL/VERIFICATION OF EXEMPT STATUS
DECISION DATE:	August 21, 2014

Thank you for your submission of Amendment/Modification materials for this project. The University of Northern Colorado (UNCO) IRB approves this project and verifies its status as EXEMPT according to federal IRB regulations.

Hello Randy,

Excellent work. Good luck with this interesting and detailed research.

Sincerely,

Nancy White, PhD, IRB Co-Chair

We will retain a copy of this correspondence within our records for a duration of 4 years.

If you have any questions, please contact Sherry May at 970-351-1910 or Sherry.May@unco.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Northern Colorado (UNCO) IRB's records.

APPENDIX K

DEPARTMENT APPROVAL FOR THE STUDY

Permission for Research at Rocky Mountain University
Rocky Mountain University
Institutional Review Board
Fort Collins, CO

To Whom It May Concern:

This letter is to grant permission for Randy Larkins to conduct a dissertation research project entitled Project Success: A Methodological and Evaluative Case Study of The Early Grade Feedback Program Intervention in my course. The Chemistry department at Rocky Mountain University is embarking on a new emphasis to help students in required core courses, and we feel that this is an excellent time to review methods and procedures and try to help students succeed in new and innovative ways. This research could also shed light on reasons for students to be placed in a probationary status condition after their first semester at RMU, and could also assist our assigned advisor to look at methods such as individualized academic planning that might be useful to employ in advising our students.

In conducting this research, we will provide Randy Larkins access to our academic advisor, allow him to conduct focus group sessions with students who will be taking General Chemistry, permit collection of interview data through digital recording devices and research notes (with the students' consent) and meet with him as needed to discuss the project.

In return, we ask for copies of all written publications regarding this research, and reserve the right to use any and all materials developed as a result of this project and to terminate this research at any time if it is not felt to be in the best interest of our staff, students or mission.

Sincerely,

Dr. …
General Chemistry Coordinator
Department of Chemistry
Rocky Mountain University

APPENDIX L

ANNOUNCEMENT FOR PARTICIPATION IN THE STUDY

Recruitment Letter

Hi! My name is Randy Larkins. I am a graduate student at the University of …, and I am looking for a total of 36 students who are at least 18 years of age to participate in a research study to find out if the support you are given in this class to help you succeed is actually helpful to you or not. Your commitment would involve:

- Attending one in-person or electronic group session for one hour in the third week of class
- Answering four questions briefly in an email that I will send to you once a week for four weeks, and
- Attending a final in-person or electronic group session for one hour during the 8th week of class

If you choose to participate in this research, you will have the choice of selecting the way you'll meet as a group in the first and last week of the research from the following options:

- You can meet face-to-face in a place located on this campus in the evening
- You can meet electronically with audio and video in a virtual meeting room
- You can meet electronically in a text-only virtual meeting room

You will also have the choice to use any name you would like to be referred as for the entire study. If you choose to participate, you will get the following benefits as a thank you from me:

- A $5.00 gift card to … Coffee Lounge
- A list of intervention programs offered by the Chemistry department and the Early Grade Feedback program that are designed to help you succeed in General Chemistry,
- A summary of strategies used by successful students, and
- An opportunity to express your opinions to the administration of Rocky Mountain University regarding the effectiveness of the department and university support for your success in General Chemistry.

Participation in this research is voluntary and in no way will influence your grade in General Chemistry. If more than 36 people volunteer, selections will be made, and you may not be selected to participate. If you are interested, please sign the form that the instructor has and I will respond to you and let you know whether or not you're selected. I'm looking forward to hearing from you!

Sincerely,
Randy Larkins (randy.larkins@unco.edu)

APPENDIX M

STUDENT VOLUNTEER FORM

Student Volunteer Form

Please read this carefully before signing it! Be sure to choose your group format.

I wish to volunteer to help with the research project known as Project Success (short title). I understand that by volunteering, I am signing up to participate in:

- Attending one in-person or electronic group session for one hour in the third week of class
- Answering four questions briefly in an email that I will send to you once a week for four weeks, and
- Attending a final in-person or electronic group session for one hour during the 8th week of class

I understand that participation is voluntary, and if chosen to participate, I will receive the following benefits:

- A $5.00 gift card to … Coffee Lounge
- A list of intervention programs offered by the Chemistry department and the Early Grade Feedback program that are designed to help you succeed in General Chemistry,
- A summary of strategies used by successful students, and
- An opportunity to express your opinions to the administration of Rocky Mountain University regarding the effectiveness of the department and university support for your success in General Chemistry.

I also understand that my grades in General Chemistry will not be directly affected by my participation in this research.

I would like to participate in the following focus group format (please put an X beside the format you would like to participate in):

____ Face-to-face group sessions in a place located on this campus in the evening

____Electronic group sessions using audio and video in an online virtual meeting room

____Electronic group sessions using text-only in an online virtual meeting room

_____ ____ _____
(Student Name) Age* (Date)

_____ _____
(Email) (Phone Number)

*You must be at least 18 years old to participate.

APPENDIX N

CONSENT FORM

Informed Consent for Participation in Research

University of Northern Colorado
Project Title: Project Success: A Methodological and Evaluative Case Study of The Early Warning Program Interventions

Researcher: Randy Larkins, doctoral student, Department of Applied Statistics and Research Methods
Phone Number: (720) 515-9212
email: randy.larkins@unco.edu

Research Advisor: Maria Lahman, Ph.D. Department of Applied Statistics and Research Methods
Phone: 970-351-1603
Email: maria.lahman@unco.edu

Dear Student,
I am conducting research to find how students become successful in selected entry-level (100) courses at Rocky Mountain University (specifically, General Chemistry). If you grant permission, you will be involved in:

- Attending one in-person or electronic group session for one hour in approximately the third week of class
- Answering four questions briefly in an email that I will send to you once a week for four weeks, and
- Attending a final in-person or electronic group session for one hour during the 8th week of class

Questions will involve three topics: how you feel students are succeeding in General Chemistry; if and what types of programs, workshops or services you will be using (or have used) for help in this course; and how you feel about the type of group session in which you participated.

You must be at least 18 years old to participate in this research.

By agreeing to participate in this research, you are agreeing to allow me to access records pertaining to your grades for General Chemistry. I will keep these records private and will not divulge any information about these records except to report group summaries in my final research paper.

Please initial below to indicate that you have read and understood this explanation:

_____
Initials (Please continue to the second page)

I foresee no risks to subjects beyond those that are normally encountered by Rocky Mountain University students living on a campus. Rocky Mountain University rules prohibit me from discussing with anyone any comments made during focus group sessions without the student's express consent or a court order. I will use an electronic recording device to capture focus group conversations. Although all information will be kept in secured, password-protected computer located at my home, there is a possibility that information can be stolen electronically or (in the case of a face-to-face group session) stolen from my locked car, although the information will be placed on the secure computer at my home as quickly as possible, and all information on the recorder will be erased. Finally, any paperwork (such as this consent form) that is associated with this research will be stored in a locked file cabinet at my home. For your participation, a copy of the final research report will be given to you at your request.

Agreeing or refusing to be in this study will not impact your standing in this course in any way. During the research process, you will be able to decide if you wish to continue in this research, and you have the right to end this research without any consequences to future services at Rocky Mountain University. Although this study is designed to understand the situation of students in the course General Chemistry and possible strategies to help them succeed in this course, the researcher, Department of Chemistry and Rocky Mountain University do not guarantee any results as a consequence of your participation. In addition, participation or lack of participation in this research will not directly affect any grade that you will receive from this course.

Please feel free to email me or phone me at (720) 515-9212 if you have any questions or concerns about this research and please retain one copy of this letter for your records. Thank you for assisting me with my research.

Sincerely, Randy Larkins

_____

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to that you are otherwise entitled. Having read the above and having had an opportunity to ask any questions, please sign below if you would like to participate in this research. A copy of this form will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Sponsored Programs, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-2161.

_____ _____

Student's Signature Date

_____ _____

Researcher's Signature Date

If you give permission for Randy Larkins to use your situation with a fictitious name and removing all other identifiers as an example in his research reports, please initial here:

_____ (Initials)

APPENDIX O

REVISED INCENTIVES AND INSTITUTIONAL REVIEW BOARD APPROVAL

IRB – University of Northern Colorado

Addendum to Project Success: A Methodological and Evaluative Case Study of The Early Alert Program Interventions by Randy Larkins

I am requesting a change to my approved research protocol. The change is to add an additional $35.00 gift certificate per type of focus group to my existing protocol (all changed are marked in yellow on the accompanying IRB Application Narrative). The reason is low participant turnout.

On September 5, 2014, I began to recruit volunteers for my research. I collected enough volunteers to be able to conduct the study (consisting of six focus groups, followed by four weeks of email responses and final focus group sessions). However, the attrition rate was very high, with only 2 or 3 students appearing for each focus group session. The last two sessions were cancelled due to very low turnout. I still need to conduct two electronic focus group sessions to complete the initial phase of this research. In addition to recruiting more students for these sessions, I need to maintain the number of participants I currently have.

At one of the sessions that did occur, a participant noted that I might have received more participation if I had included a drawing to the university's student center for $35.00. I would like to utilize that student's suggestion for two reasons: first, because I want them to know that I take their suggestions and comments seriously, and secondly, because I believe that the suggestion is a good idea for creating a better incentive than I currently have. I would therefore like to add a $35.00 gift certificate incentive to be used at the university's student center for each type of focus group (I have three types of focus groups). The compensation will change to the following (noted in in yellow in section B2, v, paragraph 2; section D, Compensation (shown below and in the narrative); and Appendices B and C, the student recruitment and volunteer forms in the revised application narrative):

A. Compensation: Students who volunteer for these focus groups will receive the following compensation:
    1. A $5.00 gift card to … Coffee Lounge
    2. A chance for a $35.00 gift certificate to the … Student Center (one certificate will be provided to each type of focus group),
    3. A list of intervention programs offered by the Chemistry department and the Early Grade Feedback program, and
    4. A summary of strategies used by students to successfully pass this course which may be useful for future courses encountered by the students

Please see the following pages for revised recruitment procedures and an announcement to new volunteers and currently existing participants.

New Recruitment Procedures

If this addendum is approved by the IRB committee, I will send an email containing the revised student recruitment letter (see narrative, Appendix B) to all chemistry students who have not participated yet, announcing the new incentive with the following preface:

Dear Student,

Previously, I attended your General Chemistry course to ask for your participation in a research study to find out if the support you are given in this class to help you succeed is actually helpful to you or not. I am happy to announce that two additional group sessions (one online audio-video session and one online text-only session) are being held on *(date and time here; this will be determined after IRB approval, but will be held within the next week after approval)*.

Your participation is important. If you participate, you will be given the following items as appreciation for your efforts:

1. A $5.00 gift card to … Coffee Lounge
2. New! A chance in a drawing for a $35.00 gift certificate to the … Student Center (one certificate will be provided to each type of focus group),
3. A list of intervention programs offered by the Chemistry department and the Early Grade Feedback program, and
4. A summary of strategies used by students to successfully pass this course which may be useful for future courses encountered by the students

A drawing for the three gift certificates (one for each type of focus group) will be held immediately after the last focus group session to be held on *(date to be determined upon IRB approval)*. To be eligible for this drawing, you must participate in all parts of the research, including:

- Attending one electronic group session for one hour (date to be determined),
- Answering four questions briefly in an email that I will send to you once a week for four weeks, and
- Attending a final electronic group session for one hour following the week after all email questions have been completed.

If your name is drawn, the certificate will be mailed to you immediately following the drawing.

If you would like to participate, please contact me at randy.larkins@unco.edu or call me at ... Thank you and I look forward to hearing from you!

Randy Larkins

(The revised recruitment letter will follow this preface – see the following page for the revision.)

Recruitment Letter

Hi! My name is Randy Larkins. I am a graduate student at the University of Northern Colorado, and I am looking for a total of 12 students who are at least 18 years of age to participate in a research study to find out if the support you are given in this class to help you succeed is actually helpful to you or not. Your commitment would involve:

- Attending one in-person or electronic group session for one hour,
- Answering four questions briefly in an email that I will send to you once a week for four weeks, and
- Attending a final in-person or electronic group session for one hour following the final week of email questions.

If you choose to participate in this research, you will have the choice of selecting the way you'll meet as a group in the first and last week of the research from the following options:

1) You can meet electronically with audio and video in a virtual meeting room
2) You can meet electronically in a text-only virtual meeting room

You will also have the choice to use any name you would like to be referred as for the entire study. If you choose to participate, you will get the following benefits as a thank you from me:

- A $5.00 gift card to … Coffee Lounge
- A chance in a drawing to win a $35.00 gift certificate to purchase items at the … Student Center
- A list of intervention programs offered by the Chemistry department and the Early Grade Feedback program which are designed to help you succeed in General Chemistry,
- A summary of strategies used by successful students, and
- An opportunity to express your opinions to the administration of Rocky Mountain University regarding the effectiveness of the department and university support for your success in General Chemistry.

Participation in this research is voluntary and in no way will influence your grade in General Chemistry. If more than 12 people volunteer, selections will be made, and you may not be selected to participate. If you are interested, please sign the form that the instructor has and I will respond to you and let you know whether or not you're selected. I'm looking forward to hearing from you!

Sincerely,

Randy Larkins (randy.larkins@unco.edu)
Doctoral Candidate, University of Northern Colorado

Announcement to Current Participants

Participants who are currently involved in the research will receive the following information:

Dear (student name),

We listened! You are currently participating in a research study to find out if the support you are given in this class to help you succeed is actually helpful to you or not. In a recent focus group session, an additional incentive of $35.00 was suggested by a student. After considering this suggestion and obtaining approval from a research review board at the University of Northern Colorado, I am happy to tell you that I will be able to offer each type of focus group (in-person, online audio/video and online text only) a chance of a $35.00 gift certificate to the … Student Center to be used as you wish (within the guidelines of the gift certificate policies).

The following items will now be offered to you as appreciation for your efforts:

1. A $5.00 gift card to … Coffee Lounge
2. New! A chance in a drawing for a $35.00 gift certificate to the … Student Center (one certificate will be provided to each type of focus group),
3. A list of intervention programs offered by the Chemistry department and the Early Grade Feedback program, and
4. A summary of strategies used by students to successfully pass this course which may be useful for future courses encountered by the students

A drawing for the three gift certificates (one for each type of focus group) will be held immediately after the last focus group session to be held on *(date to be determined upon IRB approval)*. To be eligible for this drawing, you must participate in all parts of the research, including:

- Attending one in-person or electronic group session for one hour in the third week of class (which you have already done),
- Answering four questions briefly in an email that I will send to you once a week for four weeks, and
- Attending a final in-person or electronic group session for one hour during the 8th week of class

If your name is drawn, the certificate will be mailed to you immediately following the drawing.

Thank you again for your participation and support of this research. If you have any questions, please feel free to contact me by email at randy.larkins@unco.edu or call me at …

Sincerely,
Randy Larkins

UNIVERSITY of
NORTHERN COLORADO

Institutional Review Board

DATE:	September 28, 2014
TO:	Randy Larkins
FROM:	University of Northern Colorado (UNCO) IRB
PROJECT TITLE:	[639402-3] Project Success: A Methodological and Evaluative Case Study of The Early Grade Feedback Program Interventions
SUBMISSION TYPE:	Amendment/Modification
ACTION:	APPROVAL/VERIFICATION OF EXEMPT STATUS
DECISION DATE:	September 27, 2014

Thank you for your submission of Amendment/Modification materials for this project. The University of Northern Colorado (UNCO) IRB approves this project and verifies its status as EXEMPT according to federal IRB regulations.

Hi Randy,

Your recruitment changes seem justified and within guidelines. You are approved to continue with these changes.

Good Luck.
Nancy White, PhD, IRB Co-Chair

We will retain a copy of this correspondence within our records for a duration of 4 years.

If you have any questions, please contact Sherry May at 970-351-1910 or Sherry.May@unco.edu. Please include your project title and reference number in all correspondence with this committee.

APPENDIX P

BENEFITS TO STUDENTS, THE DEPARTMENT AND THE UNIVERSITY

Benefits to the Students, College and University

To conduct this research and comply with my desire to give back to those who participate in the research, I have identified potential benefits for the student participants, the College of Natural Sciences (especially the Department of Chemistry who agreed to volunteer their course for this research) and Rocky Mountain University.

Students: For participating in this research, students will receive

- A $5.00 gift card to … Coffee Lounge
- An opportunity to express their opinions regarding the effectiveness of Department, College and University support during their initial term at Rocky Mountain University,
- A list of intervention programs offered by the Chemistry department and the Early Alert program, and
- A summary of strategies used by students to successfully pass this course that may be useful for future courses encountered by the students

The Department/College: For allowing research of its students during this semester, the Chemistry department and College of Natural Sciences will receive

- Summaries of all focus group information,
- A description of the weekly progress of students who are engaged in the research,
- Recommendations for interventions that seem to promote successful students (and what interventions may need improvement),
- Description of any indicators that might trigger intervention cues, and
- A statistical report designed for the department outlining demographic and academic characteristics of all students enrolled in General Chemistry Fall 2014, including (but not limited to)
- Group summary of students by progress indicators3, including:
- New freshmen group end of term grade outcomes
- End of term outcomes based on progress indicators
- End of term grade outcomes for Students attending U-Turn
- Final course grades and academic status
- Type of intervention by end of term grade outcomes

The University: For allowing research of its students during this semester, Rocky Mountain University will receive:

- All information given to the students,
- All information given to the department/college,

[3] No individual statistics will be given to anyone involved in the program or research

- A copy of my dissertation including my methodological and contextual findings, and
- A five-year summary of all data collected for use by the Early Alert Program, including
- A longitudinal statistical report designed for the university, encompassing the same statistical material given to the department plus other inter- and intra-college information
- A multiple regression analysis detailing characteristics of students who succeed (or fail)
- A copy of summaries of interviews and focus groups I have conducted throughout the five years of research in this project, and
- Recommendations of future intervention programming as they apply to new freshmen students based on my longitudinal quantitative and qualitative findings.

APPENDIX Q

BLACKBOARD COLLABORATE@

SECURITY

Blackboard Collaborate Security[4]

System Security

At the infrastructure level, Blackboard's systems are located within facilities at our provider that require access card and biometric identification. Only key Hosting personnel have access to the data center and to our servers, located in locked racks secured by two-factor access controls. Onsite security personnel monitor the facility continuously, and all areas within the facility are under recorded video surveillance at all times.

At the server-hardware level, all servers are hardened and protected by firewalls. Blackboard publishes only those interface ports required for operation of the service. Only essential services can be configured and enabled on the servers and those services present a public port only as required to deliver the hosted service. Commonly exploited services, such as FTP, are not available. Firewalls are configured to limit access to only the public services as well as to throttle common denial of service attack attempts.

At the application level, access to session service is only provided to users that have identified and authenticated themselves to the Session Administration System (SAS). Key Blackboard personnel have restricted access to customer data and read-only access to selected application logs.

For customers, users are only allowed access to data once they provide their credentials by logging into the service website. Client administrators can only be registered by Blackboard personnel and are registered as system users and given access appropriate to their role.

Information is logically separated, so sessions, schedules and user information are restricted to members of the client login group. Upon login, session attendees are presented with a schedule of only those sessions they are eligible to attend. Access to the SAS is under SSL encryption that provides a reliable mechanism for protecting data in transit to our servers. System administration data communications is via encrypted traffic only. Client session recording archives are partitioned by client into distinct storage directories for isolation and improved management.

The applications have undergone external and internal audits to ensure secure operation. Blackboard has engaged the services of a third party to conduct a review of its infrastructure and application software and practices. This audit was based on the ISO

[4] Excerpted from https://confluence.umassonline.net/download/attachments/63275856/Blackboard_Collaborate_Technical_Infrastructure.pdf?version=1&modificationDate=1357928113162

17799 standard. The audit findings have formed the basis for improvement to processes and practices, technical infrastructure, and application software. Internal audits are conducted regularly.

All relevant vendor operating system and middleware software security patches are monitored and applied as applicable as soon as is possible. Software updates are applied to vendor software packages and the operating system modules when the updates are available and as appropriate.

APPENDIX R

REMINDERS TO ATTEND FOCUS GROUP SESSIONS

Reminders to Attend Focus Group Sessions

(Phone reminder script)

Hello, (student's first name). How are you? This is just a call to remind you that you are scheduled to participate in a focus group on (time and day) (online or in the face-to-face focus group session location). In return for participating in this research, you will receive:

A $5.00 gift card to Mugs Coffee Lounge

A list of intervention programs offered by the Chemistry department and the Early Grade Feedback program that are designed to help you succeed in General Chemistry,

A summary of strategies used by successful students, and

An opportunity to express your opinions to the administration of Rocky Mountain University regarding the effectiveness of the department and university support for your success in General Chemistry.

Will you be still be able to attend?

(If yes) Thank you! I'll talk to you on (repeat time, day and location again)!

(If no) I'm sorry to hear that. Thank you for volunteering and have a great day!

(Email and Postcard for face-to-face focus groups)

Dear (student name),

This is a reminder that you have volunteered to participate in a research study titled Project Success. As part of this research, you have agreed to meet at (date, time) at (location on campus); see the map below for the location. You do not need to bring anything but yourself; snacks and drinks will be provided to thank you for your willingness to come and participate.

By agreeing to participate in this study, you are helping the University to attempt to improve its services to new students. In addition, by attending this one-hour session, you will be given a list of strategies used by successful students, a list of programs and services offered by the University and Department of Chemistry, and a chance to voice your opinion. Your voice is important.

Thank you for agreeing to be part of this project. We will see you on (date and time) at (location)! – Randy Larkins, focus group facilitator

(Email and Postcard for electronic focus groups)

Dear (student name),

This is a reminder that you have volunteered to participate in a research study titled Project Success. As part of this research, you have agreed to meet at (date, time) online at (web location); see directions for logging in to participate. You can participate in your room or apartment, but I ask that for this meeting, you be alone. If you will not have privacy in your room or apartment, please email me for a list of alternative places on campus that you may use for this meeting.

By agreeing to participate in this study, you are helping the University to attempt to improve its services to new students. In addition, by attending this one-hour session, you will be given a list of strategies used by successful students, a list of programs and services offered by the University and Department of Chemistry, and a chance to voice your opinion. Your voice is important.

Thank you for agreeing to be part of this project. We will see you on (date and time) at (web location)! – Randy Larkins, focus group facilitator

APPENDIX S

DIRECTIONS TO ATTEND FOCUS

GROUP SESSIONS

Directions to Attend Focus Group Sessions

(Email and Postcard for face-to-face focus groups)

Dear (student name),

This is a reminder that you have volunteered to participate today in a research study known as Project Success. As part of this research, you have agreed to meet today at (time) at (location on campus); see the map below for the location. You do not need to bring anything but yourself; snacks and drinks will be provided to thank you for your willingness to come and participate.

By agreeing to participate in this study, you are helping the University to attempt to improve its services to new students. In addition, by attending this one-hour session, you will be given a list of strategies used by successful students, a list of programs and services offered by the University and Department of Chemistry, and a chance to voice your opinion. Your voice is important.

Thank you for agreeing to be part of this project. We will see you tonight, (time) at (location)! – Randy Larkins, focus group facilitator

(Email and Postcard for electronic focus groups)

Dear (student name),

This is a reminder that you have volunteered to participate today in a research study titled Project Success. As part of this research, you have agreed to meet today at (time) online at (web location); see directions for logging in to participate. You can participate in your room or apartment, but I ask that for this meeting, you be alone. If you will not have privacy in your room or apartment, please email me for a list of alternative places on campus that you may use for this meeting.

By agreeing to participate in this study, you are helping the University to attempt to improve its services to new students. In addition, by attending this one-hour session, you will be given a list of strategies used by successful students, a list of programs and services offered by the University and Department of Chemistry, and a chance to voice your opinion. Your voice is important.

Thank you for agreeing to be part of this project. We will see you tonight, (time) at (web location)! – Randy Larkins, focus group facilitator

APPENDIX T

PICTURES OF THREE TRAINS

FOR FOCUS GROUPS

(used by permission from Microsoft Clipart@)

APPENDIX U

FLASH CARDS USED IN

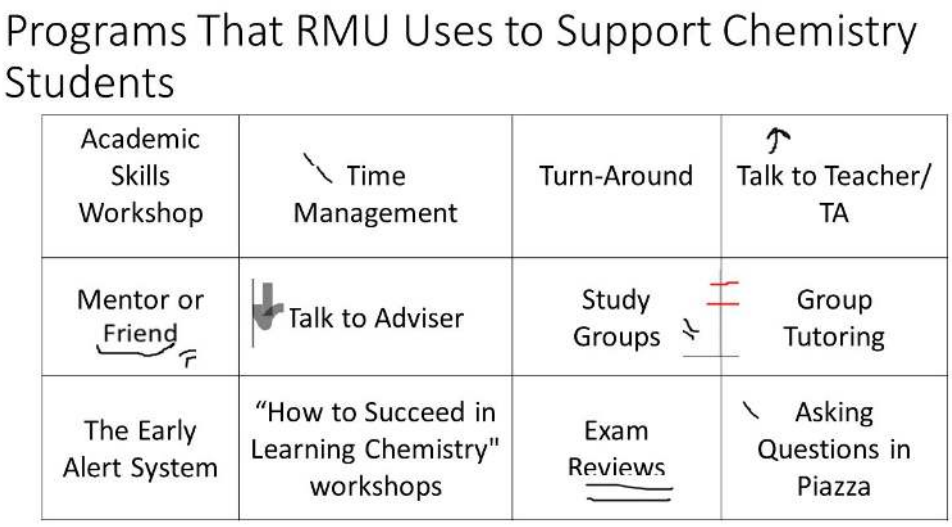
FOCUS GROUPS

Original Flash Card

Programs That RMU Uses to Support Chemistry Students

Academic Skills Workshop	Time Management	Turn-Around	Talk to Teacher/ TA
Mentor or Friend	Talk to Adviser	Study Groups	Group Tutoring
The Early Alert System	"How to Succeed in Learning Chemistry" workshops	Exam Reviews	Asking Questions in Piazza

Flash Card With Participants' Discussion Marks (electronic focus group)



APPENDIX V

PERMISSION FOR ALTERNATE

DISSERTATION FORMAT

MEMORANDUM

TO: THE GRADUATE SCHOOL
FROM: RANDY LARKINS, DOCTORAL CANDIDATE
SUBJECT: REQUEST FOR MODIFIED DISSERTATION FORMAT
DATE: FEBRUARY 17, 2015
CC: DR. SUSAN HUTCHINSON, DR. MARIA LAHMAN

I wish to apply for a dissertation format in which chapters 4 and 5 each consist of a manuscript (2 manuscripts total) ready to be submitted to publications in my field (followed by a chapter 6 summary of my dissertation). These manuscripts will be based upon research conducted in Fall Term 2014 as part of my dissertation, and will not be published at the time of my dissertation defense. I will be the sole contributor of these manuscripts.

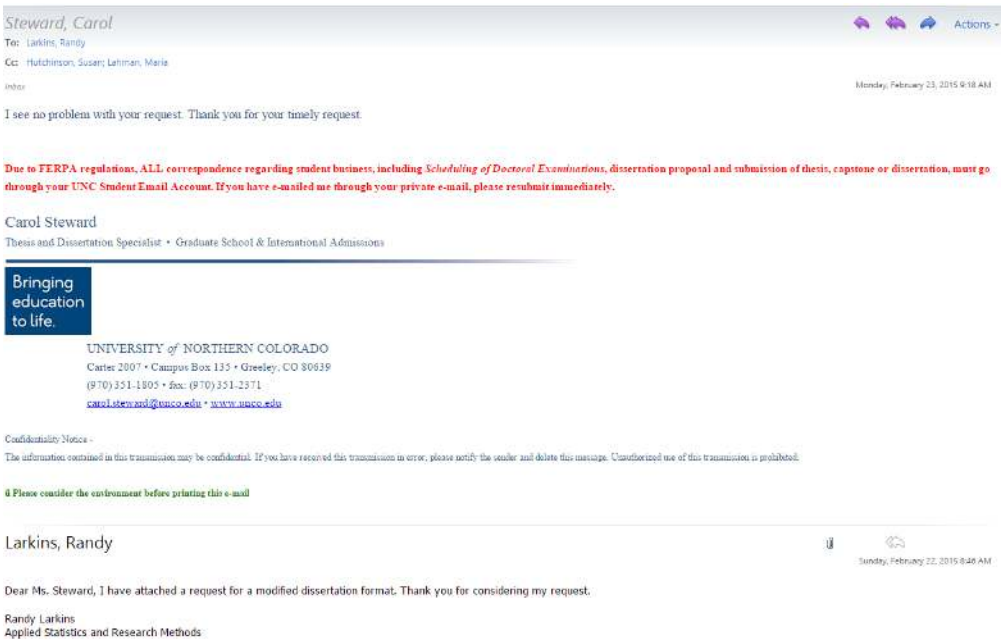
As a research methodologist, I conducted research on two areas of study: 1) the methodological aspect of the study, and 2) the contextual investigation. Therefore, chapter 4 will contain a methodological manuscript, while chapter 5 will contain a contextual manuscript. Both chapters will contain all elements of the following outline:

- Title
- Abstract
- Introduction (literature review)
- Materials and Methods
- Results
- Discussion

The manuscript will adhere to all guidelines required by the Graduate School for dissertation manuscripts.

Thank you for your consideration.

Randy Larkins



Steward, Carol

Actions

To: Larkins, Randy

Cc: Hutchinson, Susan; Lehman, Marla

Inbox

Monday, February 23, 2015 9:18 AM

I see no problem with your request. Thank you for your timely request.

Due to FERPA regulations, ALL correspondence regarding student business, including *Scheduling of Doctoral Examinations*, dissertation proposal and submission of thesis, capstone or dissertation, must go through your UNC Student Email Account. If you have e-mailed me through your private e-mail, please resubmit immediately.

Carol Steward

Thesis and Dissertation Specialist • Graduate School & International Admissions

Bringing education to life.

UNIVERSITY of NORTHERN COLORADO

Carter 2007 • Campus Box 135 • Greeley, CO 80639

(970) 351-1805 • fax: (970) 351-2371

carol.steward@unco.edu • www.unco.edu

Confidentiality Notice -

The information contained in this transmission may be confidential. If you have received this transmission in error, please notify the sender and delete this message. Unauthorized use of this transmission is prohibited.

Please consider the environment before printing this e-mail

Larkins, Randy

Sunday, February 22, 2015 8:46 AM

Dear Ms. Steward, I have attached a request for a modified dissertation format. Thank you for considering my request.

Randy Larkins
Applied Statistics and Research Methods

APPENDIX W

INTERNATIONAL JOURNAL OF RESEARCH & METHOD IN EDUCATION SUBMISSION GUIDELINES

International Journal of Research & Method in Education

Instructions for authors

This journal uses ScholarOne Manuscripts (previously Manuscript Central) to peer review manuscript submissions. Please read the guide for ScholarOne authors before making a submission. Complete guidelines for preparing and submitting your manuscript to this journal are provided below.

Use these instructions if you are preparing a manuscript to submit to International Journal of Research & Method in Education. To explore our journals portfolio, visit http://0-www.tandfonline.com.source.unco.edu/, and for more author resources, visit our Author Services website.

International Journal of Research & Method in Education considers all manuscripts on the strict condition that

- the manuscript is your own original work, and does not duplicate any other previously published work, including your own previously published work.
- the manuscript has been submitted only to International Journal of Research & Method in Education; it is not under consideration or peer review or accepted for publication or in press or published elsewhere.
- the manuscript contains nothing that is abusive, defamatory, libellous, obscene, fraudulent, or illegal.

Please note that International Journal of Research & Method in Education uses CrossCheck™ software to screen manuscripts for unoriginal material. By submitting your manuscript to International Journal of Research & Method in Education you are agreeing to any necessary originality checks your manuscript may have to undergo during the peer-review and production processes.

Any author who fails to adhere to the above conditions will be charged with costs which International Journal of Research & Method in Education incurs for their manuscript at the discretion of International Journal of Research & Method in Education's Editors and Taylor & Francis, and their manuscript will be rejected.

This journal is compliant with the Research Councils UK OA policy. Please see the licence options and embargo periods here.

Submitting Your Manuscript to ScholarOne Manuscripts: A Guide

To submit your manuscript, you will need the following files:

- A Title page file with the names of all authors and co-authors*
- Main document file with abstract, keywords, main text and references
- Figure files
- Table files

- Any extra files such as Supplemental files or Author Biographical notes

Word templates are available for many of our journals, but please check the Instructions for Authors page of the journal before you use them.

If you are submitting to a journal that uses double-blind peer review, please note that you will need to save the title page as a separate file and designate it as "not for review".

- Manuscripts are accepted in English. Oxford English Dictionary spelling is preferred. Please use single quotation marks, except where 'a quotation is "within" a quotation'. Long quotations of 40 words or more should be indented without quotation marks.
- Manuscripts should be compiled in the following order: title page; abstract; keywords; main text; acknowledgements; references; appendices (as appropriate); table(s) with caption(s) (on individual pages); figure caption(s) (as a list).
- Ideally, manuscripts should be around 7,000 words in length, excluding tables and references.
- Abstracts of 200 words are required for all manuscripts submitted.
- Each manuscript should have to keywords.
- Search engine optimization (SEO) is a means of making your article more visible to anyone who might be looking for it. Please consult our guidance here.
- Section headings should be concise.
- All authors of a manuscript should include their full names, affiliations, postal addresses, telephone numbers and email addresses on the cover page of the manuscript. One author should be identified as the corresponding author. Please give the affiliation where the research was conducted. If any of the named co-authors moves affiliation during the peer review process, the new affiliation can be given as a footnote. Please note that no changes to affiliation can be made after the manuscript is accepted. Please note that the email address of the corresponding author will normally be displayed in the article PDF (depending on the journal style) and the online article.
- All persons who have a reasonable claim to authorship must be named in the manuscript as co-authors; the corresponding author must be authorized by all co-authors to act as an agent on their behalf in all matters pertaining to publication of the manuscript, and the order of names should be agreed by all authors.
- Please supply a short biographical note for each author.
- Please supply all details required by any funding and grant-awarding bodies as an Acknowledgement on the title page of the manuscript, in a separate paragraph, as follows:
    - For single agency grants: "This work was supported by the [Funding Agency] under Grant [number xxxx]."

    - For multiple agency grants: "This work was supported by the [Funding Agency 1] under Grant [number xxxx]; [Funding Agency 2] under Grant [number xxxx]; and [Funding Agency 3] under Grant [number xxxx]."
- Authors must also incorporate a Disclosure Statement which will acknowledge any financial interest or benefit they have arising from the direct applications of their research.
- For all manuscripts non-discriminatory language is mandatory. Sexist or racist terms must not be used.
- Authors must adhere to SI units. Units are not italicised.
- When using a word which is or is asserted to be a proprietary term or trade mark, authors must use the symbol ® or TM.

NB: Please follow any specific instructions for authors provided by the Editor of the journal

Font: Times New Roman, 12 point. Use margins of at least 2.5 cm (1 inch). Further details of how to insert special characters, accents and diacritics are available here.

Title: Use bold for your article title, with an initial capital letter for any proper nouns.

Authors' names: Give the names of all contributing authors on the title page exactly as you wish them to appear in the published article.

Affiliations: List the affiliation of each author (department, university, city, country).

Correspondence details: Please provide an institutional email address for the corresponding author. Full postal details are also needed by the publisher, but will not necessarily be published.

Anonymity for peer review: Ensure your identity and that of your co-authors is not revealed in the text of your article or in your manuscript files when submitting the manuscript for review. Advice on anonymizing your manuscript is available here.

Abstract: Indicate the abstract paragraph with a heading or by reducing the font size. Advice on writing abstracts is available here.

Keywords: Please provide five or six keywords to help readers find your article. Advice on selecting suitable keywords is available here.

Headings: Please indicate the level of the section headings in your article:

- First-level headings (e.g. Introduction, Conclusion) should be in bold, with an initial capital letter for any proper nouns.
- Second-level headings should be in bold italics, with an initial capital letter for any proper nouns.

- Third-level headings should be in italics, with an initial capital letter for any proper nouns.
- Fourth-level headings should also be in italics, at the beginning of a paragraph. The text follows immediately after a full stop (full point) or other punctuation mark.

Tables and figures: Indicate in the text where the tables and figures should appear, for example by inserting [Table 1 near here]. The actual tables and figures should be supplied either at the end of the text or in a separate file as requested by the Editor. Ensure you have permission to use any figures you are reproducing from another source. Advice on artwork is available here. Advice on tables is available here.

Running heads and **received dates** are not required when submitting a manuscript for review.

If your article is accepted for publication, it will be copy-edited and typeset in the correct style for the journal.

If you have any queries, please contact us at authorqueries@tandf.co.uk, mentioning the full title of the journal you are interested in, or see our Author Services homepage.

APPENDIX X

JOURNAL OF GENERAL EDUCATION SUBMISSION GUIDELINES

Journal of General Education Submission Guidelines

SUBMISSION INFORMATION:
If you would like to submit an article to JGE, please visit http://www.editorialmanager.com/jge/ and create an author profile. The online system will guide you through the steps to upload your article for submission to the editorial office.

Articles are selected for the original ideas, cogent argument, and new information they contribute. Each article is assessed by the editors, selected readers, and members of the editorial board for its contribution to the discussion and debate over these issues. Manuscripts for submission should be typed double-spaced throughout, including block quotations and references, and pages should be numbered consecutively, with notes grouped in one section at the end. Footnotes are not permitted. To ensure anonymity, authors' names and affiliations should appear on a separate cover page.

Submissions preferably should not exceed 25 pages. A 200-word abstract is required with all submissions. Upon acceptance, a 60-word bio will be requested for each author.

The following formats, listed in order of preference, will be accepted: Microsoft Word 6.0 or higher, rich text format (rtf), or simple text. Please check for and eliminate all viruses before sending.

SUBMISSION GUIDELINES FOR AUTHORS

General Submission Criteria

- The journal uses a double-blind review process; please remove all references to or clues about your identity as author(s) from the main text and footnotes.
- Tables, figures, appendixes, and photos must be submitted as separate files / documents from the article text.
- Submissions should be accompanied by an Abstract of up to 200 words to be entered directly on the Editorial Manager submission page.
- Submit 1 - 5 key words.
- Accepted submissions should provide an author biography of up to 60 words.
- Authors are responsible for securing permissions and paying the required fees for the use of any material previously published elsewhere. Copies of permission letters should be sent to the Pennsylvania State University Press with the author’s publication contract.
- Authors guarantee that the contribution does not infringe any copyright, violate any other property rights, or contain any scandalous, libelous, or unlawful matter.
- Authors guarantee that the contribution has not been published elsewhere and is not currently under consideration elsewhere.

Manuscript Format

- Articles should be submitted as Microsoft Word files.
- All text, including notes and works cited should be formatted in Times New Roman font, size 12 point, with double line spacing throughout.
- Paragraph indentation by tab only, not space bar or paragraph indent function
- Number pages at the bottom right.
- No function of 'Track Changes' should be in use. Please check your document for any remaining tracked changes, hidden text, or comments, and delete them.
- 'Style' field should read 'Normal' throughout text
- Use 'main headings' and 'subheadings'
- Subheads may be placed in italic to distinguish them from a full heading
- No automated lists – all numbers or bullets must be keyed
- When omitting part of a sentence with an ellipsis, use three periods with a space before, in between and after (" . . . and . . . "). When using a four period ellipsis, the first is a true period, and the following should be spaced as above.
- Epigraphs and extracts from other texts should be set off with line spacing—do not format an indent. On the line after an epigraph, be sure to include the name of the author and the source; do not use an endnote.
- Use single spaces following periods between sentences throughout the manuscript.
- All footnotes to be converted to endnotes, double spaced, and rendered in 12-point Times Roman.
- Tables / figures / appendixes:
    - Must be submitted as separate files / documents from the article text.
    - An indication in the text for placement should be given, for example:
        - <Table 1>, <Figure 2>, <Appendix 1>
    - Figures must be submitted in the original format at the size the author would like them to appear.
    - Tables should be submitted in MS-Word. All tables may be included in one document.
    - Charts and graphs should be submitted in MS-Excel or its original source file.
    - Digital images should be submitted in either .tiff or .jpeg files at 300 dpi at the size the images are to appear.
    - If possible, all digital files (photos) should be grey scale.