Effects of Engagement on Performance Outside of High School

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Abstract

Schools always have struggled finding the magic tool to keep students in school and getting a high school diploma. One method, which has helped increase student performance, is student engagement. The purpose of this study is to explore how students perform in high school in standard based schools versus career academy based schools and the effects it has on student performance outside of high school. Research has shown that most “blue-collar” jobs are in high demand for qualified workers. Career academies have more hands on learning leading to higher performance outside of high school. Therefore, it was hypothesized that higher student engagement in high school leads to students being more successful outside of high school than students who are not engaged in learning during high school. Success was determined by meaningful employment four years following high school graduation.

*Keywords*: Student Engagement, Career Academies, Career and Technical Education (CTE), Vocational Careers.

**Effects of Engagement on Performance Outside of High School**

**Introduction**

One of the major concerns of educators and parents is making sure their students are ready for their next chapter in life, which is commonly referred to as: life after high school. Every parent wants the best for their child and for him/her to be successful in life. A major area of concern is the choice that children make to not graduate high school. Students who decide to drop out of high school limit the jobs they can find (Hemelt, Lenard, and Paeplow, 2019, p.161).

 Every child is different, and the basic eight to three o’clock school day may not be highly optimized for their well-being. Sitting in a classroom learning about the core subjects (math, reading, writing, science and social studies) may not be for every student. If students cannot find the purpose behind the learning, such as questioning “why do I need to learn this” and “how will I use this in my life,” they could struggle with motivation in the classroom. Students do not always make the connection between learning specific things and how it will help their careers and further their lives after school. That is why schools have to find ways to help students discover the ‘why’ and see the purpose of learning each subject.

 Career academies are a way for students to explore different career fields that may be of interest during high school. Academies can be: imbedded within a school, multi-year programs that integrate career and technical education (CTE) courses, project based learning, and internships (Hemelt, Lenard and Paeplow, 2019, p.161). Career academies were first put in place to help student’s engagement and to prevent students from dropping out. Now career academies are looked at as helping promote college and career opportunities for all students (Hemelt, Lenard and Paeplow, 2019, p.161).

**Statement of the problem**

 The purpose of this study is to explore how students perform in high school in standard based schools versus career academy based schools and the effects it has on student performance outside of high school. *Career academy* is defined as a public school embedded into campuses that will run the program (Mowry, 2019, p.46). Career academies “are schools within schools that link students with peer’s teachers, and community partners in a structured environment that fosters academic success” (Ncacinc.com, 2019). *Traditional based high school* is defined as teacher-centered delivery of instruction and students receive the information. Traditional schools stress basic educational practices and expect mastery of learning in core subjects of math, reading, writing, science and social studies (Schrader, 2013). *Student engagement* refers to the degree of attention, curiosity, interest, optimism and passion that students show when they are learning or being taught, which extend to the level of motivation they have to learn and progress in their education (Partnership, 2016). *Vocational Education* also referred to as *Career and Technical Education (CTE)* prepares learners for jobs that are based in manual or practical activities, traditionally non-academic and related to specific trade. The strongest career academies have CTE as their core purpose (Kemple, 2008).

**Review of Related Literature**

 A student’s education can lead them to have success after high school; it all depends on how they apply themselves in the classroom. In today’s society we need to guide and support the younger generations. One day, they will be in the work force and out in the real world by themselves. Student engagement has huge benefits for student’s growth in the classroom. Finding the right practices to incorporate student engagement in the classroom is not easy at first. The dying trade is the number of people that have vocational based jobs is dwindling. Career Academies have been around for many years; at first they were in place to help lower income students stay in school and graduate. Now, Career Academies are focused on all students and providing different learning paths. Letting students be in the driver’s seat on how they want to guide their learning and career after high school is extremely critical.

This literature review will dive into the need for student engagement in schools, practices that promote student engagement, the dying trade in reference to why we need vocational jobs, and lastly the impact career academies have on student performance after high school.

**Need for Student Engagement**

Literature shows that the more ways we can observe information through our senses, the more connections the brain can make (Institute for Educational Advancement). The information taken in is more likely to be held on to through adulthood. Students can be actively learning by physically measuring, collecting data, and handling geometric objects for example (Institute for Educational Advancement). Lessons that go beyond the basic lecture help to deepen the student’s understanding of a concept. University of Chicago found that during a test when hands on learners thought about concepts, there was a higher rate of activity in their sensory and motor-related parts of their brain and this lead to better memory (Institute for Educational Advancement). According to Institute for Educational Advancement, it has been found that hands on learning should be supported by traditional learning to increase retention. When the two concepts are used together, students retain more of the information. Students need to learn the base of the material before starting hands-on projects.

 Career Academy is a program that is set up to combine a mixture of traditional learning and hands-on learning. Students are given the opportunity to earn a high school diploma and at the same time, work towards their future. This helps keep students in school and find their passion for learning (Hemelt, Lenard and Paeplow, 2019, p.161). According to The National Dropout Prevention Center (NDPC) some of the main reasons students drop out of school is because of push, pull or falling out of school. When it comes to push, that is defined as when situations in the school lead to consequences leading to dropout. Students can be pulled out of school when factors inside the student drive them away from completing school. Falling out of school occurs when a student does not show academic progress in schoolwork and starts to not care about completing school (Dropoutprevention.org, 2019).

 In the United States, the average graduation rate is 85 percent, which equates to 15 percent of adolescents in the United States are not graduating from high school (NCES, 2015). The rates for African American students are even lower. In Nebraska, the graduation rate is 89 percent, which is just above the national average. When looking at the graduation rate of white and black public high students, there is a 12 percent gap (NCES, 2015). The graduation rate for black students in Nebraska is 81 percent. In Minnesota, the graduation rate for white students is 88 percent and black students is 65 percent; that is a 23 percent gap between races (NCES, 2015). According to *Education Week*, at this rate and specifically looking at current ninth grade students, 700,000 of American student will not graduate from high school (Gomperts and Nagaoka, 2017).

**Practices that Promote Student Engagement**

 The key to success has been to focus on what students actually do in their studies rather than on what has been done to them by the school they attend (Bryson, 2014). Work placement is a “step-change” when students can find a level of engagement higher than what they have been able to reach before (Bryson, 2014). For some students, it makes a change in their performance goals. This shift starts to give the sense of autonomy to the students in relation to their learning (Bryson, 2014). Student’s engagement cannot improve until the teacher buys in, ensuring students succeed to the best of their ability (Bryson, 2014). Making sure to encourage and engage students with the demands of the program is extremely important. Teachers cannot guarantee success of their students but they can bend the odds in their favor of success by finding ways to be committed to their students learning, attitude they have in the classroom, and the method of teaching they use (Bryson, 2014).

**The Dying Trade**

California, by the year of 2025, will have 30 percent of all job openings, equating to over a million jobs, that will require some post-high school education (Krupnick, 2017). Over the past few decades, there has been a national push for high school students to get a bachelor’s degree leaving blue-collar fields with a negative reputation (Krupnick, 2017). Carolyn Lee the executive director of The Manufacturing Institute stated, “people just don’t think of us, they don’t realize we are there” (Frazee, 2018). The manufacturing industry has to rebuild their reputation because people are hesitant after all the layoffs of the Great Recession, they have to find ways to assure employees that they will have long-term job stability (Frazee, 2018). According to The National Association of Manufacturers “2.4 million manufacturing jobs could go unfilled between now and 2028” (Frazee, 2018). With the decrease of people wanting to explore Vocation Education career field, the economy could lose “$2.5 trillion in Gross Domestic Product (GDP) over the next decade if the 2.4 million jobs are not filled” (Frazee, 2018). Phil Raimondo is the CEO of Behlen Manufacturing Company in Columbus, Nebraska. The company makes pre-engineered metal buildings, grain bins and feed gates. Raimondo said, “In the 1990 all he had to do was put an ad in the paper and had qualified welder or other skilled laborers walk through the door. Today he is desperate for workers” (Frazee, 2018). National Center for Educational Statistics show that only 8 percent of students are enrolled in certificate programs (Nces.ed.gov, 2012). United States Senator Marco Rubio ran for president in 2016 and he stated a question for Americans asking “whether it’s worth going deep into debt to pay for college at a time when the average cost of tuition, fees and room and board at a private four-year university is closing in on the median American household income” (Iasevoli, 2016). The presidential candidate brought to light that Career and Technical Education(CTE) fields are positive career choices.According to Manhattan Institute about 44 percent of college gradates work in jobs that don’t require a degree (Iasevoli, 2016). According to Andrew Hanson, a senior research analyst with Georgetown University’s Center on Education and the Workforce,

“High schools and colleges have struggle for decades to attract students to job-

oriented classes ranging from welding to nursing; They’ve tried cosmetic

changes, such as rebranding “vocational” courses as “career and technical

education,”

 Students and their families have yet to buy in” (Krupnick, 2017). This is why Career Academies are becoming more and more important. Community colleges are partnering with local business and high schools to create apprenticeship and training programs (Frazee, 2018). Participating in a career academy in high school a student’s starting pay can be around $56,000 to $120,000 per year that doesn’t require a bachelor’s degree (Krupnick, 2017; Iasevoli, 2016). Students in today’s society need to be shown all different types of career fields because receiving a bachelor’s degree is not the only way to a comfortable life and having a successful career. Career Academies help students graduate from school and also give students the opportunity to receive a head start on a “blue-collar job” or credits toward a bachelor’s post-secondary degree.

**Impact of Career Academies**

 Extensive research has been done and shows that Career Academies have had an impact on academic, workforce development, and social perspective (Ncacinc.com, 2019). Manpower Demonstration Research Corporation MDRC has found in its research that “investments in career-related experiences during high school can produce substantial and sustained improvement in the labor market prospects and transitions to adulthood of youth” (Kemple, 2008). One of the few youth-focused interventions career academies have improved is the labor market prospect of young adults (Kemple, 2008). The Career Academies can only be as successful as the educators make them. Louie F. Rodriguez is an associate professor at California State University San Bernardino and he said “We need to intentionally create environments that contribute to the social, cultural, and intellectual development of our students, the structure alone won’t do that” (Anderson, 2016).

Dr. James Kemple Senior Research Associate at MDRC found that career academies have the most success with high-risk students for school failure (Tan, 2000). Dr. Kemple found that with low-risk students of school failure, career academies had little positive effects (Tan, 2000). The low-risk students “increased career-related course taking and work-based learning activities without reducing academic course-taking” (Tan, 2000). Jason Eppens is a high school student at Lincoln Northeast and also works through the career academy in Lincoln, Nebraska. He applied to the career academy (TCA) to start to explore his love of welding. TCA gave him benefits such as getting to go on more field trips in which he was able to explore the welding work force. When it comes to college, when he is ready to go he gets to skip the line and go straight into Southeast Community College (SCC). The college currently has a waiting list about a year long, but because of Jason’s participation at TCA, he will get to start college immediately. For Jason, school wasn’t horrible as he had good grades; he just was never excited to go to school. When he joined TCA, it sparked his excitement for learning and he was always ready to go because it was something he loved to do (The Career Academy, 2018). Jenifer Velazquez was grateful for the opportunity to join TCA because her class size was small so she had more opportunities to work one on one with her teacher (The Career Academy, 2018).

**Conclusion**

In conclusion, studies have shown that student engagement improves student’s learning in the classroom but also leads to higher performance in student’s careers after high school. Traditional based learning has to be used in the right balance with student engagement. Career academies promote student engagement and increases graduation rates. They were aimed to service high-risk students, but now have swung towards not just career ready but also college ready students. Data show that career academies still have greater benefits for high-risk students, but low-risk students still have benefitted from spending time in the academies. Career academies help prevent vocational jobs from going extinct and provide all students with course work that’s related to careers they may possess outside of high school. Giving an opportunity to every student to have success in life as there is no right way to success; it will look different for every student.

**Statement of Hypothesis**

 The quality of student engagement has improved over the years. Research shows that when students are engaged, they make connections and are more likely to store information they learn and reference back to the information. Therefore, it was hypothesized that higher student engagement in high school leads to students being more successful outside of high school rather than students who are not engaged in learning during high school. This is determined by meaningful employment four years following high school graduation.

**Methodology**

**Participants**

Participants for this study will be students from Northwest High School in Grand Island, Nebraska. The students will be seniors in high school during the 2019-2020 school year, aged 17 and 18. For the study, a range in demographic and social economic status is needed. 50 students in total will be chosen: 25 students that will participate in traditional classes and the other 25 students will participate in traditional classes and Career Pathways Institute (CPI). Career Pathways Institute (CPI) is located in Grand Island, Nebraska giving students from Hall County the opportunity to have a head start in the workforce or college. CPI serves all the schools in Hall County. The Northwest Public School district is comprised of St. Libory, Chapman and Cedar Hallow are rural schools in the district. Northwest is mainly made up of students who live in Grand Island, Nebraska and opt into Northwest High School. Students will be asked to fill out a Google form asking if they would be willing to participate in the study and the form was sent out and available at parent teacher conferences.

The reason why Northwest and CPI were chosen was both schools have their different styles of student engagement during the school day. Northwest day is the typical eight periods for 45-minutes per day. Career Pathways Institute day is a mixture of career based learning and traditional learning. Student’s who participate in CPI, go to their home high school half the day and spend the other half at CPI.

**Instrument**

The effects of student’s engagement on performance outside of high school will be determined by comparing achievement of the two groups. This will be measured by a rating scale: one will be developed using Google forms and that will be sent to the participant’s email.

**Research Design/Variables**

 There will be two groups that have 25 students in each group. The first group will be traditional based class schedule. The other group will be made up of students who participate in CPI based learning. Students in both groups will be given a survey asking them about their school experience. Once a year for four years, another survey will be sent out asking what they do for work or post-secondary schooling. The survey will measure up to four years past the graduation date because career and technical education can get students a head start on work or college credit. Traditional based learning students could go in many different directions. Four years gives students a good start on starting a job or finishing college. This study was chosen to see what style of learning best prepares students for life after high school.

**Procedures**

At the beginning of the 2019 - 2020 school year, emails will be sent out to students as well as parents of senior students. The email will explain the purpose of the study and give details for the students. Parent teacher conferences will take place September 25 and 26 and students can sign up at that time. An email will also be sent out for sign-up, just incase students or their parents don’t attend parent teacher conferences. The letter of consent will be available at parent teacher conferences so students and parents can sign at that time. This is all voluntary students are not required to be involved. Quota sampling will be the means of gathering participants in the study. The first 25 students of traditional and the first 25 students involved in CPI based learning will be apart of the study. Because Northwest is not given 25 slots for students to be in CPI, I will have students from all over Hall County participating in the CPI group.

 During the school year, students who attend Northwest will be asked to come and have a short meeting before or after school so all information can be explained and class schedules can be collected. Students in the CPI group will have a meeting at the CPI building so the students won’t have to travel. Students will have received a copy of the letter of consent at school to take home to their parents if the letter has not already been filled out. At the meeting, students will fill out a survey on what they think student engagement looks like and they will also share what their plans are for after high school. Right before graduation, another survey will be sent out to see if any of the student’s plans have changed during the school year.

 Once a year, students will receive an email with a Google form asking about their progress with their career or post-secondary schooling. Student’s last survey will be in 2023 - 2024 which will look at student’s overall rating of student engagement in high school and the progress on their career after high school. Due to the duration of this study, it is common knowledge that students will most likely drop out of the study over time and pre-cautions have been taken to account for this. Over time, approximately five students from each group are likely to drop out of the study. Students will complete a follow up with an exit form asking about final comments.

**Data Analysis**

Data will be analyzed using a rating scale from one to five on questions about student engagement. This rating scale will be explained by researchers and ultimately put into a pie chart. Student’s grade point average (GPA) will also be a used statistic. The researcher(s) will calculate the standard deviation to compare the two groups. Researchers will sort all survey responses from the Google form and place the responses in the correct category. For example, plans after high school will be broken down into 4-year college, 2-year college, military, or work field. The statistics will help teachers see the numbers on how student engagement can help student’s learning.

**Time Schedule**

An effect of student engagement research is focused on exploring how student’s high school academic experience leads to their performance outside of high school. Student’s enrollment will be collected during their high school experience, more specifically, if they participated in traditional classes or Career and Technical Education (CTE). Most of the time spent on the study was collecting data from students over the four years after high school, calculating statistics, and interpreting the results.

**Budget**

The budget for this study is small. All questionnaires will be sent out on Google forms and are free of charge. Using Google forms for the questionnaires saves any additional cost related to paper copies, postage, and envelopes. Gift cards will be bought to help with student’s participation and a drawling will be done every year.

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