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OHIO'S DROPOUT RECOVERY AND PREVENTION COMMUNITY SCHOOLS: A COST-BENENFIT ANALYSIS AND MODEL POLICY RECOMMENDATION FOR STAKEHOLDERS

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A DISSERTATION

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Abstract

High school dropouts are potential high school graduates. This has been proven in the State of Ohio where a subset of community schools (known as charter schools in other states) entitled Dropout Recovery and Prevention schools (DORPs) serve students who have either already dropped out of high school or are credit deficient. This research examined DORPs using Cost-Benefit Analysis (CBA) methodology and developed model policy recommendations for DORP stakeholders, based on the results of the CBA.

Until 2014, DORPs in Ohio were protected from closure by the Ohio Department of Education (ODE) due to poor performance, *i.e.*, low graduation rates and/or poor academic measures, by a waiver that was codified in state law. That waiver law expired in 2014 and current Ohio law allows ODE to close DORPs after three years of poor academic performance.

The CBA of DORPs resulted in an estimate of the annual and lifetime economic impact of the closure of DORPs in the State of Ohio. The CBA was chosen as the economic measurement model due to its broad historical use in evaluating and justifying government programs.

This research strongly suggests Ohio DORPs have a net positive cost-to-benefit balance and, conversely, the closure of Ohio DORPs is anticipated to have a negative economic impact on governments and communities. This study contributes to the body of knowledge in education economics justification, charter school justifications, and the uses of CBA in evaluating educational programs. No prior research on the net cost-to-benefit analysis of dropout recovery and prevention schools has been found.

Keywords: Dropouts, Dropout Recovery, Dropout Prevention, Charter Schools, Cost-Benefit Analysis

Dedication

This dissertation is dedicated to father, David L. House, who literally worked himself to death to give his children more opportunity than he had as a young man. The youngest of nine children, my father left school in the ninth grade. In the late 1940's, in the hills of Kentucky, a male was not expected to finish high school. It was the expectation a male would go to work in his young teenage years to help bring income to the family. The son of a tobacco farmer, my father left school to work in the Kentucky tobacco fields. The factory boom of the 1950's led him to Ohio where he became a machinist. Drafted to the United States Army in 1954, he served two years and returned to Ohio to resume his blue collar career as a machinist. He married my mother in 1957 and they began their lives together in Hamilton, Ohio, where they had four children, of which I am the youngest. At the age of 44, my father survived a massive heart attack and was unable to work again. The doctors told him if he survived five additional years, it would be a long life. My father defied the odds and courageously lived another 21 years during which he had three more heart attacks and three open-heart surgeries. At the age of 65 his health had deteriorated to the point where he was admitted to University of Cincinnati hospital heart transplant unit. In August, 1999, after waiting six months in the hospital, the doctors finally found a match and performed a heart transplant that did not succeed. My father passed August 31, 1999.

To my father: Your grace, humility, courage, pride, and humor in the face of death is a life lesson in which I will never forget. I hope I have made you proud for I am proud to be your namesake.

David L. House II, M.P.A., Ed.D.

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Chapter 1: Introduction

General Area under Study.

High school dropouts are potential high school graduates. This has been proven in the State of Ohio. The Montgomery County Out-of-School Youth Initiative (OH), funded by a local government entity, was successful in recovering students and providing them with the opportunity to earn a high school diploma.

In the State of Ohio, a school district can receive state funds for educating a young adult until the age of 22. Thus, a school can recover students and provide them opportunities to earn a high school diploma until that student turns 22 years of age. This provides communities in Ohio opportunities to recover students and allow the recovered students an opportunity to earn a high school diploma in lieu of earning a General Equivalency Diploma (GED). In addition, communities can reduce their dropout rates and create better educated workforces via dropout recovery programs.

Ohio has a special designation for dropout prevention and recovery schools (DORPs). Schools can seek the special designation from the Ohio Department of Education (ODE), to specifically engage in dropout recovery and serve at-risk youth. Community schools that enroll a majority of their students, aged 16 to 21 that are at-risk of dropping out or have already done so, may be defined as "dropout-prevention-and-recovery" schools. Because such schools serve mainly at-risk youth, or students who are not currently enrolled in a school, they are considered a special subset of community schools for accountability purposes (Churchill, 2014).

Until 2014, Ohio DORPs were protected by a waiver process. ODE produces a Local Report Card for all public schools in the state (In Ohio, community schools are

considered public schools as they receive public financing). This Local Report Card grades schools on a variety of variables. Thus, community schools in Ohio can be closed if they consistently earn poor marks on the yearly Local Report Card. Ohio DORPs could, prior to 2014 when the, original waiver law expired, obtain a waiver that would protect them from the community school closure process.

At the end of the 2014 fiscal year, the State of Ohio Legislature took no action to reinstate the expiring law that provided a waiver to DORP's. Thus, the Ohio Department of Education, under current law can close DORP's due to poor academics (defined in Chapter 2). The primary aim of this study will be a cost/benefit analysis to examine the economic impact that closure of these schools will have should the Ohio legislature fail to reinstate the waiver process for DORPs, with the secondary aim of providing policy advocacy proposals in accordance with the data produced by the research.

Context and Background.

The Montgomery County (OH) Out-of-School Youth Initiative began formal operations in 2001. This initiative was community-based as the private sector, K-12, and higher education institutions collaborated to recover dropouts. The operations of the initiative were funded by a yearly grant from the county in which the initiative was based. However, the initiative was not part of the county government structure, but housed at the large community college within the county in which students were being served. At the beginning of this initiative, the community college raised private sector funds to help finance the community schools that were to be associated with the initiative. Thus, this was a unique local program, as the initiative operations were funded by a local

government entity, employees of the initiative were state employees at the community college, and the partner schools of the initiative had their public funding enhanced by private funding (in Ohio, community schools hold the legal designation of being a not-for-profit entity; therefore, private funds can be raised and used by a community school). The initiative helped reduce the county dropout rate from 25.6% in the academic year 2000-2001 to 12.6% in the academic year 2007-2008 (Carter, M. and House, D., 2010).

From 2001-2012, the initiative partnered with eight schools that specifically served dropout recovery or at-risk students. Seven of the eight schools were community schools, and one school was supported by the local career technical center. The school associated with the career technical center served at-risk students who were truant and/or credit-deficient but had yet to completely drop out of the high school setting.

The initiative earned national recognition from a variety of publications/entities. In October 2005, the initiative was presented with the prestigious Crystal Star Program Award of Excellence in Dropout Recovery, Intervention and Prevention. This annual award is distributed by the National Dropout Prevention Center/Network (NDPC/N), based at Clemson University. NDPC/N and is broadly recognized as the national authoritative entity on dropout recovery and intervention programs.

In addition to receiving the national award, NDPC/N also named the initiative a "model program" in Career and Technical Education (Smink, J., and Reimer, M., 2005) Also, NDPC/N named the initiative a model program that has "Strong Evidence of Effectiveness," the highest distinction within the NDPC/N model program database (Clemson University, http://www.dropoutprevention.org/modelprograms/show_program.php?pid=28).

The initiative was one of twelve community programs selected to be prominently featured in a report entitled *Whatever it Takes: How Twelve Communities are Reconnecting Out-of-School Youth* (Martin, N. and Halperin, S., 2006) from the American Youth Policy Forum, located in Washington, D.C. The initiative was also featured in the National Education Association/Youth Development and Research Fund publication *Answering the Call: Addressing the Dropout Trend*. (NEA, 2007).

Also, the initiative was a 2010 Bellwether Award Finalist. The Bellwether Award recognizes innovative and trendsetting community college programs in the areas of workforce development, planning governance and finance, and instructional programs and services. The Institute of Higher Education, which is housed in the College of Education, University of Florida, sponsors the Bellwether Award. Finally, the initiative was named 2011 Program of the Year by the International Association of Truancy and Dropout Prevention (IATDP). IATDP is an association of educators, government officials, and stakeholders whose history of truancy and dropout prevention efforts date back to 1911.

Purpose.

This descriptive, economic public policy analysis study demonstrated, via cost benefit analysis, the economic impact closures of Ohio Dropout and Prevention Recovery Schools (DORP's) would have on the State of Ohio and provided policy advocacy proposals with regard to the outcome of the analysis.

Research Questions.

RQ1. What is the comparative cost of educating DORP students versus the estimated societal cost of failing to graduate DORP graduates for the 2012-2013 school year?

RQ2. What does the aggregate average difference in earnings for high school dropouts vs. high school graduates mean in terms of difference of median incomes?

RQ3. Using an estimated comparison of a lifetime cost of one drop out to government, compared to the cost of educating that one graduate for six years in a DORP school, what are the cost benefit analytics if the state only graduated 5%, 10%, 15%, 20%, or 25% of the total number of 2012-2013 DORP graduates?

RQ4. What is the annual monetary difference of government transfers to Ohio Adults by Educational Attainment when examining the number of 2012-2013 DORP Graduates

Data Gathering.

For this descriptive cost benefit analysis, individually identifiable information on human subjects was not gathered. Existing secondary data from the Ohio Department of Education (ODE), the United States Department of Education (US DOE) and the United States Census Bureau (USCB) was used.

Assumptions/Delimitations/Limitations.

As noted in the section above, this descriptive cost benefit analytic study used data gathered from ODE and the United States Department of Education. Data reported from ODE and the United States Department of Education are generally self-reported data. Thus, this project is based on the assumption that individual school districts in Ohio have been comprehensive, forthright and honest when reporting their data regarding dropouts and truancy.

The percentages of dropout students vary from state to state. In addition, within a particular state, the dropout rates and the reasons why students drop out can vary due to geographical factors. Students in large cities have a different environment and challenges than students in rural areas. Thus, since the experience of this researcher was with dropout recovery schools in an inner-city and as the dropout rate is higher in urban areas than in rural areas, the results of this study may not be applicable to rural communities. This study is delimited to the state of Ohio. Thus, this study may not be generalizable to other states due to other demographic factors.

Significance.

It was the experience of this researcher, in attending conferences and working in the field of dropout and truancy for the past decade, the majority of traditional public school districts focus on dropout prevention, essentially keeping at-risk and/or truant students in school. This is a noble endeavor and economically beneficial to communities, individuals, families, and society, as a whole. However, scant attention has been paid to recovering students who have dropped out of K-12 education systems.

Dropout recovery is defined as efforts that encourage adolescents who have left school without a high school diploma to re-engage in formal education and graduate from high school (Catterall, 2012). The foundational model developed through this research may be useful in informing school districts of the economic benefits of supporting specialized educational initiatives (or programs, or schools) that are dedicated to recovering students who have dropped out of the K-12 education system. Finally, this research provides a practical advocacy model through descriptive statistics and a cost benefit analysis that may be utilized by members of the state legislature or DORP advocates.

Definitions.

4-Year Longitudinal Graduation Rate—as defined by ODE, the longitudinal graduation rate places students into a cohort when they enter the 9th grade. Each student is then tracked to identify whether they graduate within four years or are a non-graduate (Ohio Department of Education, http://bireports.education.ohio.gov/PublicDW/asp/Main.aspx).

Achievement—A component used by ODE to measure DORPs. As defined by ODE, this component measures the percentage of students who pass all five graduation tests by the time they reach the 12th grade or by the time they are within three months of turning age 22 (ODE website, http://education.ohio.gov/getattachment/Topics/Data/Report-Card-Resources/Sections/Dropout-Recovery/Understanding-Ohios-New-Dropout-Recovery-Community-School-Report-Card.pdf.aspx).

American Community Survey—The American Community Survey (ACS) is an ongoing survey that provides data every year, giving communities the current information they need to plan investments and services. Information from the survey generates data that help determine how more than $400 billion in federal and state funds are distributed each year. To help communities, state governments, and federal programs, ACS inquiries about: age, sex, race, family and relationships, income and benefits, health insurance, education, veteran status, disabilities, where you work and how you get there, and where you live and how much you pay for some essentials. All this detail is combined into statistics that are used to help decide everything from school lunch programs to new hospitals.

Association for Educational Communications and Technology (AECT)—is a professional association of thousands of educators and others whose activities are directed toward improving instruction through technology

CBA—Cost Benefit Analysis implies a systematic comparison of the magnitude of the costs and benefits of a form of investment in order to assess its economic profitability (Woodhall, 2004). Therefore, to obtain a CBA:

> Net Benefits = Total Benefits – Total Costs (Wholey, J., Hatry, H., Newcomer, K., 2010).

Community Schools—Known as charter schools in other states, community schools are not-for-profit public schools in Ohio governed by specific Ohio community school law. In general, community schools are allowed to operate with more flexibility regarding curriculum being non-unionized schools. In exchange for this flexibility,

community schools must perform well via academic measures or risk being closed by the State of Ohio.

Descriptive Statistics—Descriptive statistics are intended to help one summarize the overall trends or tendency in the data, provide an understanding as to how varied scores may be, and provide insight as to where one score stand in relation to others (Creswell, 2012).

Descriptive Study— Describe phenomenon or behaviors. Descriptive studies do not provide explanations of a phenomenon or behavior (Bryant, 2004).

Dropout Recovery and Prevention Schools (DORPs)—DORPs are Ohio community schools that specifically serve students between the ages of 16-21 who are credit deficient or have previously "dropped out" of high school. DORPs are public schools in Ohio that are legally designated as not-for-profit entities and can only serve a student until that student turns 22 years of age. To be designated a DORP community school in Ohio, schools must apply for, and be granted, a waiver from the Ohio Department of Education.

The Common Core of Data (CCD)—a program of the U.S. Department of Education's National Center for Education Statistics that annually collects fiscal and non-fiscal data about all public schools, public school districts and state education agencies in the United States. The data are supplied by state education agency officials and include information that describes schools and school districts, including name, address, and phone number; descriptive information about students and staff, including demographics; and fiscal data, including revenues and current expenditures (National Center for Education Statistics, http://nces.ed.gov/ccd/).

Current Population Survey—The Current Population Survey (CPS), sponsored jointly by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics (BLS), is the primary source of labor force statistics for the population of the United States. The CPS is the source of numerous high-profile economic statistics, including the national unemployment rate, and provides data on a wide range of issues relating to employment and earnings. The CPS also collects extensive demographic data that complement and enhance our understanding of labor market conditions in the nation overall, among many different population groups, in the states and in sub state areas. (United States Census Bureau, http://www.census.gov/cps/).

Dropout Recovery—Dropout recovery is defined as efforts that encourage adolescents who have left school without a high school diploma to re-engage in formal education and graduate from high school (Catterall, 2012).

Educational Planning—in the broadest scope, is the process of systematic, rational analysis to the process of educational development with the goal of making education more efficient in responding to the needs of students and community. Educational planning deals with the future while pulling enlightenment from the past (Coombs, 1970).

Gap Closing—A component used by ODE in the measurement of DORPs. As defined by

ODE, this component measures how well a school is doing in narrowing gaps in reading, math and graduation rate among students identified in up to ten student subgroups (ODE website, http://education.ohio.gov/getattachment/Topics/Data/Report-Card-Resources/Sections/Dropout-Recovery/Understanding-Ohios-New-Dropout-Recovery-Community-School-Report-Card.pdf.aspx).

GED—Equivalency test for those who failed to complete a high school diploma. The acronym stands for General Educational Development.

High School Completer—an individual who has been awarded a high school diploma or an equivalent credential, including a General Educational Development (GED) certificate (U.S. Department of Education, 2014).

Graduation—A component used by ODE to measure DORPs. As defined by ODE, this component separately measures the percentage of students who graduate within four, five, six, seven or eight years of entering the 9th grade in five measure ratings. The numerators and denominators from each of the five rates will be combined to create the graduation component rating (ODE website, http://education.ohio.gov/getattachment/Topics/Data/Report-Card-Resources/Sections/Dropout-Recovery/Understanding-Ohios-New-Dropout-Recovery-Community-School-Report-Card.pdf.aspx).

National Center for Education Statistics—The National Center for Education Statistics (NCES) is the primary federal entity for collecting and analyzing data related to education in the U.S. and other nations. NCES is located within the U.S. Department of Education and the Institute of Education Sciences. NCES fulfills a Congressional mandate to collect, collate, analyze, and report complete statistics on the condition of American education; conduct and publish reports; and review and report on education activities internationally (https://nces.ed.gov/about/).

ODE—Ohio Department of Education

Ohio Graduation Test (OGT)—Current law requires students who first enrolled in grade 9 before July 1, 2014, to take and pass the Ohio Graduation Tests for high school

graduation. Due to legislative changes, these are the last cohort of students who must pass all five parts of the Ohio Graduation Tests to receive high school diplomas. The Ohio Graduation Tests will continue to be administered through 2022 for those who need to pass one or more parts to obtain a diploma (http://education.ohio.gov/Topics/Testing/Ohio-Graduation-Test-OGT).

Planned Programming Budgeting System (PPBS)—Robert McNamara introduced CBA into the Department of Defense as a portion of the Planned Programming Budgeting System (PPBS). In 1965, President Lyndon B. Johnson required the use of PPBS throughout the executive branch (Fuchs, E., and Anderson, J., 1987).

Progress—a component used by ODE to measure DORPs. As defined by ODE, this component measures the average annual gain made by the group of students in reading and mathematics using the NWEA Measure of Academic Progress (MAP) assessment (ODE website, http://education.ohio.gov/getattachment/Topics/Data/Report-Card-Resources/Sections/Dropout-Recovery/Understanding-Ohios-New-Dropout-Recovery-Community-School-Report-Card.pdf.aspx).

Safe Harbor for Ohio Community School Closure—The majority of community schools receive the same traditional report cards as other public schools. Community schools can be closed by law for continued poor performance. That said, Ohio's current safe harbor provisions say the state will not use grades published on the 2014-2015, 2015-2016 and 2016-2017 report cards to judge whether it will close a school http://education.ohio.gov/Topics/Data/Report-Card-Resources/Safe-Harbor-Guidance).

SES—Socioeconomic status

Status Dropouts—The status dropout rate represents the percentage of 16- through 24-year olds who are not enrolled in school and have not earned a high school credential (either a diploma or an equivalency such as the General Educational Development [GED] certificate). In this indicator, status dropout rates are estimated using both the American Community Survey (ACS) and the Current Population Survey (CPS). The 2008 ACS has a larger sample size than the CPS, which allows for more detailed comparisons of status dropouts rates by race/ethnicity, nativity, and sex (National Center for Education Statistics, 2010).

Student Post-Secondary Outcomes—a component included in DORPs grade card by ODE, but not a measurement component. Included in DORP grade cards for informational purposes only. As defined by ODE, this component reports additional student outcome data relevant to the college and career readiness of students enrolled in dropout recovery schools (ODE website, http://education.ohio.gov/getattachment/Topics/Data/Report-Card-Resources/Sections/Dropout-Recovery/Understanding-Ohios-New-Dropout-Recovery-Community-School-Report-Card.pdf.aspx).

US DOE—United States Department of Education

USCB—United States Census Bureau

Chapter 2: Literature Review

The Problem.

This descriptive public policy analysis examined, via Cost Benefit Analysis (CBA), the economic impact of closures of Ohio Dropout and Prevention Recovery Schools (DORPs) on the State of Ohio. The National Center for Education Statistics defines the status dropout rate as "the percentage of 16- through 24-year-olds who are not enrolled in school and have not earned a high school credential (either a diploma or an equivalency credential such as a General Educational Development [GED] certificate). Status dropouts are no longer attending school (public or private) and do not have a high school level of educational attainment. Based on data from the Current Population Survey, the status dropout rate decreased from 12 percent in 1990 to 7 percent in 2012" (U.S. Department of Education, 2014).

In 2008, approximately 3.0 million 16- through 24-year-olds were not enrolled in high school and had not earned an alternative credential. These status dropouts accounted for 8.0 percent of the 38 million 16- through 24-year-olds in the nation. Males ages 16–24 had higher status dropout rate (8.5 percent) than females which had a 7.5 percent status dropout rate in 2008. The status rate for Asian/Pacific Islanders stood at 4.4 percent, and Whites stood at 4.8 percent. The Black status dropout rate was 9.9 percent whereas the Hispanic status rate stood at 18.3 percent (U.S. Department of Education, 2010).

Table 1. 2008 Status Dropout Rates by Ethnic Grouping

Hispanics	18.3%
Black	9.9%
White	4.8%

Source: Department of Education, 2010

The overall status dropout rate stood at 7 percent in 2012. For males, the status dropout rate stood at 7 percent in 2012. For females, the status rate stood at 6 percent in 2012. For Whites in 2012 the status dropout rate stood at 4 percent and the rate for blacks was at 8 percent. The rate for Hispanic was at 13 percent (U.S. Department of Education, 2014).

Table 2. 2012 Status Dropout Rates by Ethnic Grouping

Hispanics	13%
Black	8%
White	4%

Source: Department of Education, 2014

The percentage of Hispanics ages 16–24 who were dropouts was consistently higher than that of Whites and Blacks between the 36-year period of 1972-2008. Black

and White status dropout rates have fallen in this 36 year period. For whites, the reduction has been from 12.3 percent in 1972 to 4.8 percent in 2008. In the same time period, the status dropout rate for Blacks declined from 21.3 percent to 9.9 percent. Between 1972 and 1990, Hispanic status dropout rates were stayed consistent. However, since 1990 the Hispanic status dropout rate has begun to fall from 32.4 percent to 18.3 percent in 2008 (National Center for Education Statistics, 2010).

Age is also a factor as, according 2008 data, 16 year old students accounted for 2.8% of all status dropouts, and 17 year old students accounted for 4.7%. Students 18 years of age represented 9.0% of all status dropouts. Students of the age of 19 accounted for 11.1 percent and 20-24 year old students accounted for 11.2% of all status dropout rates (National Center for Education Statistics, 2010). Thus, one can see that as a student grows older, the likelihood of becoming a dropout increases, especially between the ages of 16-19.

The report *The Consequences of Dropping Out of High School: Joblessness and Jailing for High School Dropouts and the High Cost for Taxpayers* (Sum, Khatiwada, McLaughlin, and Palma, 2009) from the Center for Labor Market Studies at Northeastern University examines the societal economic impact of high school dropout. This 2009 report notes "the average high school dropout will cost taxpayers over $292,000 in lower tax revenues, higher cash and in-kind transfer costs, and imposed incarceration costs relative to an average high school graduate."

Levin, Belfield, Muennig, and Rouse conducted research proving high school graduation associates with better health, higher incomes, lower criminal activity, and lower welfare receipt. The authors noted the lifetime value of public economic benefits

to society to be $209,100 (2007). Research from Cecilia Rouse of Princeton University shows a dropout, over his or her lifetime, costs government approximately $260,000 (2005). A 2008 report from the Economics Center for Education and Research at the University of Cincinnati lists the fiscal benefits to taxpayers pertaining to high school graduation. The study notes on average, high school graduates pay more in taxes ($564) compared to high school dropouts who only pay $316 annually. In addition, high school graduates receive fewer government assistance payments in areas such as housing, food stamps, health care, unemployment, and disability compensation, as high school graduates receive an average of $2,806 annually compared to high school dropouts who receive an average of $5,091. The study concludes, after subtracting the cost of schooling, Ohio taxpayers can realize a lifetime net benefit of nearly $210,000 per high school graduate, which amounts to a return of $11.62 for every $1 invested (Vredeveld, 2008).

The University of Cincinnati study also notes economic benefits to individuals and to the state economy. Vredeveld concludes, due to higher wages and employment, the per capita median earnings of high school graduates is $8,459 higher than that of high school dropouts. Also, individuals who earn a high school diploma can realize a net lifetime benefit of over $470,000 in increased income. In addition, the report concludes the total economic loss to the Ohio economy in terms of lost earnings due to lack of education amounts to $7.8B annually (Vredeveld, 2008).

Regarding indicators of a student dropping out of high school, there are many. Hahn summarizes ten indicators as identified by social scientists for students who are at-risk for dropping out:

- Behind a grade level and older than their peers
- poor academic performance
- dislike of school
- continual detention and suspension
- pregnancy
- students who are in families that receive welfare or single parent homes
- the attraction of employment
- the attraction of military service
- undiagnosed learning disabilities
- language difficulties (Hahn, 1987)

Hahn also did research into principal reasons students themselves give for dropping out. Students cite poor grades, dislike for school, alienation from peers, employment, and marriage and pregnancy. The most common response from dropouts as to why they dropped out of school was academic performance (1987).

The size and organization of high schools by grades 9-12, 7-12, or 10-12 positively correlates with high school dropout rates. Alspaugh (1997), found schools with longer grade spans (7-12) had lower dropout rates than schools with shorter grade spans (10-12) and notes school organization and curricular offerings may have as much or more of a relationship to dropout rates than does socio-economic status. Alspaugh (1997) also states school size may be a factor as the schools with lowest dropout rates are small schools that maintain a K-6, 7-12 organizational scheme, as opposed to schools who have K-5, 6-8, 9-12 organizational scheme. Buckley notes several descriptors that lead

decreases in graduation rates such as race, pregnancy while enrolled in high school, enrollment, employment status, and cultural norms (2012).

Balch identifies ten strategies to address the reduction in dropout rates (1989). Identify eighth grade students who are potential dropouts, provide every student with a contact person at the school, use college students as mentors, vocational education programs developed in earlier grades, and the development of new programs with long-term commitment to the dropout problem are the first five recommendations. Attempts to recover dropouts, involvement of parents and community, re-evaluation of the C-average rule for sports and extra-curricular activities with the intent to keep at-risk students involved in school activities, stronger guidance for students in grades six-through-nine, and an increased focus on engagement over summers after grade ten and during the months of February and March, which have been shown to be critical risk periods for potential dropouts are the remaining five recommendations.

The National Dropout Prevention Center/Network reports fifteen effective strategies for improving student attendance and truancy prevention, which would reduce the overall dropout rate. Systematic renewal, which calls for a process of evaluating goals and objectives relative to school policies and practices, school-community collaboration, safe-learning environments, and family engagement are four strategies. Early childhood education, early literacy development, mentoring/tutoring, service-learning, alternative schooling, after-school opportunities, and staff professional development are seven additional strategies. Active learning, educational technology, individualized instruction, and career and technical education are the remaining four strategies (Smink and Reimer, 2005).

The GED.

Students, viewed categorically, who earn high school diplomas achieve higher socioeconomic status (SES) than students who earn a GED and high school graduates fare better in the labor market than GED recipients (Institute of Education Sciences, 2011 and Tyler and Lofstrom, 2009). In the year 2006, of those in the lowest socioeconomic quartile, 22.2% were high school graduates, and 34.7% were GED recipients. However, the earning of a GED proved to be more beneficial financially than remaining a high school dropout as the majority of those in the lowest socioeconomic quartile, 55.2% were high school dropouts (Institute of Education Sciences 2011). While the availability of cost efficient GED options exist for students, as noted above, those who obtain a high school diploma fare better financially and obtain higher socioeconomic status than those who earn a GED (Institute of Education Sciences, 2011 and Tyler and Lofstrom, 2009).

Heckman, Humphries, Lafontaine, and Rodriguez conducted three studies on the effects of the GED programs on high school graduation rates (2012). One study examined the effect of raising the difficulty of the GED test. The authors found the nationally mandated increase in GED passing standards in 1997 resulting in a 1.3% decrease in the dropout rate in states that were required to increase their standards as compared to states that were not required make the change. The second study showed that the introduction of the GED Option Program in Oregon led to a 3%-4% decrease in graduation rates. The GED Option Program allows high schools to provide GED preparation and certification in the high school. This program targets students identified as high risk for dropping out of high school and guides them to the GED test and

certification as an alternative. Finally, in the third study noted in the same 2012 paper, the authors found California, prior to introducing the GED program in 1974, had higher graduation rates than other states in the country. The authors show, when the GED was introduced in California, graduation rates fell by 3%. "Taken together, these studies suggest that the GED program induces students to drop out of school. The program has changed from its original intention of providing a second chance for adults to becoming a primary vehicle for obtaining high school certification among many students enrolled in secondary education" (2012).

Tyler and Lofstrom note the original intent of the GED, developed 1940's, was a way to certify that returning World War II veterans who had left high school to serve in the military were labor market or college ready (2009). The GED program has grown from 50,000 test takers in 1955 to about 670,000 test takers in 2007 (Tyler and Lofstrom, 2009). In addition, Tyler and Lofstrom note GED holders do not fare as well as regular high school graduates in the labor market, and GED recipients get much less postsecondary education (2009).

Critics of dropout recovery schools may argue the GED is an appropriate credential for credit-deficient young adults. However, the aforementioned research strongly demonstrates that high school graduates earn more income and fare better in the labor market. Finally, according to Heckman, Humphries, Lafontaine, and Rodriguez, the GED option for high school age students actually results in increases in the high school dropout rate (2012).

Brief History of Charter Schools.

A charter school is a publicly funded school typically governed by a group or organization under a legislative contract (charter) with a state or jurisdiction. Charter schools are exempt from certain state or local rules and regulations. In return for this flexibility and autonomy, charter schools must meet accountability and/or academic standards stated in its contract with the state or governing entity. Charter schools are reviewed periodically (typically every 3 to 5 years) by the agency in the jurisdiction that granted the charter. The charter can be revoked if guidelines or standards outlined by the state or governing authority are not met (U.S. Department of Education, National Center for Education Statistics, 2014).

Nationally, the first state to pass legislation allowing the establishment of charter schools was Minnesota in 1991. As of the 2011-2012 school year, charter school legislation existed in 42 states and the District of Columbia with Alabama, Kentucky, Montana, Nebraska, North Dakota, South Dakota, Vermont, and West Virginia being the states without charter school authorization laws (U.S. Department of Education, National Center for Education Statistics, 2014). However, Kentucky passed charter school legislation in March, 2017 (Kentucky Charter School Project) and Alabama passed legislation allowing for the creation of charter schools in March, 2015 (Cason, M., 2015).

The costs to the communities regarding high school dropouts are staggering. Students who drop out, in aggregate, are estimated to nationally cost more than $260 billion in lost wages, taxes, and productivity in their lifetimes (Martin, N. and Halperin, S., 2006). If only one-third of high school dropouts were to earn a high school diploma, federal savings in reduced costs of food stamps, housing assistance, and Temporary

Assistance For Needy Families would amount to $10.8 billion annually (Martin, N. and Halperin, S., 2006).

Dropping out of high school has numerous negative outcomes for particular individuals. The median income of those aged 18 through 67 who had not completed high school or a high school credential was approximately $23,000 in 2008. In contrast, the median income of those 18 through 67 who completed at least a high school credential, stood at approximately $42,000. Thus, over a lifetime, this correlates to an average loss of approximately $630,000 in income for dropouts in comparison with high school graduates. In addition, dropouts aged 25 or older reported being in worse health than those who are not dropouts, regardless or socio-economic status.

High school dropouts also make up higher percentages of the nation's prison and death row inmates. Finally comparing high school graduates with non-graduates, the average high school dropout cost to the national economy is approximately $240,000 over his or her lifetime in terms of lower tax contributions, higher reliance on Medicaid and Medicare, higher rates of criminal activity, and higher reliance on welfare (National Center for Education Statistics, 2010).

Ohio Community School Law for Dropout Recovery Schools.

The law allowing the operation of community schools in Ohio (known as charter schools in the majority of other states) passed Ohio legislature in 1997 (Ohio Department of Education, http://education.ohio.gov/getattachment/Topics/Community-Schools/Annual-Reports-on-Ohio-Community-Schools/Community-School-LegisHistory.pdf.aspx). Within this law there are two types of community schools

allowed: new start-up schools and conversion schools. Conversion schools are defined as public school district, joint vocational school district or educational service center that transforms all or part of an existing traditional building into a community school that is independent of the district and authorized by a sponsor. Conversion community schools can open in any public school district in the state http://education.ohio.gov/getattachment/Topics/Community-Schools/Annual-Reports-on-Ohio-Community-Schools/2015-2016-Community-School-Annual-Report.pdf.aspx).

New Startup Schools are community schools that may be located only in a district that conforms to the definition of a "challenged" school district at the time the community school developer enters into a preliminary agreement with a sponsor. Ohio Law defines challenged districts as:

- The "Ohio 8" urban public school districts: Akron, Canton, Cincinnati, Cleveland, Columbus, Dayton, Toledo and Youngstown, which have high numbers of economically disadvantaged students;
- School districts located in the Lucas County pilot;
- On March 22, 2013, school districts designated in Academic Emergency or Academic Watch on the 2011-2012 Local Report Card;
- School districts that receive D or F grades on the Ohio School Report Cards Performance Index (which shows how all students performed on all state tests) and F grades on Value-Added (which shows student knowledge growth over time) for two of the following school years: 2012-2013, 2013-2014, 2014-2015 and 2015-2016. However, Ohio's Safe Harbor provisions prevent the Department from applying the criteria for the 2014-2015 and 2015-2016 school years. Passed

into law by the Ohio General Assembly, Safe Harbor gives schools, teachers and students time to adjust to the new state tests and suspends many of the consequences of the tests for schools for the 2014-2015, 2015-2016 and 2016-2017 school years;

• School districts with overall grades of D's or F's in the 2016-2017 school year or later (Safe Harbor prevents the Department from applying the criteria for the 2016-2017 school year);

• School districts with F grades on Value-Added for at least two of the three most recent school years, including 2016-2017 and beyond (Safe Harbor prevents the Department from applying the criteria for the 2016-2017 school year); and,

• The lowest 5 percent of districts in Performance Index score rankings. Safe Harbor prohibits the Department from creating a ranking based on Performance Index scores for 2014-2015, 2015-2016 and 2016-2017. (Ohio Department of Education, http://education.ohio.gov/getattachment/Topics/Community-Schools/Annual-Reports-on-Ohio-Community-Schools/2015-2016-Community-School-Annual-Report.pdf.aspx).

Safe Harbor regarding community school closure is a term defined by ODE. Since, community schools can now be closed by law for continued poor performance, Ohio's current safe harbor provisions notes the state will not use grades published on the 2014-2015, 2015-2016 and 2016-2017 report cards to judge whether it will close a school. Thus, the grading period on performance of DORPs and whether they will face closure will begin, as of this writing, in the 2017-2018 school year (http://education.ohio.gov/Topics/Data/Report-Card-Resources/Safe-Harbor-Guidance).

Within these two types of community schools exists another special community school designation which is now entitled by ODE as Dropout Prevention and Recovery community schools (DORP). Ohio produces a report card for each public school (DORPs are considered public schools legally as they receive public financing). Although DORPs will now be subject to closure laws, they will be graded differently on the state report card (personal communication, Dr. Steven Tate, January 2015).

As of the academic year of 2014-2015, the Dropout Recovery Community School Report Card will consist of the following components: Graduation, Achievement, Gap Closing, Progress, and Student Post-Secondary Outcomes. The last component, Student Post-Secondary Options, will be for informational purposes only and will not be a rated component used in the formula to calculate a school's effectiveness (ODE website, http://education.ohio.gov/getattachment/Topics/Data/Report-Card-Resources/Sections/Dropout-Recovery/Understanding-Ohios-New-Dropout-Recovery-Community-School-Report-Card.pdf.aspx, Appendix A).

Since the waiver, which strictly defined DORPs as community schools whose "program serves students no younger than 16 nor older than 21 years of age at the time of enrollment" (http://education.ohio.gov/getattachment/Topics/Quality-School-Choice/Community-Schools/Drop-Out-Prevention-and-Recovery/Dropout-Prevention-and-Recovery-Program-DPRP-Wai/DPRPW_guid4_15_11.pdf.aspx) was allowed to expire by the Ohio State Legislature, DORPs are currently defined as:

dropout prevention and recovery school is one to which any of the following applies:

(1) Any community school that operates a drug recovery program in cooperation with a court; or

(2) Any community school in which the majority of students are enrolled in a dropout prevention and recovery program operated by the school that meets the following criteria:

(a) The program serves only students not younger than sixteen years of age and not older than twenty-one years of age;

(b) The program enrolls students who, at the time of their initial enrollment, either, or both, are at least one grade level behind their cohort age groups or experience crises that significantly interfere with their academic progress such that they are prevented from continuing their traditional programs;

(c) The program requires students to attain at least the applicable score designated for each of the assessments prescribed under division (B)(1) of section 3301.0710 of the Revised Code or, to the extent prescribed by rule of the state board of education under division (D)(6) of section 3301.0712 of the Revised Code, division (B)(2) of that section;

(d) The program develops an individual career plan for the student that specifies the student's matriculating to a two-year degree program, acquiring a business and industry credential, or entering an apprenticeship;

(e) The program provides counseling and support for the student related to the plan developed under division (A)(4) of that section during the remainder of the student's high school experience; and

(f) The program's instructional plan demonstrates how the academic content standards adopted by the state board of education under section 3301.079 of the Revised Code will be taught and assessed; or

(3) Any conversion community school whose sponsoring district has received a waiver from having the school's academic data rolled up into the district's local report card because the school primarily enrolls students between sixteen and twenty-two years of age who dropped out of high school or are at risk of dropping out of high school due to poor attendance, disciplinary problems, or suspensions. (Ohio Department of Education website, http://education.ohio.gov/Topics/Community-Schools/Drop-Out-Prevention-and-Recovery/Dropout-Recovery-Report-Card-Designations).

Thus, with this definition, it is important to note, currently, DORPs need not be strictly high schools that only serve credit deficient or unenrolled 16-21 year olds as was the previous definition used to obtain a DORP waiver. A community school can be a K-12 school and be considered a DORP under current ODE definition, as long as that school's majority of students are considered dropouts or credit deficient.

Regarding DORP report cards, the four graded components, as of the 2015-2016 report card, are graduation, achievement, gap closing, and progress. Student post-secondary outcomes is a fifth component that will appear on the report card but it will not be a graded component, i.e., it will not count for/against measurement used to determine whether a DORP should close or not (ODE website, http://education.ohio.gov/getattachment/Topics/Data/Report-Card-Resources/Sections/Dropout-Recovery/Understanding-Ohios-New-Dropout-Recovery-Community-School-Report-Card.pdf.aspx). The five components are defined as follows:

Graduation This component separately measures the percentage of students who graduate within four, five, six, seven or eight years of entering the 9th grade in five measure ratings. The numerators and denominators from each of the five rates will be combined to create the graduation component rating.

Achievement This component measures the percentage of students who pass all five graduation tests by the time they reach the 12th grade or by the time they are within three months of turning age 22.

Gap Closing This component measures how well a school is doing in narrowing gaps in reading, math and graduation rate among students identified in up to ten student subgroups.

Progress This component measures the average annual gain made by the group of students in reading and mathematics using the NWEA Measure of Academic Progress (MAP) assessment.

Student Post-Secondary Outcomes This component reports additional student outcome data relevant to the college and career readiness of students enrolled in dropout recovery schools (ODE website, http://education.ohio.gov/getattachment/Topics/Data/Report-Card-

Resources/Sections/Dropout-Recovery/Understanding-Ohios-New-Dropout-Recovery-Community-School-Report-Card.pdf.aspx).

The report card for these schools are somewhat different as DORPs, until the beginning of the state fiscal year 2014 received a state waiver. DORPs were identified through two waiver processes. Community schools received an alternative report card for the 2013-2014 state annual report if they had previously applied for, and were awarded, one of two different waivers. First, a waiver from closure for poor academic performance as outlined by state law, and second, a waiver from rolling the dropout recovery school statistics into the sponsoring districts overall report card.

As of July 1, 2014, the academic waiver laws for DORPs expired and, as of this writing, according to the Ohio Department of Education, there has been no indication that the Ohio legislature will seek to renew or extend the waiver law (personal communication, Dr. Steven Tate, Ohio Department of Education, January 2015, and May 2016). Thus, this means DORP's will now be subject to the same closure laws for poor academics, based on the measurements used on the Local Report Card.

As to why the Ohio Legislature did not renew the DORP waiver legislation, the legislature did not make a formal, public statement as to their rationale. However, there have been calls from state politicians to increase accountability for not just DORP schools but all community schools. In 2015, State of Ohio, Auditor of State, Dave Yost released a report on community school attendance. In this report, the auditor selected 30 community schools at random to audit student attendance and enrollment practices. Of the 30 community schools selected in the report, 9 were DORPs. The audit found

variances between actual head count and reported enrollment at several community schools and recommended ODE conduct a review of the schools with variances to determine if they were in compliance with state community school legislation (State of Ohio, Auditor of State, 2012). In addition, specifically regarding the graduation rates of DORPs, Ohio State Senator Peggy Lehner, Chairwoman of the Senate Standing Committee on Education, recently stated "You can't possibly expect dropout recovery schools to have anywhere near the graduation rate of typical schools. But the bar is too low to be credible" (O'Donnell, P., 2017).

The State of Ohio community school closure law states "This section applies to any community school in which a majority of the students are enrolled in a dropout prevention and recovery program. Beginning on or after July 1, 2014, any such community school that has received a designation of "does not meet standards," as described in division (D)(1) of section 3314.017 of the Revised Code on the report card issued under that section, for at least two of the three most recent school years shall be subject to closure in accordance with this section" (Ohio Revised Code, http://codes.ohio.gov/orc/3314.351).

The closure waiver for DORP schools had been in place since Ohio Senate Bill 311, enacted in 2007 by the 126th General Assembly (http://education.ohio.gov/Topics/Community-Schools/Drop-Out-Prevention-and-Recovery/Dropout-Prevention-and-Recovery-Program-DPRP-Wai). This law exempted schools from criteria other non-dropout recovery charter schools must abide by and creates the following requirements for DORPs:

1. Program serves students no younger than 16 nor older than 21 years of age at the time of enrollment.

2. Students at the time of enrollment either, or both, are at least one grade level behind their cohort age groups or experience crises that interfere with their academic progress such that they are prevented from continuing their traditional program.

3. Students must pass the Ohio Graduation Test.

4. Districts and schools seeking a Dropout Prevention and Recovery Waiver shall provide evidence that the program develops an Individual Career Plan (ICP) for the student that specifies the student's matriculating to a two-year degree program, acquiring a business and industry credential, or entering an apprenticeship.

5. Program must provide counseling and support for the student related to the Individual Career Plan (ICP). High Quality Individual Career Plans should include the following elements:

- Career goals
- Interests, skills and knowledge that support career goals
- High school classes related to career goals
- Outside-of-school activities to reach career goals
- Specialized training needed to meet career goals during and after high school
- Career/Passport Portfolio
- Record of assessments both current and future

• Identify post-graduation plan, which may include either a 2-year degree program, acquiring a business and industry credential, or entering an apprenticeship program

6. The program requires the student and the student's parent, guardian or custodian to sign a written statement asserting their consent to the student's graduating without completing the Ohio core curriculum and acknowledging the ineligibility to enroll in most state universities in Ohio without further course work.

7. Program must have an instructional program that demonstrates how the Ohio Academic Content Standards are taught and assessed.

8. Waiver applications will be reviewed within 59 days and the applicant will be contacted by ODE via-email.

http://education.ohio.gov/getattachment/Topics/Quality-School-Choice/Community-Schools/Drop-Out-Prevention-and-Recovery/Dropout-Prevention-and-Recovery-Program-DPRP-Wai/DPRPW_guid4_15_11.pdf.aspx).

There were 86 DORP's in Ohio for the 2012-2013 school year. The number of graduates from each DORP was obtained from the ODE website. The total number of graduates from all DORP schools in which information is available were calculated. The reimbursement to the DORP school from the state of Ohio (cost of the state to educate a DORP student per year) for a full academic year was $5,800 for the 2012-2013 school year (personal communication, Dr. Steven Tate, Ohio Department of Education, June 09, 2015). In the 2012-2013 school year, under the DORP waiver, a student could only

attend high school, and have the state reimburse for that particular child until the age of 22 and could not enroll in a DORP until the age of 16. Thus, the longest length of time a student could attend a DORP who had a waiver was six years.

DORPs in Ohio have a rolling admissions method of entry for each child, meaning a student can enroll at any time of the academic year as long as that student is currently not enrolled in another public school district and is credit deficient. This means each student varies regarding time spent in DORP's prior to graduation. Each student is unique regarding how many credits a particular student begins the DORP with, and how many credits, in each subject area, each student needs to graduate.

Since there are wide variations and discrepancies regarding the lengths of times students are enrolled in DORPs prior to earning their high school diplomas, an average time will not be used in the calculation of the cost of educating a child. Since, for the 2012-2013 school year, a child could only enter a DORP at the age of 16, and the state of Ohio stopped reimbursing a DORP for an student once that student turned the age of 22, the longest a child could possibly be in a DORP was six years. A student being enrolled for six years in a DORP would be a rare occurrence since any student, even if entering with no credits earned, can easily complete DORP curriculum within three years.

Cost Benefit Analysis and its Use in Public Policy.

Descriptive statistics are commonly utilized to summarize the overall trends or tendency in the data, provide an understanding variations in scores, and provide insights as to where one score stands in relation to others (Creswell, 2012). Descriptive studies

are not meant to explain a phenomenon or behavior. Rather, such studies are meant to describe the phenomenon or behavior (Bryant, 2004).

The Association for Educational Communications and Technology defines descriptive research as a study that "does not fit neatly into the definition of either quantitative or qualitative research methodologies, but instead it can utilize elements of both, often within the same study. The term descriptive research refers to the type of research question, design, and data analysis that will be applied to a given topic. Descriptive statistics tell what is, while inferential statistics try to determine cause and effect" (Association for Educational Communications and Technology, http://www.aect.org/edtech/ed1/41/41-01.html).

A CBA identifies and places dollar values on costs of programs, weighing those costs against the benefits of a program as measured via dollar value. To obtain a CBA one subtracts costs from benefits to obtain net benefits of the program. If the net benefits are negative, they are classified as net costs. Therefore, to obtain a CBA:

> Net Benefits = Total Benefits – Total Costs (Wholey, J., Hatry, H., Newcomer, K., 2010).

The term cost benefit analysis implies a systematic comparison of the magnitude of the costs and benefits of a form of investment an in order to assess its economic profitability (Woodhall, 2004).

The use of CBA is commonplace in the public sector and in many government entities, it is mandated. The utilization of CBA in federal government can be traced to the Flood Control Act of 1936 which authorized navigation and flood control projects on navigable water in the United States only when the projects' benefits proved to be greater

than its costs. CBA then became an established feature in United States water policy (Fuchs, E. and Anderson, J., 1987).

In the 1960's CBA was introduced into other policy areas. Robert McNamara introduced CBA into the Department of Defense as a portion of the Planned Programming Budgeting System (PPBS). In 1965, President Lyndon B. Johnson required the use of PPBS throughout the executive branch (Fuchs, E., and Anderson, J., 1987). In 1981 President Ronald Reagan, via Executive Order 12291, established the structure of CBA examination of executive rule makings that will have significant economic consequences and submit those analyses to the Office of Information and Regulatory Affairs for review. Agencies were instructed not to publish their rules until such reviews were concluded (Livermore, M., 2014).

Educational planning, in the broadest scope, is the process of systematic, rational analysis to the process of educational development with the goal of making education more efficient in responding to the needs of students and community. Educational planning deals with the future while pulling enlightenment from the past (Coombs, 1970). Education is universally recognized as an investment in human capital that produces economic benefits to the future wealth of a country via increasing the capacity of production of its people (Woodhall, 2004). Coombs lists five educational planning questions every nation faces:

1. What should be the priority objectives and functions of the educational system and each of its subsystems (including each level, each institution, each grade, each course, each class)?

2. What are the best of the alternative possible ways of pursuing these possible objectives and functions? (This involves a consideration of alternative educational technologies, their relative costs, time requirements, practical feasibility, educational effectiveness, etc.
3. How much of the nation's (or community's) resources should be devoted to education at the expense of other things? What appears to be the limits of feasibility, in terms of not only financial resources but real resources? What is the maximum of resources that education can effectively absorb in the given time period?
4. Who should pay? How should the burden of educational costs and sacrifices be distributed as between the direct recipients of education and society at large, and among different groups of society? How well adapted is the present public fiscal structure, and other sources of educational revenue, to attaining a socially desirable distribution of the burden and at the same time a sufficient flow of necessary income to education?
5. How should the total resources be available to education (whatever the amount may be) be allocated among different levels, types and components of the system (e.g. primary v. secondary v. higher education; technical v. general education; teachers' salaries v. building and equipment v. textbooks, free meals, scholarships, etc.)? (1970).

The concern for education planners is twofold: to reach an increased understanding of the validity of education in its own empirically observed specific dimensions and to help in the defining of appropriate measures and strategies for change (Woodhall, M., 2004).

Expenditures on education can be justifiable in terms of the potential contribution of education to economic growth. However, this then raises the question of how does education expenditures compare to other national investments (Woodhall, M., 2004). The general rationale for the use of CBA lies in the concept that actions are worth doing if the benefits from doing them outweigh the costs (Sen, 2000). The benefit-cost framework provides information about the relative magnitude of costs and benefits that accrue over time as the result of any given action taken and is widely accepted in public sector program selection (Puget Sound Regional Council, 2009). Since it is recognized that investment in education does produce economic benefits to society, the need to analyze the benefits and nature of these benefits is inescapable, especially since governmental resources are scarce and investment choices must be made judiciously (Woodhall, M., 2004). Although noting the challenge of not being able to calculate social rates of return healthily in applying CBA to education, Jimenez and Patrinos state it worthwhile to go through the discipline of tracking benefits and costs (2008).

Regarding the research in the field of educational planning, no topic has aroused the suspicion of teachers and administrators to the degree that the cost-benefit analysis has. Administrators fully embraced the conclusion of economists that education is a good investment. However, administrators did not accept the corollary that, in light of an environment of competition for funds, the effectiveness of education could be compared to alternative pathways or expenditures (Woodhall, M., 2004).

Many in education have argued cost-benefit analysis is not applicable to education due to the multiplicity of objectives in education and the importance of non-educational benefits (Woodhall, 2004). Jimenez and Patrinos note lower fertility or lives

saved because of improved sanitation conditions followed by a more educated woman who never participates in the formal labor market as external effects of education (2008). In addition, Jimenez and Patrinos notes the concept of externalities in that the benefits of education may extend past the individual to others. Examples of externalities are improving social equity, strengthening national cohesiveness, and a reduction of crime rates (2008). However, Wholey, Hatry, and Newcomer specifically cite a dropout prevention program as an example of use of CBA, noting such a program in a high school would likely consider the number of dropouts prevented to be an important outcome (2010).

Chapter 3: Research Methods

Purpose of the Study.

This descriptive, economic public policy analysis study demonstrated, via cost benefit analysis, the economic impact closures of Ohio Dropout and Prevention Recovery Schools (DORP's) would have on the State of Ohio and provided policy advocacy proposals with regard to the outcome of the analysis.

Aims of the Study.

At the end of the 2014 fiscal year, the State of Ohio Legislature did not act to reinstate an expiring law that provided a waiver to DORP's, which had disallowed the Ohio Department of Education to close DORPs due to poor academic metrics or other performance criteria (defined in Chapter 2). Thus, the primary aim of this study was to examine the community and societal economic impacts that closures of these schools are projected to have. Further aims of the study were to (1) develop a policy proposal and (2) an advocacy resource analysis document, both of which will be of use to educational leaders, stakeholders in the communities, and legislators, as they consider the impact of their regulatory and legislative actions regarding this at risk population.

Methodology, Data Collection, and Ethical Considerations.

Data regarding total number of graduates from 2013 DORP schools are public domain via the ODE website (http://reportcard.education.ohio.gov/Pages/Power-User-Reports.aspx). A database of the graduation count from all 86 DORP schools that were

in operation in academic year ending 2013 was created and included in the appendix. After the graduation count (raw number of graduates per school) were compiled for each DORP school, those amounts were totaled and used in the calculation to obtain CBA.

A CBA is an effective economic analytic method that may be used to guide or support a decision-making process for prioritization of public spending and revenue generating options (Puget Sound Regional Council, 2009). In addition, a CBA can be used to guide the economic usefulness of making an investment. A CBA is essentially the dominant evaluation methodology in economics (Puget Sound Regional Council, 2009),

The use of CBA is commonplace in the public sector and in many government entities, it is mandated. The utilization of CBA in federal government can be traced to the Flood Control Act of 1936 which authorized navigation and flood control projects on navigable water in the United States only when the projects' benefits proved to be greater than its costs. CBA then became an established feature in United States water policy (Fuchs, E. and Anderson, J., 1987).

In the 1960's CBA was introduced into other policy areas. Robert McNamara introduced CBA into the Department of Defense as a portion of the Planned Programming Budgeting System (PPBS). In 1965, President Lyndon B. Johnson required the use of PPBS throughout the executive branch (Fuchs, E., and Anderson, J., 1987). In 1981 President Ronald Reagan, via Executive Order 12291, established the structure of CBA examination of executive rule makings that will have significant economic consequences and submit those analyses to the Office of Information and

Regulatory Affairs for review. Agencies were instructed not to publish their rules until such reviews were concluded (Livermore, M., 2014).

Cost benefit analysis attempts to compare costs with the dollar value of the benefits of the program. CBA can be conducted before, during, or upon completion of program implementation. In addition, CBA can greatly assist administers in the process of program evaluation (Wholey, J., Hatry, H., Newcomer, K., 2010).

CBA is most useful when one is attempting to analyze a single program or policy. The use of CBA in examining such a program or policy is to determine whether the program's total societal benefits exceed the costs. In addition, CBA can be used to compare alternative programs to see which one achieves the greatest benefits to society (Wholey, J., Hatry, H., Newcomer, K., 2010).

Procedures Used.

To obtain CBA, the variables used for calculation must be determined. This section will focus on the procedures used to obtain the variables for CBA calculation.

Regarding the first research question (What is the comparative societal cost of educating DORP students versus the estimated cost of failing to graduate DORP graduates for the 2012-2013 school year?), CBA was determined using the estimated comparison of a net lifetime cost of one dropout to society of $210,000 compared to the cost of educating that one graduate for six years in a DORP school ($5,800 x 6).

The cost of median income of dropouts compared to graduates in Ohio was calculated and analyzed via CBA analysis as well. According to the 2009-2013 5-Year American Community Survey complied by the U.S. Census Bureau, those in Ohio whose

educational attainment were less than high school graduate had a median income earned $18,797 whereas Ohioan high school graduates earned $27,427. The difference was multiplied by the total number of 2013 graduates to show that the total average increase in earnings of DORP graduates/the total amount of earnings the State of Ohio would have resulted in a net loss in taxable revenue had these students not graduated.

The third research question used the CBA determined in question 1 to show the benefit to government if only 5%, 10%, 15%, 20%, and 25% of the 2,670 students who graduated from DORPs in 2012-2013 had graduated.

Finally, the fourth research question examined the difference in government transfers to Ohio adults when examining whether those adults are high school graduates (including equivalency) or high school dropouts.

Leadership Roles in applying the CBA of DORPS Methodology and Policy Proposal Development.

Dropouts are an especially crucial topic at this particular time in Ohio as the recent law change has put the existence of DORP's in jeopardy. As noted in the introductory section, there is evidence of success of DORPS as a dropout recovery initiative in Ohio that saw a county reduce its dropout rate from 25.6% to 12.6% (Sinclair Community College, Carter, M. and House, D., 2010).

This research is crucial at this particular time as it demonstrates that closure of DORP's has a net negative economic impact on government and communities – that is, that the economic costs outweigh the economic savings of the cessation of the DORP school funding. This study is timely as it may not be too late through advocacy to successfully influence the Ohio State Legislature to reinstate the DORP academic waiver

approvals and to keep DORPs open, as none have yet to be closed due to academic performance. DORPs are not projected to be closed for substandard dropout rates until 2020 as the state requires at least three years of poor academic performance before starting closure procedures.

Thus, this data is important and timely for the leadership of the Ohio Legislature and ODE. For example, the law that allowed for academic waivers could still be reinstated, since no DORPs have not been closed by the state at this time. If there is no will from the legislature to reinstate the academic waiver law, these data and policy suggestions that follow, could be used by ODE to develop the metrics and standards in which DORPs are measured as these standards can still be revamped.

Summary.

This descriptive, economic public policy analysis study demonstrated, via cost benefit analysis, the economic impact closures of Ohio Dropout and Prevention Recovery Schools (DORP's) would have on the State of Ohio and provided policy advocacy proposals with regard to the outcome of the analysis. At the end of the 2014 fiscal year, the State of Ohio Legislature changed law which allows the Ohio Department of Education to close DORP schools in the future due to poor academics.

Regarding proposed methodology, this Dissertation in Practice was a descriptive economic model study. Information from human subjects was not gathered. Existing data from State of Ohio Department of Education was used.

This research could impact state leadership by showing state leaders the importance of DORP schools and persuade Ohio leaders to reconsider their current

position. This research could help save DORP schools in Ohio. In addition, this research could change current Ohio law and reinstate the previous law which provided closure protection to DORP schools. Ethical considerations were not an issue as human subjects were not used.

Chapter 4: Research Results

Purpose.

This descriptive, economic public policy analysis study demonstrated, via cost benefit analysis, the economic impact closures of Ohio Dropout and Prevention Recovery Schools (DORP's) would have on the State of Ohio and provided policy advocacy proposals with regard to the outcome of the analysis.

Research Data Gathering.

For this descriptive study, individually identifiable information on human subjects was not gathered. Existing secondary data from the Ohio Department of Education (ODE) were used. Data from the 2012-2013 school year was gathered from the ODE website, and compiled for this project.

Research Question Results.

RQ1. What is the comparative cost of educating DORP students versus the estimated societal cost of failing to graduate DORP graduates for the 2012-2013 school year?

For school year 2012-2013, there were 86 DORP's operating in Ohio. Of those 86 DORPs, raw graduation totals exist on the ODE website for 66 DORPs. There is a variety of reasons ODE may not have graduation totals for a DORP such as reporting issues, the schools could have closed prior to the graduation reporting window for the 2013 school year, or the schools may have graduated fewer than 10 students in that year (personal communication, Kelsey Stephens, Data Administration Manager, ODE, May

06, 2016). The total number of graduates for the 66 DORPs combined was 2,670. Thus, regarding the first research question:

CBA = Number of 2013 DORP Graduates x $210,000 (Vredeveld, 2008) - Number of 2013 DORP Graduates x $34,800 (state funding for six years)

CBA= 2,670 x $210,000 – 2,670 x $34,000

CBA= $560,700,000 - $90,780,000

CBA= $469,920,000

Table 3:
CBA, Benefit to Government for Educating DORP Students for 2012-2013 School Year

		Ohio DORP Graduates 2012-2013	**Total Cost**
Societal Cost of Failing to Educate Each Student	$210,000	2,670	$560,700,000
Cost of Educating Each Student at a DORP for Maximum of Six Years	$34,800	2,670	$90,780,000
		CBA (Benefit to Government)	**$469,920,000**

Thus, the maximum cost of educating 2,670 graduates of DORP of the 2012-2013 school year was $90,780,000. Again, it needs to be noted this estimate is based on a DORP graduate spending all six years, from the age of sixteen to the age of twenty-two, enrolled in a DORP school. This is a maximum cost estimate as a student could only be enrolled in a DORP for six years. DORPs operate via curriculum that is student driven, which allows students to work at their own pace earning credits as quickly, or as deliberately, as needed.

For example, if a student is proficient in Math, that student could earn one subject credit in a few months. If a student is not proficient in English, it may take a student several months to complete a subject credit. Computer based curriculum allows students to work at their own pace. Thus, it would be rare for a student to consume six years to obtain a diploma. It is likely a student would be removed from enrollment for lack of attendance before consuming all six years of eligibility at a DORP. Therefore, the number $90,780,000 is the maximum possible cost to the state of Ohio for educating 2.670 DORP graduates for the 2012-2013 school year. The actual cost is not available as the state does not track how long it takes each student to complete the requirements for a high school diploma in a DORP school.

As noted previously, a student between the ages of 16-21 can enter a DORP at any level of high school educational attainment. As long as the student has completed the eighth grade, and is not attending a traditional high school on a regular basis, and/or is credit deficient for their age, they may enroll in a DORP. Thus, a student who would be a senior in a traditional public high school who may only need a couple of credits may enroll. Also, a 16 year old student who has no credits may enroll in a DORP. Obviously, it would take the former less amount of time to complete the requirements for a high school diploma at a DORP than it would the latter.

The societal cost of failing to graduate a DORP graduate of the 2012-2013 school year, based on the estimate from dropout costs society $210,000 over the lifetime of that dropout, is $560,700,000. Therefore, CBA for research question 1 is $469,920,000 positive net benefit to society for Ohio graduating 2,670 DORP students in the 2012-2013 school year.

RQ2. What does the aggregate average difference in earnings for high school dropouts vs. high school graduates mean in terms of difference of median incomes?

According to the 2009-2013 5-Year American Community Survey complied by the U.S. Census Bureau, those in Ohio whose educational attainment were less than high school graduate had a median income earned $18,797 whereas Ohioan high school graduates earned $27,427 (https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF).

. The difference will be multiplied by the total number of DORP 2013 graduates to show that the total average increase in earnings of DORP graduates. Therefore, research question 2:

CBA = No. of 2013 DORP graduates x Ohio median income of a high school graduate – No. of 2013 DORP graduates x Ohio median income of a less than a high school graduate

CBA = 2,670 x $27,427 – 2,670 x $18,797

CBA = $73,230,090 - $50,187,990

CBA = $23,042,100

Table 4: Taxable Income that would have been lost to Ohio had 2012-2013 DORP Graduates not Graduated

	Income	**Ohio DORP Graduates 2012-2013**	**Net Income**
Ohio Median Income of High School Graduate, 2013	$27,427	2,670	$73,230,090
Ohio Median Income of Less than High School Graduate, 2013	$18,797	2,670	$50,187,990
		CBA or Taxable Income to Ohio Lost had 2013 DORP Graduates not Graduated	**$23,042,100**

Thus, the CBA, regarding the difference in median incomes of 2012-2013 DORP graduates and if those graduates had failed to complete high school is over $23M. This is $23M of disposable income high school graduates have to spend, in addition to the money saved by the state for producing a high school graduate that will be less likely to be on social welfare, criminal justice system, human services, etc. (see research question 1 above).

This is not $23M directly to the state. It is however, $23M available to the state in increased income tax revenue and sales tax revenue. It is important to note these are median income figures for high school attainment in the State of Ohio and do not take into consideration any advanced education. Once a student becomes a high school completer, that student is eligible to enroll in a state-funded university or college in Ohio. Thus, the benefit to the State of Ohio may be greater, dependent upon if a particular student with a diploma from a DORP continues his or her educational pursuits and obtains an associate or bachelor degree as, in general, the higher the level of educational attainment the higher the projected annual income for an individual. While it is true that one with a GED credential can also enroll in institutions of higher education, as noted previously in the literature review, GED recipients receive less post-secondary education than high school graduates (Tyler and Lofstrom, 2009).

RQ3. Using an estimated comparison of a lifetime cost of one drop out to government, compared to the cost of educating that one graduate for six years in a DORP school, what are the cost benefit analytics if the state only graduated 5%, 10%, 15%, 20%, or 25% of the total number of 2012-2013 DORP graduates?

Thus, as calculated in research question 1:

CBA = Number of 2013 DORP Graduates x $210,000 (Vredeveld, 2008) -
Number of 2013 DORP Graduates (2,670) x $34,800 (state funding for six years)
CBA = 469,920,000

5% of CBA = benefit to government
10% of CBA = benefit to government
15% of CBA = benefit to government
20% of CBA = benefit to government
25% of CBA = benefit to government

CBA = 469,920,000
5% of CBA = $23,389,200
10% of CBA = $46,778,400
15% of CBA = $70,167,600
20% of CBA = $93,556,800
25% of CBA = $116,946,000

Table 5: CBA to Government had Only a Portion of the 2012-2013 DORP Graduates Graduated

Percentage of 2012-2013 Graduates (2,670)	Raw Number of 2012-2013 Graduates	Lifetime Benefit to Government in $
If Only 5% Had Graduated	134	$23,389,200
If Only 10% Had Graduated	267	$46,778,400
If Only 15% Had Graduated	401	$70,167,600
If Only 20% Had Graduated	534	$93,556,800
If Only 25% Had Graduated	668	$116,946,000

The CBA analytics strongly supports, based on the cost of educating each graduate, DORP schools provide a positive financial impact on the state of Ohio. Therefore, if DORP's in Ohio only managed to graduate 5% of the number of 2012-2013 DORP graduates, then Ohio would have had a positive financial impact of $23,496,000. If only 25% of the 2013 DORP graduates had graduated, Ohio would have had a positive financial impact of $117,480,000.

Critics may contest this measure as an inaccurate cost estimate to the state as it does not take into consideration the cost of educating the numerous DORP students who

attend for a period of time, then dropout, failing to obtain a diploma. This charge would be correct as the above calculation only considers the cost of educating graduates from DORP schools. However, the state does not report the number of students who enrolled in a DORP and failed to finish. Thus, it is not feasible to calculate the cost of educating all students who enrolled in a DORP during the 2012-2013 as the state does not report how many students enroll at each DORP school, and the length of time each student stays at a DORP school.

However, this is still an important metric as it shows, even if DORP schools were only 10% as effective in the 2012-2013 school year in graduating students, there is a net benefit to the state of over $46M in comparison to the cost of educating 10% (267 students) of those who graduated from DORP schools. This is a figure that should not be discounted because the cost of educating all students who enrolled in DORPs cannot be calculated.

RQ4. What is the annual monetary difference of government transfers to Ohio Adults by Educational Attainment when examining the number of 2012-2013 DORP Graduates

Vredeveld (2008) notes a difference in government transfers to Ohio adults when examining whether those adults are high school graduates (including equivalency) and high school dropouts. Vredeveld states a high school dropout receives $5,091 annually in government transfers, whereas a high school graduate receives $2,851. Government transfers is defined by Vredeveld as public cash assistance, housing subsidies, food stamps, unemployment insurance, disability insurance, Medicare, and Medicaid. Thus, the annual difference in government transfers for each high school graduate is $2,240.

Table 6: CBA of Monetary Difference in Government Transfers to Ohio Adults using 2012-2013 DORP Graduation Data

Number of 2012-2013 Graduates	Difference of Annual Government Transfers to Ohio Adults via Educational Attainment (Dropout vs. Graduate)	Total Annual Savings of Government Transfers to Ohio Adults via Educational Attainment to the State of Ohio
2,670	$2,240	**$5,980,800**

Therefore, using Vredeveld's analysis of the difference of annual government transfers via educational attainment (dropout vs. high school graduate), of $2,240, the annual savings of government transfers to Ohio adults is $5,980,800 when multiplied by the number of 2012-2013 DORP graduates.

The results of the CBA and all factors analyzed for this study strongly suggest that DORP schools are economically and socially beneficial to government and the State of Ohio. For the 2012-2013 academic year, the State of Ohio had a positive CBA of $469,920,000. If the 2,670 DORP graduates from the 2012-2013 academic year had not graduated, the State of Ohio would have lost over $23M in taxable revenue as the median income for high school graduates is greater than the median income of individuals with educational attainment less than a high school diploma. In addition, the annual savings to the state is over $5M as government transfers for high school graduates is less than government transfers to individuals who have failed to complete high school.

Chapter 5: Reflections, Implications, and Recommendations

Reflections and Implications.

This researcher worked for the Montgomery County (OH) Out-of-School Youth Initiative, highlighted in Chapter 1, for eight years serving as budget manager, and for the last two years of his employment, as initiative executive. Thus, he is well aware of the positive effect DORPs can have on the community, as he witnessed the decline of the county dropout rate firsthand.

However, he did not fully grasp the positive financial effect DORPs had until completing this study. Of the seven DORPs in which he worked with, six were career and technical education schools. Therefore, not only were these DORPs providing students who were credit deficient or completely out of the traditional public school system an opportunity to earn a high school diploma, these particular DORPs were graduating students who were workforce ready with credentials in a particular field.

For example, two DORPs trained students for careers in the health industries. Thus, students, in addition to a high school diploma, could earn certification in the field of nursing. For instance, students could earn their State Tested Nurse Aide (STNA) certification, in addition to earning their high school diploma.

Having worked with the county initiative, he knows firsthand accounts of local business supporting these career and technical education DORPs, as they produce graduates who are certified in a particular field. Thus, the benefits are immediately twofold: producing high school graduates who were previously dropouts or significantly credit deficient, the state is saving monies by reducing dependence on social services/welfare, and business were able to immediately hire certified employees in fields in which there is high demand for talent, such as nursing.

After completing this study however, he realized just how significant the savings to government entities are simply by producing graduates who otherwise would not have graduated. One not only has to consider the savings to the state regarding the reduction of reliance on social services/welfare, one also needs to consider the increase wages earned by a high school graduate, which increases taxable revenue to the state as high school graduates obtain a higher socioeconomic status than students who earn a GED (Institute of Education Sciences, 2011 and Tyler and Lofstrom, 2009).

As noted previously, Tyler and Lofstrom note GED holders do not fare as well as regular high school graduates in the labor market, and GED recipients get much less postsecondary education (2009). In addition, one needs a high school diploma or GED to attend college. This only increases taxable revenue to the state as the lifetime earnings of one who holds an Associate's degree is greater than one who holds a high school diploma, and the lifetime earnings of one who possesses a Bachelor's degree is greater than one who holds an Associate's degree (U.S. Department of Education, National Center for Education Statistics, 2014).

The lifetime cost to government per student that fails to graduate high school is significant. The lifetime cost of $210,000 becomes millions of dollars of cost to government over the lifetimes of just one academic class. This figure should not be overlooked or taken lightly. This study calculated the total cost to government if DORP graduates from the academic year 2012-2013 failed to graduate. There were 2,670 graduates from DORPs in the 2012-2013 school year. If these 2,670 students had not graduated the cost to government would have been $560,700,000 over the lifetime of these students. For just one academic year, the cost to government would be over ½

billion dollars, over the lifetime of students, if the 2,670 students who graduated from DORPs in 2012-2013 had not graduated.

This is only a calculation of cost to government if the 2,670 students in the 2012-2013 academic year who were recovered and graduated from DORPs had not been recovered and did not graduate. One needs to keep in mind the thousands of students who have dropped out of high school in the state of Ohio that has not reconnected to a high school diploma program.

Now compare that cost for failing to graduate students to the cost of funding students to attend DORPs. At the most, the cost of funding a student to attend a DORP, using the traditional definition of 16-21 year olds attending DORP high schools, would be $34,800 per student. This figure is only if the student attended the DORP for all six years in which a student was eligible to attend. Using the figure of $34,800 per student is CBA is the worst case scenario. Thus, there is a strong likelihood the savings to government are even greater as it is unlikely a DORP student would take six years to graduate.

A student attending a DORP all six years would be, as noted in the research section, incredibly rare, as a student would have to enter immediately upon turning 16 years of age, and progress at an incredibly sluggish pace to take six years to graduate. However, using worst case scenario of a student attending all six years, it still only costs the state, by 2012-2013 calculations, $34,000 per student to graduate. This is an inexpensive investment when one considers the overall cost to government of a student not graduating being $210,000.

Therefore, strictly from an economic perspective, DORPs make sense. It is counterproductive to the state, from an economic standpoint, to allow these schools to be shuttered. This study strongly suggests the economic benefits of DORPs. The DORP schools in the state of Ohio should be allowed to continue to operate without risk of closure.

The State of Ohio Legislature, by not renewing the academic closure waiver for DORP's, created an environment in the state where lawmakers and ODE officials had to hurriedly, and haphazardly, put together DORP closure criteria. The Ohio Legislature did not provide specifics as to what they wanted to see in the new DORP closure criteria until recently. Thus, ODE was left without guidance as to how to proceed in implementation of development of closure criteria, evidenced by the continuous granting of safe harbor to DORPs year after year. As of this writing, unless safe harbor is granted again prior to the 2017-2018 school year, the clock for closure of DORPs starts with the. 2017-2018 school year.

Again, from his firsthand knowledge of working with DORPs, one of the common complaints levied against these schools, particularly by traditional public school administrators, union leaders, and school board members, is they are unnecessary. The argument is as follows: if students who have dropped out of traditional public schools desire to return to school, they can return to the local high school in the traditional public school system. Therefore, DORPs are unnecessary.

This argument and logic is flawed in three ways. First, putting a student who is credit deficient back into the traditional public school system where said student already dropped out from is nonsensical. The student was already unsuccessful in the traditional

public school environment. Thus, it would be wise to put a dropout or credit deficient student in a new alternative environment. As noted in the research section, Hahn lists being older than peers or credit deficient as a reason students drop out. Second, placing an older student with younger students in a classroom is not a beneficial environment for either the younger students, or the older credit deficient/dropout student. In a traditional public school setting where classroom assignments are based on credits earned, not peer group age, placing a 17 year old with 14 year because the 17 year old only has one credit is not good practice. Such an age difference between students could cause classroom disruption and hinder the progress of both the 17 year old as well as the group of 14 year olds. Finally, even if a 17 year old could coexist in a classroom of 14 year olds without disruption, the traditional classroom setting of traditional public schools is not conducive to credit recovery.

In the cohort model used in traditional public schools, students earn 4-6 credits per year and advance as a group. In the DORP model, students work at their own pace via computer based curriculum and can earn credits more quickly. Thus, in the DORP student centered model, there is more incentive for credit deficient students as they determine how quickly they advance and graduate. In the cohort model applied in traditional public school, a 17 year old credit deficient "freshman" knows they are going to have to attend school until they are 21 to graduate. In the DORP model, it is possible a student with zero credits can graduate in a couple of years, dependent upon how quickly that student works through the computer based curriculum.

Recommendations.

The research conducted by this researcher strongly suggests DORPs have a positive economic impact on Ohio. Thus, the State of Ohio Legislature should heed the following recommendations to ensure the continued operation of DORPs:

Recommendations that should be implemented immediately to save DORPs

Recommendation 1: Redefine DORPs to the original definition

The state definition for a school to be labeled a DORP school should be reestablished to its original definition. Prior to the Ohio Legislature allowing the DORP waiver to expire, DORPs were strictly defined as community schools whose "program serves students no younger than 16 nor older than 21 years of age at the time of enrollment" (http://education.ohio.gov/getattachment/Topics/Quality-School-Choice/Community-Schools/Drop-Out-Prevention-and-Recovery/Dropout-Prevention-and-Recovery-Program-DPRP-Wai/DPRPW_guid4_15_11.pdf.aspx).

Currently, ODE allows for "any community school in which the majority of students are enrolled in a dropout prevention and recovery program" (http://education.ohio.gov/Topics/Community-Schools/Drop-Out-Prevention-and-Recovery/Dropout-Recovery-Report-Card-Designations) to be considered a DORP. One needs to be cognizant of the language. During the years in which the closure waiver was intact, DORPs had to be schools that only served 16-21 yr. olds. Currently, a rule states a community school can be labeled a DORP if the majority of students are enrolled in a dropout program as defined by state law. As a consequence, the new definition for a school to be considered a DORP is that community school only has to have a majority of its students in dropout programming. Thus, a community school that serves K-12

students could be labeled a DORP if the majority of its students were aged 16-21 and in dropout recovery programming.

This researcher found this to be a puzzling change, as it creates difficulty in measuring and comparing DORP schools to traditional schools. If one school meets the traditional definition and is only a high school that serves 16-21, and the school next door is a K-12 school that has a majority of students who are 16-21 in dropout recovery programming, but still serving students K-8, those are two completely different schools. This mismatch of criteria creates difficulties in finding like measurements for statistical analysis, as one would be comparing a traditional K-12 school with a strictly purposed dropout recovery school that only serves students aged 16-21. This is a problem needlessly created with the new definition of DORP schools. Since this study examined data from the 2012-2013 school year in which DORPs did not face closure, and strongly suggests DORPs have a positive economic impact on the State of Ohio, a straightforward solution would be to restore the original definitions and criteria for DORP schools. This would ensure all DORPs were strictly serving 16-21 year olds and would allow for an apples-to-apples comparison between this subset of community schools.

Recommendation 2: Reestablish the waiver for DORP schools that meet the original definition

The closure waiver for DORP schools had been in place since Ohio Senate Bill 311, enacted in 2007 by the 126th General Assembly (http://education.ohio.gov/Topics/Community-Schools/Drop-Out-Prevention-and-Recovery/Dropout-Prevention-and-Recovery-Program-DPRP-Wai). This law exempted

schools from criteria other non-dropout recovery charter schools must abide by and created the criteria outlined in the previous recommendation.

Since 2007, legislators were cognizant of the fact DORP schools were serving students who had either previously failed in a traditional public school system, or students who had been away from education (dropped out) for an extensive period of time. Thus, legislators always recognized these schools cannot be graded or measured via criteria used to evaluate traditional public schools.

According to Dr. Steven Tate of ODE, there seems to be no will or discussion in the Ohio Legislature of reestablishment of the closure wavier for DORP schools (personal communication, Dr. Steven Tate, Ohio Department of Education, January 2015, and May 2016). As stated previously, this would be the easiest way to protect DORPs who, as demonstrated in the research portion of this dissertation and recapped at the beginning of this chapter, have a substantial positive economic impact in Ohio. It is counterproductive to shut these schools down for poor academic performance when these schools are dealing with students who have been out of school for an extended period of time, or come to the DORP credit deficit, yet still produce positive economic impact. Thus, once the first recommendation of reestablishment of the original definition applied to DORPs is completed, the waiver for DORPs should be reestablished as well.

Recommendations for Ohio if Closure Waiver for DORPs not reestablished—If waiver not reestablished, use CBA as a measurement of DORPs economic impact

Recommendation 3: ODE should track, and make available to the public, the number of students who enrolled in each DORP during each academic year.

As noted previously, ODE does not track, or if they are tracking, they do not report to the public the number of students each DORP enrolls in one academic year. It

should be expected that DORPs have high turnover rates as students who have already dropped out of school and are returning. The rolling admission policy of DORPs further complicates the issues related to drop out rates. Since students work at their own pace via computer based curriculum, DORP schools allow continuous enrollment throughout the entire school year. This means the total number of students comprising the student body can fluctuate daily with withdraws, dropouts, and new student enrollments.

One tracking component ODE currently fails to report to the public, which would be beneficial to researchers and administrators would be to track and report the number of students enrolled in each DORP. Having access to this data would be the first step in formulating CBA for each DORP for each academic school year (See Recommendation 5).

Recommendation 4: Once ODE begins tracking, and reporting to the public the number of students enrolled each academic year for each DORP, ODE should track, and make available to the public, the length of time each student stays enrolled in the DORP.

As noted above the total number of the student body can change on a daily basis at a DORP based on the way in which year-round enrollment is allowed and student turnover. Thus, ODE should track and report, once they begin tracking and reporting the number of students enrolled each academic year, the length of enrollment for each student. This, coupled with reporting the number of students enrolled each academic year, will allow for CBA analysis (See Recommendation 5).

Recommendation 5: After beginning tracking and reporting both the number of students enrolled each academic year, and the length of stay at the DORP for each of those students, ODE should perform and report CBA on each DORP school.

The coupling of the collection and reporting of the total number of students enrolled for each academic year and length of stay at DORP for each student will allow for CBA analysis as the state could compare the two metrics with the total cost to government for failing to graduate the student ($210,000 over the lifetime of a student (Vredeveld, 2008)). Thus, ODE, with tracking the length of stay for each student, could conduct a CBA for any DORP graduate upon graduation. Knowing, and reporting, the exact length of time each student has been enrolled in a DORP would allow ODE and researchers, the ability to conduct a CBA for each graduate. For example, knowing a student was enrolled in a DORP for two years, the state knows the exact cost of educating that child at the DORP since DORPs per pupil ($5,800 for 2012-2013 school-year) funding is known. One possible example, CBA = the cost to government for failing to educate student, subtracted by the total length of stay of the graduate multiplied by the cost per year to educate each student. Therefore, CBA:

Cost to government for failing to educate student ($210,000 (Vredeveld, 2008)) - Length of time graduate was enrolled in DORP x Cost per year to State of Ohio to Educate Student ($5,800 for 2012-2013 school year)

Recommendation 6: Replace Graduation Metric used to evaluate DORPs with some form of CBA analysis.

If graduation continues to be one of the metrics in which DORPs will be judged for closure, and if the academic waiver is not reinstated, all DORPs will be forced to close. As stated previously, DORPs have very high turnover and it should not surprise one that a school serving students who have already dropped out of traditional public schools would suffer from a high dropout rate.

The 4-year longitudinal graduation rate, as defined by ODE, places students into a cohort when they enter the 9th grade. Each student is then tracked to identify whether they graduate within four years or are a non-graduate (Ohio Department of Education, http://bireports.education.ohio.gov/PublicDW/asp/Main.aspx). Of the 86 DORPs operating in Ohio for the 2012-2013 school year, only three had graduation rates of 75% or above (Ohio Department of Education, http://bireports.education.ohio.gov/PublicDW/asp/Main.aspx, and Appendix A). Only 11 DORPs had graduation rates of 50% or above and 30 DORPs had graduation rates 20% or below. (Ohio Department of Education, http://bireports.education.ohio.gov/PublicDW/asp/Main.aspx, and Appendix A). Thus, to expect DORPs to maintain high graduation rates, due to the clientele in which they serve, is an unrealistic expectation from the Ohio Department of Education. Use of a form of CBA analysis, would be a more appropriate metric for DORPs to be graded on as such analysis would show if each DORP school is providing a positive economic effect to the State of Ohio. In comparison, traditional public schools, for the graduating class of 2015, were expected to have a four-year graduation rate of above 78.9% to earn a grade of "D" on the graduation rate component on the Local Report Card. To earn the best grade on the graduation rate component (grade of "A"), traditional public schools were expected to have a four year graduation rate of 93% or above (http://reportcard.education.ohio.gov/Pages/District-Report.aspx?DistrictIRN=043844).

How this Study adds to the Body of Knowledge in the field of Education Research.

In general, this study adds to the field of education research by adding to the body of knowledge of applying CBA to educational research. Many in education have argued cost-benefit analysis is not applicable to education due to the multiplicity of objectives in education and the importance of non-educational benefits (Woodhall, 2004).

However, this argument discounts the historical use of CBA in government. As noted previously, CBA has been used in federal government since the 1930's (Fuchs, E. and Anderson, J., 1987) and, in the 1960's, it became a commonly used method of evaluation in the Department of Defense and executive branch (Fuchs, E., and Anderson, J., 1987).

Particularly in education, CBA has been used to evaluate early education programming (Reynolds, A., Temple, J., White, B., Ou, S., and Robertson D., 2011), pre-school programming (Belfield, C., Nores, M., Barnett, S., and Schweinhart, L., 2006), educational planning (Woodhall, 2004), and early intensive behavioral intervention for autistic children (Jacobson, J., Mulick, J., and Green, G., 1998). Again, CBA implies a systematic comparison of the magnitude of the costs and benefits of a form of investment in order to assess its economic profitability (Woodhall, 2004). Therefore, the CBA identifies and places dollar values on costs and benefits of programs and weighs those benefits against the cost. Thus, Applying CBA to education research is important as it shows lawmakers and policy makers the exact monies saved or lost regarding a particular program.

In addition, this study adds to the body of research regarding charter schools in general. Charter schools and market based educational reforms such as vouchers have

been immersed in political debate since conception as they challenge the traditional power and funding arrangements in education (Vergari, 2007). Thus, having CBA analysis that shows a positive benefit a subset of charter schools are having on communities and a state as a whole is beneficial to future research on the benefits or successes of charter schools.

However, more specifically, this research is particularly beneficial to research on DORPs in Ohio. This researcher was unable to find CBA specific research on Ohio DORPs. Thus, this is a unique study that shows the positive impact DORPs are having in the state of Ohio. Also, as noted previously, this research is timely in that the "clock" on the measurement of academic criteria for DORP closures begins with the 2017-2018 school year. Thus, since there have not been any mandatory closures of DORPs by the state to date, Ohio Legislature and ODE can still utilize the aforementioned recommendations to save DORPs, which, as this study has shown, produce a positive economic impact.

Potential Future Topics of Research.

The issue regarding future topics of research that could/should follow this research is somewhat dependent upon how ODE responds to this research and the closure of DORPs. If the DORP waiver is not reestablished, as recommended in this dissertation, then, once mandatory closures of DORPs occur, CBA analysis could be used to determine the economic impact, if any, a particular DORP school closure has on a community.

If the waiver is reestablished, CBA could be employed by ODE to evaluate a particular DORPs effectiveness and benefit to a particular community. As noted previously, graduation rate as a component of analysis regarding academic closure is not a component the majority of existing DORPs can meet. Some form of CBA analysis should replace the graduation rate component as this study shows DORPs produce positive economic benefits per graduate.

Regardless of whether the DORP academic waiver is reestablished or not, this dissertation looked at CBA via graduates and the cost/benefit of DORP graduates. If ODE begins to track and report all students who enter DORPs, as this dissertation recommends, then CBA can be used for each particular DORP school based on how much funding each school receives per year. ODE, or any researcher, could take the total state funding to a DORP school and compare to the raw number of graduates of that school for a particular school year to determine a specific CBA for that specific DORP school.

In addition, CBA analysis for traditional public schools to compare to CBA for DORPs would be beneficial as well. Per pupil funding for traditional public schools is greater than the $5,800 per pupil funding given to a DORP in 2012-2013 academic year. One particular example, Dayton City Schools which is located in Montgomery County (the Ohio county in which the dropout recovery initiative in this dissertation was highlighted) had per pupil expenditures of $9,109 for the 2015-2016 school year whereas $8,840 per pupil was the state average for the 2015-2016 school year (Ohio Department of Education, http://reportcard.education.ohio.gov/Pages/District-Report.aspx?DistrictIRN=043844).

Thus, future research of the city schools in the area in which DORPs are located throughout the State of Ohio would be beneficial to compare to the cost-benefit analytics of DORPs. CBA for traditional public districts would be interesting research as traditional public schools produce a greater number of graduates in terms of raw total graduates, yet have significant higher per-pupil funding than DORPs. The cost benefit analytics per traditional public school graduate, school, and district would make interesting research.

Appendix A: DORP Graduates and Graduation Rate for 2012-2013 Academic Year

DORP School	No. 2013 Graduates	Graduation Rate 2012-2013 Year
Achieve Career Prep Academy	20	22.2
Akron Digital Academy	62	18.8
Auglaize County Educational Academy	31	50
Capital High School	26	13.6
Center for Student Achievement	19	30
Cleveland Academy for Scholarship Technology	41	31.6
Coshocton Opportunity School	33	75
Cruiser Academy	68	48.3
Dayton Technology High School	37	43.5
Dohn Community School	65	44.7
Eagle Learning Center	16	Not Reported
Early College Academy	19	8.2
Everest High School	50	64.2
Fairborn Digital Academy	40	49.3
Findlay Digital Academy	54	71.1
Focus Learning Academy of Southeastern Columbus	27	8
Focus Learning Academy of Southwest Columbus	47	11.7

Focus North High School		33			17.6	
Foxfire High School		81			68.9	
Franklin Local Community School		23			88.9	
Frederick Douglas Reclamation Academy		13			8	
Glass City Academy		64			18.6	
Goal Digital Academy		45			28.8	
Greater Ohio Virtual School		105			42.9	
Hamilton Alternative Academy		10			27.6	
Lake Erie International High School		20			1.7	
Lakewood City Academy		18			29.3	
Lancaster Fairfield Community School		12			48	
Life Skills Center of Cincinnati		23			5.1	
Life Skills Center of Columbus Southeast		44			10.5	
Life Skills Center of Dayton		85			15.5	
Life Skills Center of Elyria		12			1.8	
Life Skills Center of Hamilton County		27			8.6	
Life Skills Center of North Akron		11			10.2	
Life Skills Center of Northeast Ohio		16			1.3	
Life Skills Center of Toledo		17			2.2	
Life Skills Center of Youngstown		27			6.9	
Lifelinks Community School		15			38.9	
London Academy		62			26.5	
Mahoning County High School		26			31.7	

Mahoning Unlimited Classroom		24			30.6	
Mahoning Valley Opportunity Center		27			18	
Mansfield Enhancement Academy		12			15.9	
Massillon Digital Academy		19			29.3	
Miamisburg Secondary Academy		58			74.6	
Mound Street Health Careers Academy		21			15.4	
Mound Street IT Academy		14			20	
Mound Street Military Careers Academy		11			10	
Newark Digital Academy		58			44.8	
P.A.C.E. High School		33			21.7	
Phoenix Academy Community School		66			10	
Pickerington Community School		57			75.5	
Pleasant Education Academy		18			48.4	
Polly Fox Academy Community School		20			33.3	
Promise Academy		46			4.4	
Quaker Digital Academy		81			32.4	
Road to Success Academy		29			15.3	
Rushmore Academy		102			63.5	
Schnee Learning Center		59			71.2	
The Academy for Urban Scholars		33			12.5	
The George V. Voinovich Reclamation Academy		27			10.2	
Townsend North Community School		62			29.6	

Towpath Trail High School		27			8.1	
TRECA Digital Academy		253			23	
Youthbuild Columbus Community		23			16.7	
Zanesville Community School		46			58.5	
		2670				

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