"We Need a Different Target": Proposing Capstone Projects as the Curriculum

Innovation of Mitchell High School's Innovation Plan

A THESIS

Presented to

The Faculty of the Department of Sociology

The Colorado College

In Partial Fulfillment of the Requirements for the Degree of the

Bachelor of Arts

By

Camilla N. Fuller

May 2019

Eric Popkin

On my honor I have neither given nor received unauthorized aid on this thesis.

_____

Camilla Nicole Fuller

Spring 2019

ABSTRACT

This study explores Colorado Springs School District 11 Mitchell High School's third year as a Priority Improvement Plan school targeted in the accountability era. It examines the potential of capstones as the "curriculum innovation" within Mitchell's Innovation School Plan as a mechanism to reduce the harm done in the "reform" era. Data for this study were collected via observations of meetings at the school, district, and state level, interviews with capstone experts and Mitchell faculty and staff, along with reviews of current capstones in practice. The primary aim of this community based research project is to assist the Mitchell High School Administration Team as they move forward with their Innovation Plan. This is done by helping them establish capstones as a viable "curriculum innovation" by providing evidence of capstones' ability to support the specific needs of Mitchell's low-income, mainly minority, high-English-Language Learner students. This study also provides evidence of capstone's ability to effectively improve student achievement, student growth and postsecondary readiness in an effort to reverse its low School Performance Framework ranking.

During the current accountability era in United States public education, low-performing schools face targeted closures for private gains, under the guise of "objective" testing measures. As one of these schools, Colorado Springs School District 11 Mitchell High School is set for this fate unless it reverses its standing as a Priority Improvement Plan school. The pressure of "being on the clock" forces teachers in to regimented, test-oriented teaching practices which are specifically damaging for Mitchell's population of minoritized students, low income students and English language learners (McNeil 2000, Knoester and Au 2017, Diamond 2007).

To address its "failing" status, Mitchell plans to become a Community School—which aims at implementing long term solutions for students and families—within the Innovation School model. An Innovation School title grants Mitchell local autonomy in determining school management, approaches to learning and in assessments (CDE 2019). By submitting an Innovation Plan, Mitchell has the opportunity to propose "curriculum innovations" to better serve the needs of Mitchell students and direct Mitchell teachers away from harmful test-based accountability strategies. As such, this report is a community based research project aimed at helping Mitchell's Administration Team establish the best "curriculum innovation." Data was collected via observations of meetings at the school, district and state level, interviews with capstones experts and Mitchell faculty and staff, along with a comprehensive review of current capstones in Colorado and other states. The initial data revealed interest in capstone projects and my investigations found that capstones would be a promising innovation for Mitchell since student capstone projects support deep, equitable learning through authentic student engagement in meaningful projects (CDE 2014, Meier and Knoester 2017). To follow through with my community partner, a summary will be presented to Mitchell's Administration Team to support their case for the inclusion of capstones in their Innovation School Propososal.

LITERATURE REVIEW

Public Schools as a System of Neoliberalism

Public schools have their roots in the common school movement of Thomas Jefferson and Horace Mann in the mid-nineteenth century (Kaestle 2001, Meier and Knoester 2017). The primary goal of common schools was to support a functioning democracy in which students needed usable knowledge, skills and dispositions to engage with each other (Meier and Knoester 2017). While the movement was successful in generating funding for public education, the schools ultimately functioned as a colonial tool to educate individuals into being the "moral citizens" of the white, wealthy American culture (Kaestle 2001).

Now, as a system embedded in the context of neoliberalism, United States public schools and their associated "reforms" continue to socialize students to accept unequal social positions and function to exploit vulnerable schools for private gain. After World War II and the economic depression of the 1930's, the United States sought a way to reassert its hegemony on the global stage and maintain domestic peace at home (Harvey 2005). The state was concerned with building a competitive workforce that would be able to fight international threats (Harvey 2005). State intervention prevailed, pushing welfare systems and constructing a social and moral economy (Harvey 2005). These tactics, known as embedded liberalism, prompted some economic growth in the 1950's and 1960's, but was halted completely when the United States was hit by the oil crisis, recession and inflation in the 1970's and 1980's (Harvey 2005). With this, the transnational elite began the political project of neoliberalism to reestablish their class control (Harvey 2005).

Neoliberalism has not succeeded in generating global capital accumulation, but it has succeeded in revitalizing the wealth of the elite and blatantly backing social inequality (Harvey

2005). The market is praised for its ability to promote "rights and freedoms" yet, it is evident that those "rights and freedoms" are only for those whose "income, leisure and security need no enhancing" (Harvey 2005:28). The most dangerous aspect of this neoliberal mindset is that increased social inequality is seen as beneficial for preserving the United States' economic power because neoliberals claim that an unequal playing field prompts necessary competition in the workforce (Harvey 2005). As a result, a low class status is blamed on personal and cultural reasons rather than the true cause of neoliberal systems (Harvey 2005).

The Accountability Era

The same false narratives used to support competition in marketplace neoliberal policies are used to support competition in schools as part of the 21st century school "reform" era, characterized by high-stakes testing, competition and school choice (Ravitch 2013). Regan's 1983 *A Nation at Risk* report cited America's declining status on the world stage to demand a raise in academic performance and reinstated the need for moral education in public schools (National Commission On Excellence in Education 1983, Hunt et al. 2010). This report established a call for accountability for student performance and was adopted into all subsequent education administrations (Ravitch 2013). "America 2000" was George H. W. Bush's education program which began the push towards testing accountability (Ravitch 2013). Clinton's "Goals 2000" provided the funding to further support national achievement standards and tests (Ravitch 2017). Then the infamous 2001 No Child Left Behind Act legislated the use of "assessments of and for learning" and locked teachers into regimented curriculums (Hunt et al. 2010, Ravitch 2017). Obama's "Race to the Top" program exaggerated the accountability, choice and testing rhetoric, supporting charter schools and giving the democratic endorsement to the era of public school destruction. These education agendas were under the guise of right-to-work laws but

favored union-busting, illustrating an intentional effort to decimate school teachers' collective bargaining rights and any potential for social movement organizing which would threaten neoliberal's private gains (Ravitch 2017, Lafer 2013). Like neoliberal policies, the accountability era is a bi-partisan agenda that benefits those already privileged.

Ravitch (2013) claims what is happening now in public schools "is not meant to reform public education but is a deliberate effort to replace public education with a privately-managed, free-market system of schooling" (5) which is destroying the institution that is supposed to produce a public, democratic citizenry. The charter school movement is central to the accountability era, arguing that increased school autonomy and competition in the public school sector leads to improved student achievement (Renzulli and Roscigno 2007). The reality is that charter school students perform no better than public school students and charter schools deplete public schools of resources while increasing segregation (Renzulli and Roscigno 2007). Every time a public school gets converted into a charter school, public money gets funneled into the same, private hands that champion the neoliberal paradigm (Ravitch 2010). Since neoliberals can now profit off of public education, there is support for the "reforms" which intentionally create a "crisis of public schools," blaming schools, teachers and students for their failures and validates private interventions (Ravitch 2013).

School Performance Frameworks (SPF) are the primary tool used to create this "crisis" and are based on the Performance Indictors: academic achievement (average test scores on state assessments), academic growth (progress students make in their achievement on CMAS, PSAT/SAT and ACCESS tests) and postsecondary readiness (graduation rates, dropout rates, matriculation into college or career certificate program and average scores on SAT) (CDE 2018).

SPF are used to classify schools as "failing" and legitimizes the privatization of primarily under-resourced, low-income schools (CDE 2018, Ravitch 2013).

As standardized tests are a factor of each Performance Indicator, testing-accountability is central to the "crisis." These assessments are often not testing how much a student knows, but how well a student can *perform* as a byproduct of the student's privilege in their exposure to test prep, test resources and instruction that fosters high achievement (Lafer 2006). The inherent bias of these tests are further damaging for minoritized students (Philips 2006). Standardized testing in the United States originated from IQ tests which were used to make broad, incorrect claims about the intelligence of non-white people and were widely cited in the eugenics movement (Gould 1996, Knoester and Au 2017). Today, bias is written into tests through questions crafted for students with the social, academic and knowledge capital of the dominant white American culture (Philips 2006).

These tests are considered "high-stakes" partly because of the grave consequential impacts for low-preforming schools. Non-white students perform disproportionately low on standardized tests which means the tests are often used as "a tool of white supremacy" to justify racist interventions (Knoester and Au 2017). The supposed "objectiveness" of standardized tests allows for affluent parents to send their children to whiter schools (better performing schools) without being labelled prejudiced (Knoester and Au 2017). This "free market" promotion of parent choice is problematic because affluent parent choice creates a vicious cycle of winners and losers where the most at-risk students are stuck at the schools with the least amount of parent funding and district investment, also leading to more segregated schools (Knoester and Au 2017, Haimson and Ravitch 2013).

Schools with predominantly minoritized students are where teachers are most frequently forced to use "teach to the test" techniques such as rote memorization and teacher centered instruction because these are the strategies falsely believed to improve test scores (McNeil 2000, Knoester and Au 2017, Diamond 2007). Alternatively, schools with high proportions of affluent students receive instruction that incorporates critical thinking, problem solving and active participation which is the type of instruction found to actually increase test scores due to deep student learning (Diamond 2007, Schroeder, Currin and McCardle 2018, Kingston 2018). These differentiated practices widen the achievement gap as high-needs schools continue to produce poor test takers, while affluent schools excel. Further damaging, is the way that the "teach to the test" strategies are correlated with the skills of low paying-jobs, continuing to subject low-income students to poor socioeconomic mobility (Diamond 2007).

Two case studies, in New York and Chicago, illustrate what is happening in public schools across the country. By running the New York public school system like a business, Mayor Bloomberg put immense pressure on schools to focus solely on providing standardized testing data (Haimson and Ravitch 2013). This pressure forced schools to refine the curriculum, eliminating project-based learning and fieldtrips (Haimson and Ravitch 2013). It was found that schools with a larger percentage of students receiving free or reduced lunch were much more likely to receive failing accountability reports which made them eligible for closure (Haimson and Ravitch 2013). Diamond (2007) conducted a qualitative study of teachers in Chicago public schools to determine how high-stakes testing impacts instruction and found that there is a strong link between assessment type and instruction practices. Not only were teachers pressured to cut important content but they felt like the content was out of order (Diamond 2007).

Test-based accountability is a neoliberal tool that intensifies inequality and bolsters the "public school crisis" by validating affluent parent choice, unfair teaching practices and the closure of many under-performing schools. These elements of the current school "reform" era are hidden under the farce of "objectivity," while really being the key features of the private profit making agenda (Ravitch 2017).

Mitchell in the Accountability Era

Within District 11, a disproportionately under-resourced district in Colorado Springs, Mitchell High School stands out as the most disadvantaged school (National Center for Educational Statistics 2018). Mitchell is also the most racially and ethnically diverse school in District 11 with 46.2% Hispanic or LatinX, 35.4% white, 14.3% black, 1.2% Asian, 2.3% American Indian/Alaska Native, and 0.5% Native Hawaiian/ Pacific Islander students (Mitchell High School 2019). Further, according to the principal of Mitchell, nearly a third of Mitchell students are English language learners (Mr. Perez 2019). These demographics mean that Mitchell students are the exact population of students who are most damaged by "reforms" in the accountably era. Mitchell is a third year Priority Improvement Plan school, on track for closure in two years if nothing changes. This SPF status is further evidence that Mitchell as an under-resourced school is being targeted in the accountability era since SPF can be used as a tool for private gain aimed at capitalizing on the systematic demolition of public schools. The principal indicated that the things that Mitchell struggles with the most in raising the SPF scores is low testing, and low participation (Mr. Perez 2018). Especially with Mitchell's low SAT scores— average 870 combined math and English compared to 1050 nationally, (Mitchell High School 2018)—Mitchell teachers complain that being "on the clock" makes Mitchell a stressful place to work where teachers feel pressured to "teach to the test," desperate to raise academic

achievement (English Department meetings 2018). As confirmed in the literature, this pressure is digging Mitchell deeper into its "failing" status and further blaming and hurting its students (McNeil 2000, Knoester and Au 2017, Diamond 2007). To get off "the clock" Mitchell will have to improve on the SPF Performance Indicators: academic achievement, growth and postsecondary readiness (CDE 2018). Given this, Mitchell must acknowledge that schools with high populations of minoritized students are disproportionately damaged by high-stakes testing reform, and therefore any initiatives to address SPF must keep the needs of their specific student body in mind by proposing changes that are not based in testing-accountability.

Additionally, Mitchell is situated within a district with a graduation crisis. In 2018, the graduation rate for District 11 was 70.1%, 10% lower than the average Colorado State Graduation rate (Colorado Springs School District 11). Even though Mitchell's overall graduation rate increased from 66.6% in 2017 to 72.3% in 2018, it is still the lowest of the four traditional high schools within the district (Colorado Springs School District 11). Additionally, according to Jeremy Koselak, District 11 System Improvement Specialist, with the new graduation guidelines for District 11—which include specific postsecondary workforce readiness demonstrations—there is an expected drop in graduation rates for the class of 2021 (Koselak 2019). A related issue is Mitchell's mobility rate which the principal claims is about 40 percent (Mr. Perez 2019).

Mitchell's mission statement is "[t]o prepare for a challenging future through perseverance, excellence and leadership" (Mitchell High School 2019). While this is an honorable mission, Mitchell's tense climate of testing pressure due to its SPF ranking, along with its poor graduation rates, mean that many Mitchell students are not prepared for a challenging future in postsecondary life. These factors limit their potential to challenge the inequalities they

have faced and will continue to face. Mitchell students deserve a curriculum option that is not tied to a neoliberal agenda, but rather one that is intentionally working to decrease inequality and gives all students a chance to succeed.

Mitchell plans to become an Innovation School to address its Priority Improvement Plan status. This step is necessary because as Mitchell's principal indicated, Mitchell has been historically denied the district support it needs for equitable improvement, and an Innovation School status grants Mitchell individualized school development plans that has the potential for equitable advancement in the district (Mr. Perez 2019). Research supports the importance of local autonomy because schools are located across vastly different communities which have different missions and needs (Meier and Knoester 2017, Diamond 2007). Given this, local flexibility with maintained support, can allow for previously neglected communities to prosper (Meier and Knoester 2017, Diamond 2007). To better serve the needs of its students and address what Mr. Perez defines as the "generational poverty" Mitchell students face, the Administration Team is determined to identify "innovations" that address its context as a high-minority, high-English Language learner (EL), high-needs school. The Innovation School model would allow them to do this by identifying specific "innovations" of change in the school. Further, within the flexibility of the Innovation School model Mitchell can adopt the Community School approach which is:

> A place and a set of partnerships between the school and other community resources. Its integrated focus on academics, health and social services, youth and community development and community engagement, leads to improved student learning, stronger families and healthier communities (Coalition for Community Schools 2019).

With this aim in mind, Mitchell is considering what specific "innovations" need to be proposed to become a successful Community School so to increase achievement and reverse their Priority

Improvement Plan status (Community School meeting 2019). Identifying a "curriculum, instruction and assessment innovation" is the first step to reach these goals (CDE 2017).

METHODS

This study uses a community based research (CBR) approach with mixed research methods. Community based research is founded on the interactive process between a community partner and the researcher, believing that the research should directly and positively create change as requested by the partner (Strand, Marullo, Cutforth, Stoecker, and Donohue 2003). CBR projects are co-constructed so that the community partner remains in control of the research goals (Strand, Marullo, Cutforth, Stoecker, and Donohue 2003). My CBR partner, the Administration Team at Mitchell High School, expressed interest in capstone projects and asked me to investigate capstones as one academic feature of their 2018 Innovation Plan. Specifically, the Leadership Team sought data on capstones in comparable Colorado schools along with long established programs for replication purposes. This study and the associated report submitted directly to the Leadership Team, provides Mitchell High School with evidence on how implementing capstones address the needs of Mitchell's specific student body and directly works to improve Mitchell's status as a third year Priority Improvement Plan school. True to the demands of CBR, my research questions and methods were constantly evolving throughout this process (Strand, Marullo, Cutforth, Stoecker, and Donohue 2003). To fully address the needs of my CBR partner, the following questions guided my research:

- Why would capstones be the "curriculum innovation" that best addresses the issues Mitchell students face and have the potential to reverse Mitchell's SPF ranking?
- Is Mitchell prepared to implement capstones as part of their Community School model?

The collection of data has three primary components: observations of meetings at the school, district and state level, interviews with educators who are capstones experts and interviews with

Mitchell faculty and staff, along with a comprehensive review of capstones in practice in Colorado and other states.

Meeting Observations

Having worked at Mitchell High School the previous year as a Public Achievement Coach, I had an established relationship with the English Department Chair, and co-writer of the Innovation Proposal. This relationship granted me access to faculty and staff meetings and deepened my contextual understanding of Mitchell. I attended three English department meetings, two strategic planning meetings with Mitchell's Administration Team and a collaborative meeting on Mitchell's plan to adopt the Community School model as part of their Innovation Plan. These meetings gave context into Mitchell's "crisis" SPF situation and was where I first heard discussions on the potential of capstones. I used field notes from these meetings to identify what specific things a curriculum at Mitchell should address and what curriculum changes the school was already considering. At the state level, I attended a Colorado Department of Education conference on the Development of Performance Assessments (hence referred to as CDE conference). This conference was hosted in collaboration with Envision Learning Partners who is the primary partner in capstone development within Colorado Schools. The CDE conference brought together innovative educators from across the state to define the outcomes of the Postsecondary and Workforce Readiness Competencies. One major agenda item was the role of capstones to asses those competencies. Therefore, I was able to observe rich discussion on Colorado schools who are already using capstones and what aspects of capstones are troubling for Colorado educators.

Interviews

At the state level I interviewed individuals who consider themselves "capstone experts." Jeremy Koselak, District 11's System Improvement Specialist, provided information on graduation trends in the district and shared data on how capstones could address the graduation problems that Mitchell faces. At the CDE conference I interviewed Susan Malek, a Deeper Learning Coach at Envision Learning Partners, who contributed to my understanding of the potential for capstones to be used as a formal assessment tool and provided me with resources related to professional development in capstone schools. Finally, I conducted interviews with Mitchell High School's principal to gather data on Mitchell's desire and capacity to implement capstones.

Capstone Reviews

The data in this section was drawn from literature on capstones in practice along with primary source data drawn from school websites, videos, blogs and capstone guidebooks. I used this data to find schools and programs that had parallels to Mitchell's needs in order to provide options for how capstones might operate at Mitchell. To deepen my understanding of current District 11 capstone operations, I also attended two capstone presentations at Doherty High School; one smaller display of knowledge along with an event titled "SpartanX" which was a larger community event hosted to display students' final demonstration of knowledge. Although Doherty has a course called "AP Capstone" which is not a Mitchell goal, the observations supplemented my understanding of why capstones in District 11 specifically, could be successful.

FINDINGS

Capstones are defined in a multitude of ways in the literature and within Colorado which gives the potential for schools to craft and define a capstone program that best serves the specific

needs of its students. For clarity, CDE (2014) states that capstones are "the culminating exhibition of a project, performance, or structured experiences that demonstrates learning of pre-determined outcomes." The following capstone reviews are intended to highlight three different ways success was captured in a capstone process. The three models are transferable to Mitchell's population of students and vision as a Community School. Importantly, none of the models are "capstone courses," which is valuable to Mitchell because then funding does not need to be allocated for the creation of a new class. The rubrics used by these schools can be found in the appendices.

Roaring Fork High School; Glenwood Springs, CO.

Since Mitchell has a study body with unique needs, it was necessary to review a capstone program in practice within a high school that has a comparable context. Roaring Fork High School is the closest resembling high school according to demographics. The students are 57% Hispanic, 40% white, 1% Hawaiian Native/Pacific Islander, 1% American Indian/Alaskan Native and 1% two or more races (U.S. News High School Rankings 2019). 43% of Roaring Fork High School students are qualified for free or reduced lunch (U.S. News High School Rankings 2019).

Background: In 2013, Roaring Fork District found that only 27% of the ninth grade class was on track to graduate college and career ready (CDE 2017). To increase graduation rates and college and career readiness rates, the district decided to implement capstones. In the 2015-2016 year advisory crews were slowly introduced into Roaring Fork schools to help support students learn about capstones and their new graduation plans (CDE 2017).

How it works: All graduating seniors in Roaring Fork school district are required to complete a capstone to graduate. Each capstone includes a proposal, portfolio with deliverables,

a community expert, a final product, a presentation and a reflection (Roaring Fork Schools 2017). Students are graded with rubrics at each stage (see Appendix A.).

Results: Many students have found that they were able to work on something they were already passionate about which allowed them to connect deeper with their community and practice skills that were relevant to them (Roaring Fork Schools 2018). Further, employers were impressed with the capstone process: "[the students] are going to be able to sell their business idea, they are going to be able to be creative, talk persuasively, those are all the skills that the capstone brings together" (CDE 2017). Rob Stein, Roaring Fork's superintendent, argues that "capstones are something different than how people typically see high school in America" (CDE 2017). Capstones offer the opportunity for a district to stand out which can be an attractive way to recruit students to the district and reduce district transfers. Additionally, it gives students in the district something to look forward to that is unique to their high school experience. Rob Stein also emphasized "if the capstone program is to succeed, the community is going to have to step up and provide mentoring and internships. Teachers will have to shift the focus of their teaching to provide necessary supports for students. Administrators will have to ensure that teachers are getting ongoing professional development to make that shift possible" (CDE 2017). The need for community support is evident as is the way that adopting a capstone option requires a necessary shift in teaching strategies to support students in a learning environment that is fostering genuine postsecondary readiness characteristics.

Independence High School; Charlotte-Mecklenburg schools, NC.

Schools outside of Colorado that have well established capstone programs should also be examined to help Mitchell consider the benefits of the capstone option and to provide guidance in creating Mitchell's capstone plan.

Background: Graduation projects are North Carolina's version of capstones. These projects have been a part of North Carolina high school curriculum since 1986 so there is much to learn from the state's experience (Public Schools of North Carolina 2018). Many districts in North Carolina have adopted the state's approved accountability rubrics to serve the needs of their local students (Public Schools of North Carolina 2018). Since the use of graduation projects in North Carolina are so prolific, many studies have been conducted to evaluate their programs. These studies indicate the clear benefits for students who have completed a graduation project as compared to schools in which the projects are not required (Public Schools of North Carolina 2018, Pulcheon 2011). Specifically, Egelson, Harmon and Bond (2002) did a comparative study with four control schools and four schools that utilized graduation projects and found that students who attended schools with graduation projects highly benefited from the capstone process. It was found that capstone students were much more likely to have high levels of teacher involvement that utilized student centered strategies (Egelson et al. 2002). Further, 65% of students in North Carolina asked about capstone projects, found that they used skills they gained through their graduation project when they entered the workforce or higher education (Egelson et al. 2002).

How it works: Since 2010, All seniors at Independence High School complete a graduation project. The goal of the graduation project is for students to demonstrate the skills they gained in high school (Charlotte-Mecklenburg Schools 2014). Each graduation project includes a research-based paper, an application (product of service learning), an oral presentation and a portfolio. Students are graded with rubrics at each stage (See Appendix B.).

Results: Since most of the project work is done without direct supervision of teachers, the students at Independence High School take full ownership of their projects (Charlotte-

Mecklenburg Schools 2014). Through the research-based paper students demonstrates that high school has prepared them to analyze, apply and synthesize knowledge (Charlotte-Mecklenburg Schools 2014). The service learning component of the graduation project demands real word application of skills which are transferable to post graduation experiences (Charlotte-Mecklenburg Schools 2014). Students defend their knowledge to Review Board members, helping students develop public speaking and problem solving skills. The portfolio portion assesses students' ability to organize and make sense of their gained skills.

Bryan Adams High School; Dallas, TX.

Background: Envision Learning Partners, the primary partner of CDE in portfolio and capstone development, has worked closely with two public high schools to implement portfolio defense—one form of capstones. One of those schools is Bryan Adams High School which transitioned to using the portfolio defense model in 2015. This form of capstone can be used to directly validate the student's development that happens both in and out of the classroom.

How it works: Students are given time and guidance to complete tasks in their content areas and in their daily lives that are connected to postsecondary readiness skills. Then in their senior year, students reflect, based on criteria that the school determines, and create a portfolio that represents both content mastery and proficiency in postsecondary readiness skills. Students then take that portfolio and use it to make an argument for college or career readiness in an oral presentation (Suzanne Malek, Envision Learning Partners 2019). Rubrics designed using Stanford Center for Assessment, Learning and Equity (SCALE) are used to evaluate the students. Mitchell should consider using SCALE as a resource in their capstone development process.

Results: Having to defend a portfolio is reflective of real world situations. During the CDE conference we were shown a video of alumni students speak to the things that they have

had to do in college and life after high school that they felt especially prepared for because of portfolio defense and ahead of their peers. These included: job interviews, performance reviews and meetings where they have to present their findings (CDE conference 2019). Additionally, when done well, portfolio defense improves instruction because it makes student and teacher work public. Representatives from Envision Learning Partner explained the power of how sitting and listening to a student talk about what they personally gained, makes it obvious what needs to be adjusted and who needs to be supported. This option is asset based in that it opens up the way students can demonstrate their proficiency to different settings and different problems they are solving because students are given the agency to craft their own portfolio, pulling from wherever the relevant skill development took place.

ANALYSIS

Capstones should be Mitchell's "curriculum innovation" because they fit well in the Community School model, effectively serve the specific needs of Mitchell's student body, and address Mitchell's low scores on the SPF Performance Indicators: academic achievement, academic growth and postsecondary readiness. Specifically, capstones increase participation and exam scores, two aspects of SPF that Mr. Perez conveyed particular concern for.

Community School

In a Community School, students' education must be integrated with community, which capstones can accomplish (Coalition for Community Schools 2019). The first two capstone models reviewed have a large emphasis on community and can serve as examples for ways Mitchell's capstone process could work within the Community School model. Roaring Fork High School requires all students to have a community expert whom the student must meet with regularly for consultations. The community expert is expected to "encourage academic rigor…

know what professional standards look like in their field and feel comfortable offering feedback"

(Roaring Fork Schools 2017). At Independence High School, community engagement is

apparent in the service learning aspect of the capstone in which the student must "identify/design

and participate in a suitable, related service learning experience that connects to their community

issue" (Charlotte-Mecklenburg Schools 2014). The Mitchell Administration Team is already

considering what a community orientated capstone might look like:

> We can make a capstone about job shadowing, or an internship, a project kind of like a thesis but it has a theme, whether it is business administration, entrepreneurship. And we support that not only with classes and with partnerships in the community that would support that type of thing. It takes collaboration and a lot of work but I think we have plenty of partnerships with CC, UCCS, Pikes Peak, United Airlines… there are plenty of people out there because there is a shortage on the workforce that are willing to come and work with us. So I think with innovation school I think we will be able to get that flexibility so I think the capstone projects are huge (Mr. Perez 2019).

Mitchell's strong existing partnerships suggest that the school is prepared to try this "curriculum

innovation." The enthusiasm of Mitchell's partners is encouraging because it implies that

capstones would be something that impacts both Mitchell students' development while

improving the surrounding community's organizations and businesses. Importantly, all the

capstones reviewed indicated that students are given many options to complete their project,

implying the flexibility in curriculum that Mr. Perez indicated Mitchell strives for in a

Community School. The observations of Doherty High School's "SpartanX" Capstone

Presentations informed how apart from the capstone development process being tied to

community, the final showing can also be a powerful community building event. "SpartanX"

was held in the school's auditorium and about 500 people attended including business leaders,

community members and the Super Intendent. This was a wonderful way to showcase what the

students were learning, how they have developed applicable workforce skills and would

contribute positively to the community post-graduation. Capstones, in whatever form Mitchell decided to implement align perfectly with the Community School model.

SPF Performance Indicator: Academic Achievement

The state uses the average scores on state assessments to calculate a school's academic achievement score (CDE 2017). Given Mitchell's population, the literature confirms that it is in the best interest of Mitchell students to avoid "teach-to-the-test" techniques and instead adopt techniques that actually foster the academic achievement of all students (McNeil 2000, Knoester and Au 2017, Diamond 2007). Of course, since tests are used to determine academic achievement and students who strive to attend top tier universities must have high test scores, Mitchell students do need to be able to perform. Luckily, research supports that students exposed to Problem Based Learning (PBL), the type of instruction capstones demand, do as well or better on standardized tests than students who are traditionally taught (Kingston 2018, Parker et. al 2008). Cervantes et al. (2015) did a study on the impact PBL had on a school with majorly "at-risk" students. They found that PBL positively impacted student achievement by requiring the "active engagement of students which places students in realistic, problem solving environments that serve to make connections between the classroom and real life experiences" (Cervantes et al. 2015:62). Mitchell students who have been systematically damaged by accountability "reforms," deserve a chance at equitable academic achievement, which capstone instruction supports.

Many Mitchell teachers related their difficulties keeping students engaged which inhibit academic achievement (English Department meetings 2018). During one strategic planning meeting a teacher noted, "kids literally walk out of this building if they don't like what is going on" (Mr. Monks 2018). Additionally, since the Mr. Perez relayed that low participation is one of the main reasons Mitchell is a Priority Improvement Plan school, Mitchell students need to be

able demonstrate their learning through projects that actually excite them. Meier and Knoester (2017) wrote a comprehensive review of seven alternative assessment models based on their experiences in schools along with synthesized data on alternative assessments. Meier and Knoester (2017) found that capstones use "authentic assessments" defined as "assessments conducted while students are performing work that are intrinsically valuable and worth doing" (8) as opposed to "assessment based only on whether children have learned a particular narrow list of facts" (25). Capstones encourage active learning which will keep students engaged thereby fostering academic achievement. Importantly, active learning is found to be specifically motivating for students in urban schools with student demographics similar to Mitchell (Meier and Knoester 2017). Mitchell's Administration too is convinced that the authenticity of student learning is key:

> The fact that [the capstone] is authentic, that kids are interested in doing it, I mean every kid should be engaged with that, if you are engaged in some type of project that is leading them somewhere…I think overall you will increase, astronomically, the engagement of students more than it is now…And I think we will have a better result that way, you have less dropout rates, more engagement…it is a win-win (Mr. Perez 2019).

Academic achievement will only be accomplished if students care about what they are learning and capstones give students the power to study what captivates them, so they can learn deeply. Students testimonies from Roaring Fork High School illustrate the strength of capstones to do exactly that: "It makes capstone less of an assignment and more of a way to plot out some time to do something they love. Authenticity allows for students to learn in a more captivating environment" (Roaring Fork Schools 2018).

  Although capstones are proven to more authentically develop skills through their engaging pedagogy, they can seem like a more ambiguous form of measuring content mastery. This lack of standardization was cited to be intimidating both by leadership at Mitchell and

people in the CDE who use context mastery as a way to gauge academic achievement on a day to day basis in the classroom. This is a valid concern, however, many schools have successfully implemented capstones and have therefore developed rubrics that provide the necessary amount of standardization so that capstones can be used to accurately measure academic achievement (see appendices for a few sample rubrics). When discussing this concern with Mr. Perez he reassured that "if you base your project on the standards that you have articulated for that class and for the graduation requirements, then it shouldn't be so bad" (Mr. Perez 2019). This comment indicates how Mitchell's Administration is already considering ways to use class and graduation standards to shape a capstone process. This framing, along with the rubrics included at the end of this study, should provide the amount of standardization Mitchell teachers need to feel comfortable using capstones to gauge academic achievement.

SPF Performance Indicator: Academic growth

The state uses the progress students make on CMAS assessments, PSAT/SAT and EL student ACCESS assessments to calculate a school's academic growth score (CDE 2017). Apart from the ways the previous section illustrated how capstones can increase test scores, other schools' experiences with capstones confirm the potential of this "curriculum innovation" for academic growth. So far, the District Capstone option, off of the state "Gradation Guidelines: Menu of College and Career-Ready Demonstrations," has been implemented in Roaring Fork School District, Canon City School District, JeffCo School District and Denver Public Schools. Where implemented, capstones have been found to offer Colorado schools the opportunity to provide students with the type of instruction that fosters academic growth (CDE 2014). Additionally, the long duration of capstone practices in North Carolina and subsequent research on them, revealed that 75% of students who completed a graduation project believed that their

writing, research, speaking, planning and time management improved due to the graduation project (Egelson et al. 2002). This statistic points to the power capstones have in supporting academic growth.

Mitchell teachers have indicated some reservations about whether capstones would actually lead to academic growth. Mr. Perez shared:

> So yeah, I think the capstone, I think people are afraid of it a little bit from what I get. How do you control the quality of it? Is it really rigorous enough? Are we going to be watering down graduation requirements? So I get that part of it, their trepidation. But to be honest with you, if you look at our SAT scores, if you want to talk about grade inflation, it is nationwide. If you look at SAT scores versus graduation rates, it is already inflated. Teachers are passing students out of high school knowing that they are not ready for college because what are they going to do? Stay here for five years if you don't pass algebra? So they are already inflated nationwide when it comes to the SAT. So I am excited to see what kind of work we can do (Mr. Perez 2019).

Mr. Perez points out the inflation that happens in high schools as an example of the faults with the current testing paradigm. In doing this, he illustrates how capstones won't cause the problems that educators are worried about, because the problems are actually symptoms of what's already happening. Alternatively, since capstones are integrally a more complicated form of assessment, districts in Colorado who have already implemented capstones were all found to develop a capstone program that is rigorous and worth the effort of implementation (CDE conference 2019). Further, these districts have found that capstones are scaffolding the growth of all students whereas generally only their privileged students perform well on standardized tests (CDE conference 2019). Clearly, academic growth can be better addressed through capstones because they will genuinely foster growth equitably, so that teachers aren't passing students, unjustifiably, out of high-school.

SPF Performance Indicator: Postsecondary Readiness

The state uses graduation rates, dropout rates, matriculation rates into college or career certificate programs and SAT scores to calculate a school's postsecondary readiness score (CDE 2017). While attending the CDE conference, I observed educators and policy makers from across the state discuss the limitations of defining postsecondary readiness in this way. Arguing the sentiment "we get what we measure," conference participants agreed that achieving a score is not proficient for demonstration of postsecondary readiness as these are "not transferable skills" (CDE conference participants 2019). Rather, and evident by the focus on the CDE conference, there is a push for postsecondary readiness to be evaluated based on students' proficiency in core competencies, also referred to as knowledge and skills (CDE 2019). Performance-based assessment in the form of capstones requires students to show their ability to apply content knowledge in critical thinking tasks that naturally transfer to workforce and college success (Stanford School Redesign Network 2008). Further, as the successful North Carolina capstone high school found, the capstone process requires students to reflect on all they have gained in high school so they are able to articulate to themselves, future colleges and/or future employers what their skills are.

By identifying capstones as their "curriculum innovation," Mitchell too is supporting a more comprehensive definition of postsecondary readiness which benefits Mitchell students (CDE 2017). Rather than continue to use a curriculum that pushes test prep, Mitchell's Administration wants to redefine readiness in a way that honors the incredible things that Mitchell students already do. Mr. Perez frames this possibility by explaining his concern with the way the current curriculum does a disservice to Mitchell's EL students:

> You know a kid who comes from Honduras who doesn't speak English, comes to a four-year diploma model, he or she is 17 they are not going to stay here for years, they are going to drop out…Like why not instead of doing this regular model, maybe it is the capstone project that is specific for them that includes learning English, taking so many

English classes so that they can pass a basic English test, and then have them on a different track to the GED and now, we have a kid that will be more productive and maybe eventually go to college because they can say you know what? I know enough English then that is a path they can take later. But we are not doing any favors by doing this four-year thing and then we drop them because if you are 18 and you have two credits then we drop you because this is not your path and so we just sending these young people out there and they are like okay I have choices. I can sell drugs, steal, work underground because maybe I don't have any papers you know all these choices but you know I don't think they have to be there. We can do much better for the kids at that stage and put them on a track for them to be successful. And whether that is a capstone project I think that is a great idea (Mr. Perez 2019).

In this way, Mitchell is looking for a "curriculum innovation" that changes the system so that all students are validated in their postsecondary readiness. Beyond EL students, many Mitchell students would benefit from a redefined postsecondary readiness definition:

> We look at some of these kids that score horribly on the SAT but you see them in the auto shop, they are excellent mechanics, someone in the ROTC, I mean we just got Gold Standard on our team, and that is nationwide. So there are so many things, we have kids that are struggling academically they are getting scholarships for theater. There are so many ways that, math, your success in the SAT, is not going to dictate your success for life. If that is true, I wouldn't be here (Mr. Perez 2019)

Portfolio defense, the type of capstone used at Bryan Adams High School, could be the specific capstone program for this Mitchell goal to of redefining success. Portfolio defense is students curating evidence of their work to back up claims about their skills and the curriculum tool which enables students to advocate for their individualized learning successes (Justin Wells, Envision Learning Partners 2019). Capstones, in their ability to honor a more holistic approach to learning, is the "curriculum innovation" that paves the path to establishing a new definition. Not only is this shift validating, it is also practical. Hanover Research (2013) conducted a review of capstone programs, profiling six schools who successfully implemented capstones as graduation requirements. The review found that capstones confront senior "burn-out" by allowing students to relate the work they have done in high school to preparing for

postsecondary life (Hanover Research 2013). The Mitchell Administration Team wants to do more to make capstones a practical "curriculum innovation" for its students:

> capstones have come into play because we are looking at how can we provide our students not only with authentic experiences that will prepare them to either go to college or the workforce and also give them credits for their experiences (Interview with Mr. Perez 2019).

By awarding credit to students who use their capstone projects to work towards their English proficiency goals or their workforce goals, Mitchell is not only helping those students gain applicable skills that will help them fight inequality in their life but also giving more students the chance to graduate which expands the pool of successful graduates entering the workforce to include students who employers might otherwise discount due to low test scores. Proof of this workplace success is evident in how supportive and impressed employers in Roaring Fork school district were of the students' capstone projects. Further, the video shown at the CDE conference confirmed that students felt especially prepared and ahead of their peers in workforce tasks due to their Portfolio defenses (CDE conference 2019). Capstones provide the learning tools that will make Mitchell students postsecondary ready, no matter the path they choose to take.

Further, a vital element of postsecondary readiness that Mitchell should address is their potential to educate students to engage in democracy as this is one of the most powerful ways students will work against injustice (Meier and Knoester 2017). Engaging in democracy takes many forms, but education that helps students realize the impact that they can have by working collaboratively with others to solve public problems is one attainable impact schools can have (Boyte 2008). Capstones respect students as decision-makers and deliberators which are how these democratic dispositions grow (Meier and Knoester 2017). High school graduates are only postsecondary ready, if they are prepared to engage actively in creating a new world for themselves.

CONCLUSION

As confirmed through reviewing the literature, current capstones in practice and Mitchell's commitment to student equity, implementing capstones as the "curriculum innovation" within Mitchell's Innovation Plan, is a tangible away for Mitchell to target academic achievement, growth and postsecondary readiness. By addressing these indicators, Mitchell has the potential to reverse its SPF ranking and effectively support its students. Assessments can genuinely address inequality if they are not focused on ranking students harshly into winners and losers as has been supported within the neoliberal paradigm (Meier and Knoester 2017). This type of marketplace accountability exaggerates segregation, quality gaps between schools and endorses harmful narratives of school "reform" that further damages those already suffering (Meier and Knoester 2017). Divorcing from a testing-accountability mindset, Mitchell has the opportunity to actually teach students the skills to be successful post-graduation, and hopefully reduce the harm that current school "reforms" are having on the school and its students. Importantly, a capstone "curriculum innovation" will also keep students engaged and present, which addresses one of the primary reasons Mitchell has fallen to a Priority Improvement Plan status (Mr. Perez 2018).

Since the goal of this study is to support Mitchell's Administration team as they move forward with their Innovation Plan, a few key suggestions have been identified. First, the autonomous capabilities of an Innovation School should be capitalized on so that Mitchell can use this study and the related Mitchell report, to craft a capstone program tailored specifically for Mitchell students. Second, as the Roaring Fork Superintendent indicated and Diamond (2007) found: policy shifts greatly impact teacher instruction but the pedagogical impacts are mediated by the individual teachers' approach to education and the community of educators they are

surrounded by. So, while implementing a "capstone innovation" has the possibility to change surface level instructional practices, Mitchell must also be ready to implement ample professional development provided to aid teachers to understand the power pedagogical advantages that capstone hold (Diamond 2007, Darling-Hammond 2004).

My research revealed some possible options to help with this need for professional development. The AP Capstone teacher at Doherty High School teaches a Project and Inquiry class for teachers which focuses on teacher mindset shift. As an experienced capstone teacher she would be able to provide workshops within District 11 for Mitchell teachers. Additionally, the Buck Institute for Education (2019) provides teacher workshops on PBL. Envision Learning Partners, one of the primary developers of capstones in Colorado schools also partners with schools to help them adopt capstones as assessments (Envision Education 2018).

As one Mitchell educator identified, "the system changes once you change the target. I know here at Mitchell, the target is SAT, we need a different target" (English Department meeting 2018). Assessments can encourage the type of schooling that gives students the skills to think critically about power structures and succeed in postsecondary life, but only if equity is the target (Meier and Knoester 2017). Proposing capstones as Mitchell's "curriculum innovation" within their Innovation Plan is the most direct way to redefine assessments in an asset-based way, supporting Mitchell students and advocating against accountability era "reforms" that have so unfairly wronged Mitchell students. Mitchell needs this curriculum change, the Community School model it is ready for it; and its students deserve it.

REFERENCES

Boyte, Harry. 2008. "Citizen Professionals." Pp. 143–157 in *The Citizen Solution: How You Can Make a Difference*. Saint Paul: Minnesota Historical Society Press.

Buck Institute for Education. 2019. "PBL Works." Retrieved February 19, 2019 (https://www.pblworks.org/what-is-pbl).

Cervantes, Berandine, Lynn Hemmer, and Kamiar Kouzekanani. 2015. "The Impact of Project-Based Learning on Minority Student Achievement: Implications for School Redesign." *NCPEA Education Leadership Review of Doctoral Research* 2(2):50–66.

Charlotte-Mecklenburg Schools. 2014. "Graduation Project: 2014-2015 Student Manual." Retrieved February 19, 2019 (http://schools.cms.k12.nc.us/independenceHS/Documents/2014-2015%20School%20Year/CMS2014GPManual_RF.pdf).

Coalition for Community Schools. 2019. "What is a Community School?" Retrieved March 1, 2019 (http://www.communityschools.org/aboutschools/what_is_a_community_school.aspx).

Colorado Department of Education and Asia Society's International Studies School Network. 2014. "Portfolio and Capstone Guidebook." Retrieved January 18, 2018 (https://www.cde.state.co.us/postsecondary/portfolio-and-capstone-draft-implementation-guidebook).

Colorado Department of Education. 2017. "Colorado Education Highlights." Retrieved February

    19, 2019 (https://www.cde.state.co.us/edhighlights/detail/highlights-20170215.

Colorado Department of Education. 2018. "Capstone." Retrieved December 8, 2018

    (https://www.cde.state.co.us/postsecondary/grad-capstone).

Colorado Department of Education. 2018. "CDE 2018 School Rankings." Retrieved December

    18, 2018 (https://www.cde.state.co.us/accountability/performanceframeworkresults).

Colorado Department of Education. 2018. "Priority Improvement and Turnaround Districts and

    Schools: A Supplement to the CDE District Accountability Handbook." Denver, CO.

    Retrieved December 18, 2018

    (http://www.cde.state.co.us/accountability/priority_improvement_turnaround_supplement

    _2018).

Colorado Department of Education. 2019. "Innovation School." Retrieved March 4, 2019

    (https://www.cde.state.co.us/choice/innovationschools).

Colorado Department of Education. 2019. "Innovation Schools Act Guidance." Retrieved March

    4, 2019 (https://www.cde.state.co.us/choice/innovationplanguidance).

Colorado Department of Education. 2019. "School and District Accountability." Retrieved

    March 6, 2019 (http://www.cde.state.co.us/accountability/accountability-fact-sheet-

    2017).

Colorado Springs School District 11. 2017. "2018 On-Time Graduation Analysis." Colorado

    Springs: Published Report.

Colorado Springs School District 11. 2018. Board of Education Policy Regulation IKF-R-.

    "Graduation Requirements (Applied to 2021 Graduates): Regulation IKF-R-1."

    Regulation to Policy IKF. Retrieved December 18, 2018

(https://www.d11.org/cms/lib/CO02201641/Centricity/domain/69/SectionI/IKF-R-1.pdf).

Darling-Hammond, Linda. 2004. "Standards, Accountability, and School Reform." *Teachers College Record* 106(6):1047–1085.

Diamond, John. 2007. "Where the Rubber Meets the Road: Rethinking the Connection Between High-Stakes Testing Policy and Classroom Instruction." *Sociology of Education* 80:285–313.

Envision Education. 2018. "Envision Learning Partners." Retrieved March 8, 2019 (https://envisionlearning.org).

Egelson, Paula, Susan Harman, and Sally Bond. 2002. "A preliminary study of Graduation Project programs in selected southeastern high schools." Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA. Retrieved February 19, 2019 (https://files.eric.ed.gov/fulltext/ED466336.pdf).

Gould, Stephen J. 1996. *The Mismeasure of Man.* Revised and expanded ed. New York, NY: Norton.

Haimson, Leonie, and Diane Ravitch. 2013. "Unequal Schools." *The Nation,* May 6, pp. 41–43.

Hannover Research. 2013. "Best Practices in Capstone Projects: Prepared for Northwest Independent School District." District Administration Practices: Washington DC.

Harvey, David. 2005. *A Brief History of Neoliberalism.* Oxford: Oxford Press

Hunt, Thomas, James Carper Thomas Lasley, and Daniel Raicsh. 2010. *Encyclopedia of Educational Reform and Dissent.* Thousand Oaks, CA: Sage Publications.

Kaestle, Carl. 2001. "Introduction." Pp. 11–17 in *School: The Story of American Public Education* edited by S. Mondale and S. Patton. Boston: Beacon Press.

Kingston, Sally. 2018. Project Based Learning & Student Achievement: What Does the Research

      Tell Us?" *PBL Evidence Matters* 1(1):1–11.

Knoester, Matthew, and Wayne Au. 2017. "Standardized Testing and School Segregation: Like

      Tinder for Fire?" *Race Ethnicity and Education* 20(1): 1–14.

Kolesak, Jeremy. 2019. Email-message to author, February 27.

Lafer, Gordon. 2013. "The Legislative Attack on American Wages and Labor Standards, 2011-

      2012." *Economic Policy Institute*, October 31, 2013.

McNeil, Linda. 2000. *Contradictions of School Reform: Educational Costs of Standardized*

      Testing. New York: Routledge.

Meier, Deborah, and Matthew Knoester. 2017. *Beyond Testing: Seven Assessments of Students*

      and Schools More Effective Than Standardized Testing. New York: Teachers College

      Press.

Mitchell High School. 2018. Student Achievement and Demographics." Retrieved February 27,

      2019(https://www.d11.org/cms/lib/CO02201641/Centricity/domain/3231/schools/mitchel

      l.pdf).

Mitchell High School. 2019. "Mitchell School Profile." Retrieved February 19, 2019

      https://www.d11.org/Page/10515.

National Center for Educational Statistics. 2018. "Common Core of Data: Search for Public

      Schools." Retrieved December 18, 2018 (https://nces.ed.gov/ccd/schoolsearch/).

National Commission On Excellence in Education. 1983. *A Nation at Risk: The Imperative for*

      Educational Reform. Washington, DC: U.S. Department of Education. Retrieved January

      18, 2019 https://www.edreform.com/wp-

      content/uploads/2013/02/A_Nation_At_Risk_1983.pdf).

Parker, Walter, Susan Mosborg, John Bransford, Nancy Vye, John Wilkerson, and Robert
Abbott. 2008. "Rethinking Advanced High School Coursework: Tackling the
Depth/Breadth Tension in the AP US Government and Politics Course." *Journal of
Curriculum Studies* 43(4):533–559.

Phillips, Michele. 2006. "Standardized Tests Aren't Like T-Shirts: One Size Doesn't Fit All."
Multicultural Education June: 52–55.

Public Schools of North Carolina. 2018. "The North Carolina Graduation Project: Standards of
Quality and Verification Process for High School Accountability." Retrieved February
19, 2019
(http://www.ncpublicschools.org/docs/accountability/testing/eoc/gradproject18.pdf).

Pulcheon, Jamie Lynn. 2011. "The North Carolina Graduation Project: Student and Stakeholder
Perceptions on Educational Aspirations, Workforce Preparedness, and Commitment to
Service." Ph.D. dissertation, Department of Educational Leadership, University of North
Carolina Wilmington.

Ravitch. 2010. "the Myth of Charter Schools." *The New York Review of Books* November 11.
Retrieved March 6, 2019
(http://68.77.48.18/RandD/Other/Myth%20of%20Charter%20Schools%20-
%20Ravitch.pdf).

Ravitch, Diane. 2013. Reign of Error: *The Hoax of the Privatization Movement and the Danger
to America's Public Schools.* New York: Alfred A. Knopf.

Ravitch, Diane. 2017. "The Miseducation of Liberals: Don't like Betsy DeVos? Blame the
Democrats." *New Republic*, May 23, pp. 16–17.

Renzulli, Linda, and Vincent Roscigno. 2007. "Charter Schools and the Public Good." *Contexts* 6(1):31–36.

Roaring Fork Schools. 2017. "Capstones Handbook 2017-2018." Retrieved March 1, 2019 (http://www.rfsd.k12.co.us/documents/Capstone_Handbook.pdf).

Roaring Fork Schools. 2018. "Roaring Fork School Capstones Program Video." Retrieved February 20, 2019 (https://www.youtube.com/watch?v=5yH4xuapw1Y).

Schroeder, Stephanie, Elizabeth Currin, and Todd McCardle. 2018. "Mother Tongues: The Opt-Out Movement's Vocal Response to Patriarchal, neoliberal Education Reform." *Gender and Education* 30(8):1001–1018.

Stanford School Redesign Network. 2008. "What is Performance-Based Assessment." *Stanford University School of Education*, Stanford: CA.

State Board of Education. 2013. "Colorado High School Graduation Guidelines." Retrieved December 8, 2012 (http://www.cde.state.co.us/postsecondary/graduation-guidelines).

Strand, Kerry, Sam Marullo, Nick Cutforth, Randy Stoecker, and Patrick Donohue. 2003. *Community-Based Research and Higher Education.* Jossey-Bass: San Francisco.

U.S News and World Report. 2019. "Roaring Fork High School Student Body." Retrieved February 19, 2019 (https://www.usnews.com/education/best-high-schools/colorado/districts/roaring-fork-school-district-no-re-1/roaring-fork-high-school-4162/student-body).

Appendix A. Roaring Fork Assessment Rubrics (Roaring Fork Capstones Handbook 2017-2018)

CAPSTONE PRODUCT RUBRIC

Name:
School:

Pass with Honors	Pass	Need to Revise or Complete
REFLECTION. In the end, the most important part of your capstone is what you learn about yourself as a student, learner, and citizen.		
❏ Your reflection is honest, reflective, and insightful. ❏ Your reflection moves beyond a simple description of the project to an analysis of how the experience contributed to your understand yourself, others, and/or skills/knowledge.	❏ Your reflection is honest and reflective. ❏ Your reflection shows you are attempting to analyze the experience to better understand yourself, others, and skills/knowledge.	❏ Your reflection needs to be more reflective or honest. ❏ You make an attempt to apply the learning experience to understand yourself, others, and/or course concepts but fails to demonstrate depth of analysis.
LEARNING STRETCH. Your capstone is an opportunity to learn about something you've always been passionate or curious about. It's a chance to learn new skills, or gain new knowledge, or be pushed in new ways.		
Product is an original work that clearly demonstrates challenge and growth for the student by: ❏ Going beyond other coursework to produce an original idea in the field **OR** ❏ Incorporating (through documentation) complex skills, processes, and content that is typically only performed by professionals in the field. ** *Option to personalize – how is this a learning stretch for THIS student?*	Product is a sophisticated, if not entirely original, work that demonstrates challenge and growth for the student by: ❏ Offering insights/inferences that extend beyond the learning gained through other coursework. ❏ Showing (through documentation) that student has learned new skills and/or processes critical to the field of study.	Product demonstrates little challenge and growth for the student because: ❏ The documentation doesn't reveal insights or learning that extend beyond student's other coursework. ❏ Documentation reveals very few new skills and/or processes or student has an incomplete grasp of skills/processes or is unable to demonstrate them well.
QUALITY. After high school, you will be judged by real-world standards, and this is an opportunity to learn what those standards look like in different fields. Your capstone should provide you the opportunity to complete several versions or drafts, receive feedback, make improvements, and reach the standard required in the professional world of work.		
❏ Product meets professional standards and could be presented in the workplace without many changes.	❏ Product clearly went through several drafts or designs, is polished, and is ready for public presentation.	❏ Product shows effort, but is not ready for public presentation.
** *Option to personalize – what, exactly, does high quality look like with this type of product?*		
AUTHENTICITY. Students and adults alike are more likely to be motivated to do something well if it is "real", either because it has an impact on someone else, helps solve a real problem, or involves real-world tools or standards.		
The product is as authentic as possible given the confines of a high school project. It is evident that much effort has been made to make it beneficial, purposeful, or real. It utilizes tools, tasks, standards, processes, or audiences used by adults in real settings and by professionals in the workplace, and meets at least one of the following criteria: ❏ It meets a real need in the world, or the products that you create are used by real people, OR ❏ It has a direct impact on or use in the real world.	Your product is somewhat authentic. It utilizes tools, tasks, standards, processes, or audiences used by adults in real settings and by professionals in the workplace, and meets one of the following criteria: ❏ It sets up a scenario or simulation that is realistic, even if it is fictitious, OR ❏ It creates a product that may not actually be used in the real world, but is similar to the kinds of products people really use.	❏ The product is not very authentic. More effort could have been made to make it beneficial, purposeful, or real, either by meeting a real need, focusing on a real issue or problem, setting up a realistic scenario, or utilizing real-world standards/tools/audiences, or generally making it bigger than the student him/herself.
DOCUMENTATION. The process that you go through to complete your project is often as important as the product itself, but sometimes the full process is hard to understand just by looking at a final product. Your documentation helps others understand the learning, effort, revisions, and mistakes that went into the final product.		
❏ Key documentation in your Schoology (or other online) portfolio is **thorough**. The artifacts/deliverables have been chosen with care and provide comprehensive, organized documentation of the product creation. ❏ The documentation **supports and enhances the** process required to create the product.	❏ Key documentation necessary to evaluate your product is **included and organized** (or linked) **in** Schoology (or other online format). This may include select drafts, photos, videos, meeting notes, and journal entries. ❏ The documentation **shows the process** that occurred to create the product.	❏ Key documentation is **missing**, or the artifacts/deliverables **need to be more organized**. ❏ The documentation doesn't show the process required to create the product. **More evidence is needed** of the learning and work.
PRESENTATION. You presented your capstone to an audience, either at the presentation showcase or a different, authentic setting. In doing so, you shared a slice of what you learned and/or demonstrated something related to your capstone.		
❏ Presentation completed. Details (location, date, and audience):		
FINAL EVALUATION (select one) ❏ **Pass with Honors** ❏ **Pass** ❏ **Need to Revise**	**COMMENTS:**	

Appendix B. Independence High School Rubrics (Charlotte-Mecklenburg Schools Graduation Project: 2014-2015 Student Manual)

Research Paper Rubric

Total Points	Evaluation Criteria	Distinguished 4	Effective 3	Insufficient 2	Unsatisfactory 1	No Submission 0
	Content	Presents skillful, insightful, focused thesis statement	Presents thesis Statement with effective insight and focus	Presents thesis statement with minimal insight and focus	Presents no thesis statement or one with no insight and focus	No Paper Submitted
		Exemplary synthesis of ideas, providing multiple perspectives that draw strong and clear connections between thesis and related ideas	Effective synthesis of ideas, providing multiple perspectives that draw connections between thesis and related ideas	Effective synthesis of ideas, providing limited perspectives that draw insufficient connections between thesis and related ideas	Does not synthesize ideas, or provide multiple perspectives, shows limited understanding of connections between thesis and related ideas	
		Demonstrates exceptional selection of supporting information, *including a primary source,* clearly relevant to thesis and related ideas	Demonstrates effective selection of supporting information, *including a primary source,* clearly relevant to thesis and related ideas	Demonstrates selection of supporting information, *including a primary source,* relevant to thesis and related ideas	Minimal use of supporting information relevant to thesis and related ideas *May not include primary source*	
		Masterfully balances use of quotations and student paraphrasing	Effectively balances use of quotations and student paraphrasing	Insufficiently balances use of quotations and student paraphrasing	Does not incorporate use of quotations and student paraphrasing	
		Demonstrates flawless use of prescribed format (MLA, APA) including pagination, citations, primary and secondary sources	Demonstrates effective use of prescribed format (MLA, APA) including pagination, citations, primary and secondary sources	Demonstrates flawed use of prescribed format (MLA, APA) including pagination, citations, primary and secondary sources	Does not use prescribed format (MLA, APA) Does not include Works Cited page or cite resources within text	
		Seamlessly integrates student-generated visuals (charts, diagrams, pictures, etc.) to enhance and emphasize important content	Effectively integrates student-generated visuals (charts, diagrams, pictures, etc.) to emphasize important content	Integrates student-generated visuals (charts, diagrams, pictures, etc.) to emphasize content	Does not include student-generated visuals (charts, diagrams, pictures, etc.) to clarify content	
	Conventions	Exhibits masterful use of language, including skillful word choice, clarity, consistent voice, and effective compositional choices that convey specific meaning	Exhibits good use of language, including intentional word choice, clarity, consistent voice, and effective compositional choices that convey specific meaning	Exhibits ineffective use of language, including weak word choice, limited clarity, inconsistent voice, and ineffective compositional choices	Exhibits flawed use of language, including poor word choice, confusing ideas, no voice, and lack of compositional choices	
		Masterfully uses standard writing conventions in grammar, spelling, capitalization, punctuation, and usage to enhance meaning	Effectively uses standard writing conventions in grammar, spelling, capitalization, punctuation, and usage to enhance meaning	Minimally uses standard writing conventions in grammar, spelling, capitalization, punctuation, and usage to enhance meaning	Does not use standard writing conventions effectively in grammar, spelling, capitalization, punctuation, and usage	
Total Points	*Each dimension can receive between 1-4 points. The maximum score for a Distinguished level paper is 32. The minimum score for a submitted paper is 8. Papers can receive a combination of points from all categories. If students do not submit a paper, they may receive a score of 0.*					

Service Learning Experience/ Product Rubric

Total Points	Evaluation Criteria	Distinguished 4	Effective 3	Insufficient 2	Unsatisfactory 1	No Submission 0
	Learning Over Time/ Depth of Knowledge	Chooses a significant community/ global issue and demonstrates creative and effective problem-solving skills	Chooses a community/global issue and demonstrates sufficient problem-solving skills	Chooses a community/ global issue but demonstrates limited problem-solving skills	Does not focus on a community/ global issue Does not demonstrate problem-solving skills	No Submission
		Artifacts demonstrate a significant, logical, and relevant link to the service learning experience and add to the presentation	Artifacts demonstrate an adequate and relevant link to the service learning experience	Artifacts demonstrate a minimal link to the service learning experience	Artifacts show little link to the service learning experience	
		Demonstrates comprehensive, critical analysis of researched issue in developing the service learning experience	Demonstrates analysis of researched issue in developing the service learning experience	Demonstrates limited understanding of researched issue in developing the service learning experience	Demonstrates unacceptable understanding of researched issue in developing the service learning experience	
		Demonstrates exemplary creative thinking, decision-making, reasoning, and/or problem-solving	Demonstrates creative thinking, decision-making, reasoning, and/or problem-solving	Demonstrates insufficient creative thinking, decision-making, reasoning, and/or problem-solving	Demonstrates unacceptable creative thinking, decision-making, reasoning, and/or problem-solving	
		Demonstrates extensive connection to real world situations	Demonstrates effective connection to real world situations	Demonstrates limited connection to real world situations	Demonstrates unacceptable connection to real world situations	
	Quality of Work Effort	Exhibits creative and exceptional results using talents, abilities, and varied resources Displays extensive use of leadership skills	Exhibits effective results using talents, abilities, and varied resources Displays effective use of leadership skills	Exhibits insufficient results using talents, abilities, and varied resources Displays minimum use of leadership skills	Exhibits unacceptable or no results using talents, abilities, and varied resources Lacks use of leadership skills	
		Displays evidence of exceptional technical, creative, and/or organizational skills	Displays evidence of effective technical, creative, and/or organizational skills	Displays evidence of minimal technical, creative, and/or organizational skills	Displays no evidence of technical, creative, and/or organizational skills	
		Service Learning Experience demonstrates exceptional quality that exceeds 15 hours of time and effort	*Service Learning Experience demonstrates quality that reflects 15 hours of time and effort*	*Service Learning Experience demonstrates insufficient quality resulting from minimal time and effort (less than 15 hours)*	*Service Learning Experience demonstrates unacceptable evidence of time and effort*	
Total Points	*Each dimension can receive between 1-4 points. The maximum score for a Distinguished level product is 32. The minimum score for a submitted product is 8. Products can receive a combination of points from all categories. If students do not submit a product, they may receive a score of 0.*			**Scale:** 32-28 =4 27-20 =3 19-12 =2 11-8 =1 0 =0	***Overall SLE/Product Score*** ***4, 3, 2, 1, 0***	

Presentation Rubric

Total Points	Evaluation Criteria		Distinguished 4	Effective 3	Insufficient 2	Unsatisfactory 1	No Submission 0
	Communication/ Speaking Skills		Consistently speaks with engaging volume, tone, and articulation Consistently makes appropriate eye contact	Speaks with effective volume, tone, and articulation Appropriate level of nervousness Frequently makes appropriate eye contact	Has difficulty speaking with appropriate volume, tone, and articulation Makes infrequent eye contact	Does not speak with appropriate volume, tone, and articulation Makes no eye contact	No Presentation
			Consistently maintains appropriate posture, non-verbal communication techniques Consistently exhibits poise, enthusiasm, confidence Engages audience	Maintains appropriate posture, non-verbal communication techniques Generally exhibits poise, enthusiasm, confidence Engages audience	Exhibits weak posture, non-verbal communication techniques Exhibits limited poise, enthusiasm, confidence	Poor posture, non-verbal communication techniques Lacks poise, enthusiasm, confidence	
			Effective use of grammar, diction, and style	Appropriate use of grammar, diction, and style	Occasional inappropriate use of grammar, diction, and style	Consistently uses inappropriate grammar, diction, and style	
			Artifacts creatively enrich or reinforce presentation	Artifacts effectively reinforce presentation	Artifacts detract from presentation	Provides no artifacts	
	Content / Coherence		Effectively defines purpose of presentation, maintaining focus throughout	Defines purpose of presentation, generally maintaining focus throughout	Insufficiently defines purpose of presentation, may lose focus	Does not adequately define purpose of presentation or adhere to its purpose	
			Presents a logical and engaging sequence which the audience can follow	Presents a logical and engaging sequence which the audience can follow	Presents a logical and engaging sequence which the audience can follow	Presents a logical and engaging sequence which the audience can follow	
	Extemporaneous Responses		Effectively, confidently, politely, and accurately responds to judges' questions	Politely and accurately responds to judges' questions	Insufficiently responds to judges' questions	Unable to respond to judges' questions	
	Time		Consistently manages time effectively	Generally manages time effectively	Insufficient time management (over or under significantly)	Mismanages allotted time (1-2 minutes)	
Total Points	*Each dimension can receive between 1-4 points. The maximum score for a Distinguished level presentation is 32. The minimum score for a presentation is 8. Presentations can receive a combination of points from all categories. If students do not present to judges, they may receive a score of 0.*					*Scale:* 32-28 =4 27-20 =3 19-12 =2 11-8 =1 0 =0	*Overall Presentation Score* **4, 3, 2, 1, 0**

Portfolio Rubric

Total Points	Evaluation Criteria	Distinguished 4	Effective 3	Insufficient 2	Unsatisfactory 1	No Submission 0
X2	Student Reflections	Reveals mature and critical insight into how student anticipated changes and dealt with contingencies	Reveals sufficient insight into how student anticipated changes and dealt with contingencies	Reveals insufficient insight into how student anticipated changes and dealt with contingencies	Reveals no insight into how student anticipated changes and dealt with contingencies	No Portfolio
	Student Growth	Demonstrates significant ongoing academic and/or personal growth	Demonstrates adequate academic and/or personal growth	Demonstrates insufficient academic and/or personal growth	Does not demonstrate academic and/or personal growth	
	Technology	Technology used skillfully to enhance construction of portfolio	Technology used adequately to construct portfolio	Technology used minimally in construction of portfolio	Uses no technology in construction of portfolio	
	Format and Appearance	Portfolio appearance is professional	Portfolio appearance is adequate	Portfolio appearance is inappropriate or insufficient	Does not adhere to guidelines for portfolio appearance	
	Organization	Exhibits effective organizational skills in compilation of portfolio	Exhibits adequate organizational skills in compilation of portfolio	Exhibits insufficient organizational skills in compilation of portfolio	Exhibits no clear organizational skills in compilation of portfolio	
	Completeness	Exceeds requirements for portfolio contents in thoughtful ways to enhance meaning	Meets requirements for portfolio contents	Meets some requirements for portfolio contents	Does not meet requirements for portfolio contents	
Total Points	*Each dimension can receive between 1-4 points. The maximum score for a Distinguished level portfolio is 32. The minimum score for a portfolio is 7. Portfolios can receive a combination of points from all categories. If students do not submit a portfolio, they may receive a score of 0.*				*Scale:* 28-25 =4 24-18 =3 17-11 =2 10-7 =1 0 =0	*Overall Presentation Score* **4, 3, 2, 1, 0**