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PERCEPTIONS OF SECONDARY TEACHERS AND POST-SECONDARY FACULTY
ON THE INFLUENCE OF DUAL ENROLLMENT PARTICIPATION AND
COLLEGE READINESS: A QUALITATIVE SINGLE CASE STUDY

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DEDICATION

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ABSTRACT

Dual enrollment (DE) is the opportunity for high school students to participate in college coursework while high school. DE includes two overarching characteristics, student access and course integrity. Literature boasts of the benefits related to participation such as career exploration and college transition. Roadblocks may include cost, course eligibility, and lack of qualified teachers. Proponents of DE claim that a benefit of DE participation is increased student college readiness. State regulations are inconsistent regarding, development, implementation, and delivery of DE programming resulting in inconsistencies of student access and course integrity. ACT released a report in 2018 that states 38% of students who participated in their exam demonstrated college readiness.

The purpose of this case study was to explore the perceptions of secondary teachers and post-secondary faculty members on the influence of secondary student participation in DE on college readiness. This included six secondary teachers and five post-secondary faculty. Three themes and eight subthemes were identified. The first theme, student access also included student qualification, and course timing and access to technology. The second theme, course efficacy included course expectations, teacher training, and resources, course alignment and student outcomes, and teacher and faculty engagement. The final theme, college preparation, included academic readiness, perceived benefits, and nature versus nurture.

Recommendations for further study include a pre and post DE participation comparison of both students and teachers to measure differences in perception of college readiness. The second is a quantitative study to measure improvements in required college remedial coursework, improved college retention and completion rates of students who participated in DE versus those who did not.

Keywords: academic preparedness, college readiness, career exploration, dual enrollment

CHAPTER 1

INTRODUCTION

Dual enrollment, or concurrent enrollment, is the opportunity for high school students to enroll in college courses while still in high school, usually for both secondary and post-secondary credit (NACEP, 2020). According to The National Alliance of Concurrent Enrollment Partnerships (2020), the only dual enrollment accrediting body in the United States, high school students who have the opportunity to engage in dual enrollment are exposed to the rigor and challenges of college coursework requirements while still supported within their high school environment. Benefits of participating in dual enrollment also include a higher likelihood of college entry, a higher number of attempted college credits, summer enrollment, strong academic performance, and increased college completion rates (An, 2015; Wang et al., 2015).

High schools have been partnering with post-secondary institutions to practice some form of dual enrollment participation for more than 50 years. Historically, dual enrollment was maintained as a local practice. This was often an agreement between a local district and a community college (An, 2015). In the 1980s, Minnesota became the first state to create a policy that provided a framework for dual enrollment for both secondary and post-secondary institutions (Taylor & Pretlow, 2015).

In 2013, President Obama outlined a series of proposals to increase access to higher education, accountability, and expansion of reporting in regard to student learning. One of those proposals included the programming for dual enrollment (Carey, 2015). At that time, it became apparent that quality and consistency was a missing component of many dual enrollment statewide program policies and practices. According to Taylor and Pretlow (2015), the range regarding quality varied from non-existent to extensive but was largely underrepresented.

There are many perceived and quantifiable benefits for students who choose to participate in dual enrollment. Ferguson et al., (2015), stated that secondary teachers report students who are engaged in dual enrollment tend to achieve at higher levels, think more critically, and more effectively engage in learning behaviors than students who do not participate in dual enrollment. Rarig (2019) also contends that students who participate in dual enrollment while at the secondary level will continue to benefit from the experience while enrolled in post-secondary education.

One of the most observable benefits of dual enrollment is the student's ability to obtain college credit, often at a free or reduced cost, while still in high school. Time and cost are direct benefits, but additionally, gaining confidence in terms of the rigor of college is also an advantage. Students entering college are often required to take developmental or remedial coursework before beginning the curriculum for their major (An, 2015). Students who participate in dual enrollment are frequently able to overcome the need for remedial coursework by already having completed college coursework (Eisenbeck & Henson, 2013).

Dual enrollment also includes benefits related to career exploration. By participating in offered courses, students are able to have a more in depth look at potential careers. Dual enrollment courses can increase vocational skills and aptitudes assisting students in making decisions related to college major and career choices (Eisenbeck & Henson, 2013). This opportunity allows a student to discover career interests and dislikes before transitioning into college.

This qualitative case study explored the perceptions of both secondary teachers and post-secondary faculty related to the influence of high school student participation in dual enrollment on the student's college readiness. Open-ended semi-structured interviews were conducted with a

range of secondary teachers and post-secondary faculty members, data were analyzed, and findings are reported related to the key perceptions.

Definition of Terms

In this section, relevant terms and their operational definition are shared.

Academic Preparedness -Academic knowledge and skill levels in reading and mathematics are necessary to be qualified for a credit-bearing entry-level general education course that fulfill requirements toward a degree at a postsecondary institution. Academic preparedness is different from college readiness because readiness encompasses behavioral aspects of individual performance related to success in addition to academic skills (Tucker, 2017).

Career Exploration – Career exploration is programming for students to learn about various occupations and careers that fit within their skills, preferences, interests, and values (Zook, 2019).

College Readiness – College readiness is the ability for students to be able to make connections between their academics and long-term college and career goals based on Conley’s Four Keys to College and Career Readiness which are key cognitive strategies, key content, academic behaviors, and contextual skills and awareness (Conley, 2012).

Dual Enrollment (Concurrent enrollment) – Dual or concurrent enrollment programs give secondary students the opportunity to enroll in college level coursework while still in high school, for post-secondary credit. High school and college credit can be earned simultaneously (High School Dual Enrollment, 2016).

National Alliance of Concurrent Enrollment Partnerships (NACEP) – The National Alliance of Concurrent Enrollment Partnerships is the only national accrediting body for concurrent

enrollment partnerships. Their purpose is to help dual enrollment programs adhere to the highest standards, allowing students to experience a seamless transition to college (About Us, 2020).

Statement of the Problem

Inconsistencies related to statewide regulations regarding development, implementation, and delivery of dual enrollment programs could result in irregularities of student program access and course integrity (Pompelia, 2020; Zinth, 2016). Lack of access and varying levels of course integrity could impact the level of benefit received by the student based on their participation in dual enrollment (Pompelia, 2020; Zinth, 2016). While proponents of dual enrollment tout that one benefit of student participation in dual enrollment is improved college readiness, little research has been conducted to assess and demonstrate the influence that dual enrollment has on college readiness (An, 2015).

The American College Test (ACT) released information in 2018 that reports on College Readiness, the ACT College Readiness Benchmarks are scores in subject areas that represent the anticipated level of achievement for a student to have a 50% chance of obtaining a B or higher or a 75% change of obtaining a C or higher in corresponding first year college courses (2018). In the report, ACT states that 38% of students who participated in the testing met the ACT benchmarks in three of the four subject areas demonstrating the potential to be successful in three of the four subjects in first year college courses (2018). Additionally, according to Scott-Clayton and Rodriguez (2008), approximately 68% of incoming community college students are required to participate in remediation before or during their first year of college.

Literature does contend that there are a variety of quantifiable benefits related to dual enrollment participation related to student success. For example, Rarig (2019), asserts that students who participate in dual enrollment while in high school will reap post-secondary

rewards such as improved college readiness, less need for developmental or remedial coursework, greater confidence in their college coursework abilities, improved college retention and completion rates, and the potential for a shorter degree completion time saving the student both time and money. Rarig (2019) also asserts that students who participate in dual enrollment while in high school will continue to benefit from the rigors and challenge of that experience once they transition to college.

Purpose of the Study

The purpose of this qualitative case study was to explore the perceptions of secondary teachers and post-secondary faculty members on the influence of high school student participation in dual enrollment on college readiness. Specifically, do secondary teachers and post-secondary faculty perceive students who participate in dual enrollment are better prepared for college. This qualitative case study used open-ended semi-structured interviews to investigate and analyze the perceptions of secondary teachers and post-secondary faculty regarding their viewpoint on the influence of participation in dual enrollment on a student's college readiness.

Research Questions

The purpose of this study is intended to gain an understanding of secondary teacher and post-secondary faculty perceptions of the influence of student participation in dual enrollment on college readiness, this study explored two research questions:

RQ1: How do secondary teachers perceive dual enrollment influencing college readiness for high school students?

RQ2: How do post-secondary faculty perceive dual enrollment influencing college readiness for high school students?

Conceptual and Theoretical Framework

A conceptual framework is an approach to identify what a person is studying, why it is important, and why it is appropriate to study (Ravitch & Riggan, 2016). A conceptual framework explains key factors and the relationships among those factors to build the structure of the study. It is also the job of conceptual framework to identify known gaps in current research in order to refine research questions and justify the need for the study, why it is worth doing, and how it should be done.

As an educator and student researcher, I am interested in student success within dual enrollment from both a personal and professional perspective. According to the work of Ravitch and Riggan (2016), “Life experience tends to shape personal interests and goals more than detached intellectual questions” (p. 9). I have three children that are in or have graduated from high school. Each of them has benefited from their participation in dual enrollment coursework in terms of time and financial savings, feeling more prepared for college, and having the opportunity to explore various career options. From a professional standpoint, I oversee the post-secondary dual enrollment program at my institution of employment, which serves over 1,600 secondary students each year. The primary goal of the dual enrollment program is to recruit students after high school to the institution. The secondary goal is to provide secondary students an opportunity to explore career options, to introduce students to the rigor of college work, and to build the students’ confidence in their ability to complete college coursework (Penn College NOW, 2020).

For this study, the focus was on analyzing the perceptions of secondary teachers and post-secondary faculty and the influence of dual enrollment participation on student college readiness. The study focused on secondary teachers and post-secondary faculty who currently

were or had recently participated in the dual enrollment program at the site institution, either as a secondary teacher or the post-secondary faculty member. The site institution is a public, open enrollment post-secondary institution in central Pennsylvania.

The theoretical framework used within this study was constructivism. Theorist Jean Piaget viewed constructivism as the individual at the center of learning, creating, and acquiring knowledge (Brau, 1970). Additionally, McLeod (2019), notes that in the constructivism framework, learning is impacted by the social interaction with community playing a central role. McLeod (2019) also observes that constructivists believe in personal construction of meaning by the learner through experience and that meaning is influenced by the interaction of previous knowledge and new information. Creswell (2013) adds that the meanings are varied and lead the researcher to look for complexity rather than narrow meaning within a select few categories or ideas. The groundwork for this theory is that individuals actively construct their own knowledge, and that reality is determined by their own experiences as a learner (McLeod, 2019). Constructivists believe in personal construction of meaning by the learner through experience and that the meaning is influenced by the interaction of previous knowledge and new information (McLeod, 2019).

Assumptions, Limitations and Scope

According to Roberts and Hyatt (2019), assumptions are what researchers take for granted relative to their study. Assumptions of this study are typical of qualitative research. Assumptions were made that both the secondary teachers and post-secondary faculty members participating in the interviews would answer in an honest and candid manner and that the inclusion criteria provides a representative sample based on the population. Additionally,

assumption was made that participants voluntarily took part in this research collection and did so without motive or reward.

According to Bloomberg and Volpe (2019), all studies have flaws or weaknesses and should be identified early on by the researcher. Limitations are uncontrollable and threaten the validity of the study if they are not identified and addressed. For this study, the most notable limitation was on the reliance of busy professionals to volunteer their time, in an open and honest manner, without any form of return or reward. Another limitation of this study was the sample size and experiences. Interviews were conducted with a range of secondary teachers and post-secondary faculty members; therefore, analysis is limited only to the experiences and perceptions of those educators. Furthermore, the sample is not large enough to provide statistical information for analysis.

Additionally, for this study, the interview process is a limitation by nature of the human interaction, specifically the ability of the facilitator to influence the participant (Patton, 2002). Being aware of this challenge, I was attentive to the concern. Collected data and the ensuing analysis of the interviews is limited to the experiences and perceptions of the participating secondary teachers and post-secondary faculty. My own views and opinions were not shared with the participants or included in the study.

The scope of this study is limited based on the use of number of participants. During the Fall semester of the 2021-22 academic year, secondary teachers and post-secondary faculty members who were currently participating or have recently participated in the site's dual enrollment program were invited to take part in the research project. Those secondary teachers and post-secondary faculty who participated in the dual enrollment program did so within the academic years 2016 through 2020.

Rationale and Significance

Most literature surrounding dual enrollment addresses the benefits for students in relation to college readiness, retention and completion, and academic success from the viewpoint of educators, or based solely on statistical analysis. Weisman (2020), reports that in 2019, about one-third of all high school students participated in some form of dual enrollment. With the rapid expansion of dual enrollment, and the inconsistencies related to statewide regulations of development, implementation, and delivery of the programs, it is important to keep program access and course integrity at the forefront (Pompelia, 2020; Zinth, 2016). Supporters of dual enrollment identify the student's improvement of college readiness as a core goal of dual enrollment participation, yet little research has been conducted to demonstrate the influence on dual enrollment on college readiness (An, 2015). This study sought to contribute to the literature assessing the influence of dual enrollment participation on college readiness.

Karp and Hughes (2008) ascertained that by participating in the rigors and challenge of college coursework while in high school, students are better able to bridge the gap and have an easier, more successful transition into college. The research questions addressed in this study are related to the perceptions of the secondary teachers and post-secondary faculty members influence of dual enrollment participation and the student's college readiness. The potential benefit of that influence could remove the need for developmental coursework when transitioning to college.

Summary

While dual enrollment has been utilized for many years, until recently there was little regulation. Quality and consistency were not evident. In 2013, President Obama introduced a series of proposals that were aimed at increasing access to higher education, along with an

expansion on accountability and reporting of student outcomes (Carey, 2015). Since then, many states have implemented related policies to oversee dual enrollment programs and their quality.

There are many assumed and measurable benefits to dual enrollment. However, there is limited literature available regarding the impact and influence on college readiness of having participated in dual enrollment. Rarig (2019) stated that students who participate in dual enrollment while in high school will continue to reap the rewards once they have transitioned to high school. Yet, according to An (2015), little research has been conducted to confirm the influence of dual enrollment participation on college readiness. This study investigated perceptions of secondary teachers and post-secondary faculty on the influence of student's dual enrollment participation on college readiness.

In Chapter 2, additional information regarding dual enrollment, such as the definition, history, characteristics, and benefits of dual enrollment will be shared. Additionally, the literature review includes background information on college readiness. I will also share the conceptual framework and present the theoretical framework of constructivism theory.

CHAPTER 2

LITERATURE REVIEW

Concurrent, or dual enrollment is an opportunity for secondary students to participate in college level coursework while still in high school, for postsecondary credit (NACEP, 2020). The National Alliance for Concurrent Enrollment Partnerships (NACEP), the only accrediting body for dual enrollment in the United States, defines their approved model of dual enrollment as courses taught by college-approved secondary teachers in a secondary environment. Concurrent and dual enrollment partnerships and early college programs aim to successfully transition students from high school to college (NACEP, 2020).

Weisman (2020), reports that in 2019, about one-third of all high school students participated in some form of dual enrollment. Additionally, in 2018, 82% of high schools reported that their students participated in dual enrollment coursework (Thomas et al., 2013). Until Minnesota became the first state in 1980 to implement policy for the framework of dual enrollment for both secondary and post-secondary schools, there had been little to no regulation of dual enrollment programs from the state or federal level (Taylor & Pretlow, 2015). Since then, President Obama, in 2013, created policy to increase access to higher education, require accountability, and expand on the reporting outcomes of student learning (Carey, 2015). In 2016, a review of statewide educational policies showed improvement of the regulation and oversight of dual enrollment with 50 states now offering dual enrollment programming and 47 states having policies to regulate them (Zinth, 2016).

There are two overarching characteristics of dual enrollment, those include student access and course integrity. Student access addresses the high school student's ability to participate in dual enrollment courses while in high school. Student demographics such as parent's level of

education and race are shown to be a factor in the student's participation of dual enrollment (2019). Other roadblocks include cost, eligibility, and lack of qualified teachers (Pompelia, 2020). Course integrity of dual enrollment coursework includes maintaining uniformity of components surrounding the curriculum such as textbooks, learning outcomes, course syllabus, assignments, grading practices, periodic assessments, and final exams (Zinth, 2015). Zinth (2015), also maintains that there are four levels of dual enrollment, with both advantages and disadvantages, that control the academic rigor and course integrity:

1. Local control,
2. Moderated local control,
3. Adopting NACEP Standards,
4. Requiring/encouraging NACEP Standards.

The benefits of participating in dual enrollment are numerous, especially from the aspect of the student (Karp & Hughes, 2008). Two prevalent areas revolve around Career Exploration and College Transition. Ferguson (2015) ascertains that often the college courses not only compliment work available at the high school level, but it also sometimes includes industry certification, allowing the student to explore career options not otherwise available, and gain a competitive edge in the workplace. In regard to college transition, Graham (2021), notes that dual enrollment provides students with opportunity to adjust to the rigors and expectations of college coursework while still in a supportive high school environment. Graham (2021) also purports that free or reduced dual enrollment programs give the student the advantage of saving time and money on their degree upon college matriculation. Another benefit is that college completion rates are increased for participants of dual enrollment (An, 2015). Additionally, it is believed that participation in dual enrollment is related to more attempted credits, higher

likelihood of college entry, summer enrollment, and strong academic performance (Wang, et al., 2015).

This study is focused on Conley's College Readiness Framework. Conley maintains that college readiness can be defined as the level of preparation a student needs to enroll in and succeed in college, without remediation, at a post-secondary institution (Conley, 2007). Conley's framework includes four key concepts: key cognitive strategies, key content, academic behaviors, and contextual skills and awareness (Conley, 2007).

Conceptual Framework

Conceptual framework is an approach to identify what a person is studying, why it is important, and why it is appropriate to study (Ravitch & Riggan, 2016). A conceptual framework explains key factors and the relationships among those factors to build the structure of the study. It is also the job of a conceptual framework to identify known gaps in current research in order to refine research questions and justify the need for the study, why it is worth doing, and how it should be done (Ravitch & Riggan, 2016).

For this study, the focus was on analyzing the insights of the influence of dual enrollment participation on college readiness from the viewpoint of the secondary teacher and post-secondary faculty member. Information gathered assists in understanding the perceptions of secondary teachers and post-secondary faculty who were involved in or have experience with dual enrollment and what their perceptions are of the influence of student participation in dual enrollment related to college readiness. Specifically, from their viewpoint, do students who participate in dual enrollment, compared to those who do not, display a different or improved level of skills associated with Conley's College Readiness Framework. Those skills are the four

concepts of key cognitive strategies, key content, academic behaviors, and contextual skills and awareness (Conley, 2007).

This study focused on secondary teachers and post-secondary faculty who were or recently have participated in a dual enrollment program at a public, open enrollment institution in central Pennsylvania and focused solely on students who resided in Pennsylvania while in high school and attended either a traditional Pennsylvania high school, career and technology center, or a virtual high school.

Theoretical Framework

This study is grounded in the theoretical framework of constructivism in education. One of the early theorists of this philosophy was Jean Piaget. Piaget's view of constructivism theory was that the individual is at the center of knowledge creation and the acquisition process (Brau, 1970). According to Piaget, people, especially children, construct knowledge from the actions, both physical and mental, within their environment (Harlow et al., 2006). The foundation of this theory is that individuals actively construct their own knowledge, and that reality is determined by their experiences as a learner (Brau, 1970). McLeod relays that constructivists believe in personal construction of meaning by the learner through experience and that the meaning is influenced by the interaction of previous knowledge and new information (2019). Creswell (2013), wrote, "These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrow the meanings into a few categories or ideas" (p. 25).

McLeod (2019), notes that within the framework of constructivism theory, is the belief that learning is impacted by the social interaction and that the community plays a central role. Additionally, social constructivism supports a qualitative case study methodology by allowing

the researcher to ask open ended questions while providing an opportunity for the educators to define the meaning of their experience and perceptions (Creswell, 2013).

Constructivism Theory Strengths

McLeod (2019) believes that constructivism promotes a sense of personal ownership where students participate in their learning and assessment. Some experts believe that cooperative learning is an effective way to implement constructivism in education (Brau, 1970). This theory is especially beneficial for alternative educational settings such as special education. It removes the traditional educational methods and requirements such as standardized testing to allow students to build on their abilities at their own pace (Villanueva, 2014). Additionally, constructivist teaching places an emphasis on sensory, a focus that has long been lacking in traditional education (2010). Rather than doling out information, the teacher acts as a guide and actively participates in the learning process alongside the student while encouraging and challenging them (2010).

Constructivism Theory Weaknesses

Lack of structure can pose limitations to this style of learning as it removes traditional grading and places more value on students evaluating their own progress (McLeod, 2019). Some believe that students, especially novice learners, need more structure (Brau, 1970). They also report that because the nature of Constructivism is abstract, it is difficult to observe and measure learning outcomes (Brau, 1970). Theorists also believed that because the standardized curriculum is discarded in favor of more personalized course study that students could fall behind (Villanueva, 2014). Additionally, it is believed that the time required to effectively implement constructivism is a limitation. This framework requires teachers to spend a significant

amount more time engaging the learner, which in turns requires additional preparation time as well as time for reflection (Brau, 1970).

Dual Enrollment

According to Kleiner and Lewis (2005), there has been a significant increase in dual enrollment participation over the last 20 years. In 2002, approximately 680,000 high school students participated in dual enrollment nationwide. By 2010, that had jumped to a little more than two million. Weisman (2020), reports that in 2019, about one-third of all high school students participated in college coursework through dual enrollment. Additionally, in 2018 82% of high schools reported their students participated in dual enrollment coursework (Thomas et al., 2013).

Historically, dual, or concurrent enrollment, was a local practice. Some schools have been practicing some form of participation for more than 50 years. Often, this was an agreement initiated between local school districts and community colleges. For many years, there have not been state or federal guidelines related to dual enrollment. In the 1980s, Minnesota became the first state to create policy that provided a framework for dual or concurrent enrollment for both secondary schools and post-secondary institutions (Taylor & Pretlow, 2015).

Since then, many states have developed policies related to dual enrollment. In 2013, President Obama outlined a series of proposals to increase access to higher education, accountability, and expansion of reporting on student learning. One of the programs that the President addressed was dual enrollment (Carey, 2015). It became evident that quality was a missing component or at best, inconsistent, in relation to existing dual enrollment state policy. The range regarding quality varied from non-existent to extensive, but overall was largely underrepresented (Taylor & Pretlow, 2015). It was found that eight states required or encouraged

participation in accreditation with the only accrediting body, NACEP, while thirty others have reporting requirements that include: rigor, partnership regulations, support services, requirements for faculty interaction, student outcome monitoring, classroom visitation, and stakeholder surveys (Taylor & Pretlow, 2015). In 2016, a review of statewide education policies identified that there are dual enrollment offerings in all 50 states and of those, 47 states have policies that regulate dual enrollment programming (Zinth, 2016).

The variations among statewide dual enrollment policies have led to inconsistency in the expectation and delivery of programming. In general, dual enrollment is defined as an agreement whereby secondary students participate in college coursework (Taylor & Pretlow, 2015). Dual enrollment always includes the student earning college credit and often includes the student being awarded secondary credit, but this is not always the case (Thomas et al., 2013).

Additionally, the terms dual enrollment and concurrent enrollment are often used interchangeably. However, technically dual enrollment is defined as a student earning college credit while in high school (Hoffman, et al., 2009) while dual credit is defined as a high school student being awarded with both high school and college credit for completing the same course simultaneously (Thomas et al., 2013; Gray & Lewis, 2013). And concurrent enrollment is referred to as a course or program where a student takes college coursework taught by the secondary teacher at the high school campus (Hoffman, 2005). For the purpose of this study, dual enrollment was defined as the high school student participating in college coursework. This broad definition encompasses the variations of definition of dual enrollment.

Characteristics of Dual Enrollment

As mentioned previously, state policies regarding dual enrollment vary greatly. In some cases, the state policy dictates the structure of dual enrollment programming and its

implementation. State policies share some common characteristics but not in entirety, which leads to variation in development, implementation, and delivery across states (Perna, et al., 2008).

Access

According to a report published in 2019 by the U.S. Department of Education (2019), which is based on data from the High School Longitudinal Study of 2009, 34% of students took post-secondary credit in high school. Of those, 42% of participating student's parents earned a bachelor's degree or higher, compared to 26% whose parents' education was lower than a high school diploma. Additionally, a lower percentage of both Hispanic and Black students took college courses while in high school compared to White and Asian students (2019).

The same study also reported on the location that the high school students took their college courses. The most common location is at the high school, with 80% of students participating in that model of dual enrollment. Only 17% of students attend courses on the college campus and 6% taking them at a high school different than their own home high school.

With only 34% of students participating in dual enrollment and the various options for location, some researchers question the potential of barriers and roadblocks for high school students. Pompelia (2020), ascertains that some groups of students face significant roadblocks or barriers in terms of access to dual enrollment. This removes the student's ability to gain the rewards of having participated. Pompelia (2020), also shared that in 2019, states considered more than 219 bills related to dual enrollment with the majority including provisions about access to the courses. The provisions focused on reducing costs for students, removing barriers to participation, expanding student eligibility, and increasing the number of qualified educators.

According to Pomelia (2020), the cost of college coursework can be prohibitive for high school students and their families. Some states waive or reduce tuition and fees for dual enrollment courses, others leave the responsibility with the school district or student and their families. For example, in 2013 Florida approved legislation to shift the cost of dual enrollment courses to the K-12 districts (Adams, 2014). In 2014, Alabama implemented a tax credit to generate scholarships specifically for high school students pursuing dual enrollment (Adams, 2014).

While cost is one barrier that students sometimes face, there are others. The report, *Dual Enrollment Access* written by Pompelia (2020), also establishes that additional barriers include providing transportation to the course location, removing course limits, or increasing the number of allowable courses, making dual enrollment information more available to students and parents, and to amend requirements to accommodate dual enrollment students.

The third provision that Pompelia (2020), identified is student eligibility in dual enrollment. Many dual enrollment programs have requirements and academic measures in place, including current grade level. According to Gerwitz (2018), in a survey conducted by ECS in 2016, it was determined that in 17 states students were required to have a teacher recommendation in order to participate in dual enrollment. Twenty-four states had eligibility requirements such as specific high school coursework, a minimum grade point average, parent's permission, or a minimum score on a state assessment. Gerwitz (2018), also shares that some schools are attempting to re-work their approach to eligibility for dual enrollment. For example, Utah established new criteria that enables middle achieving students to participate in dual enrollment.

Pomelia's (2020), final provision is increasing the number of qualified educators. She establishes that increasing access to dual enrollment requires increasing the number of teachers who meet the requirements to teach those courses through the high school. In an article titled *Dual Enrollment, The Good, The Bad, and the Potentially Ugly, Part III* published in 2016, the author asserts that many states are seeking a solution to the lack of qualified secondary teachers needed to expand dual enrollment course offerings. Gerwitz (2018), reiterates that secondary teachers often require an undergraduate degree in their field to be in the high school classroom, while most post-secondary faculty and adjuncts require graduate level program completion.

Course Integrity

As the prevalence of dual enrollment increases, the variety of dual enrollment models that are available, and the breadth of statewide governing policies, it is important that quality controls are implemented in order to maintain academic rigor and course integrity. According to Borden, et al., (2013), recently concerns have been brought to the forefront surrounding the rigor of college classes that are taught by secondary teachers compared to those taught by the post-secondary faculty.

Most often, the only mechanism used to measure and monitor a dual enrollment course rigor and integrity are instructor credentials and qualifications (Zinth, 2015). Additionally, with the increase in demand for dual enrollment education, the pool of qualified teachers is diminished, creating issues with enforcement of qualifications (Mangan, 2016). To combat this issue, many states, and in some cases, colleges, have implemented standards that require the secondary teacher to meet the minimum qualifications as an adjunct faculty member (Mangan, 2016; Taylor, et al., 2015).

Beyond teacher qualification, it is necessary to create consistency in the coursework. This includes maintaining uniformity of components surrounding the curriculum. Those components include textbooks, learning outcomes, course syllabus, assignments, grading practices, periodic assessments, and final exams, etc. (Zinth, 2015). In 2016, Zinth reported that 28 states required dual enrollment program evaluation and 37 states required reports of student outcomes. The National Alliance for Concurrent Enrollment Partnerships reported in 2010 that both Florida and Utah policies included reviews of individual courses and Oregon, Utah, and Virginia required routine meetings for administrators to discuss best practices, review standards, and time to address program concerns (Lowe, 2010).

Zinth (2015), ascertains that there are four levels of dual enrollment partnership, all with advantages and disadvantages, that control the academic rigor and course integrity of a dual enrollment program:

- Local control – Post-secondary institution as arbiter. With this approach, the authority for determining the dual enrollment course and instructor quality falls to the post-secondary institution. There is no state policy regulating the process. The advantage in this case is that the post-secondary institution maintains the freedom to establish their own instructional requirements and processes for ensuring that curriculum is delivered properly. The disadvantage is that K-12 may be discouraged from participating based on their lack of control and engagement.
- Moderated local control – K-12/post-secondary agreement. Many states direct secondary and post-secondary institutions to create an agreement that aligns with the needs of both parties and oversees the courses and instructor requirements rather than create a statewide policy to govern dual enrollment. The advantage is that this approach of equal partnership

increases K-12 buy-in and support and provides appropriate oversight of course quality.

The disadvantage is that by establishing policy at the local level, student access and equity may not be ascertainable.

- Adopting NACEP standards. The National Alliance of Concurrent Enrollment Partnerships (NACEP) is an organization that includes both K-12 and post-secondary institutions membership who, as defined by NACEP, offer programs in which a high school student enrolls in a college credit bearing course that is taught by a post-secondary approved secondary teacher. The advantage of this model is that the NACEP standards are rigorous and provide a high level of oversight. When applied correctly, the standards should result in an authentic college course offered in the high school. The standards focus on establishing post-secondary faculty ownership and academic oversight of course content. The disadvantage is that the standards are rigorous. There are requirements surrounding post-secondary faculty visits, secondary professional development, and student requirements that are resource intensive.
- Requiring or encouraging NACEP accreditation. Some states recognize the potential benefits of adhering to NACEP standards, but also recognize that programs might consider themselves aligned with the standards, but in reality, are not closely aligned at all. In some states, programs must undergo NACEP program review, and either be accredited by NACEP or approved by the commission of higher education. In others, state funding is tied to accreditation or clear evidence of comparable standards. The advantages and disadvantages of this model as the same as the previous level, adopting NACEP standards.

Benefits of Dual Enrollment

Many benefits of dual enrollment are readily apparent, most especially from the student perspective (Karp & Hughes, 2008). Students have the ability to earn both secondary and post-secondary credit simultaneously. Bolin (2019) reveals that students who participate in dual enrollment are able to explore a variety of potential careers. Researchers report that by participating in dual enrollment, students gain advantages such as an improvement in their transition from high school and an improved college completion rate (Hoffman, et al., 2009; Santos, 2009). By earning post-secondary credits while in high school the student may save time and money while pursuing their college education (Bolin, 2019). Additionally, by taking college coursework while in high school there are secondary academic support systems in place that can assist the student in persisting through the college course, essentially bridging the gap, and creating an easier transition to college (Karp and Hughes, 2008). Students also gain confidence from having succeeded in college coursework.

Career Exploration

As mentioned, one benefit of dual enrollment includes expanded career exploration opportunities and increased vocational skills (Eisenbeck, 2013). Often, the post-secondary coursework that is being offered compliments the current high school coursework (Ferguson, 2015). These courses sometimes include industry certifications, making the student more competitive in the workplace. “High school teachers reported that dually enrolled students achieved at higher levels, thought more critically and engaged in more effective learning behaviors than students not participating in dual enrollment. They cited a strong work ethic and time management skills” (Ferguson, 2015). According to Bolin (2019), students often acquire experience with hands-on learning and real-world equipment that gives the student the

opportunity to explore a variety of careers while still in high school. Additionally, according to Karp and Hughes (2008), the benefits of participating in dual enrollment include career exploration, improved attendance, and higher engagement of at-risk students.

College Transition

Another benefit of participation in dual enrollment is student academic preparedness and the confidence that comes with the experience. Graham (2021), reports in a study completed by Best Colleges in 2018, 22% of parents expressed concern about their student's ability to balance social life and academics without their supervision. Comparably, 20% questioned their student's college readiness in terms of academic preparedness. Graham also asserts that dual enrollment is an opportunity for high school students to gain a glimpse of the academic demands they will face in college. Dual enrollment also gives high school students the opportunity to adjust to the rigors of college coursework within an educationally supportive environment of the high school setting (Graham, 2021).

Conley (2008) identifies the need for remediation as a key measure for college readiness. Approximately 68% of community college students required remediation (Scott-Clayton & Rodriguez, 2008). Many claim that dual enrollment programs reduce the need for remediation but there is little evidence to support that claim. Kim and Bragg (2008) found correlation between dual enrollment participation and college readiness in reading and writing and mathematics. According to Eisenbeck and Henson (2013), students entering college often need to take remedial coursework to prepare for their programs, they say that students who participate in dual enrollment will frequently overcome or bypass that need by having already completed college level coursework (Eisenbeck & Henson, 2013). Additionally, a study in Tennessee revealed that the need for remedial coursework decreased 9% for dual enrollment students

(Grubb, Scott, & Good, 2017). An (2015), notes that by participating in early college, students have the opportunity to avoid the need for remedial coursework.

Several researchers purport that participating in a dual enrollment program has the benefit of saving students time and money. The cost of college has rapidly increased over the last decade, it is now one of the most expensive investments an individual can make (Graham, 2021). Graham (2021), continues by stating that often dual enrollment programs assume all or part of the cost, removing some of the financial barrier to students. By participating in dual enrollment, students have the opportunity to experience more challenging material which saves them money on college but also can reduce the amount of time it takes to complete a degree (Bolin, 2019).

An (2015), concludes that one benefit of dual enrollment is college completion rates. The author reports that students who participate in dual enrollment are 60% more likely to complete a college degree. Similar to AP coursework, dual enrollment participation has also been shown to improve freshman year credit attainment. It is thought, however, that there is a threshold of six or more credits needed to create a positive impact.

Program models that provide student supports and greater transition services tend to see greater levels of student completion (Taylor & Pretlow, 2015). The advantage is due to shorter time to degree completion, elimination of duplicated curriculum, improved student habits, academic readiness, and financial savings. It is also believed that participation is related to more attempted credits, higher likelihood of college entry, summer college enrollment, and stronger academic performance (Wang, et al., 2015). Wang, et al., (2015), also report early academic momentum indicators positively related to students' college completion and retention, accounting for the positive relationship between dual enrollment participation and college outcome (Wang, et al., 2015).

Graham (2021) supports the thought that dual enrollment participation boosts college completion rates. According to a study from Teachers College, Columbia University, 88% of students who participated in dual enrollment programs continued directly into college after high school. 64% of those students entered a four-year college and earned degrees within five years (Graham, 2021). Graham (2021), also notes that when students perform well in college courses while in high school, it strengthens their aspirations as well as their confidence in their academic abilities.

Finally, Hoffman, et al., (2009), report that a key benefit of dual enrollment is that students earn college credit upon successful completion of the college coursework. Dual enrollment courses are included on the student's college transcript. This coursework allows the students to transfer the credits to other institutions (DiPuma, 2001). The receiving institution determines the transferability of the coursework. Twenty-five states have policies that require public institutions to accept dual credit coursework, while an additional fifteen states do not (Zinth, 2001). Taylor, et al., (2015), contend that students may not receive the full benefit of dual enrollment participation if their credits did not transfer to their college of choice.

Rarig (2019), eloquently synthesized the benefits of dual enrollment to the post-secondary institution as the "success of students who participate in dual enrollment programs providing implications for community colleges in terms of reducing remedial education needs, increasing student retention, raising GPA, improving student college completion, and increasing access for students." Rarig's (2019), viewpoint is from the post-secondary perspective, but each of the characteristics are applicable to the success of the student at the secondary institution as well.

College Readiness

In 2007, David Conley published a report titled *Toward a More Comprehensive Conception of College Readiness*. This report was created in conjunction with the Bill and Melinda Gates Foundation. This report is meant to facilitate actions such as analyzing current systems and widely gauge college readiness (Conley, 2017). This report is based on a decade of research completed by David Conley that analyzes both the content of entry level college courses and the perceptions of secondary and post-secondary students and instructors about their opinions on what is needed to succeed in college (Marzano, 2017). Conley (2007) asserts that college readiness can be defined operationally as the level of preparation a student needs in order to enroll in college and succeed, without remediation, at a post-secondary institution. According to Marzano (2017), students who are college and career ready can: qualify for and succeed in entry-level college credit coursework without the need for remedial or developmental courses and complete foundational courses that allow the student to continue courses in the program of study.

Conley (2007) deems that college readiness, which is currently measured by completion of high school courses, grade point average, and tests such as statewide assessment, that college readiness is really a multi-faceted concept that includes several variables both internal and external to the secondary school environment. The four concepts include key cognitive strategies, key content, academic behaviors, and contextual skills and awareness (Conley, 2007).

Key Cognitive Strategies

Conley (2007), shares that several studies of post-secondary faculty members express agreement that most students arrive at the post-secondary institution unprepared for the intellectual demands and expectations of college. Key cognitive strategies is the term Conley

uses to describe the intelligent behaviors needed for college readiness, these skills are also referred to as “thinking skills” or “dispositions”. Specific cognitive strategies that Conley includes in this report include:

- Intellectual openness: curiosity and thirst for deeper understanding, the ability to question the view of others when not logically supported, accepting of constructive criticism, and ability to change personal view if warranted by evidence. This helps students to deal with the novelty and ambiguity that is frequently encountered with new subjects and materials.
- Inquisitiveness: active inquiry and dialogue regarding subject matter and research questions and pursues evidence to defend arguments, explanations, and lines of reasoning. The student does not just accept a given assertion without cause for explanation.
- Analysis: The student identifies and evaluates data, material, and sources for quality content, validity, credibility, and relevance. Compare and contrast is a demonstrable skill used by the student.
- Reasoning, argumentation, proof: The student is able to construct a well-reasoned argument, utilizes recognized forms of reasoning to construct those arguments or defend a viewpoint, and accept critique and challenge by providing a logical explanation.
- Interpretation: The student analyzes competing and conflicting descriptions to determine the strengths and flaws of each as well as any commonalities or distinctions. The student is able to synthesize the resulting analysis and share the interpretation that is likely correct or reasonable based on the evidence.
- Precision and accuracy: The student know what type of precision is appropriate to the task and the subject area and is able to increase precision and accuracy through

approximations generated by the task. The student also uses precision to reach correct conclusions in the context of the subject or task.

- **Problem Solving:** The student develops and applies multiple strategies to solve routine problems, generate strategies to solve non-routine problems, and applies problem solving methods for complex problems.

(Conley, 2007, p.13)

Key Content (Academic Knowledge and Skills)

Conley (2007) ascertains that in order to be academically prepared and successful at the college level, the second important dimension is content knowledge. Conley (2007) poses that there are two overarching academic skills and six core academic subjects that are integral to college preparation and success.

The two overarching academic skills are writing and research (Conley, 2007). Writing includes expository, descriptive, and persuasive writing skills. Students also need to understand pre-writing, editing, and re-writing. College writing requires a student to present a clear argument, substantiate the points, and utilize basic writing styles (Conley, 2007). Additionally, college courses increasingly require students to conduct research on various questions. In order to complete research students must learn to evaluate source material and synthesize and incorporate the material into a report (Conley, 2007).

In addition to the overarching academic skills, Conley (2007), also maintains that in order to be prepared for college a student must also acquire knowledge in six core academic subjects. The six core academic subjects are English, Math, Science, Social Studies, World Language, and The Arts. English includes knowledge and skills developed in foundational English courses that enable students to engage and create well written, organized, and supported products, both orally

and written. Additionally, the foundations of English include reading comprehension and literature, writing and editing, information gathering and analysis, and critiques (Conley, 2007).

Math foundations include understanding the concepts, principles, and techniques for success in college math. Math coursework builds upon existing principles. College ready students have the ability to apply conceptual understanding in order to extract a problem from the context, use math to solve the problems, and then interpret the solution (Conley, 2007).

The third academic core subject is Science. Science at the college level, incorporates scientific thinking into all facets. Students learn to utilize communication conventions and the way that empirical evidence is used to draw conclusions and challenge interpretation. Students understand that scientific knowledge is both constant and changing (Conley, 2007).

Within Social Studies, or Social Sciences, a wide variety of subject areas are included. Each with its own content base and analytic techniques and conventions. This includes geography, political science, economics, psychology, sociology, history, and humanities. In this discipline students should have an awareness of order and structure (Conley, 2007).

World Languages includes the ability to effectively communicate with speakers of another language. The student must understand the language through the context of skills such as listening, speaking, reading, and writing. There must be an understanding of culture in order to obtain proficiency of structure and conventions of a language. The final core academic is the Arts. In college readiness, Arts refer to art history, dance, music, theater, and visual arts. Students should gain an understanding and appreciation for contributions to these fields (Conley, 2007).

Academic Behaviors

According to Conley (2007), college readiness needs to encompass a variety of behaviors necessary for academic success. Those behaviors include self-awareness, self-monitoring, self-control, and self-mastery. These behaviors are independent of content areas and cognitive strategies and consist largely of self-monitoring and study skills (Conley, 2007). Self-monitoring is the ability to think about how one is thinking. Examples include awareness of one's level of mastery and understanding of a subject, the ability to reflect on what is working and what is needed for improvement, the tendency to persist, the tendency to identify and select from a range of learning skills and strategies, and the ability to transfer learning and strategies to new situations. These individuals also tend to monitor, regulate, evaluate, and direct their thinking (Conley, 2007).

Conley (2007) also concludes that study skills encompass a wide range of active learning strategies, beyond reading and answering homework questions. These behaviors often include time management, exam preparation, utilization of resources, taking notes, and communicating with teachers. It is also the ability to successfully participate in group work (Conley, 2007).

Contextual Skills and Awareness

Conley (2007) asserts that contextual skills and awareness is a broad category that encompasses the understanding of the culture and operations of a particular institutional system. This includes key context skills and awareness surrounding the college's norms, values, and conventions related to human interaction. A lack of understanding could lead the student to feel alienated, frustrated or even humiliated during their beginning time at the college (Conley, 2007).

This skillset also includes “college knowledge” which encompasses the formal and informal processes for gaining admission (Conley, 2007). This includes curricular, testing and the application requirements, college options and choices, tuition costs and financial aid, culture of the college, and the increasing expectations (Conley, 2007).

Summary

While many schools have been participating in some form of dual enrollment for more than 50 years, there was rarely policy or government oversight. Minnesota became the first state to create policy to provide a structure for dual enrollment for both secondary schools and post-secondary institutions (Taylor and Pretlow, 2015). State policies continue to vary with little consistency, and there are several models of dual enrollment, yet the outcomes are always the same (Taylor & Pretlow, 2015). Dual enrollment always includes the student gaining college credit for courses that were taken during their high school education (Thomas et al., 2013). According to Thomas et al., (2013), the student always attains the college credit but is not always awarded high school credit. While there are a multitude of disparities in relation to the development, implementation, and delivery of dual enrollment programs, there are some consistent characteristics.

The first of those characteristics is associated with access to the dual enrollment programs. Student demographics, cost, eligibility, and qualified high school instructors are all factors in providing quality dual enrollment programs equally (Pompelia, 2020). The second characteristic is related to course integrity. As dual enrollment continues to gain popularity, Borden et al., (2013), argues that concerns surrounding the rigor of college classes taught by secondary teachers compared to those taught by the post-secondary faculty needs to remain in the forefront of education administration.

There are many benefits of dual enrollment, most especially from the perspective of the student (Karp & Hughes, 2008). The most obvious or straightforward of those benefits is that students earned college credits while in high school. According to Bolin (2019), students who participate in dual enrollment have the added benefit of exploring a variety of careers. Researchers also report that students who take part in dual enrollment gain advantages such as transcribed credits, improved confidence, easier transition to college, saving time and money in college, and higher rates of college completion (Hoffman, et al., 2009; Graham, 2021).

I utilized David Conley's College Readiness Framework to analyze the secondary teacher and post-secondary faculty perceptions of the influence of dual enrollment for students who participated in dual enrollment on their college readiness. Conley's definition of College Readiness is that students are prepared for and will succeed in post-secondary coursework, without the need for remedial work (Conley, 2007). Conley's framework includes four major concepts. The first is Key Cognitive Strategies (Conley, 2007). This consists of the intellectual demands and expectations of college or thinking skills including intellectual openness, inquisitiveness, analysis, reasoning, interpretation, precision, and problem solving. The second concept is Key Content (Conley, 2007). This encompasses the student's possession of content in key academic areas such as English, math, science, social studies, world languages, and the arts (Conley, 2007).

The third concept is Academic Behaviors (Conley, 2007). These behaviors include self-awareness, self-monitoring, self-control, and self-mastery. They are independent of content areas and cognitive strategy and focus more on self-monitoring and study skills. The fourth notion is Contextual Skills and Awareness (Conley, 2007). This is a broad category that encompasses the students understanding of the culture and operations of a specific institutional system including

norms, values, and conventions related to human interaction as well as “college knowledge” such as curricular, test and application requirements, college options, tuition costs and financial aid, and the culture of college (Conley, 2007).

In Chapter 3, information regarding the methodology of this study will be provided. The methodology includes the site information and population, sampling method, data collection, analysis, limitations, and delimitations. Additionally, ethical issues, including identification of issues and resolutions based on the Belmont Report will be addressed.

CHAPTER 3

METHODOLOGY

Dual enrollment is an opportunity for secondary students to participate in college level coursework while still in high school, often for both secondary and post-secondary credit. According to The National Alliance of Concurrent Enrollment Partnerships, the only dual enrollment accrediting body in the United States, students gain exposure to the academic challenges of college while in their supportive high school environment and earn transcribed college credit while doing so (NACEP, 2020).

There are a multitude of both perceived and quantifiable benefits for students who participate in dual enrollment. According to Ferguson, et al., (2015), secondary teachers described dually enrolled students as having achieved at higher levels, thought more critically, and engaged in more effective learning behaviors than students who did not participate in dual enrollment. It is also believed that students who participate in college coursework while still in high school will continue to benefit from the experience while in college (Rarig, 2019).

This chapter presents the methodology used in this qualitative case study on secondary teacher and post-secondary faculty perceptions of the influence of student participation in dual enrollment on college readiness. This includes the purpose of the study, research questions, research design, an overview of the demographics, instrumentations, data collection process, data analysis, and limitations of the study.

Purpose of the Study

The purpose of this qualitative case study was to explore the perceptions of secondary teachers and post-secondary faculty members on the influence of high school student participation in dual enrollment on college readiness. Specifically, do secondary teachers and

post-secondary faculty perceive students who participate in dual enrollment are better prepared for college. This qualitative case study used open-ended semi-structured interviews to investigate and analyze the perceptions of secondary teachers and post-secondary faculty regarding their viewpoint on the influence of dual enrollment on student college readiness.

Research Questions and Design

Q1: How do secondary teachers perceive dual enrollment influencing college readiness for high school students?

RQ2: How do post-secondary faculty perceive dual enrollment influencing college readiness for high school students?

Qualitative research is described as “an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (Creswell, 2014, p. 4). According to Taylor and DeVault (2015), qualitative methodology is descriptive observation, it is how researchers collect data and the words of subjects and record their behavior. This methodology views what people say and do, as a result of how people perceive their world and determine their realities (Taylor et al., 2015). I have determined that a qualitative, collective case study to be the most appropriate research methodology for the purpose of this study in order to explore how these two groups of secondary teachers and post-secondary faculty perceive the influence of student participation in dual enrollment on college readiness.

According to Creswell (2007), a collective case study involves one issue, but the researcher selects multiples cases to study. Additionally, Patton (2002) suggested that the approach of a case study is to inquire about the insight and understanding of generalizations. For this study, I have obtained data from two participant groups regarding their perceptions on the same problem.

Open-ended semi-structured interviews were conducted in order to collect data. “Qualitative researchers are interested in understanding the meaning people have constructed, which is how people make sense of their world and the experiences they have in the world” (Merriam, 2009, p. 13). This approach of using open-ended semi-structured interviews allowed me to provide questions to the participants in order to solicit feedback while providing the opportunity for participants to expand on the topic based on their own thoughts and insights.

Site Information and Population

The research setting for this study was at an applied technical post-secondary institution located in central Pennsylvania. The post-secondary institution currently has just over 4,000 full-time students and approximately 840 employees, including over 500 full-time faculty members. For the 2021 incoming class, 12% of students earned credit through dual enrollment while in high school.

According to McMillan and Schumacher (2010), a population is defined as a group that “conforms to a certain criterion” (p. 129) from which “results can be generalized” (p. 129). This case study investigated two groups. The first group included secondary teachers. These are educators who taught college courses at their high school institution. The second group was comprised of post-secondary faculty members. These are faculty members who have participated in the site institutions dual enrollment program. Six secondary teachers and five post-secondary faculty participated in the interviews.

Sampling Method

Purposeful sampling was used in this study. Purposeful sampling means that I selected particular elements from a population that represent the topic of interest, in this case experience with dual enrollment. (McMillan & Schumacher, 2010). A range of both secondary teachers and

post-secondary faculty were selected to participate in the study. An email was sent from a dean at the post-secondary institution to all secondary teachers and a second dean sent a separate email to the post-secondary faculty members, who were currently or have recently participated in the identified college's dual enrollment program. The emails asked for volunteers to participate in the study.

The solicitation emails included the reason for the request, expectations associated with participation, and logistics of the interview process. The emails are included in Appendix A. I was optimistic that both teachers and faculty would readily volunteer to meet for a one-on-one virtual interview lasting 60-90 minutes. The interviews were held in the virtual meeting platform, Zoom. Participant name and personal and/or identifying information will remain confidential. Additionally, participants were assigned an identifying numeric code in order to maintain confidentiality.

Instrumentation and Data Collection Procedures

The instrument used for this study include researcher-participant open-ended semi-structured interviews. The interview protocol and questions are located in Appendix B. Once created, a field test was performed to determine validity and inclusion. A field test, commonly used in qualitative research, is a preliminary tryout of the instrument to determine validity or need for change (Bagdady, 2020).

One secondary teacher and two post-secondary faculty took part in the field test. Once the field testing was complete and no changes were deemed necessary to the interview questions, I began interviews with the secondary teachers and post-secondary faculty. All interviews were conducted virtually, using the Zoom platform. I utilized a qualitative research method of

interviewing the participating teachers and faculty by employing standardized, open-ended questions. This style of interview is also referred to as semi-structured.

This instrument was chosen as the most appropriate for this particular study based on the ability to provide greater insight into understanding of the secondary teacher and post-secondary faculty perceptions of the influence of student participation in dual enrollment programming on college readiness. The interview questions focused on the participants experiences and perceptions of that influence.

I recorded the interviews which were conducted virtually, allowing me to utilize the transcription feature available in the Zoom platform. A review and comparison of the recordings and the transcriptions was also conducted in order to confirm accuracy. Additionally, member checking was performed. Transcripts were shared with the participants in order for the participant to confirm accuracy. This process was utilized for each interview. The recorded files and transcribed documents were stored on my personal OneDrive through the University of New England for security purposes. The recorded files were deleted upon the participant providing confirmation of accuracy. The transcribed documents will be maintained on the OneDrive for three years after the study is published.

Data Analysis

In addition to the data collection and transcription, I utilized the software program MAXQDA for coding, managing, and organizing the data. A code is a mechanism used to label a piece of relevant information (McMillan & Schumacher, 2010). Coding entails reviewing the data, establishing themes, evolving those themes into codes, removing duplication, allowing the codes to evolve, and to be refined. The MAXQDA program is often used by qualitative researchers to visualize data and the associated relationships. Using the MAXQDA, a powerful

program, allowed me to unlock key information, expand the results of data collected, and manage the data in an appropriate format within a suitable timeframe. During the data collection, participants were assigned a numerical identifying code in order to maintain confidentiality.

Additionally, for the purpose of this study, I focused on thematic analysis pattern matching. Thematic analysis is often used in qualitative research as a form of pattern recognition where themes or codes emerge and become the categories for analysis (Roberts et al., 2019). Moreover, according to Trochim (n.d.) there is a difference between creating theories and patterns. Theories imply pattern, but theories assume relationships between fundamental concepts (Trochim, n.d.). Trochim also states that theory can then be used as the foundation for creating patterns of prediction.

Limitations

Limitations refer to the weaknesses or flaws that could be identified in the research design of a study (Bloomberg & Volpe, 2019). As with most studies, this one has definable limitations. The most notable, is the reliance on busy secondary teachers and post-secondary faculty members to volunteer their time and participation with no direct return on their time investment. I was dependent on the teachers and faculty to read the invitation, be receptive to taking part in the study, respond to the invitation, and then actually participate in the interview as scheduled. A variety of options for meeting times were offered in order to give the participants opportunities that work within their schedule. Additionally, once secondary teachers and post-secondary faculty members were identified and participated, the years of their dual enrollment experience and participation was determined. The data set was limited to secondary teachers and post-secondary faculty who participated in dual enrollment during the academic years 2016 through 2020.

Secondary teachers were employed at multiple school districts or Career and Technology Centers throughout Pennsylvania and post-secondary faculty members were from various disciplines within the site institution. There is not a direct student correlation that allows us to follow a specific student's college readiness from high school to college. Therefore, the experiences and perceptions of secondary teachers and post-secondary faculty vary.

Finally, a limitation to this study is the interview process in which the facilitator could influence the responses of the participant, this can create constraints by nature of the human interaction (Patton, 2002). Therefore, great care was given to limit the data collected and the data analysis to the perspectives of the interviewed secondary teacher and post-secondary faculty member study participants.

Delimitations

According to Bloomberg and Volpe (2019), delimitations are choices that are knowingly made by the researcher which define the parameters of the study, including acknowledgement of rejected, or alternative methodological approaches that are not addressed. Delimitations offer clarity into the researchers' justification of participants, populations, samples, methodologies, points of interest, and or features of the central phenomenon (Bloomberg & Volpe, 2019; Simon & Goes, 2013). Establishing delimitations allows the researcher to identify boundaries and control what will be included and what will be omitted (Simon & Goes, 2013; Roberts, 2019).

This study contains two delimitations. The first is that this study was delimited to a distinct group of participants. It includes only secondary teachers and post-secondary faculty members who have participated in the institution's dual enrollment program. It excludes both secondary teachers and post-secondary faculty that have solely worked with other institution's

dual enrollment programs, or those that do not have firsthand experience in any dual enrollment program. Secondly, the sole collection of data collected was from open-ended semi-structured interviews and may delimit triangulation (Kim, 2019).

Ethical Issues

Guidelines were based on The Belmont Report within this study in order to adhere to ethical standards. Published in 1978, The Belmont Report was created by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (Office for Human Research Protections, 1979). The Belmont Report has three core principles regarding the treatment of human subjects: respect for persons, beneficence, and justice (Office for Human Research Protections, 1979).

According to The Belmont Report (1979), respect for persons incorporates two ethical convictions: the individual should be treated as autonomous agents, and that persons with diminished autonomy are entitled protection (Office for Human Research Protections, 1979). This can be interpreted as the individual having the capability to deliberate personal goals and act accordingly. Stated within The Belmont Report is that human subjects voluntarily and knowingly enter the research (Office for Human Research Protections, 1979). In the case of this study, I did not directly contact potential participants. Instead, emails to each group of participants, the secondary teachers and post-secondary faculty, were sent by deans at the post-secondary institution to solicit volunteers. This allowed the potential participants to understand the parameters of the study willingly and knowingly before making the decision to participate. Additionally, because the intended participants are educated teachers and faculty who were currently in the workforce an assumption can be made that the potential participants were able to act autonomously.

The second principle, beneficence, refers to ethical treatment of persons by respecting their decisions and protecting them from harm and secure their well-being (Office for Human Research Protections, 1979). This holds significance within this study because participants actively participated in the institution's dual enrollment program. Participants personal and identifying information will remain confidential. Additionally, because that information will remain confidential there will be no connection to the participants job performance review or their continued ability to participate in the dual enrollment program.

Finally, the third principle within The Belmont Report is justice. This is thought to be a sense of fairness in distribution or what is deserved (Office for Human Research Protections, 1979). The potential group of participants are secondary teachers and post-secondary faculty who currently were or recently have participated in the institution's dual enrollment program. All volunteers were able to participate in the study.

Trustworthiness

According to Devalt (2019), qualitative research focuses on trustworthiness of data rather than focusing on the actual data. Qualitative research focuses on trends that will not be definable strictly by analyzing numbers (Devalt, 2019). Data trustworthiness is defined by four components: credibility, transferability, dependability, and confirmability (Devalt, 2019). The following subsections include the listed components.

Credibility

Steps were taken to ensure standardization of the process. The same questions were asked during each open-ended semi-structured interview, the same researcher conducted the interviews, and the same transcription techniques and coding services were employed for analytical purposes. Another researcher, using the same site, participants, interview questions,

methodology, and study design would be likely to produce similar results. However, a different site, or even a different group of secondary teachers or post-secondary faculty members, or interview questions may yield different results.

A member checking process was used to ensure validity of the collected data. Qualitative research lends itself to the imposition of personal beliefs, by using this method of returning the interview or analyzed data to the study participant, the researcher is validating the information (Birt et al., 2016). Birt, et al., (2016), recommends member checking, sending the transcript to the interviewee for validation, in order to enhance the rigor in qualitative research, suggesting that credibility becomes inherent. Member checking was performed by emailing the interview transcript to the individual participant, allowing them to validate the collected data.

Transferability

Merriam and Tisdell (2016), assert that transferability is the idea that findings of a study can be applied to additional circumstances. This study relies on the sampling of specific secondary teachers and post-secondary faculty who participated in dual enrollment at the research institution in central Pennsylvania. Because the participants are specific, the transferability is low, yet findings could affect decisions related to the institution's dual enrollment program.

Dependability

According to Merriam and Tisdell (2016), documentation of data collection and the analysis process is essential to assist in understanding and duplicating the study. Bloomberg and Volpe (2018), assert that dependability refers to the ability to track process and procedures that are used to collect and analyze the data. For this study open-ended semi-structured interviews

were conducted using the virtual platform Zoom. This allowed the interviews to be recorded and electronically transcribed. Additionally, member checking was performed for further validation.

Confirmability

Bloomberg and Volpe (2018), ascertain that confirmability is the researcher's ability to collect and interpret the data in an authentic way. For this study, I implemented the thematic analysis of pattern matching. According to Roberts, et al., (2019), thematic analysis is a form of pattern recognition where themes and codes emerge to become the categories. This use of thematic analysis lends confirmability to the study.

Summary

This chapter outlined the purpose and methodology of this study. Beginning with the purpose of exploring the perceptions of secondary teachers and post-secondary faculty members who are currently or have recently participated in the site institutions dual enrollment program and their perceptions of the influence of dual enrollment participation on a student's college readiness.

This study focuses on a qualitative case study. Semi-structured interviews were conducted with a range of secondary teachers and post-secondary faculty who were currently or have recently been involved in the delivery of the dual enrollment program at an applied technical post-secondary institution located in central Pennsylvania.

This study was conducted at an applied technical post-secondary institution located in central Pennsylvania. Two separate populations were targeted. The populations included a selection of secondary teachers and a selection of post-secondary faculty members. Participants were solicited via an email request from a dean at the institution that included the purpose of the study, the reason for request, expectations related to participation, and logistics of the process.

The open-ended semi-structured interviews took place virtually using Zoom. The recording and transcription functions were employed. Member checking was then performed and finally, MAXQDA was utilized for coding, managing, and organizing the data.

The most prominent limitation of this study was the reliance on secondary teachers and post-secondary faculty members to volunteer their time and participation with no return on their time investment. Finally, ethical issues such as concerns related to conducting the study at the researchers site institution by affirming confidentiality, the use of an identifying numerical code, safeguarding collected data, and ensuring that participation does not impact job performance measures. In Chapter 4 information regarding the analysis method of this study will be shared. I will also present the results and finding of the research. This information will be followed by a summary.

Chapter 4

Results

Dual enrollment provides high school students with the opportunity to participate in college level coursework while in high school for both secondary and post-secondary credit (NACEP, 2020). The National Alliance of Concurrent Enrollment ascertains that students who participate in dual enrollment while in high school are exposed to the challenge and rigor of college coursework while they are supported by their secondary teachers. Students who participate in dual enrollment also benefit from a higher likelihood of entering college, stronger academic performance, and increased completion rates (An, 2015; Wang, et al.,2015). Additional perceived benefits include higher levels of student engagement, career exploration, and college readiness (Rarig, 2019). Most obvious in terms of benefit is the ability to attain college credit while in high school often at a free or reduced cost to the student. Additional benefits may include increased confidence in academic abilities, diminished need for college remedial courses upon matriculation, and reduced time to college completion (Eisenbeck & Henson, 2013).

The purpose of this qualitative case study was to explore the perceptions of secondary teachers and post-secondary faculty members on the influence of high school student participation in dual enrollment on college readiness. Characteristics and potential benefits explored within this study included access, course integrity, career exploration, and college readiness. Specifically, do secondary teachers and post-secondary faculty perceive that students who participated in dual enrollment benefit by being better prepared for college. This qualitative case study used open-ended semi-structured interviews to investigate and analyze the perceptions of secondary teachers and post-secondary faculty considering their viewpoint on the influence of dual enrollment on student college readiness.

The research questions used for this study were:

RQ1: How do secondary teachers perceive dual enrollment influencing college readiness for high school students?

RQ2: How do post-secondary faculty perceive dual enrollment influencing college readiness for high school students?

According to Taylor et al., (2015), qualitative research observes what people say and their actions as a product of how they have defined their world and constructed their realities. I determined that a qualitative case study was the most appropriate research methodology for the purpose of this study. Open-ended semi-structured interviews were conducted for the purpose of exploring the perceptions of both secondary teachers and post-secondary faculty on the influence of high school student participation in dual enrollment on college readiness.

The research setting for this qualitative case study was at an applied technical post-secondary institution located in central Pennsylvania. Purposeful sampling was used in this study. Both secondary teachers and post-secondary faculty associated with the institution's dual enrollment program were invited to voluntarily participate in the study. Of the 263 secondary teachers invited by email to participate, six took part. Emails were also sent to 59 post-secondary faculty members of which five participated in the open-ended semi-structured interviews.

The open-ended semi-structured interviews were conducted using Zoom, a video conferencing software. Interviews were recorded and transcribed using the Zoom platform. I reviewed the transcripts for accuracy and then provided the correlating transcript to each participant for member-checking purposes. Once the participant verified the accuracy of the transcript, the associated audio files were destroyed. Transcripts will be store on my University of New England OneDrive account for three years following publication of the research.

Analysis Method

Open ended, semi-structured interviews was the method used for data collection. The interviews were completed using the Zoom virtual platform. The questions developed for the purpose of this semi-structured interview were comprised of three demographic questions and seven qualitative questions, some of which also contained sub-topics. These questions were developed to elicit responses aimed to capture the perceptions and impressions based on personal experiences of the participants. To formulate the questions, I focused on topics relevant to dual enrollment and college readiness including student access to dual enrollment, course integrity, career exploration, college transition, and the four components of college readiness. The interview protocol is located in the Appendix A. Upon completion of each interview, the transcripts were sent to the participant to confirm accuracy of the collected information.

Six secondary teachers and five post-secondary faculty who are currently or have recently participated in the site institutions dual enrollment program participated in this study. Six secondary teachers currently employed at a variety of secondary institutions within Pennsylvania and with experience ranging from 14 to 23 years of teaching experience participated in the study. The average years of experience for the secondary teachers was 16 years. Teaching experience for the participating secondary teachers includes both general education and technical program coursework including chemistry and English to networking and machining.

Five post-secondary faculty members who are currently employed at the studied institution participated in this study. The post-secondary faculty participants teaching experience ranged from ten to more than forty years. The average of their experience was nineteen years. Areas of instruction for this group also included both general education and technical program

coursework. For example, courses include history and political science, and English to welding and Information Technology.

Table 1

Participant Demographics

Numeric Assignment	Current Position	Content Area	Years of Experience
1	High School Teacher	History/Information Technology	23
2	High School Teacher	Machining	17
3	High School Teacher	Chemistry	22
4	High School Teacher	Government/Economics	15
5	High School Teacher	Information Technology	14
6	High School Teacher	English	22
1	College Faculty	History/Political Science	10
2	College Faculty	Welding	13
3	College Faculty	Chemistry	18
4	College Faculty	English	40
5	College Faculty	Information Technology	12

Using the process defined by Smith et al., (2009), during the interview and after while reviewing recording and transcripts, I took initial notes, paying close attention to the development of codes and emergent themes, and making connections between those themes as they relate to the research questions. I began my analysis by listening to the interview recordings,

reviewing the transcripts multiple times. I then utilized the software MAXQDA to compile the data. MAXQDA is a software program used for computer assisted qualitative research.

All interview transcripts were de-identified and uploaded to the software system, creating an organizational system for streamlined analysis of the collected data. To evaluate the data, I used the thematic analysis of pattern matching. This is a purposeful application of pattern-matching that should result in a more rigorous and structured research process and write-up (Sinkovics, 2018). According to Trochim (n.d.), there is a difference between creating theories and patterns, yet they may overlap. Theories imply pattern, but theories postulate structural relationships between key constructs (Trochim, n.d.). Trochim continues that theory can be used as the basis for generating patterns of prediction. Sinkovics (2018), also notes that the goal of pattern matching analysis is to help readers of qualitative research to retrace the thought process of the investigators and assist in understanding how and why they arrived at the presented conclusions.

The next step in the analysis process was to use pattern matching to determine the themes and coding. During this process, I used the coding processes within MAXQDA to determine common responses, topics, and where responses aligned and diverged. This allowed me to confirm how the participants interpreted their experiences and the perceived influence of dual enrollment participation on college readiness.

Presentation of Results and Findings

Table 2

Resulting Themes and Subthemes

Themes	Subthemes
Student Access	Student Qualification
	Course Timing and Access to Technology
Course Efficacy	Course Expectations, Teacher Training, and Resources
	Course Alignment and Student Outcomes
	Teacher and Faculty Engagement
College Preparedness	Academic Readiness
	Perceived Benefits
	Nature versus Nurture

Theme 1: Student Access

All secondary teachers and post-secondary faculty agree that the benefits of participating in dual enrollment far outweigh the challenges in terms of influence on the student's college readiness. However, there is divergence in terms of what those benefits and challenges are. Some believe that secondary schools have the ability and engagement needed to offer dual enrollment courses while others find that technology and student qualifications hinder the student's ability to participate or succeed.

Secondary teacher number one noted that the overall dual enrollment process is relatively easy. There is no tuition cost to students in this dual enrollment program, the secondary school

pays a minimal administrative fee to participate, and the secondary school covers the cost of books and materials. This allows all students, regardless of their personal financial situation to participate. Secondary teacher number three mentioned that the process of inviting students to participate in dual enrollment is not exclusionary and their secondary district is very supportive of student participation.

Subtheme 1: Student Qualification

Responses regarding student eligibility for dual enrollment coursework included course qualifications and grades needed to be eligible for dual enrollment. Multiple post-secondary faculty mentioned a recent change in the placement requirements for their courses. College faculty number five noted that previously, the institution required all students to complete a reading placement test and additionally a math or English placement exam dependent on their desired coursework. Approximately two years ago the institution changed its policy for dual enrollment eligibility, removing placement exams and instead to require all students have a minimum of a secondary C average and maintained a math/English placement requirement for those specific courses. They noted that within their course they have not observed a perceptible change in the number of students eligible to take their dual enrollment course. Post-secondary faculty number two mentioned that previously, students who did not qualify via placement requirements for the technical coursework would participate in the same secondary level coursework but not get the college credit. The same faculty quoted the following:

Students who do not do well on the placement exam are still taking the courses for high school credit and learning the competencies and achieving the student learning outcomes of the course. If those student matriculate to our institution, they have to re-take the course because they didn't earn college credit. The recent

change in placement test requirements means that more students are eligible to earn college credit, as they should.

Secondary teacher number two shared that the previous math placement requirement was too rigorous and not necessary for their machining coursework. They felt that the placement requirement excluded qualified students from participating in the college coursework. They also perceive the current eligibility requirement of GPA as being a more accurate gauge of preparedness.

Subtheme 2: Course Timing and Access to Technology

Two secondary teachers and three post-secondary faculty mentioned the timing of college versus high school to be an issue. According to faculty number two “the time required to register students for the college course based on the timing of the high school processes is too cumbersome and causes the students to start the college coursework before they have access to the technology required.” Post-secondary faculty number one reiterated that observation, mentioning that their secondary teachers often have to start lessons that align with their high school curriculum and then work backwards to cover the same material once student access is gained to the College’s learning management system.

High school teacher number six noted a challenge of technology for dual enrollment students is that “students are already using a LMS (learning management software) for high school, now we’re asking them to use a second LMS just for their college work.” They observe this to be a challenge because students are having to upload assignments to multiple systems and recall their username and password for an additional system.

Another post-secondary faculty member noted that technology requirements can pose a challenge to rural, less affluent secondary schools who may not have money for or access to

high-speed internet and individual student computers. An additional challenge regarding technology was observed by faculty number three in that rural or less affluent secondary schools do not always have financial means to purchase one-to-one technology for students and beyond that may not have access to high-speed internet which is disruptive to the student's participation in dual enrollment.

Theme 2: Course Efficacy

There are conflicting responses to questions regarding course integrity and student outcomes of dual enrollment within both groups, secondary teachers, and post-secondary faculty. There is saturation in consensus that the secondary faculty are well vetted and are qualified to teach the coursework and shared that resources such as syllabus, assignments, and assessments are essential. However, both groups differ in thoughts in students' attainment of student learning outcomes based on course alignment and teacher and faculty engagement.

Subtheme 1: Course Expectations, Teacher Training, and Resources

Five secondary teachers and four post-secondary faculty commented on the rigor and expectations set within the program. They believed that program processes clearly set expectations of the teacher and the course. Secondary teacher number one discussed the opportunity to take part in the College's dual enrollment orientation prior to beginning their experience with the program. They stated that "between the orientation and the annual professional development conducted by the program leadership and the course's faculty member, the expectation and requirements are clearly stated, training is required, and it is attainable". High school teacher number four noted that the faculty "expect the teacher to use a college aligned syllabus with the high school dual enrollment students, and that the grading structure, assignments, and outcomes should align with the faculty's on-campus syllabus". They also

mentioned that having the oversight and engagement of a faculty member provided structure and consistency that made the teacher feel more comfortable in helping their students be prepared for the next level of coursework.

Faculty number four concurred that providing necessary resources for the high school teachers allows the teacher to help their students succeed in high school and prepare for college. Faculty connect with their teachers by providing annual training, a digital weekly newsletter that includes examples of college work and grading, and updates on the college. They also require the secondary schools to bring their students to campus at the beginning of the coursework in order to demonstrate available resources and impress the importance of the work to the students.

Subtheme 2: Course Alignment and Student Outcomes

Both secondary teachers and post-secondary faculty shared their thoughts on strengths and challenges regarding their perception of the preservation of course integrity in their experience. Topics such as course alignment, teacher and faculty engagement, and logistics were discussed. One faculty member made the notable statement that “the impact of dual enrollment is not universal, dual enrollment is incredibly powerful because you have the ability to set up a high school student for college success and/or failure, all with one course”. That faculty member continued that the impact is based on whether or not the college course aligns with the high school course and how engaged both the teacher and faculty are with each other, the course, and the students.

Faculty member number four noted that “along with aligning the syllabus, assignments, and learning objectives, I also co-grade along with the secondary teacher for a period of time in order to ensure that grading practices are consistent with the college program areas’ expectations”. They asserted that this practice allows for an additional layer of quality control.

Faculty member number two does not maintain that practice and mentioned that they are sometimes concerned with the lack of quality control for the high school dual enrollment students.

Even though the expectation is that the high school teacher is actually teaching the content during the school day, I sometimes question if that is happening or if they are just telling students to do the work on their own time, without support or follow up.

Four faculty members expressed the importance of aligning the college coursework with the high school curriculum rather than creating further work to add to the current curriculum. Faculty number one mentioned that “secondary schools have so many requirements and boxes that need to be checked that it can be challenging to incorporate the expectations necessary for dual enrollment”. They also noted that when the content falls within Pennsylvania’s Program of Study or AP (Advanced Placement) coursework there is a higher level of engagement from the secondary teacher which, in turn, leads to a greater level of success for the students.

Subtheme 3: Teacher and Faculty Engagement

Three teachers and five faculty mentioned that engagement of their counterpart is critical to the success and assurance of student outcomes. Secondary teacher number three mentioned that they “appreciate the ‘upline’ and oversight of a post-secondary faculty member. Having that oversight and resource ensures that I am setting my students up for success.” One mentioned that their faculty liaison shares a weekly newsletter with happenings that includes information about the college department, student examples, and fun facts. “This creates a higher level of dedication and commitment from me to the college and to the dual enrollment course outcomes.” Another secondary teacher remarked that when faculty invite the class to visit campus for an

activity, event, or tour that the experience for the students is enhanced and it creates a level of reality regarding the work that they are accomplishing.

Three faculty members also maintain that there are two issues that prevent success, those issues revolve around engagement from either partner. Their own course load, and the timing of the high school schedules can be problematic. The first, according to faculty member number five is the faculty members course load, whether the faculty is teaching a larger credit load than average, or teaching every day of the week, poses an issue for the faculty to schedule time to visit with the high school students. “This scheduling prevents me from working more closely with the high school teacher to oversee quality control and engage with the high school students” said the faculty member. The second obstacle has to do with logistics primarily of CTC (Career and Technology Centers) schedules. Faculty number two noted that “some CTC’s have students within multiple grade levels for half a day, whole day, every day, or varying rotations within the high school classroom”. They point out that this lack of consistency prevents the high school teacher from delivering the content in an orderly and consistent manner. They believe that “this is incredibly challenging for the high school teacher and creates inconsistencies in the course integrity”.

Theme 3: College Preparedness

Each secondary teacher and post-secondary faculty interviewed for this study independently noted their belief that there are direct benefits for students who participate in dual enrollment on the students’ level of college readiness. However, there were also questions and challenges brought to the forefront of this notion based on the caliber and preparation of a student who decides to participate in dual enrollment. Specifically, does participation in dual enrollment influence the outcomes of student preparedness surrounding areas such as academic

behaviors and key cognitive strategies or do students who are higher than average achievers in those areas choose to participate in dual enrollment.

Subtheme 1: Academic Readiness

In terms of key cognitive strategies, secondary teacher number three noted an observable difference between the approach students take to their college work versus their high school work. “Dual enrollment courses provide an opportunity for discussions and dialogue that allow students to be more inquisitive and we can challenge the students to pursue high level learning.” They also mentioned that students appear to be more willing to challenge thought processes, think independently, try different problem-solving tactics, and are less inclined to accept information at the surface level when they are in a dual enrollment course.

Faculty member number one agreed that dual enrollment students do show increased engagement in reasoning, interpretation, and argument. “I do wonder though if this is related to the actual course or the skill of the high school teacher to create an environment that challenges the students to think differently and approach their work at a higher level.”

Largely, both teachers and faculty found that the fundamental benefit of dual enrollment participation that correlates to key content is the decrease in need for students to take remedial or developmental coursework once they matriculate to a college. Faculty member number four “attributes this to greater and more in-depth writing requirements, regardless of the course, and requiring students to research, outline, draft, edit, and re-write assignments”. One secondary teacher mentioned that the addition of “group work pushed students to spend more time and hone skills on those processes”. Several teachers and faculty members observed that this area of college readiness is not necessarily influenced by participation in dual enrollment.

Several of the secondary teachers observed that the increased expectations of college coursework push students to master academic behaviors. Secondary teacher number one noted that “the awareness of deadlines, the need to acquire source information, and a higher level of accountability are more common in their dual enrollment courses”. Post-secondary faculty member number two observed that “students who participate in dual enrollment and then matriculate to the college often have a higher level of motivation and drive compared to students who did not have dual enrollment experience”. They also noted that once in college those dual enrollment students will spend additional time and repetition in order to master skills compared to students who did not participate in dual enrollment. Faculty member number four observed a similar behavior where “students do not accept work that they consider to be good, rather they push for better”.

Both post-secondary faculty and secondary teachers observed the beneficial influence of participation in dual enrollment on the students’ contextual skills and awareness. Examples included the gained understanding of college credits and transcripts, and the increase in awareness of values, conventions, culture, and enrollment processes. Secondary teacher number six expressed that those skills were created not by the actual dual enrollment coursework, but “by visiting the college campus and interactions with post-secondary faculty, admissions counselors, and college dual enrollment program administrators. Those activities create an understanding and comfortability on the part of the student.” Faculty member number two and five mentioned that this could be improved by providing assigned advisors to the dual enrollment students who matriculate to the institution as well as create a process to help them understand the practices within higher education.

Subtheme 2: Perceived Benefits

Secondary teacher number six noted that the current generation of students are more savvy consumers compared to earlier generations. “They have an awareness of the cost of college and the impact of debt associated with it. Students are exploring various avenues to overcome that debt by considering options like military, scholarships, vocational training, and dual enrollment.” Faculty number one shared that “I have, on multiple occasions, overheard college students talking amongst themselves about their dual enrollment experience and the direct cost and time savings”. Both teachers and faculty mentioned that while students have an awareness of the savings, the understanding is limited based on their life experiences and parents have a greater understanding of the importance and value. The parents should be encouraged to assist in the course selection process with their students.

Faculty number five mentioned that there are multiple benefits of participating in dual enrollment.

There is an additional benefit in regard to time saved. By having achieved credits while in high school, those courses are completed and leave room in the student’s college timeline. Depending on the number of credits the student took through dual enrollment, they can graduate early, add a minor, or even a second major.

Secondary teacher number four shared that dual enrollment has an influence on the student’s academic confidence. “Students are often not expecting the shift in the volume of work that is required of the college course versus a high school course once they accomplish that work, they realize that they can be successful in college.” Faculty number two noted that “students feel the dual enrollment courses are more challenging, they require additional self-

motivation, and encourages the student to push themselves. Being pushed in that way means that the student feels a greater level of self-confidence.”

Faculty number four also observed that students who participate in dual enrollment have a greater awareness of expectation when they arrive at college.

Students have experience reviewing and understanding the college syllabus, expectations, and volume of work associated with a college course. That means that those students are better at time management and have a more holistic understanding of how to navigate their workload.

Several secondary teachers mentioned that the students were more prepared for college placement, needing less remedial courses when they enrolled in college and post-secondary faculty noted that those students seemed more likely to retain and complete their college degree. Faculty number three also observed that “by engaging with students when they are in the high school course it provides a level of connection and comfortability for the student when they become college students, aiding in retention”.

Four secondary teachers and two post-secondary faculty expressed the belief that dual enrollment also enhances the high school experience in regard to career exploration. Faculty member number three mentioned that “college is expensive and that this experience may provide an opportunity for the student to discover an area of interest, or just as important, a lack of interest in a career pathway”. Additionally, faculty member number two shared an additional thought surrounding confidence and interest.

Students enrolled in technical coursework such as welding, rather than general education courses, may not have been considering college as an option then

realize that they are capable of the work and connect with the college program or faculty and potentially change their mind to attend college.

Subtheme 3: Nature versus Nurture

When speaking of the influence of dual enrollment on college transition, all secondary teachers and post-secondary faculty reported benefits. They mentioned benefits that include academic confidence, time and financial savings, a connection to the college and faculty, academic preparedness for college, and higher likeliness of college completion. However, both teachers and faculty questioned if those benefits were a sign of the quality of student choosing to participate versus skills gained as an outcome of the course.

Faculty member number five questioned whether dual enrollment created those influences in students participating in dual enrollment or rather does dual enrollment attract students who already have those skills.

While I teach a technical program course, I notice that students who are in higher level high school math courses gravitate towards that particular class. In that case, is time management and self-motivation an intrinsic effect, a skill that the student had already attained, or did dual enrollment influence and refine that skill.

Additionally, both secondary teacher number two and post-secondary faculty member number three questioned if key cognitive strategies such as critical thinking, analysis, and problem-solving are actually developed in the student's home life rather than the dual enrollment classroom. One faculty member mentioned that "this is an area that nature versus nurture is a possibility and the students home environment could play a larger role than their formal education".

Further questions surrounding nature versus nurture arose during the interviews. Faculty member number five questioned “by having students participate in dual enrollment while still in high school, their parents may still have oversight and are assisting with self-monitoring, time management, removal of procrastination, and regulation”. They also shared that those students do not truly learn their strengths and weaknesses in these areas until they are no longer being supervised by their parent. They do note that by participating in dual enrollment there is benefit to practicing those skills as “success in college is not solely based on intelligence but also requires mastery of behaviors such as self-awareness, self-monitoring, and self-control.”

Summary

The purpose of this qualitative case study was to explore the perceptions of the influence of dual enrollment participation on college readiness from the perspective of both secondary teachers and post-secondary faculty members. Characteristics and potential benefits explored include student access to dual enrollment, course integrity, career exploration, and college readiness.

Six secondary teachers and five post-secondary faculty participated in the study. Years of teaching experience for the secondary teachers ranged from fourteen to twenty-three with an average of sixteen years. Post-secondary faculty teaching ranged from ten to more than forty years of experience. Experience included a wide variety of content areas including chemistry, English, information technology, and welding.

Open-ended semi-structured virtual interviews with secondary teachers and post-secondary faculty members were conducted. Interviews were recorded via the Zoom platform and transcribed using the Zoom platform. Transcripts were shared with the participants to verify accuracy. De-identified transcripts were uploaded to MAXQDA to assist in data compilation. A

thematic analysis of pattern matching was used to evaluate the collected information. Three themes, student access, course efficacy, and college preparedness were determined. There were also eight subthemes identified within the three themes.

Throughout the themes participants both agreed and differed in terms of their perspectives. For the theme student access, all participants agreed that any challenges are outweighed by the benefits when considering the students college readiness. Most teachers and faculty expressed that participating in the program is relatively easy and is not exclusionary for students.

The first subtheme within student access is student qualification. Several secondary teachers and post-secondary faculty relayed that previous student qualification practices were prohibitive and negatively impacted the student's ability to participate. They mentioned that a recent change to the policy is now exclusively student GPA and has had a positive effect on student qualification. For example, secondary students who were not successful on the placement exam still took the course, but for high school credit only. They would then matriculate to the institution and have to re-take that coursework at the college. The change in placement requirement has diminished that situation.

The second subtheme of student access is course timing and access to technology. Both high school teachers and post-secondary faculty mentioned the difference in timing of the high school course versus the registration of the dual enrollment course to be problematic. Secondary teachers often have to start the coursework before a student is registered for the dual enrollment course. Without access to the Learning Management System, students are unable to complete the college work in a timely manner. Additionally, schools that are not financially affluent may struggle to provide one-to-one technology posing a challenge for the students. Furthermore,

schools that are rurally located may have trouble accessing high quality internet, also posing a challenge.

The second theme is course efficacy. There are conflicting opinions of dual enrollment course efficacy within both groups of participants. There is, however, consensus that the secondary faculty are well vetted and qualified to teach the college course. The divergence is regarding the student's attainment of learning outcomes based on course alignment and teacher engagement.

The first subtheme within course efficacy is course expectations, teacher training, and resources. Both groups expressed the rigor and expectations are clearly communicated within the program processes. Program orientation, annual professional development training, and program resources such as syllabus, assignments, grading structures, and assessments provide clarity and structure and consistency to the coursework. This also helped secondary teachers feel more comfortable that they are preparing their students for the next level of college coursework.

Course alignment and student outcomes is the second subtheme within course efficacy. Both participant groups discussed course alignment with high school course requirements, teacher and faculty engagement, and logistics of the course as necessary for student success. One faculty member noted that "the impact of dual enrollment is not universal, dual enrollment is incredibly powerful because you have the ability to set up a high school student for college success and/or failure, all with one course". Differences were noted in post-secondary approaches that have an impact on quality control of the college coursework at the secondary level. It was additionally noted that aligning the dual enrollment content with Pennsylvania's Program of Study or Advanced Placement created a higher level of engagement from the teacher, leading to success for the student.

Subtheme three of course efficacy is teacher and faculty engagement. Both participant groups mentioned that engagement of their counterpart is crucial for successful student outcomes. In some cases, faculty are co-grading along with teachers in order to create consistency, in others they are inviting the teacher and students to campus in order to connect and learn of the portfolio of college resources available to them. Several faculty members maintained that there are two issues that pose challenges for engagement. The first revolves around the faculty schedule and lack of availability to travel or connect with the high school classroom. The second has to do with the multitude of scheduling options at the Career and Technology Centers creating consistency and continuity issues for the secondary teacher.

The third and final theme is college preparedness. This is broken into three subthemes. They are academic readiness, perceived benefits, and nature versus nurture. Both secondary teachers and post-secondary faculty provided benefits related to college readiness based on the subtheme of academic readiness. It was thought that students are more inquisitive, willing to challenge, and push themselves when participating in dual enrollment. One faculty member felt that there is an increase in reasoning, interpretation, and argument, but questioned if that is based on dual enrollment or the skill of the secondary teacher. Both participant groups felt that the need for remedial courses upon matriculation to college was diminished. Several secondary teachers observed that academic behaviors such as time mastery and awareness of accountability were improved with dual enrollment participation.

The second subtheme within college preparedness is perceived benefit. One secondary teacher observed that students are more savvy consumers and have a higher awareness of the cost and return of a college degree. Both participant groups believe that students have an awareness of the time and money they save by participating in dual enrollment. There is also a

belief that students have improved interest in a confidence for college coursework once they have participated in dual enrollment. One faculty member expressed that students gain an understanding of the workload involved at the college level before transitioning to college. They also conveyed that students participating in technical coursework, rather than general studies courses, may come to realize that college is an option for them. This provides a level of career exploration for the participating student.

The final subtheme of college preparedness is nature versus nurture. Some participants in the study felt strongly that dual enrollment coursework supports the student's college readiness. Others questioned if it is really a matter of students who already have those characteristics are choosing to participate in dual enrollment or if those characteristics are the product of dual enrollment participation. Some wondered if the home environment is the influence of the positive attributes rather than formal education fostering those influences. One post-secondary faculty member did note that in either case "success in college is not solely based on intelligence but also requires mastery of behaviors such as self-awareness, self-monitoring, and self-control" and participating in dual enrollment will foster those skills regardless.

In Chapter 5, I will share the importance of the findings as well as implications. Those will be followed by recommendations for action and further study. Finally, the chapter will include a summary and conclusion of the research within this study.

Chapter 5

Conclusion

Dual enrollment is an opportunity for high school students to participate in college coursework while they are still in their supportive high school environment and are doing so for college credit (NACEP, 2020). According to The National Alliance of Concurrent Enrollment Partnerships (2020), dual enrollment only includes courses that are delivered to students during the high school day, by college-approved secondary teachers. While there are many models of dual enrollment offered, for the purpose of this study the model defined by NACEP was applied.

There are two overarching characteristics of dual enrollment. Those characteristics include student access and course integrity. Student access refers to the high school student's ability to participate in dual enrollment coursework while in high school. Roadblocks to participation include cost, course eligibility, and lack of qualified teachers (Pompelia, 2020). Course integrity within dual enrollment courses includes consistency of components such as textbooks, learning outcomes, course syllabus, assignments, grading practices, assessments, and final exams (Zinth, 2015). Zinth also maintains that there are four levels of dual enrollment that include both advantages and disadvantages which control academic rigor and course integrity:

1. Local control,
2. Moderated local control,
3. Adopting NACEP Standards,
4. Requiring/encouraging NACEP Standards.

There are numerous benefits for students who participate in dual enrollment while in high school (Karp & Hughes, 2008). The two most prevalent benefits involve career exploration and college transition. Ferguson (2015), notes that not only can college work compliment and align

with the high school course, but it also sometimes provides career exploration options that might not otherwise be available to the student allowing them to attain a competitive edge. Regarding the benefit of college transition, Graham (2021), reports that dual enrollment provides the student with an opportunity to adjust to the rigors and expectations of college coursework while still in their supportive high school environment. Benefits also include saving time and money, and increased college completion rates for students who participated in dual enrollment (An, 2015).

Proponents of dual enrollment tout that a benefit of dual enrollment participation is college readiness. However, irregularities regarding statewide regulations regarding development, implementation, and delivery of dual enrollment programs could result in inconsistencies of student access and course integrity. Additionally, the American College Test released a report in 2018 that states only 38% of students who participated in their College Readiness Exam met the benchmarks that demonstrate readiness for college.

This qualitative case study intended to gain an understanding of both secondary teacher and post-secondary faculty perceptions of the influence of student participation in dual enrollment on college readiness. There were two research questions included:

RQ1: How do secondary teachers perceive dual enrollment influencing college readiness for high school students?

RQ2: How do post-secondary faculty perceive dual enrollment influencing college readiness for high school students?

The research setting for this case study was at an applied technical post-secondary institution located in central Pennsylvania. Purposeful sampling was implemented for this study. Open-ended, semi-structured interviews with six secondary teachers and five post-secondary

faculty were conducted virtually via Zoom. Qualitative questions for the interview were developed to include topics such as student access, course integrity, career exploration, and college readiness. I reviewed transcripts as well as provided them to each participant for member checking purposes to confirm accuracy of the collected data.

Pattern matching thematic analysis was utilized to evaluate the data. This allowed me to identify themes and codes from the collected information. Three themes and eight subthemes emerged from the data. The themes included student access with the subthemes of student qualification, course timing, and access to technology. The second theme was course efficacy with the three subthemes of course expectations, teacher training, and resources, course alignment and student outcomes, and teacher and faculty engagement. The final theme was college preparedness with academic readiness, perceived benefits, and nature versus nurture as the three subthemes.

In all themes there were alignments and variances between the perceptions of secondary teachers and post-secondary faculty both comparatively and within the specified groups. For example, in the first theme, student access all participants agree that there are benefits for students who participate in dual enrollment on their influence of college readiness. However, there is divergence in terms of what those specific benefits and challenges are. The two subthemes that arose related to access and eligibility for students as well as student and school access to the technology required to participate successfully in the coursework.

The first subtheme, student qualification refers to requirements for students to be eligible to participate in the course. There were references to placement exams as well as GPA requirements. One secondary member noted that the previous requirement regarding a math placement test was too challenging and didn't necessarily align with the needs of the course and

that the change to remove the placement test and instead implement a GPA requirement meant broader student accessibility that is more in line with the course competencies. A faculty member confirmed the importance of this change noting that previously students who were not successful on the placement test were still able to participate in the same course for high school credit only. Those students could then matriculate to the college and be required to re-take the course for college credit.

The second subtheme within student access was course timing and access to technology. Both secondary teachers and post-secondary faculty mentioned issues related to the timing of high school dual enrollment registration versus the timing of curriculum and the impact that has on necessary access to technology. Several faculty shared that often teachers need to begin the instruction of the curriculum before the high school is able to complete the student registration process. This requires students to complete the coursework before they have access to the college's learning management system. That then means that once the students have access to the technology, they need to work backwards to complete the assessments for college grading that are located on the learning management system. This can be disruptive to the flow of the coursework.

The second theme is course efficacy. This includes the subthemes of course expectations, teacher training, and resources, course alignment and student outcomes, and teacher and faculty engagement. Course efficacy referred to course integrity, specifically student outcomes of the dual enrollment course. There is consensus amongst both groups of participants that the secondary teachers are well vetted and qualified to be teaching the college course and that training and shared resources such as syllabus, assignments, and assessments play a crucial role

in course efficacy. However, there are differing thoughts in regard to the achievement of student learning outcomes that are based on both course alignment and teacher/faculty engagement.

In the first subtheme, course expectations, teacher training, and resources related to course efficacy both participant groups shared the belief that program expectations are clear in terms of rigor and quality required by the dual enrollment coursework. Secondary teacher number one shared the benefit of required participation in the initial program orientation and annual professional development for laying the groundwork of expectation and creating an environment for success. Secondary teacher number four noted that the college faculty expect that the teacher is implementing a college aligned syllabus, grading structure, assignments, and outcomes ensuring that integrity of the college course remains intact. Faculty member number four agreed that by providing materials such as annual training, preparation materials, and visits to campus for both teachers and students they are demonstrating the importance of maintaining the student learning outcomes.

In the second subtheme, course alignment and student outcomes, both secondary teachers and post-secondary faculty agree that there are both strengths and challenges related to the preservation of course integrity and they relate to alignment of the curriculum as well as student learning outcomes. The main topics were course alignment, teacher and faculty engagement, and logistics. Several faculty members mentioned the importance and need to ensure that college coursework aligns with the high school curriculum rather than trying to add additional competencies to the high school courses. They noted this is most successful when the college course supports the content required of Pennsylvania's Program of Study or AP (Advanced Placement). Additionally, this ensures that the high school teacher is more engaged in the coursework. As such, several faculty members mentioned that student success requires high

school teacher engagement. One mentioned that along with shared syllabus, assignments, and assessments, they initially incorporate co-grading practices to ensure quality control. Another faculty member mentioned that they sometimes question if the teacher is meeting the requirement to actually teach the content to the students during the school day or if they are having students work on the material on their own. They continued that without the necessary support the student is not likely to be successful.

Continuing within the second theme of course efficacy is the third subtheme, teacher and faculty engagement. Both secondary teachers and post-secondary faculty stated that engagement of their counterpart is critical to the success of students achieving the student outcomes. Secondary teacher number three mentioned that they appreciate the oversight because it ensures that they are properly preparing students for the next level of coursework. They also said that this engagement from their faculty partners creates a higher level of dedication and commitment to the college and course outcomes. Faculty members maintain that there are two issues that prevent success, and both relate to engagement from either group. The first is the ability for the faculty member to engage. The teaching load of the faculty compared to the schedule for high school class availability do not always allow for the faculty to engage the high school class. The second has to do with high school schedules, specifically at CTC's. The CTC often has sending schools with various schedules. Groups of students could be arriving within multiple grades, for a half day, whole day, every day, or various rotations creating a significant challenge for the high school teacher to deliver consistent coursework. According to the faculty each of these create challenges and inconsistency of course integrity.

The third theme developed while analyzing this study is college preparedness. This includes three subthemes: academic readiness, perceived benefits, and nature versus nurture.

Both faculty and teachers agreed that there are direct benefits related to college readiness for students who participate in dual enrollment. However, there were also questions and challenges addressed that include the question does participation in dual enrollment directly influence the student's college readiness or are students who are already prepared attracted to dual enrollment?

The first subtheme is academic readiness. Regarding key cognitive strategies, secondary teacher number three noted that engagement in dual enrollment provides greater opportunity for expanded discussions and dialogue compared to traditional coursework. They also mentioned that students seem more willing to challenge thought processes, think more independently, approach problem solving differently, and are less inclined to accept information at the surface level, demonstrating higher level thinking. Key content was thought to be improved based on the secondary teacher belief that increased expectations of college coursework such as a greater awareness of deadlines, sourcing information, and higher accountability pushes students to master academic behaviors. One faculty member observed a noticeable difference of students who did participate in dual enrollment compared to those who did not in association with a higher level of self-expectation in their coursework once they have matriculated to the college.

In the second subtheme, academic readiness, contextual skills were thought to be improved upon by both secondary teachers and post-secondary faculty. Secondary teacher number six expressed that the skill increase is not necessarily related to the dual enrollment coursework rather it is factor of the required college visit and interactions with college faculty, admissions staff, and program administrators. They noted improved comfortability with things such as an understanding of college transcripts, and an awareness of the college values, conventions, culture, and enrollment processes.

Subtheme number 3, course integrity is perceived benefits. Secondary teacher number two noted that the current generation of students are savvy consumers and not only are they aware of the cost of college, but they are also more open to exploring opportunities to lessen that financial impact, including participation in dual enrollment. Faculty member number one noted that they have overheard college students on multiple occasions talk about the benefit of and amount of money that they saved by participating in dual enrollment. Both groups also mentioned the importance of including parents in the financial conversation. Faculty member number five also mentioned additional benefits of having participated in dual enrollment for students regarding time that can be saved. They noted that students who are alleviating that course load for their college years may allow them to pursue a minor, a second major, or to graduate early. Additionally, confidence was noted as a benefit of college readiness by secondary teacher number 4. The additional volume of work creates challenge that the student is pushed to achieve making them feel a greater level of self-confidence.

The third subtheme within course integrity is nature versus nurture. Interestingly, both groups, secondary teachers and post-secondary faculty report the perception of student improvement related to college readiness including confidence, time and financial savings, academic preparedness, and a higher likelihood of college completion. However, members of both groups also questioned if those benefits were a direct outcome of participation in the dual enrollment course or rather characteristics of the students who choose to participate in the dual enrollment coursework. Specifically, secondary teacher number two and post-secondary faculty number three questioned if key cognitive strategies such as critical thinking, analysis, and problem solving are actually developed within the student's home environment rather than the classroom. One faculty member mentioned that nature versus nurture is a possibility, and that

upbringing could be more impactful than formal education in this regard. That faculty member continued that parental oversight in the realm of self-monitoring, time management, removal of procrastinations, and regulation may help to strengthen those skills before the students matriculates to the collegiate level and that those skills are just as important in terms of college success.

Interpretations and Importance of Findings

Interpreting and development of findings includes making specific connections within the data to ensure both clarity and transparency (Sullivan & Forrester, 2019). “Where possible, you should include some element of narrative, as giving a flavor of the participants’ personal stories helps bring all types of qualitative analysis to life” (Sullivan & Forrester, 2019). Therefore, included in the presentation of the findings are verbatim responses as well as individual words and repeated phrases. Additionally, the overall finding of this study includes the individual themes and subthemes which arose based on the participant interviews. The findings were also interpreted within the context of the research questions, the theoretical and conceptual framework which were established at the outset of the study.

While the themes and subthemes emerged from data collected during the participant interviews, they directly aligned with the research questions and the topics included in the interview questions. Both groups indicated perceptions of student benefits regarding college readiness in terms of dual enrollment participation in regard to the student having the ability to participate and necessary engagement from the secondary schools. The belief is that as long as the secondary institution is interested and willing to engage in the dual enrollment program, students have the opportunity to participate. However, some within the groups maintain that there are challenges regarding available technology and student qualifications that hinder the

student's ability to participate in dual enrollment courses. Challenges relevant to course timing and technology pose an issue for student success and college readiness.

The second theme, course efficacy is where faculty were most vocal. This theme includes three subthemes: Course expectations, teacher training and resources, course alignment and student outcomes, and teacher and faculty engagement. Within this theme secondary faculty were at a consensus that teachers are appropriately vetted and are qualified to teach the dual enrollment course. They also expressed that the sharing of resources such as syllabus, assignments, and assessments are an essential part of maintaining the rigor of the course. However, the groups do not agree on student achievement in terms of learning outcomes based on course alignment and teacher and faculty engagement.

Within the second subtheme, course alignment and student outcomes, faculty presented a united front regarding the importance of course alignment. They shared that if the dual enrollment course outcomes aligned with competencies related to current curriculum there was a better chance of the students having a good experience and meeting the learning outcomes. Secondary teachers did not comment on this area at all. My assumption is that based on their voluntary participation in the study, is that they are teachers who provide their own intrinsic motivation to the coursework.

Subtheme three within course efficacy is teacher and faculty engagement. Both groups agree that engagement of their counterpart is critical to the success and assurance of student learning outcomes. Secondary teachers only mentioned positives in terms of faculty engagement and oversight. Faculty, agree with that perspective but raise two issues that pose challenge to engagement. The first has to do with the availability of faculty members. And the second has

more to do with the scheduling of Career and Technology Centers posing inconsistencies of instruction.

The third theme college preparedness also has three subthemes: academic readiness, perceived benefits, and nature versus nurture. Every participant shared their belief that there are direct benefits for students who participate in dual enrollment on their college readiness. Specifically with the first two subthemes academic readiness and perceived benefits. There were also questions and challenges shared related to nature versus nurture.

In terms of academic readiness both teachers and faculty shared examples of how students appear to benefit from their participation in dual enrollment. They include approach to college coursework, willingness to challenge belief systems, increased engagement in reasoning, interpretation, and argument, and a decrease in need for students to take remedial coursework upon matriculation to college. Additionally, it was observed that when in the dual enrollment course students were pushed to improve their academic behaviors such as self-mastery, time management, and accountability, and those characteristics seem to be stronger as a college student compared to students who did not participate in dual enrollment. Neither teachers nor faculty shared negative responses regarding academic readiness.

As with academic readiness, within perceived benefits both teachers and faculty shared several positive perceptions and no negative outcomes. They believe that students achieve benefits such as saving time and money, gaining confidence and a higher level of college preparedness for having participated in dual enrollment. Faculty also shared that students who participate in dual enrollment tend to retain and complete their college degree at a higher rate than those students who did not participate in dual enrollment.

The challenge to the outcome of improved college readiness based on participation in dual enrollment coursework came from both secondary teachers and post-secondary faculty in regard to nature versus nurture. They question if the outcomes are related to the student's participation in dual enrollment or if dual enrollment attracts students who already have those qualities. One faculty member mentioned that success in college requires more than intelligence, rather key cognitive strategies such as critical thinking, analysis, and problem solving, as well as behaviors such as self-monitoring, time management, and self-regulation might be improved during the dual enrollment course based on parental oversight while the student is still in high school.

Implications

The results of this study will benefit the leaders of the studied institution as they continue to develop a program that meets the needs of secondary educational institutions and expands on benefits for students. According to Pomelia (2020), roadblocks surrounding dual enrollment includes cost, eligibility, and lack of qualified teachers. Zinth (2015), also maintained that course integrity such as uniformity of textbooks, learning outcomes, course syllabus, assignments, grading practices, and assessments are essential to the success of the student in terms of learning outcomes and improved college readiness. This study demonstrated perceptions from both secondary teachers and post-secondary faculty that support those essential components of dual enrollment as well as revealed observations that could lead to program improvements at this institution. Those improvements could be carried out statewide and even nationally as other secondary and post-secondary institutions seek to gain control over the quality of their dual enrollment coursework and the opportunity to better prepare students in the realm of college readiness.

Additionally, there is an opportunity for improvements to be made in regard to students' understanding and maximizing the benefits related to dual enrollment. Karp and Hughes (2008), tout that benefits of participating in dual enrollment are readily apparent and include saving time and money. According to Hoffman, et al., (2009), students have the opportunity to gain advantages such as improvement in their college transition and college completion rate. All educational communities have the ability to evaluate those benefits in relation to the perceptions shared within this study in order to develop and improve dual enrollment practices to maximize the benefits and opportunities that students have related to increasing their college preparedness, improved college transition, and increased college retention and completion rates. By creating programmatic improvements such as academic advising for high school students, secondary and post-secondary institutions would be rewarded with improved outcomes and student success.

Furthermore, by modifying the programs course inclusion to create a system of evaluating course alignment of the college course to the secondary curriculum would address the concern shared by faculty of teachers not having the ability to properly engage in the coursework. Faculty would be given the opportunity to fully vet the course along with the secondary teacher ensuring that the outcomes fit within the current curriculum. This would confirm that teachers are not being forced to fit additional work in a timeframe that does not meet the needs of the curriculum.

Recommendations for action

The purpose of this qualitative case study was to capture the perceptions of both secondary teachers and post-secondary faculty perceptions of the influence of dual enrollment participation on a student's college readiness. The results are meaningful and important in regard to continued program improvement for the studied institution, but also other secondary and post-

secondary institutions that value the need to enhance student college readiness through dual enrollment programming. Based on the finding of this study, I offer three recommendations that relate to course timing, course alignment, and teacher and faculty engagement.

Both secondary teachers and post-secondary faculty mentioned the timing of the high school course versus the college course registration to cause issue in student access and learning. It was noted that teachers often have to begin their coursework before students are registered for the college course. Without that registration, students do not have access to the learning management system which houses materials, resources, and assessments. This causes a disruption in learning and student success. One solution is to devise a different registration process that would allow students to have access to the learning management system much sooner. This would require intervention by the institution's information technology department.

The second recommendation is to eliminate the offering of courses that do not directly align to the high school curriculum. Presently, secondary administration, along with the secondary teacher review the student learning outcomes and syllabus to determine fit. Moving forward it would benefit the post-secondary institution to be more involved in that process. By meeting with the secondary teacher, the faculty member could assess curriculum fit based on the college requirements and the overlap or exclusion of the current high school curriculum. Additionally, it would behoove the institution to re-evaluate current course offerings in the same manner and eliminate courses that are not being properly supported by the high school teacher.

Lastly, concerns were raised regarding teacher and faculty engagement. Many shared the benefits of engagement and noted that it is essential to the success of student outcomes. Several participants also expressed concern regarding lack of engagement from their counterpart. Various thoughts were shared on what the root cause of the issues were, but it is important to

further investigate the cause and potential solutions. I recommend a survey to all secondary teachers and post-secondary faculty currently engaged in the program to expand on the exploration of this topic. A short survey with several multiple-choice questions and a several open-ended question would assist in the development a hypothesis of problem and solution. That could then be used to generate additional conversation that would lead to improved practices to resolve this concern.

Recommendations for Further Study

While this study is important and meaningful, it was limited in scope. There were also valid questions that arose during the interviews that warrant additional investigation. All participants shared the perception that students do benefit in regard to college readiness based on their participation in dual enrollment. However, the most significant question is whether or not dual enrollment was the reason for the improvement or if students who already displayed those characteristics are drawn to dual enrollment. Furthermore, is the improvement a product of nature or nurture?

One way to address those questions is a study that includes both students and secondary teachers. At the onset of the students first dual enrollment course an exploratory survey of student behaviors surrounding academic behaviors and college preparedness could be conducted with the students and teacher. The same survey could be conducted a second time at the conclusion of the course with the same teachers and students. This would be used to compare results and evaluate if students truly made improvements in areas that enhance college readiness.

The second area of study that I recommend has to do with the need for remedial work, student college retention, and college completion. Current literature ascertains that students show improvements in those areas but there is very little quantitative evidence to prove the

declarations. A quantitative study that measures dual enrollment students need to take remedial coursework upon entrance to college, the percentage of college retention, and the percentage of college completion compared to students who did not participate in dual enrollment would demonstrate whether or not those statements of benefit are accurate.

Conclusion

Proponents of dual enrollment tout that one of the major benefits of student participation in dual enrollment involves improved student college readiness. However, there are wide ranging irregularities of state and nationwide regulations surrounding dual enrollment and the development, implementation, and delivery of those programs which could lead to inconsistencies related to student outcomes and course integrity. Additionally, in 2018 the American College Test reported that only 38% of students who participated in their College Readiness Exam demonstrated readiness for college.

The National Alliance of Concurrent Enrollment asserts that by participating in dual enrollment while in high school, students are exposed to the challenge and rigor of college coursework while they are supported by their secondary teachers. Additionally, students who participate in dual enrollment also benefit from a higher likelihood of entering college, stronger academic performance, and increased college completion rates (An, 2015; Wang, et al.,2015). Benefits also include higher levels of student engagement, career exploration, and college readiness (Rarig, 2019).

According to Eisenbeck and Henson (2013), benefits of dual enrollment participation may also include increased confidence in academic abilities, decreased need for remedial coursework, and savings in time and money for college completion. The ability to attain college

credit while in high school are often done at a free or reduced cost to the student (NACEP, 2020).

The goal of this qualitative case study was to gain an understanding of both secondary teacher and post-secondary faculty perceptions of the influence of student participation in dual enrollment on college readiness. This included two research questions:

RQ1: How do secondary teachers perceive dual enrollment influencing college readiness for high school students?

RQ2: How do post-secondary faculty perceive dual enrollment influencing college readiness for high school students?

Six secondary teachers and five post-secondary faculty members who currently are or recently have participated in the studied institutions dual enrollment program participated in this study. Participation included virtual, open-ended semi-structured interviews using the Zoom platform. Member checking was used in order to confirm the collected data. Finally, pattern matching thematic analysis was employed to evaluate the information. Overall, participants within the study agree that students benefit from dual enrollment participation in terms of college readiness. However, there are alignments and divergence on what those benefits are.

The findings of the study include three themes and eight subthemes. The first theme, student access includes the subthemes student qualification and course findings and timing. Both groups agreed that recent changes made to the program's eligibility requirements have proven to create better access for students who will benefit from participating in dual enrollment coursework. Both groups also agreed that technology can be a barrier. This is related to the student registration process and students not having access to the college's learning management system when they begin course curriculum. Additionally, faculty felt there were further barriers

related to technology including students not having access to one-to-one technology or schools not having access to high-speed internet.

The second theme is course efficacy which includes the three subthemes course expectations, teacher training and resources, course alignment and student outcomes, and teacher and faculty engagement. Within this theme the groups had conflicting opinions surrounding course efficacy and consensus regarding teacher qualifications. Both groups felt that the teacher vetting process, annual training, and sharing of resources were clear and rigorous. There was divergence in terms of course alignment and student outcomes. Both groups concur that it is essential for the college learning outcomes to directly align with the requirements of the high school curriculum in order for teachers to successfully implement the content. Faculty noted challenges related to quality control at the secondary level that can cause them concern in regard to student outcomes. The third subtheme is teacher and faculty engagement. Again, both groups mentioned the necessity of engagement with their counterpart and listed examples of successful situations, but faculty raised two concerns regarding engagement. The first concern is their own schedule preventing them from engaging in a productive manner and the second is related to the CTC schedule and lack of student learning consistency.

The final theme is college preparedness. This theme also includes the following three subthemes: academic readiness, perceived benefits, and nature versus nurture. In this theme, both groups shared opinions that dual enrollment does provide the student with improved college readiness skills but posed questions about whether or not those improvements directly correlated with dual enrollment participation. Within academic readiness, agreement was shared that students participating in dual enrollment tend to be more inquisitive, willing to challenge, and push themselves academically. Additionally, the perception is that the need for students to take

remedial courses upon college matriculation is diminished. Both groups shared agreement in relation to perceived benefits regarding student confidence, the savings of time and money and a better understanding of college academic expectations. The variance within this theme was raised by both faculty and teachers in that they could not be sure that dual enrollment directly correlates to the increase of skill or if students who already have those skills or have a more supporting home environment that promotes those skills are drawn to dual enrollment.

The results of this study are meaningful and important in regard to continued dual enrollment program improvement. These improvements could be solely for the studied institution or utilized for higher level, general policy. Based on the findings of this study I suggest three recommendations that relate to course timing, course alignment, and teacher and faculty engagement. Evaluation of the course registration process and granting students access to the college's learning management system at the onset of coursework is necessary to eliminate disruption of learning. Creating a process to ensure that the high school curriculum and college course objectives are in direct alignment while eliminating those that do not from the current offerings will ensure that students are provided with the opportunity to achieve the dual enrollment outcomes. Finally, it is critical that both the faculty and teachers fully engage in the coursework. Several thoughts regarding the root cause of lack of engagement were shared but further investigation is necessary in order to grasp a full understanding of the barriers and devise a resolution.

While this study provided helpful information in terms of perceptions from secondary teachers and post-secondary faculty, there are two recommendations that I make for further study. The first relates to the question of nature versus nurture. An additional study could be conducted that includes both students and secondary teachers. A survey exploring their

perceptions of student college readiness and academic behaviors could be employed at the beginning and end of a dual enrollment course in order to compare the differences in perceptions. Additionally, literature ascertains that students improve in areas such as need for remediation, college retention, and college completion. A quantitative study that measures those specific outcomes comparatively between students who participated in dual enrollment and those who did not would demonstrate the accuracy of those statements.

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APPENDICES

Appendix A

Solicitation Emails

Penn College NOW faculty - Your input is requested



Joanna Flynn

To

Cc Tanya Berfield

You forwarded this message on 12/14/2021 8:47 AM.



Mon 12/13/2021 4:01 PM

Dear Colleagues,

Tanya Berfield, who is the Director of K-12 Outreach at Penn College, is also a doctoral student at the University of New England. Her research is focused on secondary teachers and post-secondary faculty perceptions of the influence of dual enrollment participation on college readiness. This is a qualitative case study.

Tanya is currently seeking post-secondary faculty members who currently are or recently have been involved in the Penn College NOW dual enrollment program to participate in the study. You are receiving this email because you have been identified as such. Participation consists of a virtual interview to last no more than one hour and the opportunity to verify data collected by reviewing the transcript. Interviews will be conducted using either Microsoft Teams or Zoom, whichever you prefer and will be recorded.

The names of all participants collected for this study will remain confidential. At no time during the study process will any individuals be identified. Additionally, no cost will be incurred by the participants.

If you are interested in sharing your perceptions, experiences, and reflections or have questions please contact Tanya directly at tberfield@une.edu.

Thank you for considering!

Joanna Flynn

Joanna Flynn
 Dean of Curriculum & Instruction | Academic Affairs
 PENNSYLVANIA COLLEGE OF TECHNOLOGY
 + 0 +
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 570.320.2400 x7633

Dissertation Request



Randy Zangara

To

Cc Tanya Berfield; Randy Zangara



Tue 12/14/2021 8:49 AM

Dear Colleagues,

Tanya Berfield, the Director of K-12 Outreach at Penn College is also a doctoral student at the University of New England. Her research is focused on secondary teachers and post-secondary faculty perceptions of the influence of dual enrollment participation on college readiness. This is a qualitative case study.

Tanya is currently seeking secondary teachers who currently are or recently have been involved in the Penn College NOW dual enrollment program to participate in the study. Participation consists of a virtual interview to last no more than one hour and the opportunity to verify data collected by reviewing the transcript. Interviews will be conducted using either Microsoft Teams or Zoom, whichever you prefer and will be recorded.

The names of all participants and schools collected for this study will remain confidential. At no time during the study process will any individuals be identified. Additionally, no cost will be incurred by the participants.

If you are interested in sharing your perceptions, experiences, and reflections or have questions please contact Tanya directly at tberfield@une.edu.

Regards,

Dr. Randy Zangara

Randy Zangara, Ed.D.
 Dean of College Transitions & Student Success | K-12 Outreach | LEAP Center | Veteran & Military Services | Tutoring Services
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Appendix B

Interview Protocol

Hello, my name is Tanya Berfield, and I will be conducting this interview. Before we begin, let's review the information sheet that I shared with you via email when we scheduled the interview. (Review information sheet) At this time, if you have questions or concerns regarding the information that we just reviewed please let me know. (If yes, answer questions. If no, continue) Providing a verbal response do you acknowledge that you would now like to continue with the interview? (If no, thank them for their time and leave the interview. If yes, continue) Thank you so much for volunteering to participate in my study. I appreciate the time that you are spending with me today to share your thoughts and perceptions. I anticipate that this interview will take no more than one hour. The goal of this study is to examine secondary teacher and post-secondary faculty perceptions of the influence of dual enrollment participation on college readiness.

Identification of all participants and schools will remain confidential. Recordings, transcriptions, and collected data will be stored on my student OneDrive through the University of New England. I will be the only individual with access to the data. I would also like to remind you that this interview is being recorded. You are welcome to turn your camera off if you choose. I would also like you to know that I am in a personal office. No one is able to see or overhear our conversation. As we proceed through the interview, if you prefer to not answer a question, let me know and we will move to the next question. If at any time you feel uncomfortable or wish to discontinue the interview, just let me know and we will stop. If you have no questions or concerns at this time we will proceed.

Conclusion

That concludes today's interview. In the coming days I will be providing you, via email, a copy of the transcribed interview following the data collection process. You will have the ability to update, change, retract, or add to the content at that time. Please review that information for accuracy. You can respond to my email with confirmation, clarification, or questions. Thank you again for taking the time to meet with me today, it was a pleasure speaking with you.

Questions

Questions are divided into themes.

General:

1. Please provide me with the pseudonym you would like assigned to you for this study.
2. What is your current position?
3. What subject/content area do you teach?
4. How many years have you been in this field?

Access:

(Cost, availability, eligibility, qualified educators)

5. What are your observations of student access to dual enrollment?
6. What roadblocks have you observed that prohibit a student from participating in dual enrollment?

Course Integrity:

(Quality control, academic rigor)

7. What is your perception of the course integrity of dual enrollment courses that you have been engaged in in regards to student learning outcomes?

Career Exploration:

8. What observations have you made, if any, regarding career exploration opportunities students have when participating in dual enrollment?

College Transition:

9. What is your perception regarding academic preparedness, confidence, and the need for college remediation for students who have participated in dual enrollment?
10. What is your observation related to students who have participated in dual enrollment having improvements, or not, in areas such as college completion, study habits, academic readiness, and financial savings?

College Readiness

11. What are your perceptions of the influence of dual enrollment on each of the following college readiness variables?
 - Key Cognitive Strategies
(intellectual openness, inquisitiveness, analysis, reasoning, argumentation and proof, interpretation, precision and accuracy, and problem solving)
 - Key Content
(2 overarching academic skills including writing and research and six core academic subjects of English, math, science, social studies, world language, and the Arts.)
 - Academic Behaviors
(behaviors needed for success include self-awareness, self-monitoring, self- control, and self-mastery)
 - Contextual Skills and Awareness
(understanding of culture and operations of a particular institutional system such as college norms, values, and conventions related to human interaction)