Perceptions of Judges Toward Rigor of High School Senior Capstone Projects at a Northern RI Charter School

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

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Acknowledgements and Copyright

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ABSTRACT

With trends toward high stakes testing moving inexorably forward, project-based components of Rhode Island’s Performance Based Graduation system have been largely overlooked. Existing studies focus primarily on implementation of senior projects (Davidson, 2009; Lorenz, 1999; Mayer, 1999; Nicolini, 1999; Shaunessy, 2004; Singer & Hubbard, 2002). Some studies have found that increasing graduation requirements does not necessarily translate into rigor (Dounay, 2006; Lundsgaard, 2004). Less research exists on the lasting influence of projects as preparation for postsecondary pursuits (Egelson, Harman, & Bond, 2002; Pennacchia, 2010). Research on academic rigor is largely focused upon increasing course requirements (ACT, 2005; Christie, 2000; Kirst & Venezia, 2006; Peter D. Hart Research Associates, 2005) and not on performance-based assessments such as senior projects.

This study addressed the following research questions: What are the perceptions of judges of the extent of rigor of senior projects with respect to the work required to complete the written and technical (filmmaking) components of the project, and a formal presentation of the project? Is there a relationship between arts major selected and academic achievement; arts major selected and achievement on senior projects; and academic achievement and achievement on senior projects? Finally, are there differences among judges regarding their perceptions of rigor based upon the nature of their professional positions?

The study utilized a sequential, mixed methods design including a survey of N=53 judges. Survey findings informed the focus groups, which included the following categories of judges: arts faculty employed by the school (n=4), school alumni (n=3), educators (n=3), and artistic professionals (n=4).

Judges perceived that there is rigor built into the project design. Educators found that student performance with the written components was not up to expected levels, while several judges across focus groups found that students were not always adequately prepared for the oral presentation component. Analysis of student performance data found that there was no connection between arts major and performance on the capstone project.

It is anticipated that results from this study may help to shape a project for one school and perhaps make it a model for replication across other schools within the state.
I. INTRODUCTION

Overview

Senior capstone projects are one of three options available to Rhode Island high schools to meet the state’s performance based graduation requirements (PBGRs). High schools must select two of the following options: comprehensive end-of-course examinations, portfolios, or senior projects. Commonly, these projects are evaluated by school staff, which generally has a strong familiarity with the requirements and expectations of the project. This study focused on the experiences of judges, whose perspective was not utilized in the design of the project, but whose participation is essential to its sustainability as a tool for determining students’ preparedness for graduation.

Mejía (2010) argues that any research, even single case studies, produces generalizations. Analysis of this model provides data regarding the continued utilization of project-based learning at a school in a comprehensive diploma system.

This study describes the perceptions held by judges of the rigor present in the senior capstone project at a northern Rhode Island charter school. Most judges, while integral to the project, have little at stake with regard to the success or failure of participants. It is important to assess how these judges view the efficacy of such work, and to determine whether they feel that the student work that they are evaluating provides any indications of the abilities of students’ performance in their coursework in high school as well as their
potential performance in the postsecondary experiences of college or the workforce.

**Problem Statement**

With its arts focus, a charter school in northern Rhode Island identified portfolio as a logical choice to meet the state’s PBGRs. Secondarily, the school administration sought to develop a project that would provide all of its student-artists skills above and beyond those learned in their respective arts disciplines. The selection of a film as the final product maintained consistency with the school’s arts mission while requiring students to learn a new set of skills to complete the project (Beacon, 2012).

High schools had senior project requirements long before Rhode Island’s PBGR system was implemented. In many cases, these projects consume a significant amount of students’ time and require the development of new skills. While many schools leave the project topics up to individual students, several have dictated the media to be used (Zenkov, Harmon, & Van Lier, 2008). Some studies have found that projects provide valuable preparation for postsecondary pursuits (Christie, 2000; Fisk, Dunlop, & Sills-Briegel, 1997); yet others have found that they place unnecessary stress and strain on high school students (Venezia & Kirst, 2005; Wilensky, 2007).

As many states move toward an increased reliance upon high stakes testing as an indicator of successful completion of high school, senior projects may be losing their relevance. Massachusetts moved to high stakes testing with the introduction of the Massachusetts Comprehensive Assessment System (MCAS) in 1998. Rhode Island has tied the New England
Common Assessment Program (NECAP) assessments directly to the issuance of a high school diploma (RIDE, 2008b). The introduction of the Common Core Standards and the yet to be defined Partnership for the Assessment of Readiness for College and Careers (PARCC) assessment in 2014 do not seem to veer from that trend.

Demonstrating mastery of a task or series of tasks as a measure of high school achievement continues to be utilized in schools across the country (Bottoms, Young, & Uhn, 2006; Davidson, 2009; Dreis & Rehage, 2008; Egelson, Harman, & Bond, 2002; Fisk et al., 1997; Nicolini, 1999). This study addressed one task at one school, as it struggles to maintain balance between performance on required standardized assessments and continued commitment of resources to performance-based elements of its diploma system.

This school, like several others across Rhode Island, utilizes judges from outside the school community to evaluate senior capstone projects. These judges include faculty and administrators from higher education institutions, school alumni, and representatives from the artistic community. These judges often represent potential post high school opportunities for students from the subject school.

The National High School Alliance (2006a) states that, “rigor is marked by steadfast focus on increasing student achievement for all students” (p. 1). Does the program offer rigor to challenge students as they prepare for postsecondary opportunities or careers? Do the backgrounds of the judges
influence their perceptions of the program? Are there ways for the program to improve to better meet the needs of students?

**Significance of the Problem**

This study sought to ascertain the opinions of several subgroups of judges of senior capstone projects at a charter high school in a northern Rhode Island city. The school utilizes judges from diverse backgrounds to serve as the evaluators of this school-based project. These judges may or may not have a background in secondary education. Their backgrounds, however, may reflect common options for graduates of the school. Judge subgroups identified include arts faculty from the school, school alumni, educators (from primary, secondary, and postsecondary backgrounds), and working artists and filmmakers. These subgroups reflect a variety of experiences and a knowledge of key elements assessed in the school’s capstone project.

While existing research includes the perspectives of school-and university-based personnel (Christie, 2000; Conley, 2007; Darling-Hammond, Aness, & Ort, 2002; Davidson, 2009; Egelson et al., 2002; Fisk et al., 1997; Lippman et al., 2008; Lorenz, 1999; Mayer, 1999; Schwebach, 2008) as well as national testing organizations (ACT, 2005; American Diploma, 2006; National High School Alliance, 2006a; Peter D. Hart Research Associates, 2005), the opinions of those without direct association to these institutions has largely been ignored. Yet, it is these types of individuals who are likely to have a longer relationship with high school students (as employers or mentors in the arts area) than those who work exclusively in the field of
education. Without a strong connection to the institution, their opinions are more likely based on the work associated with the project and not a larger sense of the school’s academic program. This study uncovered the opinions of judges with and without strong connections to the subject school, hopefully offering new insights as to the perceived level of rigor in the project.

**Definition of Terms**

**Capstone Project:** “in-depth independent learning experiences that allow students to investigate a specialized area of interest” (RIDE, 2004, p. 20), alternatively known as the senior project and culminating project.

**Exhibitions:** “a broad term used to capture the demonstration of learning that occurs in both physical or written products and oral presentations” (RIDE, 2004, p. 20).

**PBGR:** Performance Based Graduation Requirements

**Rigor:** “marked by steadfast focus on increasing student achievement for all students” (National High School Alliance, 2006a, p. 1).

**Research Questions**

This case study, through the employment of mixed methods research, sought to answer the following research questions:

1. What are the perceptions of judges of the extent of rigor of senior capstone film projects at an arts-based northern Rhode Island charter school with respect to the work required to complete:
a. the written and technical (filmmaking) components of the project; 
   and
b. the formal presentation of the project?

2. Is there a relationship between:
   a. arts major selected and academic achievement;
   b. arts major selected and achievement on senior projects; and
   c. academic achievement and achievement on senior projects?

3. Are there differences among judges based upon professional positions?

**Background of the Study**

The educational system of the United States faces unprecedented challenges of global competition, evolving demographics, and limited finances. In response, many states have increased graduation requirements; with many choosing to focus on applied learning skills development instead of increased seat time (Christie, 2000). In 2004, Rhode Island began implementation of a Performance Based Graduation Requirements (PBGRs) System. This system allows for multiple opportunities for students to demonstrate proficiency in order to earn a Regents-approved diploma (RIDE, 2004). School districts were required to select two out of three performance-based diploma assessments: comprehensive end of course exams, exhibition of an in-depth project, or a graduation portfolio (RIDE, 2008b). The establishment of these assessments did not address the concept of rigor of the project nor of high school itself. While there is a wealth of information on the establishment of these assessments in general and on capstone projects specifically, there is little evidence regarding the perceptions of judges as to
the effectiveness of these programs to prepare students for life after high school.

**Capstone Project as Graduation Requirement**

As an alternative to comprehensive examinations, many states have chosen, at least as an option, multiple pathways to graduation. Once relegated to the difference between the general, technical education, and college preparatory tracks, students now have options for demonstrating problem solving, communication, and other skills (Christie, 2000). Project-based options for demonstrating proficiency have also found their way into arenas normally reserved for content area policy. The National Council for Teachers of English (NCTE) rendered a position statement on multimodal literacies in 2005, which identified the need of educators to create learning opportunities, which modeled the workplace likely to be encountered by graduates. To accomplish this, the Council encouraged project-based learning that acknowledged the multimodal literacies practiced by children (NCTE, 2005).

The Rhode Island Department of Education promulgated a list of findings, which noted, among other things, the lack of change in middle and high schools sufficient to meet the needs of the modern world (RIDE, 2008a).

**Implementation of Senior/Capstone Projects**

A decade ago, advocates were touting the efficacy of senior projects to demonstrate critical thinking skills (Mayer, 1999). In the same year, Lorenz described a senior English project that students complete in a three-phase project, which included a paper, a product and a presentation. Shaunessy
(2004) discusses this model within the context of gifted education but sees the applicability across populations. Students have been a vital part of project design in some cases, helping to increase ownership of the process through self-selection of topic (Lorenz, 1999; Nicolini, 2009; Singer & Hubbard, 2002).

Some projects have explored the very perception of formal education using multimedia such as digital photography (Zenkov et al., 2008), while others use film to explore personal causes, such as environmentalism (Graves, 2008). Many of these projects include outside evaluators and several of the exhibitions are open to the public, further raising the stakes for student presenters (Davidson, 2009; Fisk et al., 1997; Olson, 2006).

**Evaluation and Results of Senior/Capstone Projects**

Senior projects vary greatly in depth and breadth. Most require work throughout the final year of high school (Beacon, 2009; Fisk et al., 1997; Lorenz, 1999; Nicolini, 2009; Shaunessy, 2004); others involve just a few weeks or months of focused preparation prior to presentation of the project (Davidson, 2009; Singer & Hubbard, 2002), while others, in more of a portfolio review model, look back at work completed throughout a student’s high school career (Darling-Hammond et al., 2002). Some projects have revealed that student choice of topic may result in stronger engagement with the work and significantly better results in terms of performance on the assessment (Ito et al., 2008; Nicolini, 2009; Singer & Hubbard, 2002; Shaunessy, 2004). Ito et al. also point out that, although student choice of topic is key, adults must play a significant role, particularly in the area of
goal setting. Requirements and standards vary greatly as there are no national project-based graduation requirements.

By designing curriculum in general, and senior projects specifically, more relevant and tied to student interest, students are more likely to produce high quality work (Christie, 2000). Projects that engage students with technology have allowed students to express themselves in ways normally reserved for professional artists, writers, and filmmakers (Cellini, 2001; Dowdy, Birney, & Reedus, 2004; Graves, 2008; Ito et al., 2008). This engagement is essential if graduation projects and exhibitions are to provide preparation for entry into postsecondary education or the workforce. In fact, Dowdy et al. (2004) report that students who pursue postsecondary artistic endeavors following a high school film program were more likely to have a greater impact on their artistic environments.

While students who completed performance-based assessments such as portfolios and exhibitions have varying opinions on the efficacy of these projects, some students commented on how the experience provided them with a deeper comprehension of a particular subject (Darling-Hammond et al., 2002). Egelson et al. (2002) found that, while some of these students felt that their work had prepared them for postsecondary pursuits, they did not generally realize this until after graduation. In fact, one-third of respondents in their survey reported that the senior project had no lasting impact on their futures. It is clear that results vary greatly from student to student within a school or district and even more from geographic region to geographic region.
Rigor of Projects

Rigor is a term frequently used in education, yet its definition often varies from situation to situation. The National High School Alliance (2006a) describes four key areas of focus, including minimum graduation requirements, high-level coursework content, a wide range of student supports, and alignment of high school requirements with the needs of the workforce and postsecondary education institutions. Wagner (2008) identifies seven skills students need to master to excel in the twenty-first century. These include critical thinking and problem solving skills, the ability to lead and collaborate, demonstrating agility and adaptability, showing initiative and entrepreneurialism, demonstrating effective oral and written communication skills, being able to access and analyze information, and being curious and imaginative.

Increasing graduation requirements does not necessarily translate into rigor (Dounay, 2006; Lundsgaard, 2004). However, taking a core curriculum, particularly one which includes four years of English, and three each of math, science, and social studies, improves the success rates for students taking standardized college placement tests, like the ACT (ACT, 2005). The research has shown these and many other attempts to define rigor. Much of the research is in the area of high school course requirements. Little research exists regarding the rigor of project-based learning at the high school level. When Rhode Island established its PBGR system, it provided frameworks that included standardized rubrics for evaluating several components, including the oral presentation (RIDE, 2005b).
Conclusion/Need for Further Study

The available literature suggests that senior projects have proven effective in demonstrating student mastery of high school-level skills. However, the wide variety of the scope of senior projects, as well as the geographical location of the school and socio-economic status of the students, make it a challenge to generalize about the efficacy of these projects.

Existing studies focus primarily on the creation and implementation of senior projects (Davidson, 2009; Fisk et al., 1997; Lorenz, 1999; Mayer, 1999; Nicolini, 2009; Shaunessy, 2004; Singer & Hubbard, 2002). Less work exists on the lasting influence of these projects as preparation for postsecondary pursuits (Egelson et al., 2002). What are the perceptions of those asked to evaluate students’ work on these projects? Is there a relationship between success on these projects and success in high school?

Methodology

Research Design

The study employed a case study design using sequential, mixed methods with an initial survey leading to semi-structured focus groups. According to Creswell (2009), survey research can help to quantify attitudes and opinions of a population through the study of a sample of that population.

Sequential, mixed methods were employed so that the focus groups and content analysis could expand upon the findings of the initial survey (Creswell, 2009; Silverman, 2006). An explanatory design allowed the quantitative survey to inform the selection of participants for the semi-structured focus groups (Creswell & Plano Clark, 2007).
Sample

All members of the population of capstone judges serving in 2010 and 2011 ($N=53$) received surveys. After an analysis of the survey data, a random purposeful sample of judges was invited to participate in one of four semi-structured focus groups, based upon their classification into one of four categories: arts faculty employed by the school ($n=5$), school alumni ($n=20$), educators ($n=7$), and artistic professionals ($n=21$) (Patton, 2002). The final constitution included four groups of three or four participants each. This resulted in the focus groups consisting of subgroups of the original population (Johnson & Christensen, 2008).

Instrumentation

To gather the quantitative data for Research Questions 1 and 3, a questionnaire was developed based upon the rubric utilized by judges to evaluate student projects. The rubric contained five evaluation categories, mirroring the judges’ rubric. Each category included five questions and utilized a 4-point Likert-type scale with responses ranging from *strongly disagree* to *strongly agree*. A pilot study was conducted with alumni and faculty from the subject school to examine the item content, readability, and response format of the instrument. The instrument’s content validity was supported through the literature and by a content review by the professionals named above in the pilot study.

Focus groups were formed from the judges who participated in sessions in 2010, 2011, or both, with assignment to one of four categories: Educators, Artists/Filmmakers, Alumni, and Arts Faculty from the subject school.
Data Collection

Data collected included school records (grade point average and performance on capstone assessment), rubric scores, survey data, and focus group transcriptions. Student performance in academic coursework was compared with performance on the capstone assessment. This analysis provides a picture of rigor in the classroom and in the capstone assessment at the subject school. The researcher made initial contact with \( N = 53 \) participants then distributed a web-based survey to all respondents. This request was repeated after one week to those who had yet to respond. The researcher collected all data from the survey site and incorporated them into a spreadsheet. Content experts (\( N = 2 \)) reviewed focus group questions prior to the sessions to ensure readability and the clarity of the response format. Focus groups were audio recorded for transcription and analysis and transcripts were sent to all participants for member checking.

Data Analysis

The researcher analyzed quantitative results using the Statistical Package for the Social Sciences (SPSS, 2010). Descriptive statistics, including frequencies, percent, means, and standard deviations described the responses to both components of Research Question 1. Data analysis of the multi-dimensional survey was also performed. Cronbach’s alpha reliabilities were calculated for the data from sets of common items to determine if means could be generated for the respective sections of the questionnaire. A criterion of .70 was used. Means and standard deviations were reported on all items.
For the phase two qualitative data analysis, Interpretive Integration was used to inform the questions for the focus groups (Polit & Beck, 2011). After the \( n = 4 \) focus groups were conducted, the transcripts were read, analyzed using discourse analysis, coded, and categorized.

During this phase, Research Question 2 was answered by an analysis of student data, including demographics, chosen arts major, academic achievement as measured in cumulative grade point average, and performance on the capstone presentation. Quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS, 2010). For Research Questions 2a and 2b ANOVA examined the relationships between the dependent variable (achievement on senior projects) and the independent variable (arts major selected). Research Question 2c was analyzed using a simple product-moment correlation for academic achievement and achievement on senior projects. Effect size was calculated and significance levels were calculated using the Bonferonni adjustment for item-level analyses.

Analysis of Research Question 3 included data from the initial questionnaire as well as transcript analysis from the focus group sessions. ANOVA was used to examine the relationships between the dependent variable (opinions of rigor) and the independent variable (professional position).

The explanatory design allowed for the quantitative and qualitative data analysis and interpretation. During this phase the researcher began the process of what Tashakkori and Teddlie (1998) and Sandelowski (2000) (as
cited in Polit & Beck, 2011) “qualitizing” the quantitative data. That is, using the quantitative data from the research questions to “give life” to patterns that emerge in the analysis. This final phase of analysis and interpretation provided a more complete picture of the case. A more detailed description of the research methods used in this study is presented in chapter III.

**Limitations**

The researcher brings bias to the study because he created this project and, therefore, has invested significant time and effort into its success. However, participants may be more likely to open up and share feelings about the project with someone with whom they are familiar. The honesty of participants will also be a concern. Alumni and faculty have developed a strong attachment to the institution and this may result in a desire to please the researcher.

The researcher selected participants from the 2009-2010 and 2010-2011 school years for two reasons. First, they were the most recent years available and, therefore, would provide the freshest data for the case study. Second, these are the first years during which the researcher was not the teacher of record and primary contact point for judges of the senior capstone project. The researcher was not responsible for collecting and using the assessment data for the class. He brought an outside perspective to this set of data.

The researcher conducted member checking following the transcription of the interviews. Lincoln and Guba (1985) stress the importance of member checking as “the most crucial technique for establishing credibility” (p. 314).
By taking pieces of the polished reports back to the participants, the researcher allowed them to check the facts prior to publication of the study.

The single case design, as well as the small number of participants, limits the generalizability of this study. The researcher has provided detailed data describing the population and setting to allow others to determine the transferability of the study’s findings.

**Delimitations**

The study was limited to those judges who participated in 2010 and/or 2011. Earlier classes have been excluded as some of the requirements were changed. However, some judges have served consistently since 2007, and they were not excluded.

**Summary**

This chapter identified the purpose of this case study research: to determine the perceptions of judges as to the rigor of senior capstone projects at a northern Rhode Island charter school. To effectively capture the perceptions of judges, this study used quantitative academic data as well as qualitative focus groups. This methodology provided a full picture of the program at the subject school. The diversity of the backgrounds of participants in this study provided a wealth of qualitative data to add to a comprehensive set of quantitative data.

Chapter II provides an extensive review of the literature on senior projects. Chapter III includes details of the methodology used in this mixed methods case study. Results from the study are presented in Chapter IV.
while Chapter V provides an opportunity for discussion and recommendations for improving the project at the subject school.
II. LITERATURE REVIEW

Introduction

With the introduction of the Common Core Standards and the soon-to-be released Partnership for Assessment of Readiness for College and Careers (PARCC) assessment, schools in the United States are focused upon standardized testing as never before. In the rush to implement standardized testing mandates, many states have provided little resources devoted to performance-based measures, such as portfolios and capstone projects. These measures often provide students the opportunity to complete rigorous work to demonstrate a wide variety of skills.

This chapter begins with a review of the efforts of some schools and districts to implement senior projects, and then follows with a review of the limited literature on the evaluation of such projects. Capstone projects as graduation requirements form the third topic in this chapter. A review of the literature as to the efficacy of capstone projects as preparation for the postsecondary options of college and employment follows. The chapter concludes with an overview of rigor, as it pertains to high school in general and capstone projects specifically.

While rigor is a hot topic in the field of education, few agree on what constitutes rigor in the high school experience. Much of the focus of the literature on rigor focuses upon students taking increased course-loads, with some sources even citing a specific number of credits in particular subjects, while others describing course content and assessments.
It is the discussion of assessments that reveals the place of capstone projects. Much of the literature on capstone projects points to the higher-level thinking and time on task required to successfully complete all elements of these projects. The uncertainty of the means by which these projects can be assessed, as opposed to the straightforward nature by which standardized tests can be evaluated, make capstone projects a more difficult choice for schools, districts, and states to make. Choosing to implement these projects demonstrates a commitment to student learning beyond the classroom and provides a solid foundation for postsecondary opportunities in the college classroom and in the workplace.

**Implementation of Capstone Projects**

The research on the implementation of capstone projects leans heavily to implementation at the school and district level. The decision to implement a capstone or senior project is never undertaken lightly. Significant resources must be poured into these initiatives and their efficacy remains unclear. Yet several schools and some states have made these projects graduation options or requirements as a means for students to demonstrate proficiency.

Barron et al. (1998) argue that project-based learning may be difficult to implement, but the rewards outweigh the challenges. To implement project-based learning across institutions, they recommend:

- clearly defining goals that will lead to deep understanding;
- scaffolding all elements of project;
- including formative assessment throughout the process; and
• developing structures within the classroom and within the school that promote significant participation.

A strong professional development component for all those involved is the key to ensuring that project-based learning can be implemented school- or system-wide. Dounay (2006) points out that formative assessment, prevalent in elementary and middle schools, has not been a focus at the secondary level. She puts the onus on the states for not mandating requirements. Notable exceptions, she notes include Rhode Island and Indiana. Those two states provide clear expectations and guidelines for implementation and evaluation of projects, which all schools must follow (Dounay, 2006; RIDE, 2004).

Chadwell (1992) describes a model from Oregon that laid the foundation for many states across the country as they implemented the project and identifies its goals. The project should provide a long-term activity, which included tasks or other elements across several disciplines. In addition, the project should hold high school seniors accountable for their education by insisting in public demonstration of their skills. Also, elements of student choice and community involvement must be included. Finally, school staff should be left with a clear picture of how their efforts have come to fruition in the work of the students. Davidson (2009) affirms this essential connection between summative assessment and instruction. She identifies four necessary conditions for successful implementation of exhibitions. First, there must be school-wide alignment of instruction and assessment to exhibitions. Second, schools must put into place structures that support
“sustained collaboration” between stakeholders (p. 38). Third, strong community connection beyond the school walls must be present. Finally, each school must actively connect or otherwise network with other schools with a strong exhibition program. The National Center for Learning and Citizenship (2004) provides a more comprehensive model with 15 key elements required to create a more rigorous senior exhibition program. These elements are further described below.

Fisk, Dunlop, and Sills-Briegel (1997) describe one school’s decision to implement a senior project requirement to ensure that the school’s graduates held certain skills upon graduation. Chief among these skills were skills associated with critical thinking and communication. More specifically, students were asked to demonstrate written and oral communication skills, the ability to think critically, the skills necessary to obtain information from diverse sources, and the ability to express themselves creatively. The school’s faculty set all evaluation criteria, and also served as the evaluators of the committee.

While student choice is a critical element throughout the literature, Ito et al. (2008) warn that meaningful adult presence (whether through a teacher, advisor, mentor, or parent) is essential to ensure the success of high school students tackling independent, interest-driven projects. Cellini (2001) describes a school that uses traditional subject for senior projects such as immigration reform, but dictates that students create a short film as their final product. Pittsburgh’s Mt. Lebanon High School takes this one step further and offers a public showing of the films created by students, taking
the term exhibition to a new level (Graves, 2008). The “Through Eyes” project conducted with students in Cleveland, Ohio dictates the media which must be used, but still includes a writing requirement and significant choice when it comes to subject matter (Zenkov et al., 2008). The College Bound Filmmakers Academy, a five-week intensive filmmaking program conducted on a college campus in northeastern Ohio, provides college instructors sharing college-level teaching to high school students, thereby exposing them to college expectations at an early age (Dowdy et al., 2004).

O'Sullivan and Dallas (2010) discuss the importance of having a class at the high school level modeled after a college course. One such class exists in Rosemont High School in the Minneapolis suburbs. Seniors enroll in a research paper class, which culminates in a single, college-level research paper.

Davidson (2009) describes exhibitions that develop from classwork and the conditions that must be present in order for these exhibitions to be successful. Among her assertions is that instruction throughout a school must adequately prepare students to make such exhibitions. In addition, schools must provide systems and settings for students to effectively collaborate within the school while connecting to resources outside of the school. She deems exhibitions the “fulcrum for school transformation” (p. 36).

The National Center for Learning and Citizenship (2004) differentiates between senior projects and culminating projects. While senior projects generally refer to projects resulting from learning in senior year or
throughout high school, culminating projects are expected to include learning obtained over a longer period of time, perhaps encompassing the entire kindergarten through 12th grade experience.

At the Francis W. Parker Charter Essential School in Massachusetts, students must complete exhibitions in order to move from one ungraded level to the next. These are not the only exhibitions that the students complete; however these are higher stakes, or “gateway,” exhibitions (Garbus, 2000). The author describes the elements of these exhibitions, including the use of authentic assessments, real-world problems and challenges, student choice in topic development, the use of real audiences, and the potential for their work to have an impact on the larger community.

In studying the newly created smaller schools in the Coalition Campus Schools Project, Darling-Hammond, Ancess, and Ort (2002) studied a wide array of models for senior exhibition, but found that they all included:

- written and project work;
- an oral presentations before a committee of teachers and at least one peer;
- rubrics based upon established standards; and
- consistent scales to rate all program elements.

They also found that students’ experience with presentations for portfolio and senior projects “deepened their understanding” (p. 661).

Beacon High School in New York City offers a senior Science seminar that culminates in a capstone project (Schwebach, 2008). The course involves students researching a project, writing a research paper complete with a review of pertinent literature, and then making a presentation to their peers.
and teachers unfamiliar with their work. Singer and Hubbard (2002) describe a senior English project, which allows true choice of topic for students and requires them to make real-world connections through research and interviews. Verner and Hershko (2003) discuss an Israeli high school graduation project based on robotics. What differentiates this project from many others is its reliance on teamwork. Students work in small teams to study robotics, culminating in the construction of a robot to be placed into national and international competition.

Dreis and Rehage (2008) describe a four-pronged approach for seniors at New Trier High School in Winnetka, Illinois. Seniors must participate in a school-wide mentoring program where they assist teachers in a variety of ways. In addition, they must complete an experiential education opportunity during their final quarter of school and a yearlong service project with Habitat for Humanity. Finally, they must actively engage with a student-driven guidance program.

Pfeifer, Sadusky, and Kubic (2010) describe an alternative, project-based approach to graduation in Maryland. The program, called the Bridge Plan for Academic Validation, is a recently developed method by which students at risk of not graduating are able to demonstrate mastery of classes through project-based learning in lieu of performance on standardized tests. The supplanting of standardized testing with demonstrations of proficiency eschews the nationwide trend toward more and more testing.

The Bridge model (Pfeifer et al., 2010) calls for the following elements in its project-based approach:
• authentic assessment based on student interest;
• instruction in skills specific to project work;
• student choice in assignment selection;
• clear expectations on project rubrics; and
• external review by content area experts.

What is of interest to note is that Maryland’s definition of external review refers to adults external to the classroom, but still employed by the school (i.e., teachers and administrators who may not know the student). Kerka (2001) states the role of the teacher in the capstone course must be that of facilitator, guiding the students to successful independent work. The resources of these projects were not limited to the traditional teacher and guidance counselor roles.

Whether viewed as a culminating experience for the four years of high school or the 12 years of primary and secondary education, capstone projects are generally seen as a bridge to the postsecondary world. They have taken many forms, but generally include the key elements of written and oral communication as well as exhibition. Perhaps because of their myriad varieties, it is often difficult to assess their results on a state or federal level.

**Evaluation and Results of Capstone Projects**

With the drive on a national level moving inexorably toward standardized testing, some schools and districts continue to advocate for the use of non-standard assessments that allow students to demonstrate skills that cannot be captured on a standardized test. While significant literature exists on the
use of standardized testing, literature on the evaluation of capstone projects remains limited. The models of these projects vary greatly, thereby limiting the ability for comparative analysis from state to state, district to district or even school to school. The literature reveals a combination of case studies and broad analyses.

Darling-Hammond et al. (2002) studied large schools that have been restructured into smaller, more personalized learning environments through the Coalition Campus Schools Project (CCSP) in New York City. They found that these smaller schools can be more successful through the utilization of common standards and a consistent use of performance based assessments, including senior projects. In their study, schools that had been transformed into the smaller schools saw an increase in graduation rates as well as improved retention and performance in postsecondary pursuits. Another school in New York uses a comprehensive rubric that apples to both the written and oral elements of their senior project (Schwebach, 2008).

Self-evaluation is often a part of the process of evaluating senior experiences. Students at some schools complete a self-evaluation as part of their participation in senior year leadership activities (Dreis & Rehage, 2008). Washor, Arnold, and Mojkowski (2008/2009) note that the Big Picture Schools begin a 12 year progress monitoring cycle with a student self-assessment of their readiness for beginning college and joining the workforce. Costa and Kallick (2010) stress the importance of self-assessment over external evaluation as a critical need as schools adapt curriculum for the twenty-first century. Brookhart (2010) notes the need for students to use
higher-order thinking when they self-assess. To do this, students need to use formative assessment by analyzing their work, evaluating it against set criteria, and creating a plan for next steps in their learning. It’s imperative, Brookhart notes, that students should not have to wait until the completion of a long-term assignment to learn of their results. Ongoing, formative assessment is a required element of successful project-based learning.

Darling-Hammond, Ancess, and Falk (1995) devote a full chapter of their volume on Authentic Assessment to a case study involving senior projects at a Delaware vocational technical high school. The staff of the school began by connecting exhibition to the earning of a diploma by looking at their students as workers who must perform their responsibilities. Although their model was quite complex, the staff at the school still struggled with evaluation of the projects. The department most closely associated with the content of that particular student’s work assessed student work. Pieces of the assessment are counted for grades in individual courses and failure to complete elements of the project, would likely result in students not passing that course or those courses. However, failure to complete all phases of the assignment would not result in automatic denial of a student’s diploma. The school had taken significant steps toward graduation by proficiency, but still had work to do with regard to ensuring that students could no longer earn a diploma by simply passing enough courses. What is critical is the authentic learning that has taken place: Students identify, research, and present on a topic that they do not have expertise in at the start of the process. The learning that follows demonstrates that they will have the same skills at their
disposal when they have to problem solve situations in college or the workplace. As these projects vary greatly, the means by which they are evaluated are also varied. Few states have mandated performance-based measures, and those who have, have allowed individual districts and schools to customize their projects and even modify the evaluation rubrics developed by the states (Dounay, 2006; RIDE 2005a; RIDE 2005b).

Pennacchia (2010) conducted a mixed-methods study to ascertain the perceptions of high school graduates who had completed a senior project. Specifically, she sought to answer two research questions. First, she asked “To what degree do high school graduates perceive that the senior project proficiency-based graduation requirement prepared them for college and/or work readiness?” (p. 9). She followed up with a second question asking if the project helped them transition to their postsecondary experiences of work and/or college.

Her principal findings showed that the senior project prepared them for college and work readiness, allowed them the opportunity to explore new experiences outside of the high school setting, and gave them a sense of accomplishment. (p. 96)

Participants also indicated that, as a result of completing the senior project, they felt more self-confident. Pennacchia recalled the experiences of some of those who had recently completed the project. One graduate relayed feelings regarding the written components of the project:

The I-search paper was VERY similar to the format for a term paper I was required to write for my honors writing 100 class. We had to conduct a field study, and we had to write a 15-20 page paper. It was like the I-Search because we wrote in the first person, and it required research, interviews, and hands-on fieldwork. (p. 74)
Another student concurred, stating: “...it took more work and effort than anything in high school because it prepared me for bigger projects that I have to spend a lot of time on in college” (p. 104).

Overall, graduates believe that the senior project requirement is a valid one, because it allowed them to gain new skills and demonstrate to others what they had learned. She includes recommendations for policymakers, higher education institutions, secondary school administrators, senior project coordinators, and high school teachers. Among these, she recommends:

- the use of multiple measures to determine readiness to graduate from high school;
- consideration of the use of performance-based measures as a college entrance criterion;
- the use of employers as judges for senior projects;
- school administrators providing regular professional development opportunities for faculty on college and work readiness standards;
- project coordinators actively encouraging all members of the community to serve as project mentors and judges; and
- the use of multiple measures of assessment by high school teachers throughout the curriculum. (Pennacchia, 2010)

Analyses of high school and collegiate senior projects reveal both benefits and drawbacks of such efforts. Egelson et al. (2002) reported that students who attended a school with a senior project requirement were more confident regarding their skills in paper writing, oral presentations, and conducting research than their counterparts in non-project schools. Sill (2007), in evaluating senior projects at an undergraduate level, found that while the experience was nearly universally beneficial to students, there was no connection to the rest of the curriculum. Nicolini (1999) found that, with
regard to senior projects, “seventeen-and eighteen-year-olds can speak knowledgeably to strangers about topics that interest them” (p. 98).

Determining the success or failure of a particular academic year can best be judged through the examination of student work (Niguidula, 2010).

Linn, Baker, and Dunbar (1991), in looking to ensure the content quality of performance-based assessments such as capstone projects, call for the engagement of subject matter experts to review the design and implementation of the elements of the project.

Guskey (2007) found a significant discrepancy between the perceptions of administrators and those of teachers with regard to what they feel are valid indicators of student achievement. Administrators felt that nationally normed standardized tests were superior, while classroom teachers felt that observations and project quality provided better assessment information. Interestingly, student exhibits, in the form of projects and reports, ranked fourth overall as the perceived best indicator of student achievement. Teachers ranked it sixth, while administrators second.

While some research has been done in the area of evaluation of the results of capstone projects, the literature is more limited than in the other phases of this analysis. In fact, there was little in the literature regarding standards crossing state borders. While the move nationally is to the Common Core for English and mathematics assessments (Common Core, 2012), there is no such initiative for performance-based measures. Rubrics vary from state to state, and even within a state (Beacon, 2009; RIDE, 2005a; RIDE, 2005b). Many of the programs described above are small
schools, and the applicability to larger schools and systems is undetermined. What is clear is that evaluation of capstone projects remains an area primed for further study.

**Capstone Projects as Preparation for Postsecondary Opportunities**

While the evaluation of capstone projects remains largely unexplored, the efficacy of capstone projects as indicators of readiness for postsecondary opportunities has garnered a great deal of attention in the literature. As high school reform efforts have expanded, particularly over the last decade, capstone projects have been, if not at the forefront, certainly in the mix of the discussion.

Nicolini (1999) calls senior projects “an excellent way for students to show what they know and can do” (p. 98). The National Commission on the High School Senior Year (2001) touted the positive impact of the senior project on connecting students with possible futures of employment, postsecondary education, and citizenship. As a whole, however, the commission found that most high school seniors do not graduate prepared for college or the workforce. The commission further called for “the high school diploma must become a genuine passport to further learning and work, not simply a certification of time spent in class” (p. 27). The same study included a survey that indicated that approximately 50% of all teachers did not feel it was important to prepare for postsecondary education or employment to be “very important” (SREB, as cited in National Commission, 2001). The Commission recommended that parents should have to opt their children out of a college preparatory curriculum rather than having to opt
them in. They further recommended that rigor be made available to “larger numbers of students” (p. 29).

Peter D. Hart Research Associates (2005) reported 39% of recent high school grads that were students at four-year institutions felt that their high school education had some gaps in preparing them for postsecondary experiences. Students who entered the workforce in lieu of postsecondary education included the same percentage (39%) of respondents who felt unprepared to enter the workforce. A higher percentage (49%) of those not enrolled in school and unemployed reported gaps in their preparation. Those most in need once again, were underserved. With regard to what steps they recommend, 97% of the respondents in the Hart Research Associates study of non-college students stated that making coursework more relevant through real-world learning would have improved their high school experience. An overwhelming 95% of employers in the study agreed. Nearly half of the employers surveyed (45%) reported that high school graduates did not possess the necessary skills to advance past entry-level positions with their companies. Hart Research Associates also surveyed college instructors and found that 42% felt that public high school graduates were not adequately prepared for working at the college level.

Success in high school does not guarantee success in college or the workforce. But college success often results from a rigorous high school experience, particularly in writing, research, language and grammar proficiency, mathematics, and science (ACT, 2005; Adelman, 1999b; Barth, 2004; Conley, 2007; Martinez & Klopott, 2005; Menson, Patelis, & Doyle,
2009). Often, high school courses that allow for deep personal introspection and meaningful collaboration with peers are mere electives and not a graduation requirement (Mayer, 1999).

In a study conducted at a project-based charter school, Wurdinger and Enloe (2011) found that, through a project-based model, students had the opportunity to learn and practice life skills, including creativity, problem solving, decision-making, time management, finding information, and taking responsibility. Respondents in their survey were more likely to define beyond success in college, including abstracts such as “happiness, reaching personal goals, and the betterment of others” (p. 93). They recommend that future researchers examine project-based learning might be more useful in traditional public schools. Projects designed to make a contribution to a school or other organization can be included as part of an internship program (Markham & Lenz, 2002).

Venezia and Kirst (2005) assert that if students are to be successful in college, they must first understand what will be expected of them. This can best be achieved if high school teachers and counselors are aware of these expectations and use the information to create the appropriate connections in the high school experience. Opening the lines of communication between secondary and postsecondary institutions, they assert, is a difficult task not always undertaken by either organization.

Roderick, Nagaoka, and Coca (2009) suggest that college readiness can be defined in four ways, by:

- four-year college admissions requirements;
• performance on standardized achievement exams;
• high school grade point average; and
• what they term “college knowledge.”
They continue by defining this term as the “information, resources, and skills necessary to effectively navigate the college admissions process” (p. 197). Schools that successfully improved their graduates’ enrollments in college did so in part by increasing their “college-going climate” (p. 200). However, students attending two-year schools immediately after high school were more likely to lower their expectations than those who began their postsecondary studies at four-year schools (Alexander, Bozick, & Entwisle, 2008).

Wilensky (2007) asserts that the goal of most secondary schools is entrance into college and a handful of prestigious universities have long dictated the curriculum of the majority of high schools in the United States. The college preparatory curriculum is a hundred-year-old construct originally designed to serve 3% of the population (Conley, 2001). How have secondary and postsecondary institutions collaborated to improve the connection between what is being taught in high school and what is needed to succeed in college and in the workforce?

Cole, Kennedy, and Ben-Avie (2009) found that students’ engagement in college was based largely on their level of engagement with high school. Unlike many of the studies that place the onus of the transition on the high school, this study approached it from the college setting, looking backward. Their primary findings included the need to address student expectations as
they entered their postsecondary experiences as a way to increase student engagement at the college level. It was anticipated that this would improve retention and graduation rates for those institutions.

Rickey and Moss (2004) discuss the secondary-university partnership implemented in Indiana in 2001. This partnership resulted in particular attention to the transitional elements of the project: those skills that would aid students in the transition from high school to college. The Pathways to College Network (2007a) recommends alignment of teacher preparation programs and certification requirements with the expectation of a more rigorous experience for students. In their brief, “High Expectations: A Key to Success for All,” they elaborate on the inequities between the expectations of going to college and the rigor experienced as preparation to do so (Pathways to College Network, 2007b).

Northern University High School in Iowa provides a program that is meant to mirror the college experience in several ways. Students must enroll in a minimum of seven classes in an eight-class schedule. Students may enroll in dual enrollment courses, internships, and service learning opportunities to help meet this seven-course requirement. The structure was designed to meet the scheduling flexibility inherent in many college settings. Seniors may also elect to complete a senior project. Those who do so must log a minimum of 100 hours on task (Henriksen et al., 2008).

Conley (2001) suggests that faculty from the secondary and postsecondary schools could blindly evaluate examples of student work, including projects, thus creating a clearer picture of work that meets or
exceeds expectations. The National Council of Teachers of English (NCTE, 2005) recommended that teachers should expect student work which “may at times be more like that of the workplace than that of the traditional classroom” (p. 3). Menson et al. (2009) point out that “students who have developed strong reasoning, problem-solving, analysis and writing skills are more prepared for college than those who have not” (p. 1).

Niguidula (2010), through his work with the Coalition of Essential Schools, identified four essential components for performance-based measures, such as portfolios:

1. Products should be able to demonstrate a vision of what the student knows and is able to do.
2. There must be a clear demonstration of the purpose to the collection of the elements in the portfolio.
3. The portfolio should be designed with a particular audience in mind (i.e., teachers, peers, evaluators).
4. Finally, the students must be able to demonstrate that they met the school’s vision as to what represents high-quality work.

Essentially, there must be consensus between instructional staff, students, and those who evaluate student performance as to what is expected and how students will be assessed. Perhaps more significant, is Niguidula’s call for a feedback loop. Work is assigned by the teacher, completed by the student, assessed by the teacher, included in the student’s portfolio, analyzed by the teacher particularly how it relates to the curriculum for the course, leading to revisions to the curriculum based on the review of student work.

Several studies note that skills including self-monitoring, persistence and motivation are essential for success in college and the workplace (Conley,
Preparing students for the workforce has similar requirements, albeit with generally less rigor. The key for success in the workforce is the ability of workers to adapt their high school skills to the challenges of the workplace (ACT, 2005; ADPN, 2006; Barton, 2006; Bottoms, et al., 2006; Galinsky, et al., 2000; Levy & Murname, 2001; Peter D. Hart Research Associates, 2005; Stein, 2000). This is often accomplished through internships (paid and unpaid), job shadowing, and community service opportunities. Guy et al. (2009) looked at employment preparation, particularly for students with disabilities, throughout the state of Iowa. They found that “the vast majority of employment preparation was offered in the classroom setting” (p. 38).

Egelson et al. (2002) noted that more than half of the graduates at a school requiring senior project shared that their participation in the senior project experience had influenced their future career goals. It should be noted, however, that most of these students did not recognize the effects of this project until they were well into their postsecondary experiences. Success in high school, particularly in more advanced courses, increases confidence on the part of the student as they enter the workforce (Peter D. Hart Research Associates, 2005).

Having the opportunity for authentic work also provides students with deeper satisfaction and greater confidence as they transition to life after high school. Joyce (2008) discusses one such project in which students at a Texas high school built tables for their study center. Students gained real-world skills and were able to give something back, all while earning a stipend.
Though not designed as a transition program, it provided students with confidence in technical skills as well as improved communication and teamwork.

ACT (2009), as part of its guidelines for career success, recommends providing students with opportunities for “career-related success experiences that can serve to further reinforce students’ interests in, and pursuit of, various occupations” (p. 6). Verner and Hershko (2003) stress the role of the senior project “as an integrator of vocational and academic education” (p. 53). By allowing choice not only of the topic, but also of the format of the project, schools are preparing students for real world problem solving (Pfeifer et al., 2010).

Wiggins (2011) argues for the elimination of the high school diploma altogether. Students are no longer preparing for the jobs of the twentieth century and the faculty model has become obsolete. By making high school about preparation for postsecondary opportunities, Wiggins argues, students would leave when they are ready for those challenges.

Capstone projects can provide authentic learning for students as they contemplate and prepare for the transition to life after high school. While there is little agreement with regard to the types of the projects, there are consistent elements of choice, demonstration of persistence in reaching goals, and mirroring the college and/or workforce experience. In working toward these goals, schools can provide more rigorous graduation requirements for all their students.
Capstone Projects as Graduation Requirements

There is a certain American tradition by which high school seniors, once they have met graduation requirements and been accepted into college, tend to place significantly less emphasis on their performance in school. These students could be adversely affecting their transition to college through a concerted lack of effort (Adelman, 1999a; Mathews, 2001).

Summers (1989) identified an early example of a senior project as a graduation requirement. This project included written, project, and oral components to be presented to a panel of faculty, school staff, and members of the community. This effort represented one of the first instances of a project being assessed outside of a particular teacher’s classroom. Members of the school community at large invested time and effort into the success of these projects. In addition, the idea that outsiders might play a role in the evaluation began to take hold.

Lorenz (1999) describes the fears of the most successful students in a school as they tackled senior project. These students had established a pattern of success based on the traditional high school paradigm of read, discuss, test, and move on. True independent, project-based learning would upset this paradigm and require real growth.

Olson (2006) describes a coalition of 40 small schools in New York State known as the New York Performance Standards Consortium. In order to earn their diplomas, students at these schools must complete a research paper, a science experiment, a mathematical analysis, and a comparative literature
essay. When completed, these tasks must be presented to a committee, who use common evaluation tools to judge student work.

At the federal level, the funding and outcome measures of the No Child Left Behind Act (NCLB) remain firmly tied to standardized test scores and not performance-based measures (Hirsch, 2007). Quiara, Day, and Keniston (2009) call for ongoing dialog around the definition of “college ready” while pursuing multiple pathways to graduation for all learners and so-called “non-traditional” students.

Pfeifer et al. (2010) describe the alternative Bridge program in Maryland as one that offers an alternative path to a high school diploma. Key groups who have benefitted from this option include English Language Learners (ELL) and special education students. These particular groups often struggle with standardized testing. According to Pfeifer et al., the Bridge option “leveled the playing field” for these students (p. 48). Thurlow, Ysseldyke, and Reid (1997) point out that many states continue to offer modified diploma options for special education students. These options may or may not include many of the recent enhancements associated with high school reform and the efforts to increase rigor at the high school level.

In other states with mandatory testing, projects have been used as alternative assessments or in addition to testing requirements. Massachusetts, Alaska, and Oklahoma allow IEP students to complete a portfolio of projects in lieu of state testing. Students in Maryland and Nevada may use the portfolio after repeatedly failing the state tests. Ohio and Rhode Island have systems that require state testing and senior projects. While
Rhode Island’s requirements have been in place since 2008, Ohio’s do not take effect until 2015 (Dietz, 2010).

As recently as 1995, Rhode Island policymakers were trying to keep the priority on performance-based measures over “one-shot tests” (Archer, 2005). It was hoped that this would allow schools to stress organization, teamwork, and time management. By 2008, Rhode Island had become the first state in the nation to mandate performance based graduation requirements (Cech, 2008). Schools and districts in Rhode Island must select two of the following three options: comprehensive end-of-course examinations, a portfolio of student work, or a senior capstone project (RIDE, 2008b). While senior capstone projects are an option in the Rhode Island performance-based graduation requirements, they are not mandatory. The options for these performance measures include a graduation portfolio and a senior capstone project. Both require an oral presentation component (RIDE, 2008b). However, schools may opt out of one or the other if they choose to give comprehensive end-of-course exams.

RIDE (2011) provides an overview of the high school reform movement in the state of Rhode Island, beginning with the passage in 2003 of new regulations including a review of each district by the office of the Commissioner of Education. The review looks at where the results have come up short, notably in math performance with two-thirds of the school districts statewide with substantial implementation gaps. Based on these results, the Board of Regents required

the creation of a multiple measure graduation system that results in graduation decisions that are:
1. credible to all stakeholders (including students, parents, higher education, businesses),
2. rigorous – preparing students for postsecondary success,
3. accurate – valid and reliable, and
4. comparable across the state. (p. 2)

In revising their goals for the class of 2014, RIDE (2011) maintained the performance-based requirements, and identified four policy goals, including as its first to “set a high standard for graduation” (p. 3), while granting equal weight to coursework, state testing results, and performance-based requirements. This demonstrates RIDE’s continued commitment to the performance-based graduation requirements it first proposed in 2003.

Surprisingly, even with the increased attention afforded to standardized testing, the performance-based measures have remained in place. Coventry High School had been using performance based capstone presentation prior to the state-mandated requirement. Colleen Callahan, a member of the Rhode Island Board of Regents for Elementary and Secondary Education, noted that, “We are looking at not only what kids know, but how they use what they know” (Vernon-Sparks, 2008, p. UNKNOWN).

Dietz (2010) details the state of performance-based requirements in states without mandatory exit exams. Connecticut will institute a requirement for all seniors beginning in 2018, while Hawaii allows for an advanced diploma with a senior project course. South Dakota does not mandate the senior project, but provides for extra credit for completing tasks associated with a capstone experience.

The National Center for Learning and Citizenship (2004) points out that critics of standardized assessments are concerned that the drive for constant improvement in test scores creates an environment in which “efficiency and
conformity trump human relationships and authentic learning” (p. 1). Indeed, Gewertz (2007), points to inconsistencies regarding what scores are acceptable in state-mandated exams, and how much that really tells about the skill level of high school graduates. McIntosh (2011) echoes these sentiments as she questions the movement toward the Common Core Standards and the PARCC assessments. Students continue to be tested in a few key areas (notably mathematics and English Language Arts) and little is being done to determine students’ readiness for college and/or careers. Those who pass such tests are not necessarily prepared for college work or for the challenges of the workforce (Conley, 2007; Kirst, Venezia, & Antonio, 2004).

Through meta-analysis, Perna and Thomas (2009) maintain that a focus on high stakes testing over performance-based tasks such as portfolios and projects may be greatly diminish college opportunities, especially for “capable students attending the nation’s most underperforming schools” (p. 452). They further indicate that state testing with strong student consequences force many schools into “teaching to the test” and providing the skills necessary to pass the test and get a diploma, but not the skills needed for the postsecondary worlds of college and work.

The strains of preparing students for mandated standardized testing and for the postsecondary worlds of college or the workforce often force schools to forgo the formal senior project as a required element of the graduation formula. Few states have mandated a senior capstone project as a graduation requirement. In Rhode Island, it is one of three options to meet
the performance-based graduation requirement and schools must only choose two. In the drive to create a more rigorous environment for high school students, is there a place for the capstone project?

**High School Rigor**

“Rigor is marked by steadfast focus on increasing achievement for all students” (National High School Alliance, 2006a, p. 1). These efforts require that all involved be committed to preparing students well for “post-secondary education, career, and civic life” (p. 2). Washor and Mojkowski (2006/2007) equate rigor with college-readiness. They go further to include it between the new three “R’s”: rigor, relevance, and relationships. This is also addressed in Littky and Grabelle (2004). They cite the importance of relationships between all stakeholders in the educational process: “respect for the student, inclusion of the family, connections to other adults and the community, strong working relationships with teachers, and open communication with the administration” (p. 116). Next, they insist that the work done by students is relevant to their lives and hold meaning for them. Finally, they call for rigor in as defined by Mihaly Csikszentmihalyi as “intense concentration in any activity that requires skill and discipline, regardless of its content” (as cited in Littky & Grabelle, 2004). Rigor, according to Wilcox and Angelis (2011), “refers to an intense, focused ethic of striving to do the very best one can do” (p. 143). Whatever definition one chooses, it is not difficult to find literature on the subject of rigor in schools in general, and the rigor of graduation requirements specifically.
In their qualitative study, Bower and Powers (2009) conducted semi-structured interviews of teachers and administrators from one elementary school. It was clear that rigor was a priority at the school, but from just the small sample of seven members of the staff, no single, clear definition of rigor emerged. However, the authors identified four key themes as recommendations from the study. Skills such as higher order thinking and real world application should be incorporated into instruction. Accountability with regard to state assessments was identified as an essential tool to utilize for maintaining rigor. Instruction must be collaboratively planned to ensure a continuum of rigor throughout the school. Finally, instruction must be differentiated in order to provide rigor of all students. While the Bower and Powers point to the relationships among these areas, they report that the "participants tended to think of them as discrete items (p. 4). If defining rigor in just one school is a challenge, what are the implications for doing so in a district? A state? A nation? The National High School Alliance (2006b) sees the development of a common definition of rigor as the first step in increasing rigor for all high school students. The next step, according to Bower and Powers (2009), is for the administration of a school to empower teachers to identify appropriate strategies for their classrooms.

Grubb and Oakes (2007) identify seven conceptions of rigor. The rigor associated with student effort is directly linked to motivation, and the ability of schools to engage students in meaningful work. Test-based rigor is at the center of the standards-based movement. Much of the focus lies in comparing the results of American students with those of their overseas
counterparts. Content-based rigor is linked to students passing certain courses in preparation for postsecondary opportunities. This becomes problematic when course content is left up to individual states, districts, schools, or teachers. They next point to the debate of depth versus breadth. American schools typically focus on the breadth of material while those in other countries tend to tackle in-depth topics.

Grubb and Oakes (2007) ultimately define rigor as an increase in levels of sophistication, as it manifests itself into student competencies. The debate here is between basic skills and higher order skills. As schools, districts, states, and nations struggle with how to effectively test higher order thinking, they eagerly embrace the easier to measure basic skills. The authors next define rigor as application and transfer. Can high school curriculum be readily applied to applications beyond its original intent to new situations in the workplace? How transferable are the skills taught in traditional classes to real world problems? Finally, the authors define rigor as intellectual breadth. Are students leaving high school as well-rounded thinkers or with a limited scope of competencies? Most jobs require a wide range of abilities, from written and oral communication to technical skills and community engagement. These elements are often left out of the traditional high school curriculum to make room for topics that will be addressed on standardized assessments.

ACT (2005) reports that, “all students can benefit from rigorous course content” (p. 23), in preparing for the postsecondary opportunities of college or the workplace. They insist that expectations should be raised to the level
that all students can meet standards necessary for success in college or in the workplace. Most significantly, they encourage the dialog between state educational standards and college readiness standards. By 2010, ACT had published a study entitled “Mind the Gaps” which showed that taking a rigorous high school curriculum appeared to have an impact on success in college, particularly at the community college level (ACT, as cited in Gewertz, 2010). Bridging these two worlds necessitates the identification of those college readiness standards which are absent from the state and local standards and addressing them in high school curricula. Christie (2000) advocates for more rigorous standards at the secondary and postsecondary level through higher expectation of academic performance and student conduct and calls for colleges to increase their requirements for admission.

As early as the 1970s, there were attempts to ensure the rigor of the high school experience through the establishment of the Competency Based Teacher Education movement (Burke, 1973). Indeed, in an address to the National Art Education Association, Burke called for a four-pronged approach to improving student outcomes. This plan included the accountability of all stakeholders, the inclusion of business management practices into the field of education, a deeper analysis of the learning process, particularly through research, and improving the cultural diversity of schools and those who work in them. The focus upon research seems particularly prescient today. In the nearly 40 years since Burke’s speech, “research-based” has become coin of the realm in the training of teachers and the development of assessments for schools. This represents an early call for performance-based requirements
for high school students and their teachers. ACT (2005) echoes this call for improved teacher preparation. Teachers can only provide consistently rigorous material to their students if they are adequately trained through appropriate and continuous professional development opportunities.

More recently, Rourke and Mero (2008) described the mission of Columbus Alternative High School, which had been founded three decades earlier with a mission “to create a truly alternative and rigorous educational experience” (p. 12). The school has successfully developed a model to include rigorous academics, with required service learning, and project-based learning. Traditionally, schools have looked to the senior year as the key to transitioning to college or the workforce. The Ninth Grade Success Academy seeks to provide the necessary transition skills into freshmen, using the remaining three years to reinforce and build upon those skills (Center for Comprehensive School Reform, 2006).

In 2001, the National Commission on the High School Senior Year called for a three-part initiative it labeled the “Triple-A Program.” Its recommendations specifically called for improved alignment to include pre-kindergarten through four years of college. Specifically, they saw few connections between secondary and postsecondary educational institutions. Next, they advocated for the raising of achievement levels for all students, not just those in traditional college preparatory classes. All students need to be prepared as they leave high school. Finally, they called for more rigorous, and varied, assessments for high school seniors. These assessments, they argue, should include capstone projects, internships, research projects,
community service opportunities, and the chance to take college-level courses (National Commission, 2001).

The National High School Alliance (2006a) identified four key aspects of rigor:

- minimum college readiness graduation requirements;
- increased levels of content;
- a variety of supports to ensure student success; and
- aligning requirements with the demands of postsecondary education and employment.

They further go on to define what rigor is not. Included in this list are graduation requirements for a high school that are lower than the skills needed for postsecondary education, college preparatory opportunities only available to a small number of students, maintaining a general studies track with low or no postsecondary expectations attached to it, a vocational track not accompanied by strong academic preparation, changing course titles (but not content), and a simple increase in the number of Carnegie units required to graduate. Often, these are seen as quick solutions, but their impact will be limited (National High School Alliance, 2006a). They have created a framework and assessment tool to assist schools in determining the types and amount of rigor present in their schools.

When it comes to increasing rigor, the National High School Alliance (2006b) identifies four themes in their research on increasing academic rigor. The first area they identify is raising graduation requirements. Next, they point to the theme of equal access to quality instruction and content. This content, they assert, must be aligned with the skills necessary for
postsecondary opportunities. Finally, they cite the importance of providing additional support for students at risk.

Kirst and Venezia (2006) detail the impacts made by the lack of rigor in senior year. In addition to the added costs of remediation for college freshmen, there is a marked increase in the dropout rate due to limited academic skills of college freshmen. In a report on academic rigor, the Pathways to College Network (2007a) made several recommendations to secondary school-based personnel. Chief among these was the recommendation for a focus on depth over breadth and inquiry-based learning to develop student’s critical thinking skills.

Educational experts have questioned the implementation of school-wide special projects. Colleges review transcripts and look at grades in core courses, notably, mathematics, English, and science. Some students have noted that the stress of completing a rigorous senior project results in lower performance in those classes (Ramirez, 2008).

Washor and Mojkowski (2006/2007) cite the example of the Big Picture schools, beginning with the Met in Providence, Rhode Island. Seniors at the Met must complete a rigorous, multifaceted senior project in order to meet the school’s graduation requirements. They cite a particular strategy to engage students in rigorous work, which includes:

- working with students’ passions and interests;
- connecting student work with real-world contexts;
- building relationships with people and with different fields of study;
• acting on the belief that rigor occurs in both the academic world and nonacademic world and in the mind and the spirit; and

• finally, addressing rigor over time, and in several ways.

Roderick (2006) encourages schools to make their students’ aspirations concrete by linking them with the rigorous preparation required to attain them. In her view, this will close the gap between a student’s aspirations and what they will attain while in high school.

Achieve, Inc. (2010), in their brief, “Achieving the Possible: What Americans Think About the College- and Career-Ready Agenda”, uncovered strong agreement on the need for increased rigor in high school for all students, whether college bound or not. Of the voters polled, 90% agreed that, “academic and graduation requirements in public high schools will better prepare students to take their next step in life” (p. 2). Furthermore, 83% agreed that, “all students should be pushed to take rigorous and broad academic requirements in high school to make sure they have as many options as possible upon graduation” (p. 2).

Peter D. Hart Research Associates (2005) found that 77% of high school graduates not attending college as well as 65% of college students reported that they would have opted for more rigor in high school if they had a stronger sense of the requirements of their postsecondary experiences.

The National High School Alliance (2006b) notes that schools that view academic and career preparation as separate entities, designed for two distinct groups of students, are serving neither well. They recommend upgrading all programs to provide the skills necessary to enter any postsecondary option.
Rigor in the highest performing nations looks very different from the traditional American classroom. American students are generally exposed to a broader curriculum when compared with students in Europe and Asia (Wilson, 2009). Unlike their American counterparts, high-performing countries in Europe and Asia have national standards, allowing them to pour all of their resources, financial and human capital, into preparing students for this unified curriculum. American schools face more challenges associated with a more diverse student body, and international test results are not always comparable, as some countries do not test all students.

While rigor in high school in general is addressed in a number of studies, it is important to differentiate between general rigor and the rigor associated with assessments specifically. Savitz-Romer, Jager-Hyman, and Coles (2009) place assessment at the core of a rigorous experience for students. They argue that data from these assessments can serve to identify students who may be at risk of dropping out or, potentially, struggling beyond high school. Their recommendations include increased social and emotional support for students tackling the increase in rigor throughout their studies.

Harada, Kirio, and Yamamoto (2008) argue that project-based learning requires students to utilize deeper levels of thinking and greater skills. They further argue that through this process, students are able to create meaning for themselves, deepening their learning even further. Lundsgaard (2004) agrees that such rigorous work must be project-based, with the opportunity for learners to explore one subject deeply, rather than many broadly. Grubb and Oakes (2007) find that many of the issues of rigor can be incorporated
into a curriculum and “assessed, sometimes through projects, often through demonstrations or portfolios” (p. 27).

The Southern Regional Education Board identifies six A’s of project-based learning:

- authenticity;
- academic rigor;
- applied learning;
- active exploration;
- adult relationships; and
- assessment (SEDL, 2008).

The National Center for Learning and Citizenship (2004) described 15 key elements of a high-quality senior project program as identified by a focus group of senior project coordinators in Washington State. In creating a more rigorous program, it was hoped that the senior year would include more authentic learning and, therefore, become more meaningful to students.

The Center asserts that any effective senior project program could not be an add-on. It must be aligned to the missions of the school, district, and state. Criteria must be clearly established to ensure that the program is rigorous. Learning must be student-directed and students must take ownership of their own learning. Scaffolding must be a key element, although some models are four-year models encompassing grades 9 through 12 while others take place over shorter (or sometimes even longer) periods. The program must be challenging and provide a learning stretch for every
participant. The skills needed for the project must be utilized beyond the traditional classroom to provide truly authentic learning.

Members of the larger community must be engaged as mentors, advisors, and judges. The projects must be made available to a wider public or “authentic audience” (p. 2). In order to effectively engage the myriad stakeholders involved, programs would need to manage communication and coordination on a systems level. At all levels, staffing must be adequate to ensure that teachers and students are supported in their work. As there is frequent turnover with regard to the specific community members involved on a project, high-quality training becomes essential to ensure consistency over time. Parents represent a key stakeholder group that is often overlooked. It is important to engage them in the process of the senior project, from the initial stages of the project through the culminating exhibitions. All stakeholders, in fact, should be recognized for their roles in the success of the endeavor.

Continuous improvement and professional development is essential to the stability and growth of these initiatives. Complex systems risk growing stagnant, leading to the disengagement of key stakeholders. Other risks must be assessed and managed appropriately to ensure that safety of all participants is maintained throughout all program activities.

Meyer, Spencer, and French (2009) detail the perceptions of rigor of first year college students. While the focus is on the postsecondary experience, it is important to note that the basis of the opinions of these students is the experience that immediately preceded it: high school. Interestingly, 60% of
respondents reported that college was not as difficult as they had initially perceived. As part of their qualitative study, the included the question “What perception did you have about academics and classes prior to coming to college?” All respondents indicated that they believed that the experience would be “very complex and demanding” (p. UNKNOWN).

Wagner’s (2008) seven survival skills for twenty-first century learners include:

1. critical thinking and problem solving skills;
2. the ability to lead and collaborate;
3. demonstrating agility and adaptability;
4. showing initiative and entrepreneurialism;
5. demonstrating effective oral and written communication skills;
6. being able to access and analyze information, and
7. being curious and imaginative.

Many of these skills are required elements for an effective capstone presentation. Tied to authentic learning, students well versed in these skills leave high school with marketable skills.

The push to increase rigor in schools across the United States has been called “seriously flawed” (Grubb & Oakes, 2007). Efforts of schools and districts that seek to meet state performance requirements are insufficient to meet the needs of students (Wilcox & Angelis, 2011).

While standardized test scores remain the primary focus of the conversation about rigor, capstone projects remain ever present in the discussion. Myriad definitions of rigor, as applied to these projects, permeate
the literature. As the push to increase rigor and graduation rates continue, schools will continue to seek options to ensure their students’ success in high school and in the options beyond.

**Summary**

Rigor continues to be a focus of the high school reform conversation. With the push for greater accountability, regulators have latched on to the mantle of standardized testing as the benchmark for quality education. Schools and districts are often put in a position of focusing on preparing students for performing on these tests and not for success post-high school.

In more than a decade since the high school reform movement began in earnest, the push toward standardized testing has taken a more firm hold on a national level than performance-based assessments. Forty-five states have adopted the Common Core Standards and the yet-to-be-defined PARCC assessment (Common Core, 2012). Many experts agree that higher-order thinking and problem-solving are essential skills in both the college classroom and in the workplace, but until the decision-makers at the federal and state levels can determine a means to effectively assess these skills, the focus of the national discussion on rigor and the assessment of rigor will remain almost exclusively the purview of standardized testing.
III. METHODOLOGY

Introduction

The focus of this study was to describe the perspective of the judges regarding the rigor of senior capstone projects at a selected charter high school in northern Rhode Island. Most of these judges are not a part of the daily life of the students. Nonetheless, they play a pivotal role as to students’ attainment of a high school diploma. This section describes the selection of the research design, instrumentation, as well as the data collection and analysis components.

Research Design

The study employed a case study design using sequential, mixed methods with an initial survey leading to semi-structured focus groups. A single-case design was chosen because the school selected for the study was one of the first in the state to have an approved performance-based graduation system. This represents what Yin (2009) calls a critical case. Such cases, he asserts, may be used to test an existing theory.

According to Creswell (2009), survey research can help to quantify attitudes and opinions of a population through the study of a sample of that population. The methodology began with a survey instrument and concluded with a thorough study of a population of judges from the subject school.

Sequential mixed methods were employed so that the focus groups and content analysis could expand upon the findings of the initial survey (Creswell, 2009). An explanatory design allowed the quantitative survey to
inform the selection of participants for the semi-structured focus groups (Creswell & Plano Clark, 2007).

**Explanatory Design: Participant Selection Model**

Figure 1. Mixed Methods Explanatory Design, Participant Selection Model (Creswell & Plano Clark, 2007)

**Sample**

The study employed a quantitative instrument for participant selection. All members of the population of capstone judges serving in 2010 and 2011 ($N=53$) received survey invitations. Of those, $n=35$ returned completed surveys.

After an analysis of the survey data, a random purposeful sample of judges was invited to participate in one of four semi-structured focus groups. Random purposeful selection of participants within a small population allows for selection within critical groups but provides evidence that the selection process is unbiased (Gall, Gall, & Borg, 2007). Selection was based upon their classification into one of four categories: arts faculty employed by the school ($n=5$), school alumni ($n=20$), educators ($n=7$), and artistic professionals ($n=21$). The researcher selected four participants who are representative of these groups identified to be included in the focus groups. Johnson and Christensen (2008) refer to this as a nested sequential design. The final constitution was four groups of three to four participants each.
Instrumentation

Questionnaire

To gather the quantitative data for Research Questions 1 and 3, a questionnaire was developed based upon the rubric utilized by judges to evaluate student projects. The rubric contains five evaluation categories, evaluating five aspects of the senior project.

The questionnaire (Appendix A) has four sections: Capstone Dossier/Written Work; Organization, Preparation, and Delivery of the Oral Presentation; Film Production; and Film Post-Production, mirroring the judges’ rubric. Each section includes five questions and utilizes a 4-point Likert-type scale with responses ranging from strongly disagree to strongly agree. In addition, it includes demographic items in order to place the respondents within one of the four focus groups. These demographic items include: Gender, Age, Ethnicity, Level of Education, Occupation, Frequency of Judging at the Subject School, Frequency of Judging Capstone Projects at Other Schools, and Were You Recruited or Did You Volunteer?

A pilot study was conducted with school alumni (n=2) and a capstone teacher from the subject school (n=1) to examine item content, readability, and response format. Content validity of the survey instrument was supported by the literature (Dietz, 2010; Perna & Thomas, 2009; RIDE, 2005a; RIDE, 2005b) and a content review by the professionals referenced above.
**Focus Groups**

Based upon the findings of the initial survey instrument, as well as a review of the literature, the researcher formulated semi-structured questions (Appendix B) designed to provide more information for Research Question 1, as well as to address Research Question 2. Focus groups were formed of the judges who participated in sessions in 2010, 2011, or both. Judges were invited (Appendix C) and assigned to one of four categories: Educators, Artists/Filmmakers, Alumni, and Arts Faculty from the Subject School.

**Data Collection**

Data collected include school records (grade point average and performance on capstone assessment), judges’ rubric scores, survey data, and focus group transcriptions. As an administrator at the subject school, the researcher has access to school records. He generated reports to determine GPA as a measure of academic achievement, reviewed all judge rubrics to determine student performance on the capstone project, and printed transcript records to determine arts major for each student.

For the survey process, an initial contact was attempted with $N=53$ participants. The researcher employed email, as well as social networking through Facebook, in order to verify email contacts with all participants. Once contact had been verified, the researcher distributed an invitation (Appendix D), including a web-based survey instrument to all respondents (Appendix A). This request was repeated after one week to those who have yet to respond, then repeated a final time after a second week. All data were
collected from the survey site and incorporated into a spreadsheet for Research Question 1 and 3.

Focus groups were held with three to four representatives of each of the four categories of judges, \(n=14\). These focus groups expanded on Research Questions 1 and 3 and served to collect data for Research Question 2 (Creswell & Plano Clark, 2007; Silverman, 2006). Focus groups were audio recorded for transcription and analysis. Transcripts were sent to all participants for member checking.

**Data Analysis**

**Phase One Data Analysis**

In their sequential explanatory model, Creswell and Plano Clark (2007) use qualitative results to build upon the initial quantitative data. During phase one of the quantitative results were analyzed using Statistical Package for the Social Sciences (SPSS, 2010). Descriptive statistics, including frequencies, percent, means, and standard deviations, were used to describe the responses to both components of Research Question 1. Data analysis of the multi-dimensional survey was performed. Cronbach’s alpha reliabilities were calculated for the data from sets of common items to determine if means could be generated for the respective sections of the questionnaire. A criterion of .70 was used. Means and standard deviations were reported on all items.

**Phase Two Data Analysis**

For the phase two qualitative data analysis, Interpretive Integration was used to inform the questions for the focus groups (Polit & Beck, 2011). After
the \( n=4 \) focus groups were conducted, the transcripts were read, analyzed using discourse analysis, coded, and categorized.

During this phase, Research Question 2 was answered by an analysis of student data, which included demographics, chosen arts major, academic achievement as measured in cumulative grade point average, and performance on the capstone presentation. Quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS, 2010). For Research Questions 2a and 2b ANOVA examined the relationships between the dependent variable (achievement on senior projects) and the independent variable (arts major selected). Research Question 2c was analyzed using a simple product-moment correlation for academic achievement and achievement on senior projects. Effect size was calculated and significance levels were calculated using the Bonferonni adjustment for item-level analyses.

Analysis of Research Question 3 included data from the initial questionnaire as well as transcript analysis from the focus group sessions. ANOVA examined the relationships between the dependent variable (opinions of rigor) and the independent variable (professional position).

**Interpretation of Entire Analysis**

The explanatory design allows for the quantitative and qualitative data analysis and interpretation. During this phase the researcher began the process of what Tashakkori and Teddlie (1998) and Sandelowski (2000) (as cited in Polit & Beck, 2011) “qualitizing” the quantitative data; that is, using the quantitative data from the research questions to “give life” to patterns
that emerge in the analysis. In addition, the “long table” approach was used for transcript analysis (Krueger & Casey, 2009). By using multiple copies of the focus group sessions, the researcher can see trends throughout the transcripts. The final phase of analysis and interpretation provided a more complete picture of the case.

**Summary**

The quantitative phase of this study was based on the literature on rigor and senior capstone projects. The $n=35$ responses were used to answer Research Question 1. Descriptive statistics were used to analyze the quantitative data. The open-ended responses for phase one of the study were used to expand on the quantitative results.

All components of Research Question 2 were addressed through an analysis of student data using the Statistical Package for the Social Sciences (SPSS, 2010). ANOVA was used to examine questions 2a and 2b, while question 2c was analyzed with a simple product-moment correlation.

The qualitative phase of this study built on the quantitative results and expanded on those results to answer Research Question 3. The $N=4$ focus groups conducted for phase two of the study contributed to the findings for Research Question 2.

The mixed methods research design used for this study allows the quantitative data from the surveys as well as the student performance and demographic data to enhance the qualitative data obtained in the focus groups. Johnson, Onwuegbuzie, and Turner (2007) stated that, “Mixed
methods research...combines elements of qualitative and quantitative...for the purpose of breadth and depth of understanding and corroboration” (p. 123).
IV. FINDINGS

Introduction and Research Questions

This sequential, mixed methods case study investigated the perceptions of judges toward the rigor of senior capstone projects in an arts-based charter high school in northern Rhode Island. Data were collected from a questionnaire instrument sent to all judges who served in 2010 and 2011 (N=53) and from conducting four semi-structured focus groups. The four groups consisted of four arts faculty employed by the school, three school alumni, three educators from secondary and postsecondary institutions, and four artistic professionals.

The questionnaire and focus groups included items related to the rigor of three phases of the project: written components, technical components of the filmmaking process, and the oral presentation of the film. In addition, quantitative data were gathered and analyzed to determine what relationship, if any, existed between students’ performance on the project and their overall academic performance. Students’ choice of art major was also compared with these two areas of performance to determine if relationships existed. All quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS, 2010) software. A sequential explanatory design facilitated the quantitative and qualitative data analysis and interpretation (Creswell & Plano Clark, 2007). Tashakkori and Teddlie’s (1998) and Sandelowski’s (2000) (as cited in Polit & Beck, 2011) process of “qualitizing” the quantitative data was applied. That is, the researcher used the quantitative data from the research questions to “give life” to patterns that
emerge in the analysis. Results are reported in a manner consistent with this
design and guided by the following research questions:

1. What are the perceptions of judges of the extent of rigor of senior
capstone film projects at an arts-based northern Rhode Island charter
school with respect to the work required to complete:
   a. the written and technical (filmmaking) components of the project;
   and
   b. the formal presentation of the project?

2. Is there a relationship between:
   a. arts major selected and academic achievement;
   b. arts major selected and achievement on senior projects; and
   c. academic achievement and achievement on senior projects?

3. Are there differences among judges based upon professional positions?

This chapter deals first with the demographic information of the
respondents to the questionnaire as well as the focus group participants.
The second section details the quantitative data analyzed in this study. The
data were analyzed using the Statistical Package for the Social Sciences
(SPSS, 2010). The section begins with a report of the calculations used in
estimating the reliability of the data collected from the survey instrument.
Descriptive statistics, including frequencies, percents, means, and standard
deviations, are reported on each questionnaire item. The findings from the
open-ended question on the survey instrument are reported with the
quantitative findings. In addition, ANOVA was used to compare performance
on the capstone project with overall academic performance in the form of cumulative grade point average.

Qualitative data are presented in the third section of this chapter. This section includes data obtained from the four focus groups in response to all components of research question one regarding their perceptions of rigor associated with the capstone project. Although the purpose of the groups was to address the first research question, the groups also yielded data that was useful in responding to questions 2b and 3 as well. These qualitative findings are also included in the second section.

The fourth section of this chapter presents an integration of the quantitative and qualitative data. A summary follows this section and concludes this chapter.

**Demographics of Participants**

This section describes the demographic characteristics of the study’s participants. In this case study, data were collected from graduates of an arts-based charter high school in northern Rhode Island using an explanatory design. Mixed methods research allows for the use of an explanatory design where, as Tashakkori and Teddlie (1998) and Sandelowski (2000) (as cited in Polit & Beck, 2011) point out, the qualitative data can explain, or “give life” to the quantitative data. The data collection was conducted in two phases and from two groups of participants, one a subgroup of the other (Johnson & Christensen, 2008).

The initial phase of data collection involved the collection of data from a questionnaire sent to all capstone judges who participated in 2010 and/or
2011 ($N=53$). Demographic information for the $N=35$ respondents to the questionnaire are reported as is the information for the $n=14$ focus group members. This demographic data include information regarding participants’ occupations and judging experience.

**Questionnaire Demographics**

All ($N=53$) judges who participate in the school’s capstone project in 2010 and 2011 were invited to take the initial survey. Invitations were sent via email explaining the purpose of the study and informing potential participants that their involvement was not mandatory. The researcher administered the instrument through Zoomerang on December 3, 2011. A total of 35 (66%) of the questionnaires were completed by December 15, 2011.

Of those who completed the survey, 14% identified themselves as college students, 29% as educators either at the secondary or postsecondary level (including faculty members and administrators), 26% as artists (including painters, graphic arts professionals, and filmmakers), 11% from the non-profit or government sectors, 17% from the for-profit business community, and one participant (3%) made no selection and keyed in “n/a” (See Table 1).
Table 1

*Number and Percentage of Occupations of Capstone Judge Questionnaire Respondents*

<table>
<thead>
<tr>
<th>Occupation Group</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Students</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Educators</td>
<td>10</td>
<td>29</td>
</tr>
<tr>
<td>Artists</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>Non-Profit/Government</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Business</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>N/A</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>35</td>
<td>100%</td>
</tr>
</tbody>
</table>

Of the *N*=35 respondents to the survey, 15 had judged once at the subject school; four had judged twice; five on three occasions; six judged four times; and five had judged five or more times (Table 2). Table 3 shows the frequency of respondents judging capstone projects at schools other than the subject school.
Table 2

*Frequency of Judging at the Subject School as Reported by Questionnaire Respondents*

<table>
<thead>
<tr>
<th>Frequency of Judging</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>15</td>
<td>43</td>
</tr>
<tr>
<td>Twice</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Three Times</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Four Times</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>Five or More Times</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>35</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 3

*Frequency of Judging at Schools other than the Subject School as Reported by Questionnaire Respondents*

<table>
<thead>
<tr>
<th>Frequency of Judging</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>18</td>
<td>51</td>
</tr>
<tr>
<td>Once</td>
<td>13</td>
<td>37</td>
</tr>
<tr>
<td>Twice</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Three Times</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Four Times</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Five or More Times</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>35</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Focus Group Participants**

Focus groups (*N*=4) were formed upon the closing of the Zoomerang survey. Participants were selected for one of four groups: educators (*n*=3), arts faculty from the subject school (*n*=4), alumni from the subject school
(n=3), and artists (n=4) (Table 4). Table 5 details the focus group members’ frequency of experience of judging capstone presentations overall, including at the subject school.

Table 4

**Number and Percentage of Focus Group Members by Subgroup**

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educators</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Subject School Arts Faculty</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>Subject School Alumni</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Artists</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 5

**Frequency of Judging Capstone Projects as Reported by Focus Group Members**

<table>
<thead>
<tr>
<th>Frequency of Judging</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>Twice</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Three Times</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Four Times</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Five or More Times</td>
<td>6</td>
<td>43</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14</td>
<td>100%</td>
</tr>
</tbody>
</table>
Quantitative Findings

Overview of Data Collection and Analysis Procedures

This section presents data from the administration of the judges’ questionnaire as well as data on student performance. The questionnaire was administered online through the Zoomerang service between December 3, 2011 and December 15, 2011. The researcher e-mailed invitations and links to $N=53$ judges, representing all who judged at least once in 2010 or 2011. A total of $N=35$ completed questionnaires (66%) were submitted. The instrument (Appendix A), based on the evaluation rubric used by judges (Appendix B), included 20 items using a 4-point Likert-type agreement scales ranging from “strongly disagree” to “strongly agree.”

Sections 1, 3, and 5 of the instrument entitled, “Capstone Dossier/Written Work,” “Film Production,” and “Film Post Production,” addressed research question 1a. Section 2, “Organization, Preparation, and Delivery of the Oral Presentation,” addressed question 1b. Question 3 was addressed through this questionnaire and followed up with qualitative data from each of the four focus groups. The researcher addressed question 2 through an analysis of overall GPA throughout high school, performance on the capstone presentations, and arts major selected. Students at the subject school select one of three arts focus areas as a major in ninth grade and 25% of their coursework occurs in that area throughout their high school career. Students choose from among Visual Arts, Theatre Arts, and Culinary Arts.

The researcher used a two-phase, sequential explanatory design to select participants for the focus groups (Creswell & Plano Clark, 2007). Requests to
join the focus groups were sent to a total of 25 of the 35 survey respondents (six Educators, eight Artists/Filmmakers, seven Alumni, and four Arts Faculty Members from the Subject School). Within one week, 14 individuals agreed to participate in one of the four focus groups (Table 4).

Using the Statistical Package for the Social Sciences (SPSS, 2010), descriptive statistics were calculated by item and dimension to organize and summarize the data collected to address research questions 1 and 3. Research question 2 was analyzed using ANOVA. Responses from the questionnaire, including the first 20 items as well as one open-ended item, informed the focus group questions (Appendix A).

**Reliability of Survey Data**

Table 6 contains the category level alpha reliabilities for the first four sections of the judges’ survey. Examination of the reliabilities indicates that the data for three of the categories were associated with a sufficient level of reliability. The data from the first category, “Capstone Dossier/Written Work,” had a reliability of only .60. Since the category-level means were reported for descriptive purposes only, the low reliability of the written category was not an issue. Future development of the instrument will include the editing of item 5 (“Capstone Dossier/Written Work”) and adding approximately two more questions. Previous sentence should not be written in future tense.
Table 6

Category-level Alpha Reliabilities

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Items</th>
<th>Alpha Reliabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone Dossier/Written Work</td>
<td>5</td>
<td>.60</td>
</tr>
<tr>
<td>Organization, Preparation, and Delivery of Oral Presentation</td>
<td>5</td>
<td>.83</td>
</tr>
<tr>
<td>Film Production</td>
<td>5</td>
<td>.83</td>
</tr>
<tr>
<td>Film Post-Production</td>
<td>5</td>
<td>.78</td>
</tr>
</tbody>
</table>

Quantitative Findings by Research Question

**Research Question 1a.** What are the perceptions of judges of the extent of rigor of senior capstone film projects at an arts-based northern Rhode Island charter school with respect to the work required to complete the written and technical (filmmaking) components of the project?

The first section of the questionnaire, “Capstone Dossier/Written Work,” consisted of five items. These items were analyzed using descriptive statistics, including frequencies, percentages, means, and standard deviations. The majority (83%) of respondents agreed or strongly agreed that written components of the project provided a rigorous experience. The item scoring the lowest, “The students paid attention to detail in the written work,” reflects opinions also shared by several members of the focus groups (See Qualitative Findings section). Table 7 provides an analysis of judges’ responses to the questions regarding the written work using a Likert-type scale.
Table 7

*Frequencies, Percents, Means, and Standard Deviations for Questions Related to Students’ Written Work*

| Question                                                                 | Ratings |        |        |        |     |  
|--------------------------------------------------------------------------|---------|--------|--------|--------|-----|--------
|                                                                          | f       | D      | A      | SA     | M   | SD     |
| The students’ written work was rigorous.                                  | 1       | 5      | 19     | 9      | 3.06| .74    |
|                                                                          | 3       | 15     | 56     | 26     |     |        |
| The students paid attention to detail in the written work.               | 0       | 7      | 26     | 2      | 2.86| .49    |
|                                                                          | 0       | 20     | 74     | 6      |     |        |
| The written work provided insight into the creative process.             | 0       | 1      | 18     | 15     | 3.41| .56    |
|                                                                          | 0       | 3      | 53     | 44     |     |        |
| The written work was challenging for the students to complete.           | 2       | 4      | 20     | 8      | 3.00| .78    |
|                                                                          | 6       | 12     | 59     | 24     |     |        |
| The written work provides evidence of clear problem solving.             | 0       | 2      | 22     | 10     | 3.24| .55    |
|                                                                          | 0       | 6      | 65     | 29     |     |        |

*Note.* f = number of respondents; % = the percent of those responding  
SD = *Strongly Disagree*; D = *Disagree*; A = *Agree*; SA = *Strongly Agree*  
M = Mean; SD = Standard Deviation

In addition to written components, the project also included substantial technical components related to film production (camera work, lighting, and use of sound) and post-production (editing, sound, and titles). Judges’ responses in these two sections of the questionnaire are detailed below in Tables 8 and 9. Only one item in each category had a mean of less than 3. In Film Production, “The students used lighting effectively” had a mean of 2.86. The Film Post-Production section included the item “The students used innovative titles/credits,” which had a mean of 2.89. In both instances, the majority of respondents (71% for use of lighting and 69% for use of innovative titles/credits) indicated that they either agreed or strongly agreed with the items.
Table 8

*Frequencies, Percents, Means, and Standard Deviations for Questions Related to Students’ Film Production Work*

<table>
<thead>
<tr>
<th>Question</th>
<th>Ratings</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SD</td>
<td>D</td>
<td>A</td>
<td>SA</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>The students’ filming requirements were rigorous.</td>
<td>f</td>
<td>0</td>
<td>3</td>
<td>20</td>
<td>11</td>
<td>3.24</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>9</td>
<td>59</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>The students used creative and varied camera angles.</td>
<td>f</td>
<td>0</td>
<td>0</td>
<td>27</td>
<td>8</td>
<td>3.23</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>0</td>
<td>77</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>The students used lighting effectively.</td>
<td>f</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>5</td>
<td>2.86</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>29</td>
<td>57</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>The students used sound effectively.</td>
<td>f</td>
<td>0</td>
<td>6</td>
<td>23</td>
<td>6</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>17</td>
<td>66</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>The students required significant technical skills to shoot their films.</td>
<td>f</td>
<td>0</td>
<td>8</td>
<td>16</td>
<td>11</td>
<td>3.09</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>23</td>
<td>46</td>
<td>31</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* $f =$ number of respondents; $\%$ = the percent of those responding

SD = *Strongly Disagree*; D = *Disagree*; A = *Agree*; SA = *Strongly Agree*

M = Mean; SD = Standard Deviation
Table 9

*Frequencies, Percents, Means, and Standard Deviations for Questions Related to Students’ Film Post-Production Work*

<table>
<thead>
<tr>
<th>Question</th>
<th>Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SD</td>
</tr>
<tr>
<td>The students’ editing and post-production requirements were rigorous.</td>
<td>f</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>The students used editing creatively to communicate meaning.</td>
<td>f</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>The students used editing smoothly to minimize distraction.</td>
<td>f</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>The students used creative and engaging dialog, voiceover, or sound effects.</td>
<td>f</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>The students used innovative titles/credits.</td>
<td>f</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
</tbody>
</table>

*Note.* f = number of respondents; % = the percent of those responding  
SD = *Strongly Disagree*; D = *Disagree*; A = *Agree*; SA = *Strongly Agree*  
M = Mean; SD = Standard Deviation  

On the questions specifically mentioning rigor (the first questions in each category), an average of 90% of respondents agreed or strongly agreed that the written (82%, with a mean score of 3.06), film production (91%, mean of 3.24), and post-production (97%, mean of 3.32) requirements were rigorous.

**Research Question 1b.** What are the perceptions of judges of the extent of rigor of senior capstone film projects at an arts-based northern Rhode Island charter school with respect to the work required to complete the formal presentation of the project?

The second section of the questionnaire, “Organization, Preparation, and Delivery of the Oral Presentation,” consisted of five items. These items were
analyzed using descriptive statistics, including frequencies, percentages, means, and standard deviations. Table 10 provides an analysis of judges’ responses to the questions regarding the oral presentation using a Likert-type scale.

Table 10

*Frequencies, Percents, Means, and Standard Deviations for Questions Related to Students’ Oral Presentation*

<table>
<thead>
<tr>
<th>Question</th>
<th>Ratings</th>
<th>SD</th>
<th>D</th>
<th>A</th>
<th>SA</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The students demonstrated extensive preparation for the oral presentation.</td>
<td>f</td>
<td>0</td>
<td>12</td>
<td>13</td>
<td>10</td>
<td>2.94</td>
<td>.80</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>34</td>
<td>37</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The students maintained a clear focus on the topic during the oral presentation.</td>
<td>f</td>
<td>0</td>
<td>2</td>
<td>22</td>
<td>11</td>
<td>3.26</td>
<td>.56</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>6</td>
<td>63</td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The students dressed formally for the presentation.</td>
<td>f</td>
<td>0</td>
<td>0</td>
<td>18</td>
<td>17</td>
<td>3.49</td>
<td>.51</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>0</td>
<td>51</td>
<td>49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The students spoke clearly, effectively, and confidently.</td>
<td>f</td>
<td>0</td>
<td>5</td>
<td>23</td>
<td>7</td>
<td>3.06</td>
<td>.59</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>14</td>
<td>66</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The students fully engaged the audience during oral presentation.</td>
<td>f</td>
<td>0</td>
<td>7</td>
<td>18</td>
<td>10</td>
<td>3.09</td>
<td>.71</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>20</td>
<td>51</td>
<td>29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. f = number of respondents; % = the percent of those responding
SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree
M = Mean; SD = Standard Deviation*

Means for each of these questions are over 3.00 with the exception of the first item, “The students demonstrated extensive preparation for the oral presentation.” While the mean score was 2.94, a majority of respondents (66%) agreed or strongly agreed with the item.

**Research Questions 2a and 2b.** Is there a relationship between arts major selected and academic achievement? Is there a relationship between arts major selected and achievement on senior projects?
All students at the subject school must select one of three arts majors (Culinary Arts, Theatre Arts, or Visual Arts) at the time of enrollment. Twenty-five percent of their coursework at the school is dedicated to this content area over the course of their studies. Every senior, irrespective of his or her arts major, must complete the school’s senior capstone requirement, in the form of a film project. Table 11 lists the mean GPAs as well as the performance on the capstone rubric. Results are reported by arts major.

Table 11

*Comparison of Overall Grade Point Average with Performance on Capstone Project by Arts Major*

<table>
<thead>
<tr>
<th></th>
<th>CUL</th>
<th>THE</th>
<th>VIS</th>
<th>F</th>
<th>P</th>
<th>Summary of Significant Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Grade Point Average (GPA)</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CUL&lt;THE</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance on Capstone Project</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NSD*</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. CUL = Culinary Students; THE = Theatre Students; VIS = Visual Students. *No Significant Difference

While there were no significant differences among the arts majors with regard to performance on the capstone project (Culinary students had a mean score of 86.36, Theatre students 89.50, and Visual students 87.47), there was a significant difference between Culinary and Theatre students with regard to overall GPA. The mean overall GPA for Culinary students on a 4.0 scale was 2.59, while the mean for Theatre students was 3.07. The difference is significant at the $p=.01$ level.
Research Question 2c. Is there a relationship academic achievement and achievement on senior projects?

To compare the academic achievement and achievement on senior projects, the researcher calculated a correlation. To measure academic achievement, cumulative four-year GPA was used, which had a mean of 2.86 with a standard deviation of .59. Achievement on capstone project was measured using the judges’ scores as recorded on the final rubric, which had a mean of 87.89 with a standard deviation of 7.63. Students with a high overall GPA tended to have higher performance on the capstone project \((r=0.337, r^2=0.11, p=0.001)\). This finding demonstrates a positive correlation between academic achievement and achievement on senior projects with a medium effect size.

Research Question 3. Are there differences among the judges based upon professional positions?

Category means provide an overall sense of the judges’ opinions on groups of items. Table 12 lists each of the four categories from the questionnaire and provides the means for each occupation group. While those in the non-profit/government sector had the highest mean scores for the written (3.30) and oral (3.45) components, those in for-profit businesses reported the highest mean scores in the categories of film production (3.27) and post-production (3.43). Lowest mean scores came from artists and filmmakers three times, in the written (2.87), oral (2.98), and film production (2.89), but college students (2.92) rated the film post-production
work lower than this group (2.97). Overall, the quantitative data reveal no significant differences among the judges based upon their occupation.
Table 12

 Means and Standard Deviations for Questions Related to Students’ Capstone Work by Category

<table>
<thead>
<tr>
<th>Category by Occupation</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Work</td>
<td>3.09</td>
<td>.44</td>
<td></td>
</tr>
<tr>
<td>College Students</td>
<td>5</td>
<td>3.08</td>
<td>.18</td>
</tr>
<tr>
<td>Educators</td>
<td>10</td>
<td>3.18</td>
<td>.35</td>
</tr>
<tr>
<td>Artists and Filmmakers</td>
<td>9</td>
<td>2.87</td>
<td>.46</td>
</tr>
<tr>
<td>Non-Profit/Government Staff</td>
<td>4</td>
<td>3.30</td>
<td>.50</td>
</tr>
<tr>
<td>Members of the For-Profit Business Sector</td>
<td>6</td>
<td>3.13</td>
<td>.62</td>
</tr>
<tr>
<td>Oral Presentation</td>
<td>3.16</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>College Students</td>
<td>5</td>
<td>3.08</td>
<td>.18</td>
</tr>
<tr>
<td>Educators</td>
<td>10</td>
<td>2.98</td>
<td>.54</td>
</tr>
<tr>
<td>Artists and Filmmakers</td>
<td>9</td>
<td>3.12</td>
<td>.55</td>
</tr>
<tr>
<td>Non-Profit/Government Staff</td>
<td>4</td>
<td>3.45</td>
<td>.41</td>
</tr>
<tr>
<td>Members of the For-Profit Business Sector</td>
<td>6</td>
<td>3.23</td>
<td>.50</td>
</tr>
<tr>
<td>Film Production Work</td>
<td>3.08</td>
<td>.48</td>
<td></td>
</tr>
<tr>
<td>College Students</td>
<td>5</td>
<td>3.12</td>
<td>.27</td>
</tr>
<tr>
<td>Educators</td>
<td>10</td>
<td>3.06</td>
<td>.53</td>
</tr>
<tr>
<td>Artists and Filmmakers</td>
<td>9</td>
<td>2.89</td>
<td>.33</td>
</tr>
<tr>
<td>Non-Profit/Government Staff</td>
<td>4</td>
<td>3.25</td>
<td>.50</td>
</tr>
<tr>
<td>Members of the For-Profit Business Sector</td>
<td>6</td>
<td>3.27</td>
<td>.70</td>
</tr>
<tr>
<td>Film Post-Production Work</td>
<td>3.10</td>
<td>.45</td>
<td></td>
</tr>
<tr>
<td>College Students</td>
<td>5</td>
<td>2.92</td>
<td>.29</td>
</tr>
<tr>
<td>Educators</td>
<td>10</td>
<td>3.08</td>
<td>.45</td>
</tr>
<tr>
<td>Artists and Filmmakers</td>
<td>9</td>
<td>2.97</td>
<td>.38</td>
</tr>
<tr>
<td>Non-Profit/Government Staff</td>
<td>4</td>
<td>3.20</td>
<td>.59</td>
</tr>
<tr>
<td>Members of the For-Profit Business Sector</td>
<td>6</td>
<td>3.43</td>
<td>.51</td>
</tr>
</tbody>
</table>

*Note. N = number of respondents; M = Mean; SD = Standard Deviation*
Analyses of variance were conducted to test whether there were differences among the judges’ ratings based upon professional positions. For the four categories listed in Table 12 (Written Work, Oral Presentation, Film Production, and Film Post-Production Work), no differences were found.

Open-ended Question

The questionnaire included one open-ended question: “What is your overall impression of the amount of work required to complete the capstone project at Beacon Charter School”? The question was added to the instrument to potentially elicit data to inform the questions for the semi-structured focus groups. Responses to this open-ended question were copied into a Word document for analysis.

Of those completing the questionnaire (N=35), 25 responded to the open-ended question (71%). Table 13 summarizes the responses by indicating the number and percentage of comments related to the amount of work required by the project.

Table 13

<table>
<thead>
<tr>
<th>Frequencies and Percentages of Comments related to Rigor in Open-ended Questionnaire Item</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>A great deal of work</td>
<td>23</td>
</tr>
<tr>
<td>Some work required</td>
<td>0</td>
</tr>
<tr>
<td>Little to no work required</td>
<td>0</td>
</tr>
<tr>
<td>No reference to the amount of work</td>
<td>2</td>
</tr>
</tbody>
</table>
After the responses were entered into a Word document, the researcher grouped them into three categories that emerged from an analysis of the responses: variance in student performance, highly demanding work, and comparison to other schools. Table 14 displays themes identified in the open-ended responses as they relate to participant responses. The numbers preceding the responses refer to the identification number of the participant. Some comments have been split as they included elements from more than one theme.
Table 14

**Themes Present in Responses to Open-ended Questionnaire Item**

<table>
<thead>
<tr>
<th>Themes</th>
<th>Highly Demanding Work</th>
<th>Comparison to Other Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variance in Student Performance</td>
<td>01. The capstone project is a major undertaking and in almost all cases, they rise to the occasion.</td>
<td>07. It’s more than most high schools put their students through.</td>
</tr>
<tr>
<td></td>
<td>04. There was a fair amount of variation among students with the written requirements. When students took it seriously, I think the writing added a lot to the projects and was beneficial to the students. Unfortunately, some students seemed to disregard the written process.</td>
<td>19. Grade appropriate but more advanced than other high schools.</td>
</tr>
<tr>
<td></td>
<td>06. There were gaps; yes, but, overall I was positively impressed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. From my perspective when I watched the films and heard presentations it seemed like many of the students did not fully meet the requirements. Then there were a small few that just meet the requirements, but than there was just about no one, who went above and beyond. As a group the overall impression that I got was that many of the students struggled with the project.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. The film as final product and the written work shown to the judges may not capture all the intensity of the work.</td>
<td></td>
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<tr>
<td></td>
<td>02. An excellent program that enables the student to work through a process from first thought to finished product in a way that improves and strengthens decision-making, self-esteem and confidence. Each element of the project is important. The project spans several months of preparation and gives each student ample time to complete it successfully.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>03. It is quite an intense project, which requires much time and effort by each of the students.</td>
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<tr>
<td></td>
<td>04. The amount of work to complete the capstone is huge... Overall, I was impressed with the school and the creative way it designed a capstone that was meaningful to students.</td>
<td></td>
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<tr>
<td></td>
<td>05. I believe there is a lot of difficult steps to completing the capstone project however, if the students stay on task and use the tools and help provide to them then the workload is reasonable.</td>
<td></td>
</tr>
</tbody>
</table>
Table 14

Themes Present in Responses to Open-ended Questionnaire Item (continued)

<table>
<thead>
<tr>
<th>Themes</th>
<th>Variance in Student Performance</th>
<th>Highly Demanding Work</th>
<th>Comparison to Other Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. For the students who take it seriously, it is a great deal of work—and meaningful work. The process of making and discussing a film involves so many problem-solving and thinking skills, literacy at a high level, and engagement on both social and cognitive levels. Not to mention that for an arts-based charter school it requires working on visual, media, and performing arts. Reminds me of a TED talk I watched recently on dancing your PhD thesis.</td>
<td></td>
<td></td>
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<tr>
<td>16. It also sees that there is variation in how students apply themselves to these requirements, with some students focusing their efforts effectively and others not quite there yet (yes, they are teenagers).</td>
<td></td>
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<tr>
<td>18. However, in my experiences—both as a judge and as an observer of the process for several years—many students do not “get serious” about Capstone until the 11th hour. This, in turn, results in a mediocre (at best) product and presentation.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>21. There were students who rose to the challenge and had excellent work. There were also students who failed to complete the requirements.</td>
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</tbody>
</table>

06. I was impressed with the emphasis on process and what students who really were interested in other things were capable of getting done.

08. The Capstone project at Beacon Charter school is an engaging and challenging project. The project itself prepares students for not only college but real-world experiences as well. It challenges the student artist to push himself/herself to put their best work forward and show the world what they are capable of achieving. The entire senior year is dedicated to the producing the final product. Students must be resourceful and manage time efficiently.

09. There’s a lot of work and it’s very hard to focus especially with being a high school senior. If things were done on time and done right everything would go more smoothly.

10. The requirements for the capstone project that are laid out are demanding.

11. The capstone project seems like a very rigorous project that requires a large time commitment from students and staff that is also well scaffolded to help students produce their films in a way that is meaningful to them.
Table 14

*Themes Present in Responses to Open-ended Questionnaire Item (continued)*

<table>
<thead>
<tr>
<th>Themes</th>
<th>Highly Demanding Work</th>
<th>Comparison to Other Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variance in Student Performance</td>
<td>23. I feel that the quantity of work is great, however the quality of work seems to have fallen off. Fewer films show a deep understanding of the process and requirements, lack creativity and originality, and simply do not have the “wow” factor. Maybe this is a positive because it makes those films that received an enormous about of effort shine brightly amongst the rest. I, however, have a difficult time continuously watching films that are close copies of past works, barely meet the requirements, or show very little student interest.</td>
<td>12. I think the capstone project is an excellent interdisciplinary project that challenges students both artistically and academically. Many aspects of the project are brand new to most students requiring them to acquire new, unique, and marketable skills as an artist. The scriptwriting and reflection process is rigorous and thorough resulting in quality self-assessment and problem solving.</td>
</tr>
<tr>
<td></td>
<td>24. I think the overall amount of work is sufficient, but I also think that the quality and demand of the film production quality itself needs to be a higher priority. Both parts of the process are important.</td>
<td>15. I believe it is a healthy amount of work considering the length of time the project is given and the importance that it holds towards the students’ ability to graduate.</td>
</tr>
<tr>
<td></td>
<td>16. It appears as if students are required to devote significant amounts of time to their projects.</td>
<td>18. Indeed, the Capstone process is rigorous, requiring a lot of work on the students’ parts.</td>
</tr>
<tr>
<td></td>
<td>20. The amount of work involved, by both the students and the faculty, is tremendous. It is a four-year, on-going commitment/process that culminates into projects that are so worthwhile and so unbelievable. So many walk away with great feelings of success and accomplishment and with skills that and be used for a lifetime.</td>
<td></td>
</tr>
</tbody>
</table>
Table 14

*Themes Present in Responses to Open-ended Questionnaire Item (continued)*

<table>
<thead>
<tr>
<th>Themes</th>
<th>Variance in Student Performance</th>
<th>Highly Demanding Work</th>
<th>Comparison to Other Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. The amount of work is rigorous and challenging.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. The amount of work is rigorous and at a level that accurately shows a student’s competency and proficiency to complete an arts oriented academic program. The challenge of the capstone project is a great assessment for problem solving skills development and ability to proficiently present oneself as a professional artist.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. It is a great deal of hard work but is a good start to the students as they enter into their next stage of life. They should be proud (sic) of what they accomplish</td>
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</table>

**Qualitative Findings**

**Overview of Data Collection and Analysis Procedures**

The second phase of the study involved collecting qualitative data from four focus groups responding to the first research question (and its sub-questions): What are the perceptions of judges of the extent of rigor of senior capstone film projects at an arts-based northern Rhode Island charter school with respect to the work required to complete (a) the written and technical (filmmaking) components of the project and (b) the formal presentation of the project? It also added to the third research question: Are there differences among judges based upon professional positions?
After an analysis of the survey data, a random purposeful sample of judges was invited to participate in one of four semi-structured focus groups, based upon their classification into one of four categories (Patton, 2002). In addition, the researcher used Interpretive Integration to form focus group questions (Polit & Beck, 2011). Invitations were sent to 24 of the survey respondents to attend the focus groups at the subject school. The final constitution included four groups of three or four participants each, as detailed in Table 15. This resulted in the focus groups consisting of a subgroup of the original population (Johnson & Christensen, 2008).

Table 15

<table>
<thead>
<tr>
<th>Focus Group Invitations Sent and Final Constitution of Focus Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invitations</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Arts Faculty from Subject School</td>
</tr>
<tr>
<td>Alumni from Subject School</td>
</tr>
<tr>
<td>Artists and Filmmakers</td>
</tr>
<tr>
<td>Educators</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

The first focus group consisted of N=4 arts educators from the subject school. This group was held on the afternoon of January 24, 2012. The second group, conducted on that evening, consisted of N=3 alumni from the school who had both completed a capstone project at the school and served as judges in subsequent years. The remaining two focus groups were held the following week. Focus group three, consisting of N=4 artists and
filmmakers, was held on Monday, January 30, 2012. Two days later, the final group, consisting of secondary and postsecondary educators, was held with \( N = 3 \) participants. The researcher facilitated each of the 90-minute sessions using the same line of questioning. Questions sought to elicit participant views on the rigor involved with the capstone project, and whether or not the project served as adequate preparation for life after high school. The groups were audiotaped and the audio files were professionally transcribed. The researcher reviewed and corrected the transcripts, then sent out to all focus group members prior to analysis to make certain that their views were accurately represented (Polit & Beck, 2011). He then color-coded responses by category and analyzed them using discourse analysis. Krueger and Casey’s (2000) long table approach, utilizing multiple copies of the focus group transcripts, was utilized to identify trends throughout the transcripts.

**Qualitative Findings by Research Question**

**Research Question 1a:** What are the perceptions of judges of the extent of rigor of senior capstone film projects at an arts-based northern Rhode Island charter school with respect to the work required to complete the written and technical (filmmaking) components of the project?

**Overall Rigor.** Rigor was a significant element in the four focus groups. The researcher first asked focus group members to comment upon the rigor of the project as a whole before breaking it down into specific discussions regarding the rigor of the written and technical aspects.

One artist, a visual designer, noted:
It is a great way for students to sort of be integrative in how they can show different things that they learn whether it would be writing and the ability to do work and to commit to things and to coordinate different ideas and then pull different people together and help them do things communicate, doing the technical aspect of things and all of that and I think that it is certainly one of the more integrative and perhaps more engaging process that I see out of many sort of large scale and when I say the large scale I mean you’re getting the entire school to do not just optional for the three best students and so I think that’s a very good choice of medium.

While another, experienced in theatre, television, and film remarked: “I think it is by design rigorous and wonderful.” Another noted, “I do think that the project itself is rigorous and I am very impressed with the approach of making a film just as a project that you have your students do as a Capstone Project as a senior.” Other educators also pointed out the rigor of the design:

I think that the nature of the project ‘Who am I?’ and this is about my journey and it’s very personal about themselves. I think that is the strength and the power and that’s one of the things that I think makes it really rigorous.

I feel that the project is as rigorous as the student allows it to be. I don’t necessarily believe that the amount of paperwork or the deadlines really denote the quality of work or how difficult that it may be for that individual student.

Artists and filmmakers shared similar sentiments:

So I was overall very impressed, I thought the rigor of the project was appropriate, I do. I liked how it was broken down taking a large project and breaking it in to doable segments... I don’t think you can put too much rigor into high school effort, I don’t think high school is rigorous enough. So as far as the difficulty of it or the rigor or the demands of it, I thought that was appropriate and you could... I don’t think you could ask too much of... students.

(To) plan and shoot and think of lightings and you know do it with only having like what sounded like about one or two days with the camera and having to build a crew and use the interpersonal skills that require doing all of that which is definitely a part of filmmaking and acting and you’re actually getting things done. I thought all of that was really good.

While most of the responses to the questions focused upon rigor as a measure of academic difficulty, a member of the artists and filmmakers group identified another potential source of rigor:
(The project is) very emotionally engaging to the students and I think that I would challenge most schools whether it be high school or college to be emotionally engaged with their students and that’s something that is most rigorous sort of for the high (school) level.

Faculty members from the subject school, those with more information as to the administration of the project on a daily basis, were sometimes critical of the level of the project’s rigor. One arts teacher noted, “Academically, our students are far too coddled to, and it manifests most highly in Capstone.” He continued: “I think we are upping their rigor simply by how we are judging it at least in my perspective with what we’re doing in there. I don’t know, I think could it have more. Yeah, we certainly have more.” One of his colleagues supported this notion: “Maybe it becomes more rigorous in that aspect. Like you... and like not necessarily filter or limit what the kids can do or what they should be doing, but hey, you know what, dude? That’s not good enough.”

Another group that provided more criticism was the group of alumni judges. They had the unique perspective of having completed the project themselves in the years prior to serving as a judge. One alumnus judge attempted to connect rigor with the quality of the work she observed: “I feel like I saw a lot of stuff that was like maybe new, like a different camera angle or like different ideas, but the quality of the work didn’t seem like any better than like other years.”

**Writing Rigor.** The discussion regarding the rigor of the written elements, and students’ performance in that area, was a significant focus of the secondary and postsecondary educators group as well as of the arts educators group from the subject school. One arts teacher noted: “I judge
by rigor and my thing is what’s their paperwork look like and what’s the rigor of their paperwork and is this put together right and does it have the necessary sections”?

Several members across groups noted the significant amount of written work required for the project:

There is a certain kind of meatiness to the project. From putting together the portfolios and all these drafts and preparing the storyboards and putting things together. I think I actually in some sense this maybe why this is a very appropriate project that has a portfolio that sort of...that documents it. It's something that anyone can be impressed with by just flipping through it.

I think the workload is heavy in a good way. I think it gives them a lot to do and a lot to process and it shows, who waited to the last minute... I think adding more work might be too much to handle and any less wouldn’t be enough, so I think it’s in a nice rigor level.

I believe that those things, those beginning four or five (written) assignments truly set, they set the pace because it’s one after another after another and what I have seen occur is I’ve seen kids that do one of two things. Either they really buy into it or they keep that pace going throughout...

I actually appreciate the writing; I actually read all of them before, all the drafts. So I am a little bit obsessed and you know there are times where perhaps some people needed a second draft or third, some people didn’t. So sometimes I would literally look at the second and then third and they weren’t any different and it is fine.

I do think it as a rigorous process particularly through the scriptwriting process, where you are doing the three different drafts of the script and before you do the third draft you also have to do the storyboards, which I think is a really great part of the process because it’s asking you to visualize what’s on paper and the film and that’s a very important technical piece but also something that I think is really important for that third draft because if you are going to the third draft and you have...this idea there is a scene where a unicorn flies through the sky and there is like sparkle trails and you have to really ask yourself, ‘Is that something that’s going to be plausible?’ A really important part of the rigor is that you’re constantly going back to what you’ve done and thinking about it and re-working it and by the time you get to the third draft it’s something that is ready to film.

An alumnus judge shared that she felt that the writing rigor “isn’t that bad, because it was really spread out.” She continued: “There’s so much to do but when you actually paced yourself and spaced everything out and do
everything on time I think it’s there and you can get everything completed on time.” As a judge, this seemed a source of frustration: “A lot of written work that wasn’t there, until like the day of, which I can relate but I think... honestly I thought that was one of the easiest parts.” Another member of the group agreed: “I don’t find it that difficult I mean there’s a lot of help and like teachers, staff, Mr. Donnelly. Some of that is not difficult for a student as long as they stay on task with it.”

The group of arts teachers posed the question: “What is more important, the paperwork or the final product?” For many arts teachers, it is process over product, but a theatre teacher shared “...but I want a good product.” An alumnus saw inconsistencies between the writing work and the final product, noting there “should be more brainstorming going on inside their dossiers. Some of them are actually missing pieces.” A member of the artists/filmmakers group noted the mixed student results:

Student by student, it seemed to me these students demonstrated a different amount of what they put in to it. So for the kids who were working hard, it was extremely rigorous because they actually were trying to do every piece and have it be good and learn something and go further. But there were couple that sort of looked like ‘Oh yeah, that thing, like...all right, it’s due next week. I better get a few kids and we’ll shoot something somewhere.

The educators group identified deficiencies in the writing component of the project:

I remember going through the students I was seeing that day and thought, ‘I wonder if this is some of their best writing work. I wonder if this is just... I had to check, do that reflection and there it is.’ Sometimes I was left feeling like, for a senior, I’m not sure it was necessarily showing all that they could, some of it seems like it was just being done for the sake of getting it into the portfolio for the project... If this is about showcasing or producing and then having them all go into their best work, I don’t think they were doing their best writing.
Another member of the group concurred: “I think the reason why I don’t remember the writings must be because maybe it wasn’t that good.”

Another member of the panel, an educator from the subject school noted:

It’s very rigorous and demanding for them to do all of that work within those deadlines. So I think that some of the later pieces that maybe don’t, like such as like the filming journal and the editing journal and even maybe the summative reflection, they don’t really stop to spend as much time on that because they are they are so busy making that film... (It) keeps up the academic rigor to ask them to keep reflecting while they are making their art, which I think can help to improve it, but I think that maybe that could speak to why you’re, they weren’t meeting their own potential.

Filmmaking Rigor. While there was a lot of discussion in all groups around writing, less time was spent discussing the filmmaking component of the project. This could be due to most of the judges having limited expertise in that technical area. One Arts Faculty member from the subject school stated:

I think that rigor with the (written) dossier like I think that is great and I think... we really nail that... But the rigor of the quality of the film and making that better because I think... we don’t balance it enough right now and I think it’s very, very focused on the writing aspect of it.

While another pointed out at that “the quality of film is not nearly at the level where I feel it should be.” A postsecondary educator declared: “I am not knowledgeable or an expert in the filming and the editing. So to me that stuff just looks phenomenal, like it was highly rigorous.” As a counterpoint, an alumnus noted: “It reflects how much effort you actually put into it, like the equipment is not too technical or hard to use like you’re an average student you’ll probably be able to use it.” Another artist stated: “I think that (film)’s a very good choice of medium. A participant from the film industry pointed out that:
(to) plan and shoot and think of lightings and you know do it with only having like what sounded like about one or two days with the camera and having to build a crew and use the interpersonal skills that require doing all of that which is definitely a part of filmmaking and acting and you’re actually getting things done. I thought all of that was really good.

Another described specific filmic elements:

I was impressed quite a lot with a couple of them which how the lighting evoked the moods that they were trying to create or how the colors of the costumes... and I think a lot of the kids really addressed it deeply but I don’t think they all did.

While the rigor discussion provided a wide variety of perspectives on the overall project rigor and the rigor of the writing components, little emerged as to what the perceptions believed regarding the rigor of the filmmaking components of the project.

Research Question 1b: What are the perceptions of judges of the extent of rigor of senior capstone film projects at an arts-based northern Rhode Island charter school with respect to the work required to complete the formal presentation of the project?

Oral Presentation Rigor. The four different groups spent varying amounts of time discussing the rigor of the oral presentation. While there was less discussion than on the written elements, there was stronger consensus that the subject school needed to address the issue of oral presentations. One visual arts faculty member noted:

For my kids, they don’t, they don’t do so hot with the oral presentation. I think that... I know that there’s some coaching going on now thanks to the department head and I think that needs to continue. I think that needs to be added in.... they care about their product, they care about their education. I’m seeing that now. I don’t care if they flop up a little bit, they are up there and they care and I can see that.

While her colleague observed, “I think... these kids that do maybe fumble on their words and aren’t the greatest of presenters... I’m a huge advocate of
boys being in a shirt and tie for this presentation.” The visual arts teacher continued:

I also think that maybe it needs to be put to them in a different way. Look, when you go for a job interview, because this is pretty much a job interview, you are up there in front of a panel of people, you are showing yourself off to them, you have to field questions you should be dressed properly. Are you kidding me? Maybe it needs to be brought to them that way. You need to dress as if you are going on a job interview.

Another arts teacher concurred, “I agree and I think that there are definite opportunities for those things to occur in a child’s path from freshman year to senior year like a business course.”

While the school’s faculty, looked at the oral presentation as preparation for employment, the alumni used their unique perspective to shed some light on the challenge of making a speech as a final step toward graduation.

The oral presentation, it’s kind of a bit difficult for a lot of people because people like they see this pass or fail for the year like capstone is the deciding factor, which in some way it kind of is. It’s kind of scary for high school students to get up there (and) worry about whether or not they are going to fail for the year.

See I kind of feel like the theory of oral presentation is like nerve-racking which is, ‘Oh my god, I’m going to be in front of these people.’ But, I don’t know. See, I’m the total opposite... I feel it was kind of more relaxed almost because the judges... I mean you are among two people who are your peers from previous years, then you are among someone else who has been there all the time and two are random people. But, for the most at least, they were trying (to be) nice and relaxed. They weren’t too like, ‘Oh my god I don’t know what they are going to say.’

Another alumnus viewed the oral presentation component more critically:

I found them to be weak because they didn’t speak loud enough especially like after you do the film... You have it all written out you can’t structure it after you have done the film that is what I would do if it were my film.

While another stated the importance of the presentation in terms of the entire project: “As a judge I look at the presentation as a big portion of my grading process.”
A member of the Artists and Filmmakers group, shared her perspective on the importance of the oral presentation and the students’ success in pulling it off:

...one thing that... came up recently with one of you that I realized was really important, and that is the oral presentation and the sort of defending your thesis or whatever you want to call it, piece of it. And I thought that was just really, really important. Not that an art work should stand on its own and as an artist, I believe that, but I also believe that for a student, or a filmmaker or an art maker, it can sometimes be very, very useful to have to really think about how you did what you did, why you did what you did, and especially after you spend all this time doing it, you may not even really, you may just discover things at very end, that you didn’t know you were doing back in October, or as all of you had said, you don’t know what the work of art’s going to look like until it’s done, because it’s never the same film that you thought was going to be. The performance is never the same as you first read on the page. So I think that having to think about it and make the oral presentation and dress appropriately and all of that kind of stuff, is just another component of this project that I think is very well done, important. And I taught oral communication, and it’s really nice for students to learn to be comfortable enough to stand up in front of people. Some who are their peers and some who are adult strangers, and talk about what they’ve done. So, bravo, it’s a good piece.

While an educator described the need to improve in this area:

Another thing would be I think that the speech could get a little bit more attention because I do not think a lot of the students took the speech as seriously as they could have... I think a lot of them did but I think if they’d perhaps submitted a written version of the speech ahead of time, I think that that would make that sound a little bit more professional, and I think it would improve the public speaking aspect of this project so that it’s less of just presenting yourself a little bit and getting to question and answer there, more giving a composed speech which I think is something that they would really benefit from because public speaking happens beyond high school on a very regular basis, in most jobs and often throughout college. So I think that would be another thing that they could give a little bit more focus to.

Much of the conversation regarding the oral presentation centered around the inconsistent nature of the individual students, from “difficult” to prepare and “weak” in execution to the need for more preparation throughout the school’s curriculum and “very well done.” A consensus seems to have emerged that the school could do more to prepare students and to stress the importance of this component of the project.
Research Question 2b: Is there a relationship between arts major selected and achievement on senior projects?

The quantitative data suggest that there is no difference between arts major and achievement on senior projects (See Table 11), the following question was posed to each of the focus groups: “Is there a difference in quality among these projects based on the arts major of the students”? Many judges had only participated with one of the three arts majors, but those that had the experience of working with different arts groups reported seeing different themes, but not a drop in quality. One educator, employed at the subject school, noted:

I feel like a lot of times the visual students go for more artistic film with a lot of creative editing. The theatre students will often do something autobiographical and more emotional I feel. And culinary students, I think, go a lot with future goals and they sort of like base it around like here is my story and here is where I am going. And I think it may be because of a certain kind of student maybe that culinary brings in. A lot of our culinary students from last year had you know not had success at other schools and really found their way in culinary and I think that that led them to produce some really good films and very inspirational ones as well. A lot of the theatre and arts films are more, I think, based around their art and like what they can show and you know showcase from the talent set. With the culinary I feel really made a lot more like emotional connections a lot of times and you know they talked about their future and it got them thinking about what happens post-Beacon. So, that was kind of an interesting difference I feel between the arts but I don’t think there is a difference in quality, but definitely content.

A filmmaker, who has judged students from all of the arts majors over the years, agreed, but felt that culinary students had failed to impress him over the years:

The visual as you say very much… (is) composition based and focused on that part of their art. The theatrical base always had a bit more performance to it and they fought back and forth from year to year which group has a little more ‘oomph’ in it. But the one that always seems to drag is the culinary for me. With the exception of I’d say four or five projects over the number of years that I’ve done, four or five projects that were like, ‘Wow! Okay that was interesting.’ And some of those projects unfortunately didn’t even touch culinary. They were really good projects but they had very little to do with culinary and it kind of
bugged me because culinary is still an art form to me and I feel like they are not grasping the concept of their art and how to apply it. Like they don’t look at their, for some reason they’re not looking at their major as an art form whereas the foodies of the world and a lot of people look at food as an art form. Whether it will be through flavor or visual presentation or any number of things you put together. I’m not saying it is lacking tremendously but, if looking at a sample and from over a number of years, that seems to be the one that always, I’m surprised when I see something that really hits me.

Alumni seemed to take a more global approach, one of them noted “there is visual, there is culinary and there is theatre and I guess you can say... that capstone puts everybody on equal ground.” Another alumnus shared that “visual students would be more critical... (because) it’s their piece of work and they’ve put a lot into it.” She later added:

Theatre kids... their films are like... out there or like I feel like they are more also comical. Well, the visual ones are always more serious and dramatic and very artsy, like a lot of editing... and then the Culinary people. It's kind of hard to apply culinary to film. Whereas theatre you can put what you learn, focus on content dialogue. (In) visual it’s all about presentation and what it actually looks like. But you can’t really cook a film. So that’s why I have noticed a lot of people in culinary do the straightforward biography type things, like this is what I do they’re all I’m cooking... Besides the wrangling emotional films that are sometimes in there whereas visual or theatre, theatre has a lot of... they pull actors in... there’s a lot of content, a lot of thought, like what's actually been said whereas most of the visual ones they look really amazing, like a lot. They spend most of their time in post-production and make it look... as good as possible.

Another alumnus agreed:

Most memorable (films) were in the theatre and the arts and then some didn’t do so well some were culinary. Culinary is more it straightforward, so it’s kind of like their films are straightforward: what they like, their interests into the film.

Members of the arts faculty of the subject school, who have most experience with the capstone project, also noted differences between the arts.

One teacher, who works with both visual and theatre students noted:

How they handle the project its totally different. The visual kids, yeah they’ll write something down but visually they’ll start going and that’s going to go in a totally different direction. The theatre kids, they write all these things down, they get these grandiose idea and then they can’t pull it off in the end because it can’t translate as well off the page as it does on the page because they got these feature film script going on with nowhere near the necessary equipment.
A visual arts teacher added:

Visual artists and most of their visual capstones are more pleasing to watch than the angles and stuff that you guys get... Some of my kids, they need some help with the acting and such. That's pretty poor, but like for the most part we nail it with composition.

The visual and theatre teacher, reflecting on the quality of the products across the disciplines may have said it best: “What's capstone like? We’ve heard about this and the way I always described it is, it levels the playing field because they all have to do something that they’ve never done before.

**Research Question 3:** Are there differences among judges based upon professional positions?

In addition to the quantitative analysis for this question provided above, the researcher constructed focus groups essentially based on occupation. The quantitative analysis (See Table 12) showed no significant differences based upon the occupation of the judges. However, transcript analysis found that certain groups identified different areas of priority within their sessions.

There was significant attention spent discussing the quality of writing in the educators group, obviously an area of great familiarity to them, while they spent almost no time addressing the technical filmmaking components. The filmmakers group, meanwhile, spent much more time discussing these elements and less time on the writing. The alumni often shifted between their roles as judges and their experiences as students completing the project. While other groups related their experiences in high school and college to the project, the recent nature of the alumni group may have contributed to the shifting focus. The arts faculty from the subject school spent significant time addressing their roles in the process and how those
roles could be adjusted to improve the project in the future. In a sense, each group focused on different facets in order to provide a more complete picture of a multilayered project.

Integration of Quantitative and Qualitative Data

This section merges the findings from the quantitative and qualitative phases of data analysis of this mixed methods study. This combined analysis provides the basis for the conclusions and recommendations to follow in Chapter V. Although the first research question was intended to be answered through the questionnaire as well as by the focus groups, the second question was designed to draw data from the focus groups as well as through the acquisition of performance data at the subject school. The third question was mainly addressed through the questionnaire; however, themes emerged from the focus groups that identified some key differences based upon professional positions. The merged findings are presented by research question.

Research Question 1a: What are the perceptions of judges of the extent of rigor of senior capstone film projects at an arts-based northern Rhode Island charter school with respect to the work required to complete the written and technical (filmmaking) components of the project?

Table 16 provides an overview of the sections of the survey related to the written and filmmaking components of the project from the survey instrument, including means and standard deviations. In addition, corresponding findings from the focus groups are included. Items are ranked
in descending order based upon means calculated from the \(N=35\) questionnaires.

Table 16

*Integration of Quantitative and Qualitative Data Regarding Research Question 1a*

<table>
<thead>
<tr>
<th>Questionnaire Category</th>
<th>(M)</th>
<th>(SD)</th>
<th>Focus Group Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Film Post-Production Work</td>
<td>3.10</td>
<td>.45</td>
<td>There was no distinction in focus groups between film production and film post-production</td>
</tr>
<tr>
<td>Written Component</td>
<td>3.09</td>
<td>.44</td>
<td>Significant amount of work required; varying levels of performance across student population</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Need for deeper reflection and more attention paid to later, summative pieces</td>
</tr>
<tr>
<td>Film Production Work</td>
<td>3.08</td>
<td>.48</td>
<td>Level of comfort in discussing this issue varied greatly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Educators felt that it looked amazing, while arts faculty found it lacking in comparison to writing</td>
</tr>
</tbody>
</table>

*Note.* Data were collected from \(N=35\) questionnaires and \(N=4\) focus groups. \(M = \) mean; \(SD = \) standard deviation. Questionnaire items are ranked in descending order by mean.

**Research Question 1b:** What are the perceptions of judges of the extent of rigor of senior capstone film projects at an arts-based northern Rhode Island charter school with respect to the work required to complete the formal presentation of the project?

Table 17 provides an overview of the sections of the survey related to the oral presentation component of the project from the survey instrument, including mean and standard deviation. In addition, corresponding findings from the focus groups are included. While the questionnaire results rated the oral presentation highest, the focus groups felt that the rigorous expectations did not always result in stronger performance from the students.
Table 17

Integration of Quantitative and Qualitative Data Regarding Research Question 1b

<table>
<thead>
<tr>
<th>Questionnaire Category</th>
<th>$M$</th>
<th>$SD$</th>
<th>Focus Group Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Presentation</td>
<td>3.16</td>
<td>.50</td>
<td>Arts faculty believe that their students underperform on oral presentation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Additional preparation should be incorporated throughout the students’ four years of study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alumni noted the high stakes nature of the event and inadequate preparation may lead to nervousness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The artists and filmmakers provided a mixed impression; one called it “a good piece” while another noted the need for additional public speaking</td>
</tr>
</tbody>
</table>

Note. Data were collected from $N=35$ questionnaires and $N=4$ focus groups. $M = mean; SD = standard deviation.$

**Research Question 2b:** Is there a relationship between arts major selected and achievement on senior projects?

Table 18 provides student performance data on the capstone presentation, sorted by arts major selected. Quantitative analysis, through the use of a correlation of the means of the rubric scores, found no significant differences based on choice of arts major. In addition, corresponding findings from the focus groups are included. Focus groups generally found no differences, although a few members did feel that culinary students had a tendency to perform more poorly on the assessment. Although the differences are not significant, this is supported by the quantitative data.
Table 18

Integration of Quantitative and Qualitative Data Regarding Research Question 2b

<table>
<thead>
<tr>
<th>Category</th>
<th>Arts Major</th>
<th>Focus Group Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance on Capstone Project</td>
<td>CUL THE VIS</td>
<td>Student films in all three areas are different in theme, but not necessarily in quality</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>Visual students include more intensive cinematography</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>Theatre students have a more developed script</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Culinary students are more likely to be focused on stories of personal growth and future goals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The greatest learning stretch occurs in culinary arts</td>
</tr>
</tbody>
</table>

Note. Data were collected from N=35 questionnaires and N=4 focus groups. M = mean; SD = standard deviation; CUL = Culinary Arts; THE = Theatre Arts; VIS = Visual Arts.

Research Question 3: Are there differences among judges based upon professional positions?

Table 19 provides mean scores and standard deviations for each component of the project as reported by judge’s occupation. Quantitative analysis, through the use of a correlation of the means of the rubric scores, found no significant differences based on choice of profession of the judges. In addition, corresponding findings from the focus groups are included. Focus group discussion varied based upon the occupations of the members of the group. Although the differences are not significant, they do point to the different perspectives of the groups.
Table 19

Integration of Quantitative and Qualitative Data Regarding Research Question 3

<table>
<thead>
<tr>
<th>Category by Occupation</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Focus Group Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Students</td>
<td>5</td>
<td>3.08</td>
<td>.18</td>
<td>Educators tended to be more critical of the written work</td>
</tr>
<tr>
<td>Educators</td>
<td>10</td>
<td>3.18</td>
<td>.35</td>
<td>Alumni were more forgiving in terms of quality, but not of deadlines</td>
</tr>
<tr>
<td>Artists and Filmmakers</td>
<td>9</td>
<td>2.87</td>
<td>.46</td>
<td>Arts Faculty had mixed perceptions, but saw more focus on writing than on technical aspects of project</td>
</tr>
<tr>
<td>Non-Profit/Government Staff</td>
<td>4</td>
<td>3.30</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>Members of the For-Profit Business Sector</td>
<td>6</td>
<td>3.13</td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>Oral Presentation</td>
<td>5</td>
<td>3.08</td>
<td>.18</td>
<td>Alumni and Arts Faculty noted and were generally more accepting of student nervousness</td>
</tr>
<tr>
<td>Educators</td>
<td>10</td>
<td>2.98</td>
<td>.54</td>
<td>All groups called for additional preparation for these students in the area of oral presentation skills</td>
</tr>
<tr>
<td>Artists and Filmmakers</td>
<td>9</td>
<td>3.12</td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>Non-Profit/Government Staff</td>
<td>4</td>
<td>3.45</td>
<td>.41</td>
<td></td>
</tr>
<tr>
<td>Members of the For-Profit Business Sector</td>
<td>6</td>
<td>3.23</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>Film Production Work</td>
<td>5</td>
<td>3.12</td>
<td>.27</td>
<td>No differentiation in focus groups between production and post-production</td>
</tr>
<tr>
<td>Educators</td>
<td>10</td>
<td>3.06</td>
<td>.53</td>
<td>Those not familiar with filmmaking techniques tended to be impressed with student work in this area</td>
</tr>
<tr>
<td>Artists and Filmmakers</td>
<td>9</td>
<td>2.89</td>
<td>.33</td>
<td></td>
</tr>
<tr>
<td>Non-Profit/Government Staff</td>
<td>4</td>
<td>3.25</td>
<td>.50</td>
<td>Those with experience with the project or with filmmaking in general tended to be more critical of student performance in this area</td>
</tr>
<tr>
<td>Members of the For-Profit Business Sector</td>
<td>6</td>
<td>3.27</td>
<td>.70</td>
<td></td>
</tr>
<tr>
<td>Film Post-Production Work</td>
<td>5</td>
<td>2.92</td>
<td>.29</td>
<td></td>
</tr>
<tr>
<td>Educators</td>
<td>10</td>
<td>3.08</td>
<td>.45</td>
<td></td>
</tr>
<tr>
<td>Artists and Filmmakers</td>
<td>9</td>
<td>2.97</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>Non-Profit/Government Staff</td>
<td>4</td>
<td>3.20</td>
<td>.59</td>
<td></td>
</tr>
<tr>
<td>Members of the For-Profit Business Sector</td>
<td>6</td>
<td>3.43</td>
<td>.51</td>
<td></td>
</tr>
</tbody>
</table>

Note. Data were collected from N=35 questionnaires and N=4 focus groups. M = mean; SD = standard deviation.
Summary

This chapter reported the findings of this sequential, mixed methods case study. The purpose of this study was to describe the perceptions held by judges of the rigor present in the senior capstone project at a northern Rhode Island charter school. Student performance data were also examined to determine if choice of arts major or overall academic performance was related to performance on the capstone assessment. In addition to the student performance data, which were collected from the subject school, the researcher also collected data from a quantitative questionnaire completed by \( N = 35 \) respondents and \( N = 4 \) focus groups. The focus groups included \( n = 4 \) arts faculty members from the subject school, \( n = 3 \) alumni from the school, \( n = 4 \) artists/filmmakers, and \( n = 3 \) secondary and postsecondary educators. Focus group data were analyzed by content analysis and the quantitative data by the use of descriptive statistics, all using a sequential explanatory design (Creswell & Plano Clark, 2007). All quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS, 2010) software.

The first section of the chapter included demographic information describing the \( N = 35 \) survey respondents as well as the \( N = 14 \) focus group participants. The next two sections dealt with the quantitative and qualitative findings, respectively. These sections were organized by research question. The final section, also organized by research question, provided a side-by-side analysis of the quantitative and qualitative data. This analysis provides the basis for conclusions and interpretations in Chapter V.
The quantitative data, through analysis of the category means from the questionnaire, showed that judges felt the written ($M=3.09$), film production ($M=3.08$), and film post-production ($M=3.10$) components of the project were rigorous. In addition, results showed that they felt that the oral presentation ($M=3.16$) was also rigorous. While the focus group data mirrored the questionnaire results with regard to the rigor of the project, there was a fair degree of consensus that actual student performance in these areas, most notably in the writing and in the oral presentation, often failed to match expectations of the judges. In addition, artists and filmmakers appear to have graded film production and post-production more harshly than the written and oral presentation components.

Analysis of student performance data, including cumulative GPA and scores on the capstone assessment rubric revealed that theatre students, with an overall mean GPA of 3.07 significantly outperformed culinary students, whose overall mean GPA was 2.59. Visual students had an overall mean GPA of 2.86, not significantly different from either of the other two groups. While theatre students outperformed their culinary counterparts throughout their coursework at the subject school, none of the three cohorts outperformed the other on the capstone assessment. Culinary students earned a mean score of 86.36, theatre students 89.50, and visual students 87.47. Students in general with a higher overall GPA tended to reach higher performance levels on the capstone assessment ($r=.337$, $r^2=.11$, $p=.001$).

The school utilizes judges from varied backgrounds to evaluate the capstone project. Analysis of the survey instrument found no significant
differences among the groups (college students, educators, artists and filmmakers, non-profit/government staff, and members of the for-profit business sector) with regard to student performance. Analysis of the open-ended question from the questionnaire and the focus group transcripts revealed that, while judges felt that the rigor of the project was at an appropriate, albeit high, level. In addition, they felt that execution was not always up to the level that they anticipated. The principal findings are summarized and discussed in Chapter V, leading to some program recommendations and recommendations for further study.
V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter opens with a statement of the problem that led to this mixed methods case study. Next is a brief overview of the methods used in conducting this research study. A section on the principal findings, as organized by research question, follows. The conclusions reached are included in the next section. The chapter concludes with a set of recommendations for potential program improvements and areas for further study.

Problem Statement

Nationally, the trend is quickly shifting toward using standardized testing as the primary means of measuring student achievement. Forty-five states have signed on for the national Common Core standards, and 23 states and the District of Columbia have signed up for the assessment known as PARCC (Partnership for Assessment of Readiness for College and Careers) without knowing what exactly what the assessment will entail (Common Core, 2012). In this high stakes testing culture, few schools and districts and only two states, Rhode Island and Ohio, have mandated performance based requirements (Dietz, 2010; Olson, 2006; RID, 2008b; Summers, 1989). The literature makes it clear that one of the key factors in the trend away from performance based requirements to high stakes testing may be at least partly attributed to the ease of assessing students using these methods (National Center, 2004). High stakes testing does not necessarily provide
clear data on the ability of students to perform well in the postsecondary opportunities associated with college or employment (Conley, 2004; Kirst, Venezia, & Antonia, 2004; McIntosh, 2011).

Project-based learning, particularly as it manifests itself in senior projects, may increase chances for success in college (Menson, Patelis, & Doyle, 2009; National Commission, 2001; Nicolini, 1999; Perna & Thomas, 2009). Some studies have found, however, that such projects place undue stress on high school students as they prepare to graduate (Venezia & Kirst, 2005; Wilensky, 2007).

An arts-based charter high school in northern Rhode Island created a film-based project to meet the state’s performance-based graduation requirements (PBGRs). This project requires students to plan, write, film, edit, and present an original film to a panel of seven judges. These judges come from a number of different backgrounds, including arts faculty from the subject school, educators from other secondary and postsecondary institutions, artists and filmmakers, and alumni from the subject school. Many of these individuals have no formal connection to the school, but have expertise in one or more areas related to the project.

**Purpose of the Study**

The purpose of this student was to describe the perspective of judges regarding the rigor of senior capstone projects at an arts-based charter high school in northern Rhode Island. Judges have a tremendous impact on the high school careers of all students at the school, yet most of them are not daily fixtures in the lives of these students. In addition, the study examined
student performance data, as measured by rubrics completed by judges and compared their results with students’ school performance as measured by cumulative grade point average (GPA) at the time of graduation.

**Summary of Method**

This sequential, mixed methods case study used an explanatory design to explore project judges’ perceptions of the rigor associated with the senior capstone project at a select northern Rhode Island charter school. The initial quantitative phase included an online survey of $N=53$ participants who judged at the school in 2010, 2011, or both. $N=35$ of the $N=53$ online questionnaires were completed. This was followed by four focus groups totaling $N=14$ participants: arts faculty employed by the school ($n=4$), school alumni ($n=3$), artists and filmmakers ($n=4$), and educators ($n=3$).

Questions used on the instrument were taken directly from the rubric used by judges to evaluate senior projects at the subject school. Each section of the questionnaire included five questions and utilized a 4-point Likert-type scale with responses ranging from *strongly disagree* to *strongly agree*. In addition, the researcher included demographic information in order to place participants into one of the four focus groups.

Alumni ($n=2$) and a capstone teacher ($n=1$) from the subject school served as content experts and examined the instrument for item content, readability, and response format. Content validity of the instrument was supported by the literature.

All data were collected from the survey site and incorporated into a spreadsheet for quantitative analysis using Statistical Package for the Social
Sciences (SPSS, 2010). Descriptive statistics, including frequencies, percent, means, and standard deviations, were used to describe the responses to Research Question 1. Data analysis of the survey instrument was performed and included the calculation of Cronbach’s alpha reliabilities of common items to determine if means could be calculated for the respective sections of the instrument. Focus group transcripts were analyzed using discourse analysis, then coded and categorized.

Student school records, in the form of academic transcripts, performance on the capstone project and students’ arts majors were collected to address Research Question 2. Data were analyzed using SPSS using ANOVA (Questions 2a and 2b) and a simple product-moment correlation (Question 2c). Effect size was calculated using the Bonferonni adjustment for item-level analyses. Research Question 3 analysis included data from the original questionnaire as well as focus group transcript analysis.

The final phase of the data analysis included the “long table” approach for transcript analysis (Krueger & Casey, 2009). This approach revealed trends present throughout the n=4 focus groups, the n=35 survey responses, and throughout the student performance data from the subject school.

**Summary and Discussion of Principal Findings**

Postsecondary success often results from a rigorous high school experience, particularly in writing (ACT, 2005; Adelman, 1999b; Barth, 204; Conley, 2007; Martinez & Klopott, 2005; Menson, Patelis, & Doyle, 2009). Research Question 1a: What are the perceptions of judges of the extent of rigor of senior capstone film projects at an arts-based northern Rhode Island
charter school with respect to the work required to complete the written and
technical (filmmaking) components of the project?

1. Quantitative results show that the \( N=35 \) respondents to the questionnaire
felt that the written and filmmaking components of the project were rigorous.
The dimension-level mean scores of 3.09 (with a standard deviation of .45)
for the written component, 3.08 (standard deviation .48) for the film
production component, and 3.10 (standard deviation .45) for the post-
production work on the film show that the judges felt that these tasks all
provided a rigorous experience for students. In fact, no judges strongly
disagreed that the filmmaking elements were rigorous, while only \( n=1 \)
respondent strongly disagreed that the written work was rigorous.

2. Focus group participants agreed that the rigor of the various components
was at an appropriately high level. A member of the artists and filmmakers
group noted:

I think the workload is heavy in a good way. I think it gives them a lot to do
and a lot to process and it shows who waited to the last minute... I think adding
more work might be too much to handle and any less wouldn’t be enough, so I
think it’s in a nice rigor level.

Across groups, they found that the written requirements were rigorous, but
that students did not always apply themselves fully to the written
requirements, resulting in a reduction in quality of the final written work. An
educator remarked:

I remember going through the students I was seeing that day and thought, ‘I
wonder if this is some of their best writing work. I wonder if this is just... I had
to check, do that reflection and there it is.’ Sometimes I was left feeling like, for
a senior, I’m not sure it was necessarily showing all that they could, some of it
seems like it was just being done for the sake of getting it into the portfolio for
the project... If this is about showcasing or producing and then having them all
go into their best work, I don’t think they were doing their best writing.
With regard to the technical (filmmaking) aspects of the project, many of the judges who had no filmmaking experience were in awe of the final products, while those with experience found that the quality had remained consistent over the years. An alumnus noted: “It reflects how much effort you actually put into it... (T)he equipment is not too technical or hard to use... (If) you’re an average student you’ll probably be able to use it.”

Barron et al. (1998) recommend scaffolding of all elements of a project. In doing so, the subject school might mitigate the differences in quality described by judges.

Research Question 1b: What are the perceptions of judges of the extent of rigor of senior capstone film projects at an arts-based northern Rhode Island charter school with respect to the work required to complete the formal presentation of the project?

3. While the oral presentation component received the highest mean scores on the instrument ($M=3.16, .50 SD$), judges felt that students often underperformed in this area. One member of the arts faculty from the subject school was particularly critical of actual student performance: “...my kids...don’t do so hot with the oral presentation.” Alumni pointed to the nervousness generated by the high stakes nature of the presentation. As with the filmmaking component, judges’ comments reflected the fact that they felt the requirements were rigorous, but that student performance was not always up to the challenge. Davidson (2009) argues that instruction throughout a school must adequately support students as they prepare for
these projects. Courses across the curriculum could provide training in oral presentation skills.

Research Question 2a: Is there a relationship between arts major selected and academic achievement?

4. There is a relationship between arts major and academic achievement based on cumulative GPA. In an examination of data from the classes of 2010 and 2011, theatre students significantly outperformed culinary students throughout their studies. Theatre students have a mean GPA of 3.07, while their culinary counterparts earned a mean GPA of 2.59. The difference is significant at the $p=.01$ level. Visual arts students placed in between these two groups (mean GPA: 2.86) with no significant differences with either culinary or theatre students.

Research Question 2b: Is there a relationship between arts major selected and achievement on senior projects?

5. There is no relationship between arts major selected and achievement on senior projects. Quantitatively, the mean scores for performance on the capstone project had no significant differences with culinary at 86.36 ($SD$ 7.23), theatre at 89.50 ($SD$ 7.51), and visual at 87.47 ($SD$ 7.93). In light of the finding in Research Question 2A, this is particularly interesting. While there is a significant difference in overall academic achievement between theatre students and culinary students, no such difference exists with regard to their performance on the senior capstone project. The project levels the playing field. Some focus group members identified differences among the arts:
Most memorable (films) were in the theatre and the arts and then some didn’t do so well some were culinary. Culinary is more it straightforward, so it’s kind of like their films are straightforward: what they like, their interests into the film. While most felt that it wasn’t as much a difference in quality as it was in subject matter:

I feel like a lot of times the visual students go for more artistic film with a lot of creative editing. The theatre students will often do something autobiographical and more emotional I feel. And culinary students, I think, go a lot with future goals and they sort of like base it around like here is my story and here is where I am going.

Research Question 2c: Is there a relationship between academic achievement and achievement on senior projects?

6. Students with a high overall GPA tended to have higher performance on the capstone project ($r = .337, r^2 = .11, p = .001$). This finding demonstrates a positive correlation between academic achievement and achievement on senior projects with a medium effect size. While the project may level the playing field between the arts with regard to academic achievement, higher performing students tended to perform better on this assessment. This is an instance of what the National Commission on the Senior Year (2001) identified as a more rigorous assessment, which helps to ease the transition to postsecondary opportunities. The National High School Alliance (2006a) called for additional supports to ensure student success. These supports would help to increase the chances of all students achieving at high levels.

Research Question 3: Are there differences among judges based upon professional positions?

7. Quantitative analysis showed no significant differences among judges’ scores based upon their professional positions. While artists and filmmakers rated students lowest in three of the four sections of the questionnaire, the
difference was not significant. The focus groups, however, differed with regard to how critical they were of various components.

Educators were more critical of the written work, while alumni were more forgiving of lower quality work. Alumni and arts faculty, those most closely connected to the subject school were more accepting of student nervousness during the oral presentations. The questionnaire categories of film production and post-production were not distinguished during the focus groups. Those less familiar with the skills needed for these tasks were more impressed with student work in this area; those with more knowledge were more critical. The literature supports the use of judges from outside the classroom (Kerka, 2006; Schwebach, 2008), real audiences (Garbus, 2000) and content area experts (Lynn, Baker, & Dunbar, 1991; Pfeifer, Sadusky, & Kubic, 2010). Conley (2001) suggests the use of faculty from secondary and postsecondary schools.

Conclusions

The Rhode Island Department of Education (RIDE) has, since 2008, required schools to select two of three performance-based measures to be completed by students in order to earn a diploma (RIDE, 2004; RIDE, 2008b). Schools could select from among portfolios, comprehensive end-of-course examinations, and capstone projects. An arts-based charter high school in northern Rhode Island chose portfolios and capstone projects.

As the designer of the school’s capstone project, the researcher sought to ascertain the perceptions of the various groups serving as judges. In selecting the two most recently completed years, 2010 and 2011, the
researcher hoped to include a wider variety of perspectives. The findings of this study provided the researcher with data that can be used to improve the program’s design and, by extension, student performance on the project.

Most survey respondents felt that the project’s requirements were rigorous. Eighty-two percent of the \( N=35 \) respondents either agreed or strongly agreed that the written components were rigorous, while 91% indicated that the film production and 97% felt that the film post-production aspects were rigorous. Only 63% indicated that the students demonstrated extensive preparation for the oral presentation. Participants in the focus groups tended to indicate that the requirements were rigorous, but that students’ performance did not always demonstrate rigorous preparation on their part.

While student performance was perceived by judges to be mixed, the quantitative analysis showed that there were no significant differences in capstone performance based upon chosen arts major. Culinary students, often perceived as having lower performance levels on the capstone project, performed at a level not significantly different from either visual or theatre students. This is particularly noteworthy as the overall academic achievement of culinary students is significantly lower than that of theatre students. This finding indicates that this project provides all students with equal opportunity to succeed, independent of their selected arts major. This finding, if shared with culinary students, could provide a sense of confidence as they tackle this project.
Although students’ arts major are not directly related to their performance on the capstone project, students who had an overall higher GPA tended to perform better on the assessment.

**Program Recommendations**

1. Provide students with more support, guidance, and accountability for written components of the project. If actual student performance in this area is not at the level anticipated, more attention must be paid to the evaluation of each written assignment.

2. Offer students choice as to the medium for their reflections. Options may include multimedia alternatives, such as video journals or blogging. This may provide opportunities for richer and more varied reflection.

3. Include additional opportunities for students to practice utilizing the technical equipment. This could take the form of a “group capstone” project, complete with all project components, early in the senior year.

4. Consider opportunities for arts faculty members to take a more active role in the capstone process, either through their existing courses with the seniors or in more of a symposium-type model where students would have the opportunity to learn important skills from each of the arts educators while completing work on their films.

5. Diversifying the pool of judges each year. Fresh perspectives give each student a better opportunity to let his or her work stand on its own and not in comparison to students in past years.

6. Create a continuous cycle of improvement by providing judges, through online surveys or focus groups, the opportunity to provide more timely
feedback for program improvement. Niguidula (2010) calls for this “feedback loop” as a means to make revisions to the program.

7. Create greater awareness of this model through marketing to explore possibilities for replication at other schools.

**Recommendations for Further Study**

1. Due to the specialized nature of the project at the subject school, the generalizability of this study is limited. A wider study to include judges’ perceptions of senior projects across schools might allow for generalization to a larger population.

2. Reflective writing is a key component of the capstone project at the subject school. Effective reflection is a tool that would serve students throughout their secondary and postsecondary educational experiences. A study could examine the impact of effective reflection on student performance in school.

3. As the nation shifts to a stronger emphasis on standardized testing, it would be interesting to compare standardized test results to results on senior projects.

4. Colleges and universities have long relied upon standardized measures such as the SAT and ACT. A study could be conducted of admissions personnel from these institutions as to their perceptions regarding capstone projects as indicators of readiness for postsecondary studies.

5. Student choice is a key aspect of the capstone process. Future researchers could conduct a study to determine the relationship between college major and choice of topic of the capstone project.
Summary

The purpose of this sequential, mixed methods case study was to explore judges’ perceptions of the rigor of the capstone project at a selected northern Rhode Island charter school. In this final chapter, the findings of the study were discussed in the context of existing literature. Conclusions were based on the findings and resulted in recommendations for improving the program and for further research opportunities.

The quantitative results revealed that judges felt the program requirements were indeed rigorous. Focus groups, however, felt that student performance did not always match the intensity of the requirements. Quantitative results further show that students’ choice of arts major, while having a significant impact on overall academic performance, does not significantly affect performance on the capstone project.

The chapter concludes with recommendations for program improvement as well as for further study. There are two areas that judges identified as rigorous but indicated that student performance is not up to expected levels. By clarifying expectations and implementing changes to the program, the subject school may improve performance in these areas. In addition, students’ technical skills could be improved through additional and earlier access to filmmaking equipment and through increased participation of the arts faculty in the capstone process. Areas for further study include comparing standardized test results with those from capstone projects, a wider study of senior projects across schools, and the impact of reflection upon student performance. Through these improvements and additional
studies, senior projects may secure their position as a viable alternative to standardized testing as a measure of student potential in high school and beyond.
REFERENCES

ACT. (2005). *Crisis at the core: Preparing all students for college and work*. Iowa City, IA: ACT, Inc.

ACT. (2009). *The path to career success: High school achievement, certainty of career choice, and college readiness make a difference*. Iowa City, IA: ACT, Inc.


Essential education for a changing world (pp. 210-226). Alexandria, VA: ASCD.


Markham, T., & Lenz, B. (2002, April). Ready for the world: An innovative program links the worlds of school and work to engage students in
learning and develop their professional and academic skills. *Educational Leadership*, 59(7), 76-79.


Appendix A

Questionnaire

The following questions utilize a four-point Likert-type scale to measure responses, ranging from Strongly Disagree to Strongly Agree. Please try to encapsulate your overall judging experience at the school when selecting responses.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Capstone Dossier/Written Work

1. The students’ written work requirements were rigorous.  
2. The students paid attention to detail in the written work.  
3. The written work provided insight into the creative process.  
4. The written work was challenging for the students to complete.  
5. The written work provides evidence of clear problem solving.

Organization, Preparation, and Delivery of the Oral Presentation

6. The students demonstrated extensive preparation for the oral presentation.  
7. The students maintained a clear focus on the topic during the oral presentation.  
8. The students dressed formally for the presentation.  
9. The students spoke clearly, effectively, and confidently.  
10. The students fully engaged the audience during oral presentation.
**Film Production**

11. The students’ filming requirements were rigorous. 1 2 3 4

12. The students used creative and varied camera angles. 1 2 3 4

13. The students used lighting effectively. 1 2 3 4

14. The students used sound effectively. 1 2 3 4

15. The students required significant technical skills to shoot their films. 1 2 3 4

**Film Post-Production**

16. The students’ editing and post-production requirements were rigorous. 1 2 3 4

17. The students used editing creatively to communicate meaning. 1 2 3 4

18. The students used editing smoothly to minimize distraction. 1 2 3 4

19. The students used creative and engaging dialog, voiceover, or sound effects. 1 2 3 4

20. The students used innovative titles/credits. 1 2 3 4

**Demographic Information**

Gender   M   F   Age   18-24   25-34   35-44   45-54   55-64   65+

Highest Level of Education ______

  a. Less than HS Diploma
  b. HS Diploma
  c. Some Post-Secondary Work
  d. Certificate
  e. Associate’s Degree
  f. Bachelor’s Degree
  g. Some graduate coursework
  h. Master’s Degree
  i. Doctoral Degree
Occupation _____ (Please select one option)
1. College Student
2. Beacon Faculty Member
3. Elementary or Secondary Education
4. Postsecondary Education
5. Professional Artist
6. Non-Profit/Social Service Sector
7. Government Agency
8. Business Community

Are you an alumnus of Beacon Charter School? YES NO

Frequency of Judging Capstone Projects at Beacon Charter School:
Once Twice Three Times Four Times Five or more Times

Frequency of Judging Capstone Projects at schools other than Beacon:
Once Twice Three Times Four Times Five or more Times

Were you actively recruited to be a judge or did you volunteer?
Recruited Volunteered
Appendix B

Focus Group Questions

There will be four focus groups of four participants each, as follows:

Educators
Artists/Filmmakers
Beacon Alumni
Beacon Arts Faculty

The semi-structured focus groups will address the following questions:

1. What is the level of rigor of the capstone project at Beacon?
2. What is the level of rigor of the written components of the project?
3. What is the level of rigor of the filmmaking components of the project?
4. What is the level of rigor of the oral presentation component of the project?
5. Should the project contain more rigor?
6. Does this project prepare participants for life after high school, be it postsecondary education or employment?
7. Does this project prepare participants for pursuing a path similar to yours?
8. Is there a difference in the quality of the work between arts majors?
9. If so, why do you think that is?
10. How could the project be improved?
Appendix C

Sample Email Invitation to Participate in Focus Group

Dear XXXX,

You are one of four artists/film professionals to be selected to participate in a brief, 90-minute focus group on Capstone judging at Beacon Charter School. Your participation is voluntary, but critical for the completion of my research. I have attached a more detailed invitation and consent form which you may bring with you to the session.

I have scheduled this session for **Monday, January 30th @ 6 PM** at Beacon Charter School. Please respond to this email with your availability and willingness to participate. If you are unable to attend this session, or not interested in participating, please let me know that as well. I look forward to hearing from you and of your participation in this critical work!
Appendix D

Email Invitation to Participate in Online Survey

Friends of Beacon Charter School,

As part of my dissertation research at Johnson and Wales University, I have created a short survey to gather information on your perceptions of our senior capstone program. You are among a small group of potential respondents. This makes your feedback critical. Please click the link below to begin the survey. It will only take a few minutes of your time. Thank you in advance for your assistance with this project.

http://www.zoomerang.com/Survey/U2LQEXE7E3UE
Appendix E

Beacon Charter High School for the Arts: Capstone Presentation Rubric

<table>
<thead>
<tr>
<th>Presenter:</th>
<th>Proficient w/ Distinction (20)</th>
<th>Proficient (16)</th>
<th>Partially Proficient (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Capstone Dossier:</td>
<td>The student's online dossier:</td>
<td>The student's online dossier:</td>
<td>The student's online dossier:</td>
</tr>
<tr>
<td>The student has completed online documentation of their project through their Digication portfolio.</td>
<td>☐ Includes all required elements (see attached checklist)</td>
<td>☐ May be missing one required element (see attached checklist)</td>
<td>☐ May be missing several of the required elements (see attached checklist)</td>
</tr>
<tr>
<td>☐ Is free from error</td>
<td>☐ Has minimal errors</td>
<td>☐ May have one missing or mislabeled link</td>
<td>☐ May have significant errors present</td>
</tr>
<tr>
<td>☐ Is properly linked to all components (no dead/mislabeled links)</td>
<td>☐ Contains insight into the creative process of the film</td>
<td>☐ Many links are dead or mislabeled</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Judge:</th>
<th>Proficient (16)</th>
<th>Partially Proficient (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Content:</td>
<td>The student:</td>
<td>The student:</td>
</tr>
<tr>
<td>The student explains the process and findings of the project and resulting learning either in their dossier, oral presentation, the film or during Q&amp;A.</td>
<td>☐ Clearly defines the premise (logline) and its significance</td>
<td>☐ Does not clearly define the premise (logline)</td>
</tr>
<tr>
<td>☐ Supports the premise with an analysis of relevant and accurate evidence</td>
<td>☐ Does not support premise with evidence</td>
<td></td>
</tr>
<tr>
<td>☐ Provides evidence of complex problem solving (through producing the film)</td>
<td>☐ Shows little evidence of problem solving (through producing the film)</td>
<td></td>
</tr>
<tr>
<td>☐ Combines and evaluates existing ideas to form new insights</td>
<td>☐ Shows little evidence of the combination of ideas</td>
<td></td>
</tr>
<tr>
<td>☐ Demonstrates extensive knowledge of the topic by responding confidently, precisely and appropriately to all audience questions and feedback</td>
<td>☐ Demonstrates incomplete knowledge of the topic by responding to questions and feedback inaccurately and appropriately</td>
<td></td>
</tr>
</tbody>
</table>

| 3. Organization, Preparation and Delivery: | The student: | The student: |
| The student exhibits logical organization and communicates ideas effectively. | ☐ Introduces the topic clearly and creatively | ☐ Does not clearly introduce the topic |
| ☐ Maintains a clear focus on the topic | ☐ Does not establish or maintain a focus on the topic |
| ☐ Effectively includes smooth transitions to connect key points | ☐ Uses ineffective transitions that rarely connect key points |
| ☐ Ends with a logical, effective, and relevant conclusion | ☐ Ends without a conclusion based on evidence |
| ☐ Speaks clearly, effectively and confidently using suitable volume and pace | ☐ Fails to speak clearly and audibly and uses unsuitable pace |
| ☐ Fully engages the audience | ☐ Does not engage the audience |
| ☐ Dresses formally, with great care | ☐ Dresses inappropriately |
| ☐ Selects rich and varied words appropriate for context and audience, and uses correct grammar | ☐ Selects words inappropriate for context and audience; uses incorrect grammar |

| 4. Film Production: | The student: | The student: |
| The student effectively uses the medium of film to communicate their message. | ☐ Uses creative and varied camera angles | ☐ Angles seem to be chosen at random or seldom change |
| ☐ Uses lighting that enhances the meaning of the film | ☐ Uses lighting that is often poor or distracts the viewer |
| ☐ Uses creative and engaging dialog or voiceover to convey meaning | ☐ Uses dialog or voiceover that seems random or unrelated to film's message |

| 5. Film Post-Production: | The student: | The student: |
| The student effectively uses the medium of film to communicate their message. | ☐ Uses editing creatively and smoothly to communicate meaning | ☐ Editing is not smooth, or is sometimes distracting |
| ☐ Uses innovative titles/credits which are complete and free from error | ☐ Titles/credits are incomplete or have errors |
| ☐ Uses sound creatively, including music, voice and sound effects | ☐ Sound is unclear at points or distracts from the film’s message |

<table>
<thead>
<tr>
<th>TOTAL SCORE</th>
<th>COMMENTS</th>
</tr>
</thead>
</table>
### Capstone Digication Checklist

**Presenter:** ___________________________  **Judge:** ___________________________

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1    | "I Am..." Journal Entry  
What are the student-filmmaker's connections with self, school and their art? |
| 2    | "Initial Thoughts" Journal Entry  
What are the student-filmmakers initial thoughts about their film? |
| 3    | Logline  
Student-filmmakers express the concept for their film in 25 words or less. |
| 4    | Three Sentences  
Student-filmmakers expand the logline into three sentences. |
| 5    | Three Paragraphs  
Student-filmmakers expand the three sentences into three paragraphs.  
Their film is a now a short story. |
| 6    | First Draft of Screenplay  
Student-filmmakers take their story and put it into script format. |
| 7    | Second Draft of Screenplay  
Student-filmmakers refine their first draft. Major changes are common. |
| 8    | Storyboards Journal Entry w/ Storyboard Sample  
Student-filmmakers reflect on the process of creating storyboards for their films. Ideally, they'll have a sample of their own storyboards scanned on the page. |
| 9    | Final Draft of Screenplay  
Student-filmmakers present an error-free final draft of their script. |
| 10   | Screenwriting Journal Entry  
Student-filmmakers reflect on the writing process. |
| 11   | Production Breakdown Report  
Student-filmmakers breakdown their film scene by scene. |
| 12   | Filming Journal  
Student-filmmakers reflect upon the process of shooting their film. |
| 13   | Editing and Post-Production Journal  
Student-filmmakers reflect upon the process of assembling their film and adding music, special effects, etc. |
| 14   | Summative Reflection  
Students reflect on the whole Capstone process from their initial thoughts through post-production. |

Judges should print a rubric for each student then evaluate students on their online dossiers (Criterion 1) prior to the presentations. Content (Criterion 2) may have evidence in the dossier, the film or the presentation. If you see evidence in the dossier, please check off those items in Criterion 2 prior to the presentations. Criteria 2 through 5 will be completed at the presentations. Scores should reflect the check marks made for each question. For example:

<table>
<thead>
<tr>
<th>Proficient w/ Distinction (20)</th>
<th>Proficient (16)</th>
<th>Partially Proficient (10)</th>
</tr>
</thead>
</table>
| 1. Capstone Dossier:  
The student has completed online documentation of their project through their Digication portfolio.  
19  
\[\begin{array}{c} \checkmark \text{Includes all required elements (see attached checklist)} \\
\checkmark \text{Is free from error} \\
\checkmark \text{Contains insight into the creative process of the film} \\
\checkmark \text{Is properly linked to all components (no dead/mislabeled links)} \end{array}\]  
The student's online dossier:  
\[\begin{array}{c} \checkmark \text{Includes all required elements (see attached checklist)} \\
\checkmark \text{Has minimal errors} \\
\checkmark \text{May have one missing or mislabeled link} \end{array}\]  
The student's online dossier:  
\[\begin{array}{c} \checkmark \text{May be missing several of the required elements (see attached checklist)} \\
\checkmark \text{May have significant errors present} \\
\checkmark \text{Many links are dead or mislabeled} \end{array}\] |

The above student has three items selected in the first column and only one in the second column. That means the point value for that criteria should be somewhere between 16 and 20, but closer to 20. That pretty much leaves 19. Judges should bring their partially completed rubrics to the presentations with them. Students will not provide printed materials on that day.
Appendix F

Rhode Island Department of Education Exhibition Oral Presentation Rubric

Explanation and Considerations for Use

The Oral Presentation Rubric must be used, in some form, for the evaluation of exhibitions that are functioning as a School-Wide Diploma Assessment. This rubric outlines the required minimum standards required by RIDE. It may be modified to include more information, but schools may not remove the criteria.

Because this is a required rubric, it is quite detailed and it may be helpful for panel judges to use the simpler checklist, also provided, along with the rubric as a student is making his/her presentation. They can use this checklist to record their impressions, and transcribe the judgments to the more formal, detailed rubric after the presentation is completed.

The “Reference Standards” column identifies the Grade Span Expectations, New Standards English Language Arts Standards, and New Standards applied learning standards that are being addressed.

This is a guidance document issued by the Rhode Island Department of Education. Rhode Island schools should consider it carefully when designing an exhibition system.
### School-Wide Diploma Assessment: Exhibition Oral Presentation Rubric

Guidelines for Using Rubric: Select the box that most describes student performance in each area. Alternatively you can "split the indicators" use the check-boxes before each indicator to evaluate each item individually. Schools should use the criteria in this rubric as the minimum criteria to assess graduation by proficiency exhibitions. This criteria may, however, be modified to accommodate the individual needs of both students and schools.

<table>
<thead>
<tr>
<th>Language Use and Delivery:</th>
<th>Exceeds Standard</th>
<th>Meets Standard</th>
<th>Below Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effectively uses eye contact</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speaks clearly, effectively and confidently using suitable volume and pace</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully engages the audience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dresses appropriately</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selects rich and varied words appropriate for context and audience, and uses correct grammar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintains eye contact</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speaks clearly and uses suitable volume and pace</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Takes steps to engage the audience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dresses appropriately</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selects words appropriate for context and audience, and uses correct grammar</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organization and Preparation:</th>
<th>Exceeds Standard</th>
<th>Meets Standard</th>
<th>Below Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduces the topic clearly and creatively</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintains a clear focus on the topic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effectively includes smooth transitions to connect key points</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ends with a logical, effective, and relevant conclusion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses agenda, outline, notes or other memory aids to execute a flowing presentation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduces the topic clearly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintains a focus on the topic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Includes transitions between key points</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ends with a coherent conclusion based on evidence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses agenda, outline, notes or other memory aids to structure presentation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Content:</th>
<th>Exceeds Standard</th>
<th>Meets Standard</th>
<th>Below Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clearly defines the topic or thesis and its significance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supports the thesis and key findings with an analysis of relevant and accurate evidence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research provides evidence of extensive and valid research with multiple and varied sources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provides evidence of complex problem solving and learning stretch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combines and evaluates existing ideas to form new insights</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clearly defines the topic or thesis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supports the thesis and key findings with evidence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provides evidence of valid research with multiple sources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provides evidence of problem solving and learning stretch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combines existing ideas to form new insights</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Media Use: The student uses technology and/or other media to enhance the presentation.</th>
<th>Exceeds Standard</th>
<th>Meets Standard</th>
<th>Below Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selects and uses well-crafted audio/visual supports to communicate desired information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses technology to enhance and deepen audience understanding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student:</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses technology to enhance audience understanding.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The student appropriately &amp; effectively responds to questions.</th>
<th>Exceeds Standard</th>
<th>Meets Standard</th>
<th>Below Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrates extensive knowledge of the topic by responding confidently, precisely and appropriately to all audience questions and feedback</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The student: Demonstrates knowledge of the topic by responding to questions and feedback accurately and appropriately.
Oral Presentation Scoring Guide

This is not a rubric. It is a tool that can be used as a general guide when assessing the oral presentations component of the RI system. The impressions captured on this scoring guide should be used to inform the markings on the student rubric.

<table>
<thead>
<tr>
<th>Student Name</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Language Use and Delivery: The student communicates ideas effectively.</th>
<th>Exceeds Standard</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Maintains eye contact</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Speaks clearly and effectively</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Engages the audience</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Dresses appropriately</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Uses appropriate language and correct grammar</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organization and Preparation: The student exhibits logical organization.</th>
<th>Exceeds Standard</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Introduces the topic clearly</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Maintains a clear</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Effectively includes smooth transitions</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Ends with a logical, effective conclusion</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Executes a flowing presentation</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Content: The student explains the process and findings of the project and resulting learning.</th>
<th>Exceeds Standard</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Clearly defines the topic</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Supports the thesis and key findings with evidence</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Provides evidence of extensive and valid research</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Provides evidence of problem solving / learning stretch</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Forms new insights</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Media Use: The student uses technology and/or other media to enhance the presentation.</th>
<th>Exceeds Standard</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Uses well-crafted audio/visual supports</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>- Uses technology to enhance understanding</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q &amp; A The student appropriately &amp; effectively responds to questions.</th>
<th>Exceeds Standard</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Demonstrates extensive knowledge of the topic</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
Appendix G

Study Consent Form

Johnson and Wales University
Doctoral Program in Educational Leadership

Consent Form for Perceptions of Judges Toward Rigor of High School Senior Capstone Projects Study

Dear Participants:

You are being asked to take part in the research project described below. The researcher will explain the project to you in detail and you should feel free to ask any questions about the project that you may have. If at a later time, you have further questions, you should contact Michael Skeldon who is the person mainly responsible for this study. He may be reached by phone at 401.286.8259 or by email at mskeldon@beaconart.org.

Description of the Project

This purpose of this research is to determine judges’ perceptions of rigor of the work required to complete the senior capstone project at a northern Rhode Island charter high school. The study will focus on the experiences of judges, whose perspective was not utilized in the design of the project, but whose participation is essential to its sustainability as a tool for determining students’ preparedness for graduation. Data will be collected from questionnaires and focus groups and will identify judges’ perceptions.

In the focus groups, participants will be asked to share their perceptions of the rigor of the senior capstone project at Beacon Charter High School for the Arts. Each component of the project will be examined and judges will be asked to gauge the quality of work of the projects. These focus groups will expand upon data collected in an earlier survey.

Requirements of Study Participants

Sixteen participants will be selected to participate in one of four focus groups: Educators, Artists and Filmmakers, Beacon Alumni, or Beacon Faculty. The focus groups will take place at a mutually convenient time and venue. The sessions will be audio-recorded and transcribed to assist the researcher with the recording and analysis of the data. If you consent to participation, you will be sent a copy of the focus group questions one week in advance. The style of the focus groups will be conversational. The researcher will be the moderator of the focus group sessions. The duration of each focus group will be about 90 minutes.
The risks involved in participation in this study do not exceed what would be expected in normal daily interactions.

**Benefits of Study**

Although there may be no direct benefits to you as a result of taking part in this study, the results may contribute to the improvement of Beacon’s Capstone Project and similar projects.

**Confidentiality**

The information that you provide for this research project will not be personally identified with you, either by name or title. The data will be stored in a locked file and available only to the researcher. After the research is concluded, the data will be destroyed.

**Voluntary Participation**

The decision to participate in this research study is voluntary; you do not have to take part. If you do decide to participate, you may terminate your participation at any time. If you do decide to terminate your participation, simply inform Michael Skeldon (401.286.8259 or mskeldon@beaconart.org) of your decision and no penalty will result. If you are not satisfied with the way in which this study was conducted, you may convey your concerns to the Johnson & Wales University Institutional Review Board, which can be contacted at 401.598.1803.

I have read the consent form. My questions have been answered. My signature below indicates that I understand the information and that I consent to participate in this study.

________________________________________________________________________

Name of Participant   Signature of Participant   Date

________________________________________________________________________

Signature of Researcher   Date
The study involves the audio-taping of the interviews. Neither the name nor other identifying information about the participant will be associated with the tape(s) or with the transcript. Only the researcher will listen to or view the tapes.

The audiotapes will be transcribed by a professional who does not know the participants. Focus group participants will be identified by a number to protect their identities. Once the transcription is checked for accuracy, the tape will be erased. Interview transcripts may be reproduced in whole or in part for use in presentations or written documents that result from the study; however, neither the name nor any other identifying information of the participant will be used in such presentations or documents. Further, immediately following the focus group, the participant will be given the opportunity to have the tape erased, either in whole or in part.

Please check one of each of these pairs of options.

Taping (audio) the Interview
- I consent to having my focus group taped
- I do not consent to having my focus group taped

Transcription of Interview
- I consent to having my focus group transcribed into written form
- I do not consent to having my taped focus group transcribed into written form

Use of Transcriptions
- I consent to the use of the written transcription of my focus group in presentations and written documents resulting from the study, provided that neither my name nor other identifying information will be associated with the transcript
- I do not consent to the use of the written transcription of my focus group in presentations or written documents resulting from the study.

Signature of Participant ___________________________ Date ____________

I hereby agree to abide by the participant’s instructions as indicated above.

Signature of Researcher ___________________________ Date ____________