

Fall 12-16-2017

## Dual Enrollment and Rural Alaska: A Qualitative Case Study Examining Student Access and Impact

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Corey S. Weiss

*Concordia University - Portland*

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Concordia University–Portland

College of Education

Doctor of Education Program

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Dual Enrollment and Rural Alaska: A Qualitative Case Study Examining  
Student Access and Impact

Corey Scott Weiss  
Concordia University–Portland  
College of Education

Dissertation submitted to the Faculty of the College of Education  
in partial fulfillment of the requirements for the degree of  
Doctor of Education in  
Transformational Leadership

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Concordia University–Portland

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## **Abstract**

This case study employed an interview process that examined the access rural Alaskan students have to dual enrollment and how it differs from the access of similar school districts in remote areas of Texas. The interviewees consisted of administrators of five school districts in northern and western Alaska and their counterparts in districts in western Texas. The outcome of this study is relevant to dual enrollment research as it provides more data from a region that has been overlooked by researchers and establishes that the school districts have a substantial degree of access to dual enrollment, with no significant differences between the districts in the two states. Beyond the primary findings, the study details characteristics that the two regions have in common, which affect student participation in college credit earning courses. The data collected has been thoroughly reviewed and codified based on the answers from each participating administrator. Five themes have been developed to address the primary and subordinate research questions. Each theme has been derived from questions and establishes the foundations to categorize the findings of the study. The study revealed that students in rural Alaska have access to dual enrollment education similar to their counterparts in other areas of the country. Additionally, the results provide other perspectives, including how administrators feel about the value of dual enrollment and the obstacles that students face while pursuing an education in remote areas. The findings are significant for future research and for stakeholders who make decisions affecting educational support for students.

*Keywords:* access, advanced placement, college readiness, dual enrollment, early college high school, international baccalaureate

## **Dedication**

This study, modest in nature though it may be, was a herculean expenditure of time and treasure, and would not have been possible without the unflagging support of my best friend and partner in life, my beautiful wife Frances. She is my greatest cheerleader and my better half. She motivates me to work hard and try to be a better person. This achievement is as much hers as it is mine. But this dedication would be incomplete without extending it to my lovely six-month-old daughter, Cailea. Her life began at the same time as my proposal defense and I am so proud that she will be here to see this effort come to fruition and maybe someday know what it means to her father to achieve this long-time goal. These dear ladies make my life happy and complete. Their patience and love have made this accomplishment possible and for that I am ever grateful.

## **Acknowledgments**

I continue to be both inspired by and in awe of Dr. Brandy Kamm, without whose compassion and support I would certainly have never been able to successfully finish this task. She is a credit to our profession. I consider her a friend and guide. Like others before me, I marvel at her positive energy, good advice, and constant availability. I also extend my thanks and admiration to Dr. Donna Eastabrook and Dr. Ray Francis. I greatly appreciate their participation and the time they dedicated to helping me complete this research study. Their counsel added complexity to the topic and helped me to successfully design an impactful study. I was impressed by their thorough and relevant comments and benefited from their support and encouragement.

I owe thanks to Dr. Rick Reedy, former superintendent of Frisco, Texas ISD and a namesake of Reedy High School in the northern Dallas suburb. Both as an uncle and mentor, he has been an inspiration in my career and a helpful advocate over the last three years of arduous study. I am also grateful to Dr. Buddy Hooper, an Alaskan colleague, supporter, fellow Texan, and another veteran of the superintendent position, who was a proponent and advisor in this effort as well as my pretest interviewee. Finally, it would be shortsighted of me to not mention those individuals who participated in the interviews and provided the testimony that led me to the findings and successful completion of this very relevant and interesting research focus. They were generous with their time and cooperative in the method. They made it easy for me to carry out the study and complete this dissertation in time and successfully.

As I have stated many times in the coming pages, my primary inspiration in pursuing this topic was the desire to provide findings that would prove to be useful and contribute, even in a small way, to the larger body of knowledge regarding dual enrollment programs and how they

impact student success. If I have done that with this research study, then I am pleased with the outcome of this effort.



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## **Chapter 1: Introduction**

### **Introduction to the Problem**

Winters in western Alaska are difficult, with temperatures that can reach well below zero. Deep into the season, in some locations the sun comes up just before noon and sets around four in the afternoon. In this harsh environment, young people struggle every day to go to school to get access to education that is meaningful to them and helps them in preparing for their chosen future. Students growing up in this area of the country are burdened with various limitations to educational success. Their path is often more difficult than that of their urban contemporaries. Because of these factors, access to a college-focused curriculum, presented in an environment that seeks to replicate collegiate learning, is not always guaranteed. A few rural Alaskan students may eventually go to college, but historical trends suggest that success at that level is unlikely to follow and will largely be due to individual perseverance.

In 2015, the American Indian/Alaska Native (AIAN) population witnessed a 63.6% graduation rate, the lowest of any ethnic subpopulation and well below the state average (Zinth, 2014). In addition, examination of post-secondary enrollment of students of Alaska in 2011–2012 (the most recent year that such data is available for) shows that the AIAN students as a subcategory were substantially underrepresented when compared with other ethnic groups. A separate review of 2010 public high school graduates that had compiled college credit through enrollment in some form of dual credit program showed only two school districts in the entire state (Anchorage and Fairbanks) reporting student achievement at any meaningful level. The remainder of the state's 54 school districts either suppressed their results or had none to report (Zinth, 2014).

This study was designed to examine the level of dual enrollment access available to students in rural regions of Alaska and how that accessibility compares to other rural areas. The targeted populations located in communities that are considered “off the road” are only accessible by air. In addition, the study focused on exploring whether a disparity existed between the identified remote districts in Alaska and similar districts in the 48 contiguous states of the United States. As the following qualitative case study, and specifically the review of existing literature reveals, the availability of dual enrollment programs to rural Alaskan students is an area that has been unexplored and offered an opportunity to contribute findings relevant to school officials as they seek to bring a more purposeful and effective curriculum to one of our country’s most underserved ethnic communities.

### **Background, Context, History, and Conceptual Framework**

Dual enrollment as an educational pursuit has been around in some form since the 1950s with the goal of giving secondary students, especially those who are within a year or two of graduation, the opportunity to take college level classes or to earn credit or both, depending on the form that the program takes. In the past three decades, the idea of earning college credit before high school graduation has grown significantly because of the changes brought about by the technology revolution and its impact on all aspects of education. Dual enrollment is now more available and more accessed than at any time since its conception (Warne, Larsen, Anderson, & Odasso, 2015).

The literature review in the next chapter lays the foundation for this framework in greater detail and provides evidence that since their inception dual enrollment programs have benefited students in various forms in recent years. The review illustrates that over the last two decades student access to dual enrollment has increased substantially and recent research has focused on

studying the inequities in availability of such programs, based on ethnicity (Santoli, 2002). This study fits into that same genre by examining access in one specific area of the country.

The literature is limited to three of the most prominent methods that have been identified as dual enrollment: advanced placement courses, the international baccalaureate program, and the early college high school initiative. These three popular programs present in many schools form the baseline of dual enrollment in the United States and allow for the examination of their recent application and success rates. Whatever form dual enrollment takes, the overarching element that the literature reveals is that the students benefit from access to such courses, which helps them enter college with a greater level of preparedness.

Advanced placement (AP) is the oldest of the identified concepts and has been around for several decades. The program allows students to take college-level classes if they choose and then take an examination that tests their abilities in the subject area. Scores vary over a range of 1 to 5, with 3 and higher considered as the passing score by most colleges and universities (Hobson, 2015). International baccalaureate (IB) courses allow students to take high-level courses that have a global perspective and an emphasis on the humanities. The IB program also focuses on giving students an advanced foundation that helps them earn college credits indirectly (Hayden & Wong, 1997). Finally, the early college high school initiative (ECHSI) is still in its formative stage but is growing quickly. First conceived by a non-profit foundation in the early 2000s, early college allows students to take university level classes either on a college campus or a specially-designed campus and achieve an associate-level degree by the time they graduate from high school (Finn, 2014).

The motivation for dual enrollment and its widespread application is the largely accepted theory that students benefit from such access and that young people generally do better in college

due to their participation in such programs (An & Taylor, 2015). For years, there have been proponents of various forms of education targeting students regardless of their ethnicity or socioeconomic status. Finn (2014) concluded that “high-ability young people deserve to be taught in schools in which high achievement is the norm and not the exception” (p. 62). The author further stated that programs such as advanced placement, “schools within schools” (early colleges), and international baccalaureate programs can help to fill the need to serve this academic population (Finn, 2014).

In accepting this foundational guidepost, this study sought to review research that concentrates on investigating access that has been available in general as a baseline and then focused on the specifics of Alaskan school districts’ access to dual enrollment over the past several decades if any literature existed on this specific topic. The next step, after examining the existing literature, was to seek testimony from school leaders to determine the availability of dual enrollment courses in five specially chosen school districts in northern and western Alaska that share similar rural characteristics, as identified in Chapter 3. Finally, the concluding step of the research design was to gather similar data from five school districts in Texas, representing the access that exists in the contiguous states, and to compare the collected data to help establish credible answers to the study’s research questions.

### **Statement of the Problem**

The vision of dual enrollment programs is to provide a platform for all students to participate in courses geared toward high expectations and student achievement to build academic capacity for postgraduate work regardless of geographic location, ethnicity, or socioeconomic background (Hughes, Rodriguez, Edwards, & Belfield, 2012). Despite these laudable objectives, the reality is that in certain areas dual enrollment falls short with respect to

accessibility for all students. An examination of existing literature showed a lack of research into dual enrollment, specifically about the remote school districts of rural Alaska. Evidence shows that college participation falls well below the average and inadequate access to technology hampers educational efforts (Thomas, 2015; Zinth, 2014). Therefore, the aim of this qualitative case study was to conduct interviews of school officials in identified areas of rural Alaska to establish whether a disparity exists in dual enrollment access and how such a difference might affect students. The purpose of this research study was to establish the facts regarding dual enrollment access in this part of the country and to help create a conversation about this topic which might help, in some small way, to remedy the problem.

### **Purpose of the Study**

Many recent studies have concluded that certain inequities exist in the application of dual enrollment programs, based on both ethnicity and geographical location in various parts of the United States (Santoli, 2002). This study was designed to examine the level of dual enrollment access that is available to students attending school districts in remote areas of northern and western Alaska; the first such study to focus solely on this distant area of the country. The expectation was that the qualitative case study would determine whether a disparity of access exists in the identified Alaskan schools. Having considered the various available methods, the researcher determined that the most effective way to conduct this research and establish reliable findings would be to undertake a study that employed a simple interview model (Creswell, 2014). The interview questions were carefully constructed and posed to officials in the school districts that were selected to be a part of the study. The interview process is explained in greater detail in Chapter 3.

## **Research Questions**

The following questions were the focus of the study and guided the author's actions, the avenue of questioning, and the final data analysis.

### **Principal Question:**

- What is the level of access for students in dual enrollment programs in rural Alaska and how is it different from schools in some other remote areas?

### **Sub-Questions:**

- Research Question 1 (RQ 1): What benefits do students derive from having access to dual enrollment programs?
- RQ 2: What is the perception of school leaders about factors that contribute to or hinder their districts' access to dual enrollment programs?
- RQ 3: What is the perception of school leaders of the effect on students who do not have access to dual enrollment programs, where limited access is present?
- RQ 4: What are some potential remedies for students who are not able to participate in dual enrollment programs?

## **Rationale, Relevance, and Significance of the Study**

An examination of the literature presents two obvious conclusions: first, that dual enrollment is a popular topic with individual researchers and educational groups, especially those endeavoring to examine specific programs and their impact on education; and second, the realization that contemporary research related to dual enrollment in the state of Alaska is extremely limited (Thomas, 2015; Zinth, 2014). Because of the lack of data, it has been worthwhile researching this topic to establish an Alaskan-focused study that examined

indigenous students and whether their needs are being met through the provisions of dual enrollment courses.

The topic of this study is one that is practical and has provided results that will help school administrators make decisions that are data-driven and based on fact and substantive input. A qualitative case study method has been employed, wherein purposely selected stakeholders in the identified school districts were interviewed. Creswell (2014) described qualitative studies as being used to explore a problem, to empower individuals to make decisions and changes, and to develop means for promoting change. These purposes clearly defined the expectations of this study, as well as the hope that its conclusions will be practical and applicable.

### **Definition of Terms**

To examine this area of concentration, it is necessary to define essential terms related to its application: access, advanced placement, college readiness, dual enrollment, early college high school, and international baccalaureate:

#### **Access**

According to the Merriam-Webster dictionary, access is defined as the “freedom or ability to obtain or make use of something” (Merriam-Webster's online dictionary, 2017). In the case of this study, the term is used to denote whether the students can participate in a curricular initiative and if the target individuals are able to obtain the services that such a program offers. Conversely, a *lack of access* means that the students in question do not have the ability to take part in the programs studied due to issues related to availability or other potential reasons.

## **Advanced Placement**

Advanced Placement was created by the College Board in the 1950s to offer academically advanced high school students the opportunity to achieve college credit by taking rigorous courses based on a college curriculum that prepares the students to take a test that allows them to achieve college credit awarded by the college of their choice (Warne et al., 2015).

## **College Readiness**

Conley (2012) spent years studying the concept of college and career readiness and suggested that college readiness can be practically defined as an environment where a student “can succeed in entry-level, credit-bearing college courses leading to a baccalaureate or certificate” (p. 1). Three years later, the same author laid out four keys to college and career readiness. Students that are prepared for college should be able to demonstrate mastery of cognitive strategies, content knowledge, transitional knowledge and skills, and important learning skills and techniques.

## **Dual Enrollment**

Marken, Gray, and Lewis (2013) carried out a study of the implementation of dual enrollment programs, where they looked at all aspects of the concept and its impact on high schools and colleges. The working definition that the authors presented their readers with was simple and straight to the point. The study defined dual enrollment as “refer[ing] to high school students earning college credits for courses taken through a postsecondary institution” (p. 1).

## **Early College High School**

ECHS is a concept that allows the specifically selected high school students to take college courses for both high school and college credit so that students achieve both an associate



degree and a high school degree at the same time (Berger, Turk-Bicakci, Garet, Knudson, & Hoshen, 2014).

### **International Baccalaureate (IB)**

The guiding philosophy of the IB program is to work toward goals that are focused on “the powers of each individual to understand, modify, and enjoy his or her environment, both inner and outer, in its physical, social, oral, aesthetic, and spiritual aspects” (Hertberg-Davis, Callhan, & Kyburg, 2006, p. 8). The College Board provides clarity as to the structure of the IB, describing it as a program that provides a “rigorous course for the student” (Hertberg-Davis et al., 2006, p. 7) that leads to an examination for college credit.

### **Assumptions, Limitations, and Delimitations**

This study was conducted with a couple of assumptions that helped lead to the formulation of the problem examined and the research questions. Going into the study, it was presumed that dual enrollment is a successful pursuit that has a positive effect on student success and college readiness. In addition, the study was based on the assumption that the findings would produce useful information for a school administrator regarding dual enrollment access and how such programs might impact an organization.

There were many limitations in the study that may have had some impact on the final conclusions, including the sample size and selection and time allotted for the study. Each may have impacted the methodology and accordingly they are addressed in the research design in Chapter 3. The target population of school districts examined was small, consisting of five districts in Alaska and five in Texas. The Lone Star State was selected for three primary reasons: first, areas of Texas, while geographically different from Alaska, have similar attributes of remoteness and vast distances from urban areas; second, the two states also share many

similarities in the components of their educational systems; and finally, the areas of Texas being studied are well known and more accessible for the researcher. An additional feature discussed further in Chapter 3 is the similarities and differences between the two majority ethnic groups and how that impacted the findings of the study.

Another limitation is that many of the findings both in the literature and the final outcomes of the study are transferable; thus, the outcomes are extrapolated by drawing generalities. Finally, there was a limitation related to the methodology. Because interviews are the most effective method for gathering information, as previously discussed and elaborated on in greater detail later, the process was dependent on the cooperation of district leaders identified as the most likely to have the appropriate answers. Thus, the final testimony was affected by the assistance of these individuals, and in some cases led to the need to find other interviewees where such cooperation was not feasible or forthcoming. This process also is detailed further in Chapter 3.

Thus, the delimitations were defined by the author in order to address each potential limitation in the construct of the methodology. First, the target districts were chosen based on geographic location and similar characteristics. Furthermore, the study sought to draw supportable generalities considering how the Alaskan districts compared to the identified districts in Texas. Finally, as the study progressed, the questions that were created were targeted toward the specific district leaders being questioned; accordingly, their affiliation has been discussed and substantiated in greater detail in Chapter 3.

### **Summary**

This chapter laid the general foundation for the study. The value of this examination was its purpose and practicality. The topic in question is a real-world issue and has the potential to

impact the way educational leaders make decisions in their schools. This chapter has also sought to establish the rationale for the study, the methods utilized, and to define some of the basic expectations and assumptions that guided and impacted the direction of this study. In the next chapter, the author continues to develop the rationale for the study through a comprehensive review of the existing literature by investigating contemporary dual enrollment and those elements which have affected Alaskan education in the past.

## **Chapter 2: Literature Review**

### **Introduction**

A review of any relevant statistics regarding high school preparedness for college demonstrates that, statistically, young people categorized as American Indian/Alaska Native (AIAN) fall behind other ethnic groups in college readiness and ultimate success (Zinth, 2014). After considering a myriad of data supporting the contention, Zinth (2014) concluded:

Given the data on low college-going among American Indian/Alaska Native students and the research on the positive impact of dual enrollment on college entrance and success, states may consider policies to help tribal colleges deliver dual enrollment programs, particularly to rural American Indian/Alaska native students. (p. 9)

*Anchorage Daily News* journalist Mader (2014) profiled the plight of young native Alaskans living in remote villages far from the road system present in the southeastern part of the state. The article discusses the work of Diane Hirshberg, the director of the Center for Alaska Education Policy Research who suggested that to improve educational opportunity students should have greater access to vocational, technical, and collegiate programs (Mader, 2014). Despite such efforts, dual enrollment programs in rural Alaska appear to be sporadic and ill-focused on the needs of native Alaskans.

The purpose of this qualitative case study was to establish the level of dual enrollment program options available for rural Alaskan students. The research also sought to examine the impact of the absence of such opportunities and how those deficiencies compare to the dual enrollment availability in some of the schools of rural western Texas. In this literature review, the researcher examined concepts related to dual enrollment progress in traditional educational

environments and evaluated previous studies of Alaskan efforts as well as the status quo in the rural areas of the state. The final stage of the literature review looked at resources that established the historical problems and limitations for dual enrollment programs in rural Alaska.

### **Conceptual Framework**

A conceptual framework presents a foundation for the argument and a validation for the study. Eisenhart (1991) wrote that such a structure is composed of various points of view that construct a narrative substantiating the reason for the research. Creswell (2014) advances the notion that the conceptual framework is a philosophical paradigm that defines the elemental constructs of the study and is targeted at providing an organizational footing which lays out claims and evidence supporting the research focus and helps to establish the ultimate validity of the research and potential findings.

By any reasonable measure of progress, there is and has been for some time a crisis in the education of native Alaskans. While their civilization has existed on the western plains of Alaska for millennia, the last two centuries have seen a struggle to define a practical education for this culture (Langdon, 2014). In more recent decades, statistics consistently demonstrate the disparity in Native Alaskan educational outcomes as compared to outcomes for other ethnicities. A study by Faircloth and Tippeconnic (2010) proved that the state of Alaska's native graduation rate fell 20.8 percentage points below the national average of 67.6%. For the time period reviewed, the research indicated that 46.8% of Alaska Natives graduated compared to 74.4% of whites, 59% of African-Americans, 67% of Asians, and 24% of Hispanics. Additionally, the native graduation rate in Alaska was only higher than that in smaller populations such as Idaho (48.4%), New Mexico (45.3%), North Dakota (37.9%), South Dakota (30.4%), Oregon (42.7%), and Washington (42.7%).

Beyond the number of graduates is the larger issue of the quality of education that native children receive during their time in public school in their various communities. The large number of students who are required to participate in remedial work when they do attend college suggests that there is a disparity with non-native students. The nature of dual enrollment courses, whether vocational or general education-focused and offered onsite or through distance learning, allows for the possibility of increasing the relevance and rigor of classwork that is available to native students, impacting their individual college and career readiness (Hanlon, 2017).

The framework for this review of the relevant literature was based on certain foundational assumptions and supported by research. The research questions, detailed in the previous chapter, helped to define the fundamental problem being investigated, namely, that there exists a substantial lack of research on dual enrollment access for students in rural areas of Alaska. The literature clearly demonstrates this concern and delineates the need for conducting a study that examines the research questions previously detailed.

Having defined the relevant terminology and the problem that this study is designed to consider, the rationale for its construct and application has also been substantiated through a collection and categorizing of pertinent contemporary literature on the topic. Maxwell (2005) provided a model for the conceptual framework, saying that:

the point is not to summarize what has already been done in the field...it is to ground your proposed study in the relevant previous work, and to give the reader a clear sense of your theoretical approach to the phenomena that you propose to study. (p. 123)

Therefore, in order to establish how the findings of this study fit into the larger field of dual enrollment studies, it is useful, after a detailed examination of the literature, to draw certain

conclusions and patterns that emerge in the larger context of the topic's contemporary literature. Once considered, it will become more evident where this studies' outcomes and implications fit within the larger field of information on this important educational topic. Additionally, beyond the placement of this study in the broader spectrum is the consideration of its contribution to the larger body of knowledge regarding dual enrollment programs in this country.

A review and analysis of the literature led to the derivation of several broad conclusions that were supported by the research. First, the studies substantially indicate that dual enrollment has been proven to help make students more college-ready and the transition between high school and college more successful and college advancement more attainable (An & Taylor, 2015; Radunzel, Noble, & Wheeler, 2014). Moreover, studies also show that dual enrollment programs are far more likely to be successful when an institution makes a commitment to both the program and the students and continues to maintain that obligation going forward (Nodine, 2011).

Another conclusion generated by a review of the literature shows that dual enrollment students go to college better prepared and more focused thanks to the concurrent educational opportunities that they receive in high school (Edmunds, Willse, Arshavsky, & Dallas, 2013). Finally, a comprehensive review of the literature related to Alaskan education shows that AIAN populations, more than any other ethnicity, struggle with basic aspects of college readiness and do not show the same level of success as their counterparts in other parts of the country, as evident from an examination of the results of students in other states (Thomas, 2015; Zinth, 2014).

These themes, clearly evident in the literature presented as well as the wider research in the field, demonstrate clear patterns in dual enrollment application and access. This study adds to

the general knowledge by examining this topic within the context of equal access to academic programming and the opportunity for educational advancement.

Article 26 of the Universal Declaration of Human Rights, the founding statement of beliefs and the philosophy agreed upon by the United Nations in 1949, establishes the global ideal that all people regardless of status have a right to education. Inherent in this fundamental right is the idea of universal access (UN General Assembly, 1948). This theory is based on the belief that all persons should have access to the tools of an equitable education. Trow (2007), in an essay examining the changes in education since World War II, describes universal access (as contrasted with elite access) as seeking to “soften” the barriers and dissolve the boundaries previously existing in education that restricted access to only the wealthy or privileged (p. 244). Additionally, universal access has been extended to apply to the needs of the disabled and their ability to access educational environments and resources. This extension of the universal concept proves the author’s contention that such access is targeted at the “whole population”.

The universal access theory can also be applied to educational access based on additional circumstances. Abascal, Barbosa, Nicolle, and Zaphiris (2016) suggested:

it appears that this philosophy (universal access) frequently takes for granted some socioeconomic circumstances, such as the availability of advanced technological infrastructure, computer training, literacy, use of a language other than the official one. A great number of people with disabilities may not have access to these facilities or opportunities, therefore combining the lack of accessibility with the digital exclusion experienced by disfavoured [British spelling] segments of the world population. (p. 179)



This liberal interpretation of the theory of universal access allows for its application to this study, where the population in question could be labeled “disabled” and “disfavoured” simply because of the challenges that are presented by their inhabitation of one of the most remote regions of the country and the consequent lack of access to many of life’s taken-for-granted expectations. Also, the interpretation of universal access can be further extended beyond the geographical application to encompass educational access as affected by ethnicity. This study, as constructed, is impacted by two substantial characteristics: (a) educational access and the effect of location, and (b) the sociocultural elements that influence the outcome of the questions being examined (Abascal et al., 2016).

Taking these elements into consideration, this highly relevant study of dual enrollment access in rural Alaska fits into the wider field of such research because it deals with a topic that is part of the larger conversation about the negative impact and positive benefits of dual enrollment programing. However, despite fitting into this larger narrative, the focus of this study is unique as it seeks to address a specific region (rural Alaska) and ethnicity (Native Alaskans). Therefore, the findings of this study are important and essential in helping to add additional knowledge to this expanding field of dual enrollment education.

### **Organization of the Literature Review**

Randolph (2009) suggested that “a researcher cannot perform significant research without first understanding the literature of the field” (p. 1). Indeed, the following serves as a guide to the greater organization of this study as well as some of the fundamental conclusions from a consequential examination of relevant research over the past half-decade. The rationale for this qualitative case study utilizing the technique of interviews has been established in greater detail in the next chapter. In the next few pages, the effort will be to lay the foundation for the

examination of this research problem by reviewing recent studies that give a better perspective of the impact of dual enrollment on 21st century education. It is worth noting that this qualitative research study was conducted in the hope of eventually influencing policy decisions by educational leaders.

### **Review of Research and Methodological Literature**

A literature review seeks to establish the case for the study and to provide substantive evidence that helps to support and validate the research questions and provides the foundation for claims that guide the investigation and help to establish the research methodology (Creswell, 2014). As dual enrollment is the principal educational focus being considered, it is appropriate to study such programs in greater detail. This review primarily focuses on studies published in the last five years. In some cases, there were sources from earlier time periods that have been used and were chosen to give a historical perspective to the concepts being discussed. The literature that is reviewed comes from journal studies, with a few exceptions, and is focused on establishing what successes have been achieved in dual enrollment over the last decade and providing a historical perspective of how Alaska compares to other regions of the country in terms of educational development. It is worth reiterating that the scope of this literature review was limited to the examination of the field of public education and student access to curricular programs and the study was conducted without any expectation of the outcomes or the impact of those findings. This information was collected using interlibrary databases as well as scholarly works available through online search engines. Key search terms included *dual enrollment*, *advanced placement*, *early college high school*, *international baccalaureate*, *rural education*, *Alaskan education*, *Alaskan Native education*, and *Texas education*. Once literature was identified that helped to build the narrative and purpose of this study, the researcher carefully

reviewed each, examining the methodology and outcomes in order to glean important information that would be helpful to the construct and implementation of this study.

American education has a long history, aided by the federal government, of creating initiatives designed to push the boundaries and successes of public education. During the 19th century, policies such as the Morrill Land Grant Act focused on making basic education attainable for all Americans regardless of their location or station in life. In the 20th century, few events have affected education more than the Soviet Union's launch of the Sputnik satellite in 1957. Fearful of falling behind, the federal government poured money into education, especially in the fields of math and science (LaFeber, 2006). Additionally, the 1960s saw a great deal of growth in colleges and universities. Dual (or concurrent) enrollment courses granted public school students' greater access to higher education at an earlier age. The antecedents of dual credit courses go back more than 50 years, but there has been an explosion of such programs in the first two decades of the 21st century (Carrey, 2015; Jolly, 2009). After a half century of development, dual enrollment has become a lynchpin of modern education. Adam Lowe, the executive director of the National Alliance of Concurrent Enrollment Partnerships in a recent interview summed up the impact of contemporary dual enrollment education, saying:

As states look at how to move the need on college enrollment and completion, dual enrollment is strategy that has been proved to work...If students come to college with credits under their belt, that often gives them the momentum they need to succeed. (Pierce, 2017, para. 6)

Another fundamental element of education theory is the idea of equal access. While universal access and equity are related, as both are guided by the desire to extend access to the greatest number of persons, equity goes a step further in that it addresses the need for achieving

access for all regardless of their ethnicity, socioeconomic status, or other elements of their individual identity. One of the foremost questions in dual enrollment research in the past decade has been the study of equal access based on such characteristics as race and economic need. Additionally, there have been studies examining the impact of dual enrollment on outcomes for students in traditionally minority subpopulations. A number of studies have shown that dual enrollment positively affects all student populations, but in some cases the results do demonstrate that different ethnic and economic populations have not achieved the same level of success as more traditionally majority groups (Kolluri, 2018; Taylor, 2015).

Marken et al. (2013) concluded that approximately half of the nation's high school students had taken part in dual enrollment courses, providing evidence that the opportunity to earn college credit has been inoculated into modern education. Dual enrollment opportunities seem like a natural and obvious benefit to students focused on college attendance, with recent literature supporting the notion that such programs are successful when implemented and supported with fidelity. An and Taylor (2015) conducted an extensive quantitative study of students in dual enrollment programs and compared their college readiness to the non-dual enrollment students, using data acquired from the Wabash National Study of Liberal Arts Education assessment. The method revolved around surveying geographically diverse college students during the semester of their freshman year and then resurveying them again at the end of their first year of college. The students were questioned on five key variables: cognitive strategies, learning skills and techniques, transition skills, and exam preparation (An & Taylor, 2015). The authors, after thorough investigation, concluded that the students who had participated in the dual credit programs "displayed higher levels of college readiness at the end

of their first year than the students who did not earn college credit prior to college” (An & Taylor, 2015, p. 17).

In addition, Radunzel et al. (2014) conducted a study investigating the impact of dual enrollment college success. The authors examined four universities in the state of Texas, comparing results between the dual enrollment and non-dual enrollment students. Radunzel et al. (2014) concluded that the students who had a dual enrollment background were:

- More likely to be successful in college, including completing a bachelor’s degree in a timelier manner;
- More likely to earn a grade of B or higher in subsequent courses taken in college;
- More likely to enter college with a greater number of dual-credit hours [and] to progress toward a degree and complete a bachelor’s degree in a timely manner, and do so without accumulating a substantially greater number of credit hours by graduation; and
- More likely to succeed if they do their dual credit coursework in a two-year institution than in the four-year institution. (p. 1)

These studies are cited because they lend credence to an essential question of the research study; namely, whether students have access to and benefit from the dual enrollment courses and how their academic abilities may be impacted by such programs.

Earning college credit in high school is accomplished in many ways, too numerous to profile in this literature review. To consider a targeted examination of dual enrollment advancement, it was useful to narrow the focus to definitive applications of dual enrollment, in this case the advanced placement, international baccalaureate, and early college high school

initiatives. Advanced Placement, as a concept, has been around since the early 1950s and was considered as a settled program in the 21st century. Over the course of the last 15 years, the research focusing on AP has been investigating its effectiveness, its equitable application, and the transition of the program as it has become more available as an online instrument (Santoli, 2002). Despite the longevity of AP as a dual enrollment program, it has experienced substantial growth in high schools over the past two decades, even though the results of students' achievements have been mixed, with declining exam scores during the same period (Hobson, 2015).

Two of the most recent studies regarding results of AP testing concluded that the issues of equity and college readiness were significant concerns affecting the proper application of the program. James, Butterfield, Jones, and Mokuria (2017) published a mixed-methods study examining a single high school in the Northeast containing many different ethnicities. The results supported the conclusion that significant disparities exist between races; specifically, on exam scores affecting African American and Hispanic students as compared to non-minority students. Without drawing too many generalizations, the results of this study reflect the findings of other investigations that have been carried out in the past decade (James et al., 2017).

Another study conducted by Smith, Hurwitz, and Avery (2017) sought to examine the impact of AP exam scores on student success in college. The authors carried out an extensive quantitative study of test scores. It is worth noting that the authors of the study work for the College Board and enjoy access to millions of student test scores. After thorough testing of their hypothesis, it was discovered that success in the exams could lead to progress for the students in college. In the words of the authors, "we find evidence that attaining a relatively high AP exam

score yields a significant increase in the probability of completing a bachelor's degree within 4 years of high school graduation" (Smith et al., 2017, p. 122).

Hayden and Wong (1997) presented an examination of the success of the international baccalaureate (IB) program, with a description and a brief history. The concept first became popular in the 1960s and can now be found in primary schools in more than 70 countries. The program's goal is to provide students with a college-level curriculum that gives them a global perspective and greater international knowledge and understanding (Hayden & Wong, 1997). A mixed-method research study into the impact of IB access on college readiness was conducted by Conley, McGaughy, Davis-Molin, Farkas, and Fukuda (2014). Like the previously cited studies on advanced placement's effects on college success, the research by Conley et al. (2014) showed similar levels of success for students who brought IB experience to their college careers. The study compared data from different groups of high-level college students with and without a background in the IB program. The authors, after a substantial mixed methods investigation that looked extensively into both data and student insights, found that students who had IB experience "were better prepared for college on both academic and non-academic factors" (Conley et al., 2014, p. 5).

The goals of the early college high school initiative (ECHSI) were delineated by the Bill and Melinda Gates Foundation at the turn of the century. The initiative is designed to provide at-risk students access to college courses and an associate degree during their high school years via a partnership with a local postsecondary institution (Berger et al., 2014). The authors concluded that "engaging underrepresented students in a rigorous high school curriculum, tied to the incentive of earning college credit, will motivate them and increase their access to additional postsecondary education" (Berger et al., 2014, p. iii). Thus, the ECHSI is designed to increase

high school graduation rates, college enrollment, and matriculation, and to offer students the chance to achieve success on a more direct and challenging educational path, all of which are fundamental goals of dual enrollment programs.

Early in the implementation process of ECHS, Brewer and Stern (2005) collaborated on a working paper seeking to look at the program and its potential as a college readiness intervention. The Gates Foundation's initiative began three years earlier and so the study represented an early investigation of high school reform and implementation issues related to dual enrollment. While the analysis surveyed several different high school improvement programs, the bulk of the paper was focused on ECHS. The authors presented a brief history of the initiative, labeling it "a highly plausible approach" (Brewer & Stern, 2005, p. 15), and discussed methods designed to help the initiative succeed. Among these were suggestions that local and state policies and graduation requirements be eased to facilitate implementation of ECHS.

One of the first impactful studies, utilizing a mixed-method design, of the ECHSI as a cohesive and purposed dual enrollment initiative occurred in North Carolina and was administered by Bernstein et al. (2010). Eight years after the Gates Foundation announced its vision, North Carolina was one of the early leaders in the development of early college high schools because of support given to the initiative from the state assembly. The authors' purpose was to carry out research geared to examine the implementation and initial outcomes of the program in its early development in the state. The research included randomized field surveys administered at selected ECHS and traditional high school campuses. The methods included the analysis of state data and student surveys. After the collection and disaggregation of the data, the results suggested that the institutions studied were implementing the expected principles and



early statistics showed that students attending the surveyed campuses were advancing quicker than those surveyed at traditional schools. The report presented the first evidence—the initiative was having a positive effect on students and the learning patterns not just in North Carolina but in the entire country.

Three years later, Edmunds et al. (2013) investigated the impact of early college high schools in the same state in a thorough evaluation of the program and its effect on students and their learning. After completing a series of interviews, their conclusions served as a further endorsement of the ECHSI as a useful and productive dual enrollment initiative that helps students become more college ready. The authors stated that early college high schools “have significant impacts on many indicators of engagement” (Edmunds et al., 2013, p. 27). The results went on to demonstrate student progress in the areas of classroom engagement and discipline (Edmunds et al., 2013, pp. 27–28). More recently, Fischer (2016) carried out a quantitative study focused on examining the rate of degree attainment by graduates of an early college program in Michigan. The study’s major finding was that early college students were awarded degrees at a much higher level (68%) as compared to the non-ECHS students (23%). While acknowledging the small size of the sample, the author theorized that the findings provided reasoned proof of the long-term impact of an early college high school education. Compared to other states, Alaska has devoted very little state-level attention to policies related to dual enrollment, with most programs being administered by individual institutions (primarily the University of Alaska (UA) system). The Education Commission of the States profiled each state’s dual enrollment commitments. Alaska and Texas are compared in the following table (Dounay, 2008; Zinth, 2013):

Table 1

*Comparison of State-Level Dual Enrollment Policies and Procedures for Alaska and Texas*

Policy/Procedure	Alaska	Texas
Statewide Policy?	No	Yes
Tuition Stipulation?	No	Yes
Stipulation for college partnership?	No	Yes
Where courses are provided?	No	Yes
Student eligibility requirements?	No	Yes
Credit guidelines?	No	Yes
State funding for participation?	Reduced	Yes
Parent notification requirement?	No	Yes
Instructor policies?	No	Yes
Institutional requirements?	No	Yes
Program Evaluation provisions?	No	Yes

*Note.* Source: Education Commission of the States (2013).

Most dual enrollment programming in Alaska is university driven and associated with the UA campuses in Anchorage and Fairbanks and its satellite campuses around the state. However, the language of higher expectations and more effective college and career readiness can be found in Alaska's Education Challenge. The educational effort was spearheaded by Governor Bill Walker and the state's Department of Education and Early Development (DEED). After a series of meetings with stakeholders around Alaska in 2016 and 2017, the Education Challenge (detailed on DEED's website) was finalized, with one of the four foundational goals being the

“amplification” of student learning. Further, the Challenge provides the rationale statements for a greater commitment to student success, including:

- (a) Student success requires going beyond educational “basics”. Student outcomes should include not only knowing, acquiring, and mastering content knowledge, but also demonstrating competency in behavioral attributes such as collaboration, creativity, problem-solving, flexibility, cultural and civic literacy, etc.
- (b) Student success outcomes must be clearly defined so students, parents, and teachers know the learning targets, are able to personalize the delivery system, and can prepare graduates to thrive in all aspects of life. When student success outcomes are clearly defined, and students also understand the purpose for what they are learning, students are more successful and engaged. When students believe their experiences and opinions are respected, their motivation, buy-in, and involvement increase no matter what path they choose to follow in life; and
- (c) Graduates of Alaska’s schools need to be prepared to contribute in a positive way to Alaska’s modern economy regardless of where they live, their personal interests and passions, or their cultural traditions. Student success will depend on the knowledge, skills, and behavioral attributes defined by Alaska’s student success outcomes and will result in sound decision-making, resilience, and self-reliance as graduates move into the future. (DEED, 2017, p. 10)

While the state’s vision is appropriate, and the language suggests an environment where dual enrollment might flourish, limited data exists regarding the state of dual enrollment

education in the rural villages of Alaska, broadly defined as those communities far from the road system and only accessible by air or water. The most recent evaluation of students in the target ethnicity was carried out by Zinth (2014). The author presents statistics showing that American Indian/Alaska Native (AIAN) males were the least likely subgroup in the United States to expect to finish a college degree. Furthermore, only 40% of AIAN females and 37% of such males finished a college degree in six years, whereas their counterparts from all other ethnic groups had a 58% completion rate (Zinth, 2014). While presenting useful data related to recent post-graduate success for the Alaskan students, the study did not address the topic of dual enrollment.

Two decades earlier, Craddick (1988) wrote a doctoral dissertation focused on creating a dual enrollment model for students from rural Alaska. The effort is significant, because it is the only available research that dealt with the topic of dual enrollment in the state. The author wrote that such a program was necessary because of the 1985 statistics showing that 75% of Native Alaskan students entering the study's targeted college were required to take developmental (remedial) courses in the core subjects and that 35% of said students had a reading level below ninth grade. Clearly, students were attending college with less than the necessary skills needed to be successful. Additionally, Craddick (1988) concluded that the student population that was studied:

Drop[ped] out of college because of inadequate preparation: preparation for college level courses, preparation for living among people of many cultures, preparation for living away from home, preparation for living in a climate quite different from their own, and preparation for the relative freedom of college life.

(p. 14)

The evidence presented by Zinth's (2014) research indicates that little had changed regarding college readiness and success in the more than two decades separating these studies. Despite the vast advances in technology, curriculum design, and dual enrollment programs, there is little evidence of the degree of dual enrollment existing in rural Alaska. In an unpublished memorandum on K–12 education in Alaska, Dr. Dana Thomas, Vice President of Academic Affairs at the University of Alaska, cited the state's educational shortcomings, noting that Alaska has the lowest college matriculation rate in the country. In addition, over half of Alaska students need developmental support classes in core areas upon attending college (Thomas, 2015). This continuing trend of low-performing graduates suggests that Alaskan schools could potentially benefit from dual enrollment programs that help to improve college and career preparedness.

While Alaska's participation in dual enrollment programming could be qualified as in the developmental stage at the state level, Texas' is characterized as being "on the cutting edge of dual credit" (Appleby et al., 2011, p. 6). The previous researchers carried out a quantitative study at Texas A&M geared toward investigating dual credit access for all schools in Texas, but especially in the state's more rural areas. The group created data software that contained curricular information on every high school campus in Texas. The dataset was populated with information gleaned from the Texas Higher Education Coordinating Board, the National Center for Education Statistics and other relevant agencies. After calculating the data and examining the findings, the study group established that 95% of Texas schools offer dual credit courses and that more than 70,000 students participate in such programs. Interestingly, participation levels were higher in small towns and rural areas vis-à-vis cities and suburbs. Additionally, the study found that the higher a school's minority and socioeconomically depressed population, the lower the rate of dual credit participation (Appleby et al., 2011).

## **Review of Methodological Issues**

The studies previously discussed relating to dual enrollment programs employed a qualitative model that primarily utilized surveys and interviews to draw larger conclusions about their research focus. In addition, an evaluation of the literature, especially the Zinth (2014) study, draws stark conclusions about the current state of Alaskan education and the college readiness of its graduates. The literature cited consists of two qualitative case studies (Brewer & Stern, 2005; Craddick, 1988) and four sources that rely on survey data (An & Taylor, 2015; Edmunds et al., 2013; Marken et al., 2013; Zinth, 2014). Finally, there was one study that involved an experiment using comparative groups (Bernstein et al., 2010) and another that used a mixed-methods model (Berger et al., 2014). The study of dual enrollment initiatives established how new models of student learning are flourishing in an environment that welcomes and supports new ways to advance college and career readiness for young people. On the other hand, the silence on this topic in relation to Alaska schools foreshadowed the possible outcomes of this study.

The nature of this study suggested that the most effective model of research was qualitative collection of data through carefully constructed interview questions that sought to gather information and establish clarity regarding the research questions for this investigation. Several of the cited studies utilized a system either of interviews or surveys to help establish findings in either a qualitative or a mixed methods study. The reasoning for utilization of the interview process and the specifics of its design are laid out in greater detail in the following chapter.

## **Synthesis of Research Findings**

Having reviewed many studies related to dual enrollment programs across the country and what exists related to education in Alaska, the researcher drew conclusions that synthesized knowledge gained from a chronological examination of studies conducted on the topic in question. This review and analysis of contemporary literature led to the following narratives:

- First, the studies substantially indicate that dual enrollment has been proven to help make students more college-ready and the transition between high school and college more successful and college advancement more attainable (An & Taylor, 2015; Radunzel et al., 2014).
- The studies also show that dual enrollment programs are far more likely to be successful when an institution makes a commitment to both the program and the students and continues to maintain that obligation going forward (Nodine, 2011).
- Another conclusion generated by a review of the literature is that dual enrollment students go to college better prepared and more focused, thanks to the concurrent educational opportunities that they receive in high school (Edmunds et al., 2013).
- Finally, a comprehensive review of the literature related to Alaskan education shows that AIAN populations, more than any other ethnicity, struggle with the basic aspects of college readiness and do not show the same level of success as their counterparts in other parts of the country, as evident from an examination of the results of students in other states. (Thomas, 2015; Zinth, 2014)

These themes, clearly evident in the literature presented as well as the wider research in the field, demonstrate clear patterns in dual enrollment application and access. Furthermore, as discussed, this study adds to the general knowledge by examining this topic within the context of equal

access to academic programming and the opportunity for educational advancement. The conclusions identified and supported by the reviewed literature relate to the study because of their ties to the research's principal question and sub-questions as constructed in the previous chapter. Moreover, these conclusions correlate with the aim and purpose of the research questions.

### **Critique of Previous Research**

Most of the research in the field of dual enrollment education has been carried out in states where education reform has been a linchpin of their public conversation over the past couple of decades. Little evidence exists of studies that examine the impact of dual enrollment in smaller, more rural areas where public policy is less focused on education as a laboratory of change. Studies conducted over the past decade are more national in scope and focused on evaluating the progress of dual enrollment programs on a general level. Furthermore, many of these studies are examinations of models of dual education success, such as the study profiling the early college model in the Hidalgo school district in south Texas (Nodine, 2011).

Dual enrollment studies have not been conducted in states like Alaska. In the literature that is cited pertaining to Alaska, there are limitations that affect how it relates to contemporary issues and how it impacts the focus of this study. An obvious problem is that the research might be outdated. The Craddick (1988) study, a dissertation in which the author proposed a dual credit model for an Alaskan college, is now thirty years old and holds little relevance to the study beyond trivialities. Zinth's (2014) data has proven to be more useful at times, but the study does not explicitly focus on dual enrollment; rather, it investigates college success rates. When reflecting on schools in Alaska, the few studies that have been conducted on the topic of education have been narrow in scope and simply skirted the much larger and problematic topic.



In the Craddick (1988) and Zinth (2014) studies, the authors examined some of the basic issues relevant to dual enrollment, and a subsequent proposal by Thomas (2015) proves that educational improvement continued to be on the minds of Alaskan leaders at the time, even though significant changes had not yet occurred.

Two years after the publication of Thomas' (2015) opinions, Alaska's Education Challenge, called for by the governor and endorsed by the state's education department, local school districts, business groups, and teachers, presented a next step in which the foundational ideals of higher achievement and college and career readiness became even more prioritized as a goal of the state's educational improvement and advancement. In the report submitted to the Alaska Legislature detailing the findings that led to the Education Challenge, the DEED (2017) study's authors stated:

Many of our students are not benefiting from the superior learning opportunities that exist in some of our communities. Compared to other states in America, Alaska ranks at or near the bottom in reading and math scores. These are educational challenges that will require the character, grit, and determination that have characterized Alaskans long before there was a system of public education.

(p. 3)

### **Summary**

While Alaska faces great challenges in many aspects of public education, dual enrollment as an educational process and opportunity may offer an avenue to address many of the goals that the state has laid out in the area of educational improvement. In considering the studies presented in the literature review, many conclusions can be formulated based on the findings established by the cited research. To begin with, it can be asserted that dual enrollment course access is a viable

option for secondary students to become more career and college ready prior to graduation. Evidence for this claim is twofold: (a) Multiple, geographically diverse studies establish that contemporary students have significant access to dual enrollment options that have impacted their post-graduate readiness, and (b) Various types of such programs (i.e., early college high school, international baccalaureate, and advanced placement programs) have experienced growing rates of success, as measured by noteworthy studies in states that have made a significant organizational and fiduciary commitment to dual enrollment efforts.

The second supported assertion is that Alaskan students are ill-prepared for college, which impacts their long-term success once in college. This claim is supported by two evidentiary statements: first, educational leaders in the state have cited the need for improved rigor and outcomes in Alaskan education. The second statement supporting the assertion is evidenced by a lack of current research on the topic in question; there have been no credible studies conducted examining Alaskan students' access to a dual enrollment curriculum.

This qualitative case study was undertaken as an effort to examine students in rural Alaska, primarily native students and a small minority of non-native students who have moved in, an aspect which has received little attention in wider American society and culture. Student access to dual enrollment is now a hallmark of education in the 21st century, as demonstrated by an Internet search and the specifics of the sources reviewed in this chapter. In an age where young people's life success is more and more determined by postgraduate studies, it has become even more important to emphasize college readiness in high school and help students prepare for the often-difficult transition from their primary education to college (James, Lefkowitz, & Hoffman, 2016).

Dual enrollment is a broad concept that can take many forms and is being implemented in many schools across the country. The concern is that low-income, minority, and rural communities have little or no access to dual enrollment programs due to financial and technological constraints. These limitations lead to inequity in how our nation serves all its students, and proactive methods for addressing this problem would benefit underrepresented groups (Hughes et al., 2012).

The literature review has sought to emphasize that dual enrollment programs, which have been demonstrated to have an effect on student learning for all students at the secondary level, are flourishing in the 48 contiguous states. Additionally, the literature review has documented that Alaskan education shows a disturbing downward trend in student college readiness. The following chapter provides a detailed discussion of the methods employed to study the research questions relating to dual enrollment education and its availability to rural Alaskan schools.

## **Chapter 3: Methodology**

### **Introduction**

The focus of this investigation was derived from issues linked to a remote Alaskan village and bears the characteristics of many small communities in the region. The village is comprised of less than 1000 people, who subsist largely on hunting and commercial fishing. Graduation rate varies from year-to-year, but students rarely go to college. The students, 98% of whom are Alaska natives, are given a curriculum that has little relevance to their everyday culture and as of now they have little or no access to any means of dual enrollment study. This reality raises the question of how many students from similar educational backgrounds have access to dual enrollment programs.

The literature review presented in the previous chapter established two elements that were conducive to this examination: first, that dual enrollment programs, such as advanced placement, international baccalaureate, and early college high school, are blossoming in many schools and having a positive impact on the college readiness of those secondary students who have participated (Edmunds et al., 2013); second, little contemporary research has been carried out to gauge the level of dual enrollment opportunities available to students in the state of Alaska and what studies exist largely concentrated on the current state of education and the lack of college readiness (Mader, 2014; Thomas, 2015; Zinth, 2014). This chapter strives to establish the rationale for the study as well as the methods employed in carrying out this study of Alaska school districts and the comparison with similar schools in western Texas. The methods mirrored several of the procedures used by previous researchers that were profiled in the literature review. In addition to reviewing the motivation for the study, the author seeks to delineate its

methodological foundations, elaborate on the processes used for data collection and interpretation, and lay out the process employed for determining the findings.

### **Research Questions**

This research study was focused on determining to what degree dual enrollment opportunities are available in contiguous states and what gap exists between what is happening in those states compared to what is available in the rural areas of northern and western Alaska. The research sought to prove the existence of a disparity, if one existed, and establish that rural Alaskan students' education is adversely impacted by the limitations and absence of such programs. Essential to any research study is the need to establish certain questions to consider what can help shape the direction of the investigation and narrow the overall focus (Creswell, 2014). The following questions were relevant to this examination:

#### **Principal Question:**

- What is the level of access for students in dual enrollment programs in rural Alaska and how is it different from schools in other remote areas?

#### **Sub-Questions:**

- RQ 1: What benefits do students derive from having access to dual enrollment programs?
- RQ 2: What is the perception of school leaders about factors that contribute to or hinder their districts' access to dual enrollment programs?
- RQ 3: What is the perception of school leaders regarding the effect on students who do not have access to dual enrollment programs where limited access is present?
- RQ 4: What are some potential remedies for students who are not able to participate in dual enrollment programs?

## **Purpose and Design of the Study**

The intent of this study was to research dual credit access in various targeted rural school districts in Alaska and Texas and to measure each as points of comparison against the others. The chosen design for this process was a qualitative case study: a method utilized by most of the literature cited in the previous chapter. Yin (2013) described the characteristics of a case study, suggesting that a clear understanding of the research purpose and clarification of the study's design leads one to the obvious conclusion that the case study format is the best to conduct the research. This investigation sought to establish whether a disparity exists between dual enrollment programs in the 48 contiguous states and those that exist in the state of Alaska. The analysis of these two groups (programs in the contiguous states versus those in Alaska) sought to establish what difference existed and to further research the impact the absence or presence of such programs has on students that live in the rural school districts within the state.

The relationship of the identified research groups was established through interviews conducted with district-level curriculum leaders in five school districts in the state of Texas representing dual enrollment availability in the mainstream continental states. The second group consisted of Alaskan schools where similar interviews were conducted with curriculum leaders in five carefully chosen rural districts in remote areas of state. The identified officials to be interviewed were the superintendents of their respective districts. If such individuals were not available, the interviewer then sought to ask questions of the district's assistant superintendent or the curriculum director. As a last resort, the high school principal was interviewed if the abovementioned officials were not available.

The researcher designed both the questions (previously described) and the interview process using open-ended questions that were influenced by the study's purpose (Appendix A).

In addition, the districts targeted had majority populations of Alaskan native students. To establish a comparative group, similar interviews were conducted in five identified districts in western Texas with majority Hispanic students and town populations, and locations that related to the Alaskan districts (remoteness, difficult of access/inaccessible, etc.). To account for cultural differences, the author identified schools where the impact of such attributes is minimal, and the shared characteristics determine selection. Also, as the findings were determined, the author remained vigilant for any disparities that might have affected credible outcomes.

The researcher used a data analysis procedure that allowed for research characteristics to be examined. After receiving a consent form, the interviewee provided a copy of the questions in advance. The data collection procedure consisted of verbatim notes recorded and verified with the interviewee. Initially, the design had provided for recording the telephone conversations, but the process proved to be problematic as the program chosen for the recording failed after the first two interviews. Due to the technological error, the researcher made the decision to abandon the effort to record and concentrate on taking detailed notes focused on the exact words that the interviewee used. After completion of the data collection process, responses were evaluated, and findings established that helped to address the research questions.

Table 2

*Targeted School Districts and the Closest Population Area*

<u>Alaska District</u>	<u>Nearest Urban Area</u>	<u>Texas District</u>	<u>Nearest Urban Area</u>
A-A	Anchorage	T-A	El Paso
A-B	Anchorage	T-B	El Paso
A-C	Fairbanks	T-C	Midland
A-D	Fairbanks	T-D	El Paso
A-E	Fairbanks	T-E	El Paso

*Note.* Source: Community Demographics (2017). Retrieved from <http://www.distancefromto.net>.

### **Research Population and Sampling Method**

The targeted districts were identified based on their remote location in relation to a major population (Table 2), local population sizes (Table 3), and the ethnic composition (Table 4) of the school district. The districts selected in Alaska were labeled as District A-A, District A-B, District A-C, District A-D, and District A-E. Each district is off the road system and accessible only by air and each occupies vast areas north of the city of Fairbanks (except for District A-A, which is located on the western coast where the Yukon River flows into the Bering Sea). District A-A is composed of several villages within various tribes of the Yupik culture. The district office is in a central location with the largest community composed of more than a thousand people according to the most recent census (Census Bureau, 2010). District A-B borders the Bering Sea and is composed of various villages. Its largest village serves as the district office and is populated by more than 500 people. District A-C lies north of the Arctic Circle and like the other profiled districts consists of a series of small villages with schools serving each. The district has more than 1500 students, with the largest village home to a school consisting of 500+ students.



District A-D covers nearly 90,000 square miles. The district's office is in a community having a population in excess of 2500 people. The rest of the district is spread over numerous villages. The final district, covering a vast spread of land in the northern part of Alaska, is District A-E. This smallest of the profiled Alaskan districts is made up of six schools (Novotny, 2009).

For the comparative group, five rural school districts in western Texas were selected based on the same parameters whereby the Alaskan districts were chosen. The districts consisted of District T-A, District T-B, District T-C, District T-D, and District T-E. Each community, being among the smallest in the most remote areas in the state (Table 1 and 2), lies between the cities of El Paso and San Antonio. In addition, each district has large Hispanic majority populations consistent with the AIAN percentages present in the identified Alaskan districts.

Table 3

*Student and Regional Populations of the Targeted School Districts*

<u>Alaska District</u>	<u>Student Pop. (Avg. per school)</u>
A-A	208.2
A-B	158.0
A-C	197.6
A-D	256.3
A-E	43.5
<u>Texas District</u>	<u>Student Pop. (Avg. per school)</u>
T-A	665.8
T-B	820.2
T-C	52.3
T-D	144.7
T-E	41

*Note:* Data is from the 2015–16 school year. Regional data is collected from the 2010 census.

Source: Community Populations (2017). Retrieved from <http://proximityone.com> Source: Texas

School District Demographics (2017). Retrieved from <http://tea.texas.gov>.

Table 4

*Majority Ethnicities in Targeted School Districts, 2015-16*

<u>Alaska District</u>	<u>Ethnic Majority</u>	<u>Percentage</u>
A-A	AIAN	89.1
A-B	AIAN	85.5
A-C	AIAN	80.6
A-D	AIAN	67.5
A-E	AIAN	73.4
<u>Texas District</u>	<u>Ethnic Majority</u>	<u>Percentage</u>
T-A	Hispanic	100
T-B	Hispanic	95.2
T-C	Hispanic	63.7
T-D	Hispanic	83.2
T-E	Hispanic	65.0

*Note.* Source: Community Populations (2017). Retrieved from <http://proximityone.com>. Source: Texas School District Demographics (2017). Retrieved from <http://tea.texas.gov>.

Districts T-D, T-A, T-E, and T-B are all communities located within just miles of Mexico, with the Rio Grande River being the only barrier defining the international border. Similarly, three of the Alaskan districts; A-A, A-B, and A-C share a more distant border with Russia divided by the Bering Sea. In addition, A-E shares a common border with Canada. The final district in Texas, T-C resides far from any major highway and is also located within an hour of the Big Bend region along the Texas-Mexico border (Novotny, 2009).

## **Instrumentation**

The techniques needed to conduct effective interviews have been discussed by many researchers in the past. Creswell (2014) was one of the most prominent. The author suggested that interviews allow researchers considerable autonomy over the procedure and provide them the ability to guide the conversation in directions they deem appropriate (Creswell, 2014). The same author also defined a step-by-step protocol to follow when conducting interviews. The reasoning behind the approach was to establish credibility (Creswell, 2014). For this study and because of the limitations to communication in Alaska and the distance of the researcher from the Texas districts, interviews made the most sense because they allowed for direct contact with the appropriate district-level school leaders to ask them purposeful questions and a means to seek answers in a way that ensured a complete and thorough understanding of the questions and a valid recording of the answers.

## **Data Collection**

The method to collect data for this case study was designed to collect useful information that would yield valid results. The literature review presented many studies that utilized interviews as the primary or secondary method for the collection of data. Creswell (2014) described interviews as a crucial element in the data collection process. For this study, data was primarily collected using pre-arranged questions posed to pre-identified district-level leaders as previously discussed, using scheduled phone calls. Using this medium of communication allowed for follow-up questions and served to ensure the interviewee's undivided attention.

Several learned researchers have suggested models for designing the interview process. Creswell (2014) laid out a procedure that was useful and met the parameters of this study in a proficient manner. The proposed model consisted of the following steps, which provides a

procedural roadmap: (a) lay out open-ended and purposeful research questions, (b) identify those who will be interviewed, (c) determine the method of interviewing, (d) establish the procedure for recording the interview, (e) create an interview process, namely, how the interview will be conducted and the questions to be answered, (f) prepare the pre-interview process by testing your questions, establishing the place, and prepare a consent form if needed, and finally, (g) conduct an interview that is based on good procedures and carried out in a professional manner (Creswell, 2014).

Questions for the interview were formulated based on the study's research questions and consisted of inquiries that focused on the individual district's means of providing dual enrollment courses, how students benefit from such programs, and what are some of the specific obstacles for the district that make it more difficult for them to offer dual enrollment courses to their students. Prior to commencement of the process, a pretest was conducted with a non-participant familiar with the research process to receive feedback and to make sure questions were presented with purpose and clarity. The interviewer reviewed each question with a participant, seeking comments on the question's clarity and understandability. The input so received led to a change in wording in the first interview question and the elimination of one question due to its content being redundant. When conducting the inquiries, the researcher sought to allow the interviewee time to elaborate on given answers, with little interruption. Follow-up questions were utilized as needed and sought to be limited to clarification or expanding answers. Prior to the end of each call for both the pretest and subsequent interviews, the researcher reviewed the answer to each question with the participant to clarify any remarks and to confirm that the notes were clear and accurate.

### **Identification of Attributes**

The attributes of this study were the assumptions that the students benefit from greater access to dual enrollment opportunities and that college and career readiness is affected by such access. Finn (2014) argued that programs that benefit high achieving students are helpful to the participants as they matriculate to college and that the country ultimately prospers when students enjoy access to dual enrollment education. In addition, the literature reviewed substantiates the benefits derived by college students who participated in dual enrollment (An & Taylor, 2015; Marken et al., 2013; Radunzel et al., 2014; Smith et al., 2017). The other fact that guided this study was the lack of college readiness in relation to Alaskan students, as established by the literature (Zinth, 2014). In addition, Alaska is only one of three states in the country that does not have a statewide dual enrollment policy in place and where any programs offered are done so on a voluntary, institutional basis (Zinth, 2016). The essential terms that impacted this study have been clearly defined in Chapter 1 and were guided by these fundamental terms: access, dual enrollment, and college readiness. Understanding these concepts was crucial to the successful completion of this research.

### **Data Analysis Procedures**

In Creswell's (2014) approach to the interview process as previously mentioned, the author provided a description of a data analysis spiral to examine the data once it is collected. The author suggested that such analysis is often not distinct, can take different forms, and is a process that is learned through carrying out the procedure (Creswell, 2014). The spiral suggested a structure that was useful to the final process of analyzing interview information and determining outcomes. Flick and Gibbs (2007) have published many studies elaborating a design for codifying and assigning themes to findings that are collected in research interviews and are

used to codify the results for the study. To establish a logical system for organizing data, this system of codes was used in this study and was created with the assistance of the research questions. Pertinent codes consisted of the types of programs the districts offered, the number of students participating, the benefits or drawbacks to participation, the reasons that districts do not participate, why students do not participate when a program does exist, and the impact of rural location on program offerings (see Appendix B). When coding was completed, the collected information helped to develop overarching themes that led to the final conclusions of the study. The process for this analysis has been referenced in Chapter 1. A document was used to organize the interview questions and replies collected and compiled in such a way that it allowed for credible review procedures and codification of the results. Following the analysis of data collected for this study, the findings are presented in Chapter 5 as a narrative, offering conclusions substantiated by the interviews.

### **Limitations of the Research Design and Credibility**

Essential for the successful fulfillment of this study was the establishment of its credibility and the marginalization of any possible limitations. Several assumptions were important to the eventual success of this study. Primary among them was the professional expectation of the good faith of the individuals being interviewed—that they would be honest in their answers and cooperative in their approach. Equally important was their understanding of educational processes and their employment with a school district where they understand that organization's access to dual enrollment.

Another important limitation of the research phase of this process was time and access. The nature of this investigation required that information be collected in a compacted period, essentially a matter of weeks. The longer the data collection process took the more likely it

became that the credibility of the collected information would come into question. An additional potential barrier was cooperation from those being interviewed. Successful completion within the defined time constraints was based on the participants' cooperation and access. One of the greatest barriers to completion were the difficulties related to scheduling and carrying out phone interviews with the identified individuals. The interviewees and potential back-ups were previously identified. Another potential limitation that could have affected the outcome of the process was the difficulties with communication. Indeed, just such an issue regarding the recording of interviews presented itself, as detailed in Chapter 5. To establish credible findings, the researcher provided a procedure for the interview process. The superintendents and other school officials, whose information is available on their school district website, were contacted through an introductory email to solicit their participation in the study (see Appendix C). The email included a copy of the consent form (see Appendix D) and the expectations for their participation. Once permission was received, advance copies of the interview questions were sent to the participants so that they would have time to carefully consider each question and collect any demographic data if needed. Each step of the process was intended to develop the procedure with care and help the participants feel comfortable with the interviews.

The study allowed for a substantial level of credibility as to the transferability of outcomes that could potentially help school leaders make impactful decisions about dual enrollment and greater accessibility for underserved student populations. Transferability can be confidently applied across a wide range of other stakeholders and similar institutions in different areas. Lincoln and Guba (1985) along with other researchers have established that transferability is most likely established through thick description—in other words findings that are described in detail to help establish the findings' credibility. The nature of this study lent itself to such a



descriptive process and it was used to establish the study's findings and ensure their trustworthiness.

### **Expected Findings**

Any school administrator in rural Alaska knows the many limitations that are encountered due to the region's unique location. The literature presented a narrative that provided a foundation for the value of this research study. Additionally, a research plan was created that allowed for a credible interview process that would lead to a substantive outcome. Thus, the findings of this investigation were expected to add to an area that has largely been unexplored and to provide information that is transferable and useful to school leaders, while enhancing the greater body of knowledge on this topic.

### **Ethical Issues**

Prior to commencement of this research study, several steps were taken to avoid any potential ethical questions. As with any study involving human input, consent forms were utilized to gain permission to conduct the interviews and to use the interviewee's words and thoughts for analysis and eventual publication. In addition, the identities of those being questioned were protected and not shared in the final report of the study's findings. Also, Institutional Review Board (IRB) approval to carry out the research in question was secured through due process. The researcher ensured compliance with all expectations denoted by the IRB, as the process moved forward. Another important issue was to provide for confidentiality of research materials. This was provided through the secure storage of the interview transcripts and/or recordings, which shall be for a period of seven years before their destruction.

## **Summary**

This chapter has focused on fleshing out the details of this required study of dual enrollment access to rural Alaskan students and on establishing the methodology that was used to carry out the collection of data. As the research questions have established, this study was designed to answer the overriding question of access vis-à-vis counterpart districts in other states; in this case partner groups of districts in remote areas of western Texas. In addition, the outcome allowed for a contribution to this under-studied area and may help to impact the decisions that school administrators make as they seek to better serve their students and help them become more college ready.

The interview process was the easiest and most effective way to collect valid data that helped the author disaggregate the testimony and form conclusions about the wider questions that were studied. While the two groups of districts that were studied were limited in scope, they allowed the researcher to reach conclusions that led to inferences and theories on how the findings impacted a wider population. The literature and research methodology provided the procedures used to analyze the results of the study that are explained in Chapter 4.

## **Chapter 4: Data Analysis and Results**

### **Introduction**

With the conclusion of the data collection process, this chapter focuses on the analysis of the data. Efforts included speaking with school district officials to establish the access that the study's identified school districts in Alaska and Texas have to dual enrollment programs and how that contact is affected by their rural location, which has been described in detail in the previous chapter. The original design for this study as described in the previous chapter provided for interviews of the identified districts' superintendents. In a few cases the superintendents were not available. Thankfully, provision was made and approved in the design phase of the study that allowed for input from other officials within the district. Ultimately, it is worth reiterating that the aim of this study was to provide data and information regarding the state of dual enrollment utilization in remote school districts that might prove useful in helping school officials and others involved in public education.

### **Role of the Researcher**

With personal experience as the primary motivator for conducting this study, interviews of the participants were completed using the questions detailed in Chapter 3. Once the construct of the study was devised and approved, the researcher sought out the appropriate participants from the identified school districts. Once they were finalized the researcher scheduled times to conduct the interviews, recorded the data, and upon completion of the interviews coded the responses in order to accumulate the findings. The successful completion of this study is due to those individuals and their cheerful participation; many of them had experience of their own doctoral dissertations and answered the questions honestly and with input focused on providing

the details which have enhanced the study and helped in leading to the findings presented in this chapter.

### **Description of the Sample**

This study was conducted to seek input from school administrators about rural Alaskan students' access to dual enrollment programs. School districts were identified based on specific factors: student and regional populations, distance from a major population area, and ethnicities in the school district. It was determined that the initial person to interview for the selected school districts was the superintendent and initial contact was made by way of electronic mail. Each administrator was given a week to respond. A second reminder email was sent after expiry of this period, just in case the original query had been overlooked. If the targeted individual failed to respond after the second inquiry, the design allowed for recruitment of an assistant superintendent, curriculum director, or high school principal in the school district to interview. Table 5 details the districts that took part in the study and the positions held by the participants.

Table 5

#### *Participating School Districts and Positions of Interviewees*

School District	Position of Interviewee
A-A	Literacy and District Education Specialist
A-B, T-C, T-E	Superintendent
A-C, A-D, A-E, T-A	Director of Curriculum and Instruction
T-B	New Teacher Coordinator (formerly ELA Specialist)
T-D	High School Counselor

## **Research Methodology and Analysis**

The process of research design for this study mirrored the process that Maxwell (2013) detailed in writing on qualitative research. The author presented five components of effective design. The first step involved the establishment of goals, second was the conceptual framework, next the creation of research questions and a purposeful method, and finally the analysis phase that focused on establishing validity for the research outcomes. As this chapter focuses on the final phase of the study, the research design has been aimed at providing findings that have been articulated with clarity and provide valid and useful results.

This research employed a qualitative case study model as its methodological underpinning. The interview process was identified as the means of data collection that would most likely allow the researcher to pose specific, open-ended questions and provide the flexibility to pursue clarifications through follow-up questions. The design allowed for the collection of data that would be germane to the interview question and rich in detail so that the nature of the answers would provide valid and useful descriptions, which would help lead to conclusive findings. The primary reason for conducting this study was to provide reasonable and useful answers to the primary research question, which gives direction to the research and its design:

- What is the level of access for students in dual enrollment programs in rural Alaska and how is it different from schools in other remote areas?

With this primary objective in mind, a series of secondary questions were devised to provide more details affecting student access and progress:

- RQ 1: What benefits do students derive from having access to dual enrollment programs?

- RQ 2: What is the perception of school leaders about factors that contribute to or hinder their districts' access to dual enrollment programs?
- RQ 3: What is the perception of school leaders of the effect on students who do not have access to dual enrollment programs—where limited access is present?
- RQ 4: What are some potential remedies for students who are not able to participate in dual enrollment programs?

The direction that the research questions provided allowed the researcher to devise purposeful interview questions directed at querying individuals about their district's experience with dual enrollment programming. The secondary questions focused on adding the details that provided the thick description, which helped the researcher establish greater credibility.

### **Data Collection**

Creswell's (2014) model for conducting qualitative research interviews cited in the previous chapter served as a guide during the interview stage. These steps were utilized to guide the data collection process. According to Creswell (2014), a researcher should initially concentrate on the identification of those to be interviewed and the nature of the questions to be asked; determine the procedural aspects of the interview such as when it should take place and the means for recordings the subject's answers; prepare the documentation necessary for compliance and conduct a pretest to finalize questions. These steps were followed prior to the commencement of the interview process, purposefully (Creswell, 2014), to establish a method that aligned with the research design and provide a process that would lead to trustworthy findings.

Authorization to proceed and approval through the consent form was received from the Concordia University Institutional Review Board (IRB) in May 2017. School districts being

targeted for inclusion in the research project were identified during the development phase of the study. The data collection segment commenced shortly after the beginning of the school year. The initial contact was established with the identified districts' superintendents through a carefully prepared email that introduced the researcher and the purpose of the study (see Appendix C). Included with this introductory email were a copy of the questions to be asked (see Appendix A) and the consent form (see Appendix D).

The administrators from Districts A-A and A-B responded immediately and within two weeks the interviews were conducted. Everyone was given about a week-and-a-half to respond to the initial request. Once that period had passed, the researcher sent a reminder email to everyone who had not responded. Immediate communication came from the superintendents of District T-C and T-E and the interviews were completed soon after. In three instances during the process, district officials (in A-A, T-B, and T-D) referred the interviewer to subordinates who could better answer the questions.

After the passage of a respectable amount of time (almost three weeks), previously established procedures allowed for contacting each district's director of curriculum, the next person in the hierarchy. Interviews were conducted with these persons in Districts A-C, A-D, A-E, and T-A in just over a week's time; the cooperation of all individuals was very helpful, greatly appreciated, and integral for the completion of the study and to arrive at the findings for the research questions. In the case of districts T-B and T-D, the curriculum director recommended subordinates who they thought would have a better grasp of the questions in the interview and each respondent was glad to participate and helpful with their answers.

As the study provided, the phone interviews were recorded to be able to refer to comments as needed during the analysis of the data. Due to technical problems after the first two

interviews, it was evident that the recording process would be unsuccessful. However, copious and detailed notes were taken, and verbatim information written down. The phone call allowed for the reaffirmation of each statement through a review of the notes with each participant and the assurance it was documented in a narrative that was thorough and descriptive in nature.

Along with Creswell (2014), Gubrium and Holstein (2002) have provided additional details to prepare for the process of conducting interviews. Gubrium and Holstein's (2002) reflections helped the researcher to consider possibilities that might occur during the interviews and advised flexibility to address scenarios likely to happen during questioning.

The school district officials who were interviewed had the experience and education necessary to focus on the questions, and provide concise and appropriate answers, without the need to stray from the topic. The questions were designed in a way that allowed for the clarification of points that were made during the interviewee's comments, seek deeper understanding, and follow up on important testimony. The conversational format helped the interviewees feel comfortable with the interview method and allowed them to answer freely and offer additional details as they felt appropriate.

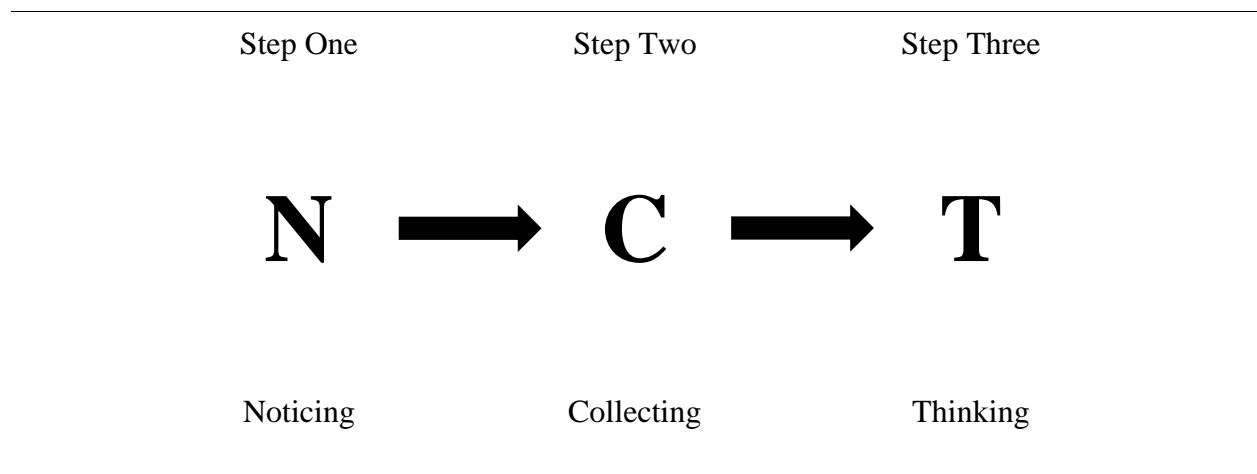
### **Data Analysis**

The analysis of the data collected through this qualitative case study was directed at finding answers to the research questions that guided the study. Thus, the process of determining how to interpret the testimony gathered was guided by the design discussed by Friese (2014). Figure 1 illustrates the noticing, collecting, and thinking (NCT) model of qualitative data analysis. NCT served as the guide for the data analysis phase. Friese (2014) detailed each step in the process, beginning with noticing, the initial step where the researchers mark up their notes and assign codes to the data to help provide both clarity and understanding. Next, the collection



step represents the organizational element where the researcher assigns the coding to specific share characteristics of the testimony and begins the process of drawing conclusions. The last step of the model is the process of putting all the pieces together.

Friese (2014) acknowledged that thinking is involved in all steps as the researcher begins the process of accessing meaning and establishing outcomes. However, this final step is guided by thinking and determined by the outcomes derived. Again, in the words of Friese (2014), “How do the various parts of the puzzle fit together? How can we integrate the various aspects of the findings in order to develop a comprehensive picture of the phenomenon studies?” (p. 14)



*Figure 1.* Data analysis using the NCT Model.

With the completion of the interviews, multiple pages of notes were collected. The first step, the noticing stage, occurred when the notes were organized to make determinations about the material collected, how it differed and how it was related, and where the data fit in relation to the research questions.

The next step involved the creation of a matrix that organized the replies to each question and then examined each reply carefully for similarities. Saldaña (2015), in a recent work on the basics of qualitative research coding, made a fair-minded analysis of the coding process

including when and how it should be used. This description provided a guide to the process for coding the collected data from the interviews.

Each coinciding answer was initially color coded and then assigned a specific code as described in Saldaña's (2015) process and detailed in the noticing and collecting process. The process of coding responses lends both organization and legitimacy to the process. The codes that are detailed are primarily designed to seek patterns, categorize similarities, and begin the process of attaching meaning and devising larger themes from the collected data.

Table 6

*Codes Utilized for the Assessment of Data*

Code Designation	Description
Code P (Participants)	Code P is designed to examine demographic data and determine the differences and similarities between the number participants in the profiled districts.
Code L (Grade Level)	Code L is designed to examine demographic data and to determine the primary grade levels that dual enrollment is offered at in the targeted districts.
Code G (Gender)	Code G is designed to examine demographic data to establish if there is a major disparity in the gender of students who participate in dual enrollment programs.

*Codes Utilized for the Assessment of Data (continued)*

Code Designation	Description
Code E (Ethnicity)	Code E is designed to examine demographic data to determine the majority subpopulations that are involved in dual enrollment programing.
Code C (Courses Available)	Code C examines data to establish the access that rural districts have and maintain to dual enrollment.
Code B (Benefits)	Code B interprets information collected from interviewees in order to define what benefits students derive from involvement in dual enrollment courses.
Code O (Obstacles)	Code O interprets information collected from interviewees in order to define what obstacles might exist that limit access to courses.
Code R (Rural Location)	Code R categorizes information collected that scrutinizes the impact that rural location has on a district's implementation of dual enrollment.
Code OR (Other Remedies)	Code OR seeks to catalogue responses that suggest possible alternative programs that might suffice in the absence of dual enrollment courses.

Vogt, Gardner, and Haeffele (as cited in Saldaña, 2015), explain coding as a research process that helps to “translate” data (p. 13). According to Saldaña (2015), coding “attributes interpreted meaning to each individual datum for later purposes of pattern detection,

categorization, assertion or proposition development, theory building, and other analytical processes” (p. 4). The codes (see Table 6), based on the question design, were used to assign meaning and allow assessment of data and to establish findings.

### **Summary of the Findings and Results of the Data**

An intensive examination of the data collected allowed the researcher to draw connections between the interview questions and the research questions that the study sought to answer. Each question that was presented to the interviewees was categorized and their answers meticulously analyzed and compared against each other to establish commonalities and differences and to determine findings regarding how the collected data affected the outcome of the research. The nature of the questions and answers received led to the determination of themes (Table 7).

The interview questions primarily included three phases: the first two questions were demographic in nature and meant to illustrate the commonalities between the profiled districts and students being examined. The second series of three questions sought to answer the primary question of the study. The next two questions were designed for districts that had no dual enrollment access at all and to establish the impact that might have on the students. The final two questions, along with Interview Question 5 sought to determine the barriers to student access because of location and other factors and what programs might serve as a worthy substitute in place of an effective dual enrollment program.

Table 7

*Five Themes Determined by Collected Data*

<u>Theme</u>	<u>Description</u>
Theme 1	Demographic Profile and Topical Relationship of Profiled School Districts
Theme 2	Student Access to Dual Enrollment Programs in Profiled School Districts
Theme 3	Perceived Benefits of Student Access to Dual Enrollment Programs
Theme 4	Obstacles to Student Participation based on Access and Location
Theme 5	Other Opportunities

A couple of points worth remembering: first, the 10 interviewees consisted of high-ranking officials in school districts in northern and western Alaska or far western Texas. Second, the officials hold positions in district or school administration, either as a superintendent, curriculum director, or district or campus-based specialist, and would be regarded as experts in the overall program of the district or the curriculum. The very nature of the officials' position and the obvious knowledge they possess lends credence to their selection and validity to their responses.

**Theme 1: Demographic Profile and Topical Relationship of Profiled School Districts**

One of the primary objectives of the study was to establish the shared characteristics of the school districts being examined. Each district is remote in nature with varying degrees of distance from major cities. Additionally, each district is composed of large ethnic majorities of either Alaskan Native or Hispanic students. Subsequent answers to the interview questions also established that both groups of districts have similar concerns including the difficulty of recruiting qualified teachers and financial obstacles. The answers that are provided in the tables 8

and 9 to Interview Question 1 (IQ1) led to the formulation of three codes to help categorize the nature of each response and to allow for an analysis of each:

- Code P (Participants): The average number of participants in this study this semester for the Alaskan school districts is 34 students with a large majority, 130 students, participating in District A-D. In Texas, there are on average 38 students per district of those supplying a count (District T-B did not provide a definite number). Like District A-D, the bulk of Texan participants came from District T-A (124 students). In most cases, numbers of students that are participating in dual enrollment courses are in single digits: three in District A-A, 9 in District A-B, 7 in T-C, and 6 in T-E.
- Code L (Grade Level): In Alaska, course participation is largely reserved for junior and senior level students. The findings in Texas were similar to the bulk of students identified in Alaska as junior and senior level. Two districts (T-B and T-D) identified the sub-junior level as participating in dual enrollment courses. One district in Texas supports an early college high school, thus opening access to its underclassmen. The early college model usually provides for college-credit earning courses to be taken at the upperclassman level, but research indicates that in some early college schools in Texas and other states college credited classes are offered in the 9<sup>th</sup> and 10<sup>th</sup> grades.
- Code G (Gender): Interestingly, two of the Alaska districts, A-A and A-B, trended toward small male majorities (60% to 70% in both districts) while one district had more females and two districts were evenly divided. The male majorities were statistically not significant in that each district reflected majorities of one male in a class of three and one male in a class of nine. Texas' outcome reflected greater female participation, with two districts (T-A with about 60% and T-B reflecting a similar

percentage) having female majorities and the rest being near even in gender participation.

An analysis of the data allows one to conclude that the P category shows no major differences between the two groups being analyzed, with similar numbers as noted previously. Category L shows similarities between the two groups profiled, as the general trend demonstrates that dual enrollment is largely targeted toward upperclassmen with few exceptions now. Code G reflects an interesting disparity in that the Alaskan schools show a very small trend toward greater male participation or parity at best in dual enrollment, whereas the Texas districts trend a bit more toward female participants. Tables 8 and 9 provide a comparison of the testimony to IQ1, the first of two demographic questions that were asked during the interview.

Table 8

*Collected Responses to Interview Question 1 in Alaska*

---

How many students in your district are currently part of a dual enrollment program? How many are male and female? What are their grade levels?

AK Districts   Responses

A-A	“Three students are currently enrolled in DE classes consisting of two males and one female. The first two are in 12 <sup>th</sup> grade and the final in 11 <sup>th</sup> grade.”
A-B	“It fluctuates but about right now there are 20-30 students; currently nine students are enrolled with five males and four females in 10 <sup>th</sup> -12 <sup>th</sup> grades.”
A-C	“I’m not sure of the total number but we have more than 10 but less than 30, also we have more females this year and they [students] are all 12 <sup>th</sup> graders.”
A-D	“We have about 130 students, the male/female ratio has been about 50/50. The courses are offered at the high school level; all students are 12 <sup>th</sup> graders.”
A-E	“We have the capacity for 14 students in our vocational program [non-dual enrollment] but we are still getting students into our dual credit, they are grades 9-12, including seven boys and seven girls.”

---



Table 9

*Collected Responses to Interview Question 1 in Texas*

---

How many students in your district are currently part of a dual enrollment program? How many are male and female? What are their grade levels?

<u>TX Districts</u>	<u>Responses</u>
T-A	“Our total enrolled is 124 students, of high school age, and primarily juniors and seniors. We haven’t opened dual credit for 9 and 10; we are about 60% to 40 % females in the majority.”
T-B	“Our courses are in 11 <sup>th</sup> and 12 <sup>th</sup> grades. We also have an early college high school where a few 9 <sup>th</sup> and 10 <sup>th</sup> graders have courses. Most of our students are females (more than 100 students participate in the courses.)”
T-C	“We have seven students; one female and six males. They are in the 11 <sup>th</sup> and 12 <sup>th</sup> grades.”
T-D	“We currently have 15 students in dual credit programs. They are evenly divided between males and females and are in the 10 <sup>th</sup> , 11 <sup>th</sup> , and 12 <sup>th</sup> grades.”
T-E	“Six total students. We have three boys and three girls, they consist of two sophomores, one senior, and three juniors.”

---

The second interview question was aimed at examining the ethnic composition of dual enrollment participants. The answers to this question are straightforward, so the code created was largely aimed at establishing the conclusions that the testimony provided.

- Code E (Ethnicity): In Alaska, all profiled districts reported Alaskan Native students as exceeding 90% participation levels in dual enrollment courses. Similarly, the Texas districts with large Hispanic populations showed equivalent results.

The answers established what one might have expected, ethnic participation in dual enrollment reflects the substantial majority populations in each school district and local population. Table 10 presents a comparison between the data collected:

Table 10

*Collected Responses to Interview Question 2 in Alaska and Texas*

---

What are the different ethnic subpopulations that are a part of a dual enrollment program?

AK Districts    Responses

A-A	“Two students are Alaskan Natives and the third is half native but not of Alaskan heritage.”
A-B	“90-98% are Alaskan Natives in the courses.”
A-C	“Our course is more than 90% Alaskan Native.”
A-D	“Our ethnic populations taking courses are mostly Natives with a few Filipinos.”
A-E	“Our students are 100% Alaska Native.”

TX Districts    Responses

T-A	“We are 99.3 Hispanic.”
T-B	“We are over 90% Hispanic in our courses.”
T-C	“They are Hispanic and White (90% Hispanic).”
T-D	“Our courses are 100% Hispanic.”
T-E	“One student is Asian, and the rest are Hispanic.”

---

## **Theme 2: Student Access to Dual Enrollment Programs in Profiled School Districts**

The second set of questions, IQ3 and IQ4, are focused on examining the primary issue of student access to dual enrollment courses and the benefits derived from such participation in the profiled districts. Code C for IQ3 is based on scrutinizing the access that students in the districts have to dual enrollment programs. The responses collected from the participating school districts provided the evidence necessary to substantiate the focus of the primary research. The representative in District A-A indicated that any course that was carried by its partner institution could be offered through distance learning but at the current time the small number that were participating were taking English and two or three remedial courses. District A-C's course offerings were roughly equivalent to A-A. The larger districts (A-D and A-E), interestingly two of the northernmost and most remote districts, had the most developed and utilized programs. District A-B, located on the western coast, maintains a program that consists of nearly 20 courses consisting of both core and elective classes. A-D and A-E also demonstrated significant access to dual enrollment with substantial offerings in both core classes and electives.

Code C (Courses Available) begins the process of analyzing data and the process of formulating useful findings:

- Code C (Courses Available): An analysis of the collected data for this question leads one to conclude that in Alaska all districts show the ability to provide basic core curriculum classes through either an on-site educator with the proper credentials or via distance learning. Significantly, many elective classes are available to students and are being utilized, especially in districts A-D and A-E. The outcomes for the Texas districts seem to mirror Alaska, as all districts have some level of access to core classes with potential electives available, especially in T-B and T-E.

Table 11

*Collected Responses to Interview Question 3 in Alaska*

---

What types of dual enrollment courses are available to students who are interested in participating in such a program?

AK Districts   Responses

A-A	“Any options offered by the college are available. Currently, the students are taking English, Remedial Math and Reading, and Remedial Reading.”
A-B	“We currently offer 17 different programs primarily English, Math, Health, Tribal Government, and Alaska History.”
A-C	“We offer Tech Prep to help students prepare for college. We also have courses where students can enroll in any college course that they want. We also offer Medical Terminology class.”
A-D	“We offer all math courses, sciences, higher level English, most of the social studies. We don’t have AK studies but do have North Slope history, World Languages, French and Spanish and other foreign languages, PE, Skills for Health, and Reading.”
A-E	“We offer outdoor power equipment, technology applications, accounting, introduction to business, skills lab, personal finance, welding technology services and welding technology.”

---

The findings in this category provided substantial data aimed at the core research focus of the study. Each of the rural districts show substantial access to dual enrollment programming. In Alaska, Districts A-D and A-E demonstrate that availability is more significant the farther each

district is, and it is also affected by qualified teacher availability. In Texas, all districts demonstrate an adequate level of access to dual enrollment, substantially equivalent to the districts in Alaska. Like Districts A-D and A-E, Districts T-A and T-B have the greatest access and largest number of participants. Unlike Alaska, though, the two least remote Texas districts have greater access because of their proximity to El Paso and their sponsor college. An examination of the results shows little difference between outcomes among the studied groups in either state. One variable that seems to be essential to access in both states is the distance to the partner college and the viability of that relationship. Tables 11 and 12 present the answers collected for IQ3:

Table 12

*Collected Responses to Interview Question 3 in Texas*

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What types of dual enrollment courses are available to students who are interested in participating in such a program?

<u>TX Districts</u>	<u>Responses</u>
T-A	“We offer Speech, English 3 and 4, US History, Government, Economics, and Pre-Calculus.”
T-B	“The courses we offer are the ECH core course, English, Math, Social Studies, Science, and foreign languages.”
T-C	“We have basic college course that are taught [online] through Midland College.”
T-D	“We teach English and Reading as dual enrollment courses.”
T-E	“Our freshmen take physiology, sociology, art, English, history, algebra, and electives as junior and seniors.”

---

### **Theme 3: Perceived Benefits of Student Access to Dual Enrollment Programs**

One of the aims of the research study and the outcome for this theme lies in the answers that were collected regarding the course benefits that students derived from participation in dual enrollment. Tables 13 and 14 scrutinize the responses given to IQ4 to determine the benefits that officials perceived the students derived from participation in dual enrollment. Codes were assigned based on attributes related to the benefits of participation as described:

- Code B (Benefits): The Alaska schools showed similar answers. A-A's official cited "others [students] get high school credit, and...gives them access to college rigor." District A-B mentioned that students "don't have to wait until college" by giving them a chance to access college credits and expectations. The individual from District A-C spoke of the ability of young people to "access a level of study that we [the district] are not able to offer." A-D's representative stated the benefits even more clearly, saying that participants have "exposure to higher level learning [and] the ability to earn college credit." Of the five surveyed districts in Alaska, four of the officials cited access to college courses and credits as a substantial benefit of a viable dual enrollment program. Additionally, higher academic rigor was mentioned by three of the district leaders as a benefit of student participation in dual enrollment. Other benefits including financial incentives, addressing needed skills, and the ability to take remedial classes prior to college were cited by single districts in the group. Of the five surveyed districts in Texas, the administrators for District T-A, T-B, T-C, and T-E each mirrored their Alaskan counterparts by suggesting that the primary benefit to students was offering early access to college courses and credits. The financial

support was more important in Texas, as three of the five officials discussed its importance. Two district administrators provided credence for the benefit of higher levels of academic rigor when enrolled in a dual enrollment program.

Table 13

*Collected Responses to Interview Question 4 in Alaska*

---

What benefits do you believe your students derive from participation in dual enrollment programs?

AK Districts   Responses

A-A	“It depends; most of the students get the remedial classes out of the way; others get high school credit; and college classes gives them access to college rigor.”
A-B	“The benefits to our students are that the courses reach past rural populations. Students don’t have to wait until college – it is their chance to get ahead.”
A-C	“The benefits are being to access a level of study that we are not able to offer. They have access to higher math and English classes – dual credit counts beyond a developmental course.”
A-D	“I think the primary benefit is the exposure to higher level learning, the ability to earn college credit and school pays, and just general opportunities.”
A-E	“The benefit is building relevant and valid skills that apply to real life work.”

---

The data collected demonstrates that both groups have similar expectations of the benefits derived from student participation in a dual enrollment course. Clearly, each district is motivated by their own environmental factors and student needs, as illustrated by the financial assistance factor which assumed greater relevance in Texas than in Alaska. Hispanic populations, a

majority in each of the Texas school districts, have a greater need for financial assistance to attend college. Alaskan Natives benefit to a greater degree from tuition assistance that is offered by local campuses associated with the University of Alaska and by smaller community colleges with a tradition of recruiting students living in rural areas of the state. While theories could be proposed about the cause of this phenomenon, such admission and finance related factors should be explored in later research.

Table 14

*Collected Responses to Interview Question 4 in Texas*

---

What benefits do you believe your students derive from participation in dual enrollment programs?

<u>TX Districts</u>	<u>Responses</u>
T-A	“The benefits are that we guarantee college credit with a passing grade, we help them save tuition assuming that the classes they take count for a degree.”
T-B	“There are a couple of benefits: 1. Students in ECH earning an associate degree. Also, our population allows them the chance to get an early start, financial benefits, and the chance to know what college is like.”
T-C	“The benefits are their weighted grade point, college credit that transfers, and better preparation for college.”
T-D	“The benefit for students is that when they graduate, they won’t have to pay for hours in college.”

---



#### **Theme 4: Obstacles to Student Participation based on Access and Location**

IQ5 seeks to scrutinize the limits that remote location and other obstacles place on students that seek to participate in dual enrollment programs. While some of the previous themes demonstrated a great deal of similarity in responses, this theme shows significant disparities based on the data collected. The code derived for IQ5 is based on establishing notable obstacles that might exist:

- **Code O (Obstacles):** In Alaska, officials presented a myriad of potential obstacles. Districts A-A and A-C were the only districts that demonstrated a commonality: a lack of awareness of dual enrollment among students and parents. The remaining responses from the administrators were singular in nature, namely a lack of desire in students for either college studies or more rigorous challenges, a lack of confidence in themselves, a general negative attitude about education in general, and lack of understanding and support at home. On the other hand, the Texas administrators expressed a different set of concerns. Districts T-A, T-D, and T-E each expressed concern over the ability of students to pass the college entrance exam. Districts T-B and T-C also cited a lack of qualified teachers and Districts T-A and T-E acknowledged a lack of support and understanding from home. Finally, one interviewee alluded to a lack of support by the district for those using distance education.

The conclusion drawn supported the vast difference in responses based on the unique needs of each district. The only true trends that can be extrapolated are the concerns about the Texas Success Initiative Assessment (TSIA or simply TSI) in Texas and the lack of awareness about dual enrollment programs in Alaska. It should be noted that one Alaska district did raise concerns about students' ability to pass the College Board's AccuPlacer exam, which serves the

same purpose as the TSI. Tables 15 and 16 provide the responses garnered from the interviews in both states. Additionally, it would be shortsighted not to highlight concerns about the lack of awareness and the lack of qualified teachers, both variables expressed by administrators at some point in several interviews. These variables are two of the biggest obstacles for remote districts and were an underlying theme in both IQ5 and IQ8 (Tables 17 and 18).

Table 15

*Collected Responses to Interview Question 5 in Alaska*

---

What obstacles do you believe affect your students' participation in dual enrollment programs?

AK Districts   Responses

A-A	“Obstacles are a lack of awareness about course availability, students often have no desire to go to college, and those who do sometimes have a lack of confidence they will succeed.”
A-B	“The primary obstacle is that Internet connectivity is very limited; also sports and other activities affect student attendance.”
A-C	“For us, the obstacle is students not knowing they can enroll. Also, it is still up to parents and student to get with the local college and figure out what they can take and going through the approval process.”
A-D	“I really can’t think of any.”
A-E	“Our biggest obstacle is the student’s attitude toward education and establishing relevancy.”

---

Table 16

*Collected Responses to Interview Question 5 in Texas*

---

What obstacles do you believe affect your students' participation in dual enrollment programs?

TX Districts   Responses

T-A	“Our obstacles primarily are access to the TSI (state college entrance exam), and not having specific district goals regarding having kids tested. There is no push for student participation.”
T-B	“We have limited course offerings onsite because of a lack of local teacher credentials. Our offerings are limited or placed online – this may limit students to having access. Another problem is lack of support and help.”
T-C	“Student participation is affected by the support they received from home, the cost of course, and courses that are online and not with a teacher.”
T-D	“Students sometimes struggle to meet the TSI test and sometimes don't meet other minimum requirements.”
T-E	“The biggest obstacle is getting that college entrance exam passed (TSI). Other problems are that parents are a little afraid to take the leap.”

---

Table 17

*Collected Responses to Interview Question 8 in Alaska*

---

In what way does the rural location of your district affect your access to dual enrollment coursework versus the access available to urban districts?

AK Districts   Responses

- |     |  |
|-----|--|
| A-A | “Our location doesn’t really affect us, except for a lack of exposure to college level expectations and lifestyles”  |
| A-B | “Pretty much the same as was stated in the previous question. The primary obstacle is that Internet connectivity is very limited; also sports and other activities affect student attendance.”                                 |
| A-C | “Our district office is in Kotzebue where students have greater access to the college.”  |
| A-D | “Sometimes in the villages the bandwidth is horrible. We are lucky because the professors will travel to the sites for some of the courses.”   |
| A-E | “It doesn’t – we have a UA branch in the district, so courses align with UA codes and minutes and hours in class. We have the technology and funds to fly kids in and have our own vocational facility with dorms, food, etc.” |
-

Table 18

*Collected Responses to Interview Question 8 in Texas*

---

In what way does the rural location of your district affect your access to dual enrollment coursework versus the access available to urban districts?

TX Districts    Responses

T-A	“Our location limits the type of instructors that we get, teachers don’t have the right credentials, and the other thing is proximity to the closest.”
T-B	“Some consider us suburban because we are close to El Paso. Thanks to this, we have a good partnership with UTEP and El Paso Community College.”
T-C	“It is difficult for students to participate in the program on the college site. It is difficult for the students to get access to the teachers easily. Courses are online without a face-to-face teacher.”
T-D	“We are not able to offer math and science classes because our teachers are not certified; those classes have to be online.”
T-E	“A big problem is availability of bandwidth. There are certain times a day when dual credit only gets the stream – we need to offer better bandwidth.”

---

IQ6 and IQ7 (detailed in Table 19) were not asked of any of the interviewees because both questions were targeted for districts that did not have any dual enrollment program. Since all 10 of the districts had access to such courses, these questions were not relevant to the discussion during the interviews. However, IQ8 was relevant as it examined the impact of location on student progress. Question 8 is like IQ5 in that it seeks to examine potential obstacles to access

specifically related to the district's rural environment. Code R is used for this question and is focused on helping to derive some conclusions regarding the impact of location:

- Code R (Rural Locations): Three of the Alaska districts, A-A, A-C, and A-E cited access or lack of access to the college campus and expectations as a relevant factor in relation to location (Table 15). District A-A suggested that a “lack of exposure” to college life and expectations was the primary shortcoming of being far away from a campus. District A-B mentioned that their local college was across the street from their district office but the other remote villages in the district did not benefit from that circumstance. Finally, District A-E stated that students had substantial access to the campus because of its proximity to Fairbanks and the financial support to shuttle students back and forth. Two districts (A-B and A-D) brought up the issue of poor Internet connection and only one (District A-B) expressed concerns about conflicts with secondary students' activities. Three of the Texas districts (T-A, T-B, and T-D) cited distance between the district and partner college as a significant issue. Equally impactful was the school district's inability to recruit teachers with the needed credentials to teach college-level classes (referenced by Districts T-A, T-C, and T-D). Finally, one Texas district T-E cited concerns about Internet connectivity.

There appears to be remarkable agreement on barriers to access relating to remote location, regardless of which state the district is located in. Each district is rural, with varying distance from major population centers. Most of the districts (6 out of 10) said that proximity to a college was either a major inhibiting factor or a strength of their program. The primary partner institution in Alaska is the University of Alaska with satellite campuses in Fairbanks and Kotzebue. The

Texas institutions vary by district, including local community colleges and the University of Texas at El Paso.

Table 19

*Unemployed Questions: IQ6 and IQ7*

---

IQ6: If your district does not offer dual enrollment, what is the reason for not having such programs available for students?

IQ7: If your district does not offer dual enrollment, what do you believe is the impact on students?

---

As previously mentioned, the superintendent for District A-B (western Alaska) referenced the fact that the college campus was across the street from their district office, providing easy access. However, the more remote villages in the district did not have such a luxury. In Texas, the primary partner for the districts close to El Paso was the University of Texas at El Paso (UTEP) or El Paso Community College. District T-C, which is closer to the Permian Basin, partners with Midland College in Midland, Texas. Also, as previously mentioned, significant concern was based on the strength and the availability of qualified teachers and access to needed Internet bandwidth. District T-A responded that “Our location limits the type of instructors that we get, teachers don’t have the right credentials, and the other thing is proximity to the closest community college,” which summarizes the crucial problems and essential conclusions of most of the districts.

**Theme 5: Other Opportunities**

The final question, IR9, concluded the interview by asking administrators to reflect on what other programs might exist for students who may not have the opportunity to participate in

dual enrollment (Tables 21 and 22). Code OR seeks to provide an avenue for compiling responses to this question:

- Code OR (Other Remedies): While reflecting on the answers to this question, some parity in responses to other remedies was found that could be employed in lieu of dual enrollment access. Consider the following remedies and comparative districts:

Table 20

*Other Remedies*

---

<u>Remedy</u>	<u>School District</u>
Online Courses in lieu of dual enrollment	A-A, A-B, A-C, T-B
Site to Site Delivery	A-A, A-B
Advanced Placement Courses	T-A, T-B
Cost Support	A-C, T-C
Blended Learning	A-C
Greater Awareness of Existing Programs	A-E
Emphasis on Vocational Programs	T-E

---

The most widely cited remedy to dual enrollment was online courses which was mentioned by Alaska districts A-A, A-B, and A-C and one Texas district (T-B). Two Alaska officials (A-A and A-B) mentioned the creation of site-to-site delivery which technically also qualifies as an online program. Site to site delivery is utilized by school districts to provide instruction from one location to other sites using digital connectivity.



Table 21

*Collected Responses to Interview Question 9 in Alaska*

---

What other remedies could be provided to students who do not have the opportunity to participate in dual enrollment programs?

AK Districts   Responses

- |     |  |
|-----|--|
| A-A | “Other remedies for students not taking part are APEX (online HS courses), site to site distance delivery, and district office to site distance delivery. Also, schools have some exposure to Florida Virtual or Ed Dynamics.” |
| A-B | “A possibility is to try to do courses online or to combine teachers in other schools using Google Hangout. Our technology is Google Hangout which most universities use. We work with UAF – NW campus.”                       |
| A-C | “One possibility is blended learning programs. Costs are also an obstacle – we also have online modules for coursework, and we can offer them as an online program.”   |
| A-D | “Because we are so rural, we have to have a (DE) program. It is focused to juniors or seniors and probably could be expanded.”   |
| A-E | “I can’t answer this because it comes down to individual relevancy – we have the opportunity here; we just need better awareness of opportunities.”  |
- 

Two Texas schools (T-A and T-B) mentioned their Advanced Placement programs as a remedy, perhaps not realizing that such courses also qualify as dual enrollment. Other suggested remedies were blended learning courses on campus, better awareness of cost support for those programs that already exist, and finally, more emphasis on existing vocational programs.

Table 22

*Collected Responses to Interview Question 9 in Texas*

---

What other remedies could be provided to students who do not have the opportunity to participate in dual enrollment programs?

TX Districts    Responses

T-A	“Other possibilities for our students are the 17 advanced placement classes that we offer.”
T-B	“For those who are not in dual credit, we have advanced placement courses and we are currently finding other online programs to move us forward.”
T-C	“One possibility that we might investigate is grants to support the tuition costs for students in these courses.”
T-D	“It would be useful for us to add more college prep courses.”
T-E	“We have a really strong CTE program and students can receive certification in vocational programs.”

---

After considering all the replies from each interview and considering the various attributes that were examined in each of the codified characteristics, a summary of the findings laid the foundation for applying the collected knowledge to the research questions. Theme 1 encompassed IQ1 and IQ2 which relate to the demographics of the profiled districts. The two findings related to the questions are:

- All districts showed participation in dual enrollment programs with no significant differences. When considering the grade level of participants, most were targeted

toward junior and senior students with limited access for 9<sup>th</sup> and 10<sup>th</sup> graders.

However, there was a disparity between the population groups of districts: Alaska had a small male majority while the Texas schools had a larger percentage of female participation over their male counterparts (60% and 60-70%, respectively).

- Results of the ethnic data demonstrate that the composition of the dual enrollment programs in each district tended to mirror the large ethnic populations in each district. All Alaskan school districts reported Alaskan Native majorities with more than 90% participants being AN, while the Texas districts had a similar percentage for Hispanic students.

Theme 2 is derived from IQ3 which provided data on the primary focus of the study, namely, district dual enrollment programs. The following finding provides an answer to the question of access:

- Each of the rural districts demonstrated some level of access to dual enrollment while several had multiple course offerings that were being utilized by students.

Theme 3 and IQ4 focused on the benefits that students might derive from association with dual enrollment:

- The data indicates that both groups have similar expectations of the benefits derived from student participation in a dual enrollment course. The issue of financial assistance was emphasized more by the districts in Texas than in Alaska, which could be due to a variety of factors that could be explored in future research.

Theme 4 is based on the potential obstacles that students and districts encounter that limit the effectiveness of dual enrollment. The findings for IQ5 and IQ8 seek to define those specific obstacles:

- The conclusion based on the responses to IQ5 is that the differences in the obstacles are based on the unique needs of each district. The only commonalities in replies are the concern about the TSI in Texas and the lack of awareness about these programs in Alaska.
- IQ8 examines the impact of a rural location on student access. There appears to be remarkable agreement on this topic, regardless of location. Each district is considered rural with varying distances from major population centers; most (6 out of 10) administrators stated that the proximity to a college was either a major inhibiting factor or a strength of their program. Also, significant, but not surprising, are concerns based on Internet connectivity and the availability of qualified teachers.

Interview Question 9 is the basis for Theme 5 which focused on alternative opportunities for students who may not be able to participate in dual enrollment in their district. The finding summarizes the feelings that the interviewees had on the topic:

- Most of the districts view a viable online course program as a possible alternative to the lack of dual enrollment programs in districts that have limited access.

### **Summary**

This chapter has provided a review of the data collection procedures, an analysis of the data collection method, and a detailed review of the interview process and the data collected. The researcher coded each reply and used the information to derive findings to answer the research questions. The principal question of the study focused on the level of student access to dual enrollment programs in rural Alaska. Clearly, the findings to IQ3 established that access does exist and students in even the most remote areas of Alaska may participate in college-level courses. The sub-questions sought to examine other aspects of dual enrollment: benefits that

students derive from such access and participation, factors that hinder access to dual enrollment programs, and other remedies which might exist for students who are not able to participate. In Chapter 5, these findings will be used to draw conclusions from the study.

## **Chapter 5: Discussion and Conclusion**

### **Introduction**

The final chapter will examine the findings of the research study, elicit meaning from the data, consider how the information addresses the research questions, and ultimately add to the body of knowledge on dual enrollment. Yin (2015) stated, “Research studies do not end with a sheer analysis of their data or with the literal presentation of their empirical findings. A good analysis must extend two further steps – trying to interpret the findings and then trying to draw some overall conclusion(s) from a study in its entirety” (p. 218).

The researcher pursued the topic of dual enrollment because of an abiding interest in helping to prepare students to be more college-and-career ready. The location of rural school districts, regardless of state, often means that there are inherent limitations that must be accepted and addressed. Education in the 21st century is changing greatly, and dual enrollment programs are at the forefront of this change. No student should be denied access to educational services due to any factor: location, ethnicity, or circumstances of birth. The conclusions stated in this chapter have been shaped by personal insights, best teaching practices, and reasoned analysis of the collected data. The findings of this study should prove useful to administrators as they seek to make informed decisions about programs that are likely to affect greater student success.

### **Summary of the Results**

Yin (2015) established guidelines for a complete and impartial interpretation of collected data as valid and comprehensive through consideration of the following characteristics: first, *completeness*, meaning the interpretation is thorough in its application. The second attribute is *fairness*; do others agree with your findings and are they unbiased in their application to the study’s conclusion? Next, does the outcome mirror the data and establish *empirical accuracy* and

is *value-added*, in other words provide a new assessment of the study's topic? Finally, does the process provide *credibility*, or substantiate the conclusions (Yin, 2014, p. 218)? Ultimately, the final conclusions are guided by the application of both the previous attributes and the knowledge gained during the data collection process, and the application of that learning in relation to the research questions that were designed during the developmental phase of the study. The findings presented represent the analysis of the broad themes derived from the data:

### **Theme 1: Demographic Profile and Topical Relationship of Profiled School Districts**

- All districts showed participation in dual enrollment programs, with no significant differences. When considering the grade level of participants, most programs were targeted toward junior and senior students, with limited access for 9<sup>th</sup> and 10<sup>th</sup> graders. However, there was a disparity between the population groups of districts: Alaska had a small male majority while the Texas schools had a larger percentage of female participation (60% and 60–70% respectively).
- Results of the ethnic data demonstrate that the composition of the dual enrollment programs in each district tended to mirror the large ethnic populations in each district. All Alaskan school districts reported Alaskan Native majorities with more than 90% participants being AN, while the Texas districts had a similar percentage for Hispanic students.

### **Theme 2: Student Access to Dual Enrollment Programs in Profiled School Districts**

- Each of the rural districts showed significant access to dual enrollment. All districts demonstrated some level of student access, while several had significant offerings that were being utilized by a significant number of students.

### **Theme 3: Perceived Benefits of Student Access to Dual Enrollment Programs**

- Testimony about the benefits of dual enrollment shows that the school districts in both states have similar expectations of the benefits derived from student participation in dual enrollment courses, primarily greater access to college credit courses in high school and higher academic rigor at the secondary level.

### **Theme 4: Obstacles to Student Participation based on Access and Location**

- The conclusions that articulate the findings for this theme are that the differences seen in the responses are based on the unique needs of each district. The only trends that can be extrapolated are the concern about the TSI in Texas and the lack of awareness about these programs in Alaska.
- IQ8 examines the impact that the rural location has on student access. There appears to be remarkable agreement on this topic, regardless of location. Each district is considered rural with varying distances from major population centers, and most (6 out of 10) said that proximity to a college was either a major inhibiting factor or a strength of their program. Also, significant, not surprisingly, are concerns based on Internet connectivity and the strength and availability of qualified teachers.

### **Theme 5: Other Opportunities**

- Most of the districts view a viable online course program as a possible alternative to the lack of dual enrollment programs in districts that have limited access.

As previously stated, the final results to the research study are defined, not by the findings presented above, but through seeking to apply the new knowledge to the research questions of the study.



## **Primary Research Question Conclusions**

### **Primary Question**

- What is the level of access for students in dual enrollment programs in rural Alaska and how is it different from schools in other remote areas?

An examination of the findings, especially those related to IQ3 regarding available programs, presents a definitive answer to the primary research question for this study. Regardless of perceptions that existed prior to the commencement of data collection, access exists for all districts that were included in this case study. The analysis provides a count of students that are currently taking part in dual enrollment classes, but most districts suggested that additional classes could be offered based on demand. Therefore, no matter how remote, rural districts have substantial access to courses that allow their students to earn college credit.

### **RQ 1**

- What benefits do students derive from having access to dual enrollment programs?

IQ4 was intended to gather testimony to answer the question of the benefits of dual enrollment. As the findings suggest, there is general uniformity among administrators about the benefits that dual enrollment offers students: primarily the chance for young people to have access to college credit and higher academic rigor prior to high school graduation. Certainly, educators, including those interviewed, attest that this is the primary objective of dual enrollment no matter where it is applied and the major factor that motivates students to seek a more demanding academic level.

### **RQ 2**

- What is the perception of school leaders about factors that contribute to or hinder their district's access to dual enrollment programs?

While the results from IQ3 established that the profiled districts do have extensive access to dual enrollment, IQ 5 and IQ8 results also proved there are limitations that still exist that might not necessarily affect larger, more urban districts. While there were references to potential obstacles for students and school districts, the obstacles most prevalent were distance from the partner college and finding teachers who are qualified to teach dual enrollment courses on site; to a certain degree the two challenges are interrelated, as both relate to availability of qualified instructors who have personal access to students. In the two states studied, a teacher is required to possess qualifications that include at least a master's degree and/or 18 credit hours in the subject taught. These credentials are equal to those required for adjunct instructors at the community college level. The testimony of the administrators interviewed supported the fact that finding teachers with the required credentials in small towns and villages is indeed a very difficult task. Other concerns that were raised during the interviews dealt with the limitations of effective Internet, which is a serious issue in both regions studied, the awareness among students and parents about dual enrollment courses, and the ability to pass the necessary tests to qualify for dual enrollment participation. These variables are affected to some degree by financial limitations; the ability of the school district to have the resources to hire more qualified teachers, publicize programs, or impact the infrastructure of the district with greater Internet connectivity.

### **RQ 3**

- What is the perception of school leaders of the effect on students who do not have access to dual enrollment programs where limited access is present?

This question was based on IQ6 and IQ7 which were targeted for districts that did not have dual enrollment access. Because all the districts had access to some degree, they were unable to answer these two inquiries. Nonetheless, inferences can be made based on the answers given by

interviewees to other questions. The researcher thinks it could be substantiated that any school leader who understands and shows an appreciation of the benefits that dual enrollment offers would agree that not participating would be a significant missed opportunity for students. In reviewing the benefits that administrators discussed in IQ3, students who did not have access would miss out on those opportunities that were discussed in Chapter 4.

#### **RQ 4**

- What are some potential remedies for students who are not able to participate in dual enrollment programs?

This final research question matches IQ9 almost verbatim, which is based on the theory that students in rural districts will face some limitations regarding access to dual enrollment. As the findings establish, most administrators felt that the obvious substitute for courses such as dual credit and AP is greater access for students to high school courses online. Other interviewees suggested that expanded opportunities for college prep and vocational training would provide a useful substitute to dual enrollment.

### **Discussion of the Results**

An examination of the findings and the answers from the interviews presents a clear outcome to the research questions. The study was designed so that the conclusions would lead to valid findings. Maxwell (2013) raised many important questions when considering the validity of findings:

How might your results and conclusions be wrong? What are the plausible alternative interpretations and validity threats to these results and conclusions, and how will you deal with these? How can the data that you have, or that you could

potentially collect, support or challenge your ideas about what's going on? Why should we believe your results? (p. 4)

These questions, designed to guide the process and establish legitimacy, are useful points to consider in a discussion of the findings.

**Question 1: How might your results and conclusions be wrong?**

The researcher has the highest confidence in the outcome of the study. Any faulty conclusions would be based on a misapplication of the findings and their meanings. Care was taken during the conduct of the phone interviews to write thorough, verbatim notes, review answers with each interviewee, and clarify any misinterpretations. The analysis of information was crafted using a clear coding process. Therefore, any error in the findings would occur during the interpretation phase; however, the researcher is confident that the conclusions have been interpreted with thoroughness and appropriate application.

**Question 2: What are the plausible alternative interpretations and validity threats to these results and conclusions, and how will (did) you deal with these?**

The primary question of the study focused on rural students' access to dual enrollment programs. While the data clearly established that students have access to such courses notwithstanding their remote location, an alternative interpretation could clearly be offered. Student access to dual enrollment is undoubtedly hindered, not by the limitations of location, but by the lack of awareness about such programs and the absence of promotion of such opportunities in many of the surveyed districts.

Throughout the study, the researcher was attentive about providing credible findings and carrying out a process that was accepting of any outcome, thorough in collecting descriptions rich in detail, and focused on unbiased and supportable conclusions. One of the early concerns

during the research design was the size of the interview sample. While 10 total districts might seem small at first glance, the five districts in Alaska cover all the school districts in the northern tier of the state along with two districts that encompass most of the Bering Sea region.

Additionally, the Texas districts represent a vast territory stretching from El Paso to the Big Bend country and affecting most of the far western area of the state. Furthermore, the selection process used during the development of the study was rigorously applied and it examined many aspects of the chosen districts as detailed in Chapter 3.

**Question 3: How can the data that you have, or that you could potentially collect, support or challenge your ideas about what’s going on?**

This question raises an interesting point that did affect the research process in this study. After receiving approval from the IRB, summer vacation began for many school districts throughout the country, including the districts targeted for the study. The initial plan was to conduct the interviews during the months of June and July. However, the researcher became concerned that the summertime might affect both availability and the responses of the interviewees. One of the important inquiries was the determination of the number of students participating in dual enrollment; clearly, the responses would be significantly affected by summer vacation. Therefore, the researcher waited to conduct the interviews at the beginning of the school year when classes were in session.

**Question 4: Why should we believe your results?**

Silverman (2016) states that establishing validity in an interview process is based on “whether the views expressed by the interviewees reflect their experiences and opinions outside the interview situation, or whether they are an outcome of the interview situation itself” (p. 414). The question of believability is determined, not just by the aims of the interview process as

Silverman asserts, but also by the nature of the findings and conclusions, and how they impact the study's outcomes. The researcher followed a process that has been thorough, fair, unbiased in its application, and successful in garnering data that is based on the participants' "experiences and opinions outside the interview situation" (Silverman, 2016, p. 414). The method used in the study has been based on the expectations for a qualitative case study and has been guided by research conducted by experts in the field of interview procedures, coding, and the many other facets of qualitative data collection and application.

### **Discussion of the Results in Relation to the Literature**

Chapter 2 presented a thorough literature review focused on presenting prior research regarding the broad topic of dual enrollment. In addition, Chapter 2 sought to present a historical analysis of the three most popular applications of dual enrollment: advanced placement, international baccalaureate, and early college high school. The contribution of this study to dual enrollment literature is best summarized by examining the themes derived from the research questions and the data that was collected to substantiate each of these different themes.

#### **Theme 1: Demographic Profile and Topical Relationship of Profiled School Districts**

An exhaustive review of recent literature on various aspects of dual enrollment presented studies related to many different educational institutions in the contiguous states in the country. The review conducted in Chapter 2 established that, despite the many studies on this topic, no recent research had been undertaken regarding school districts in Alaska. This study's initial purpose and primary objective research question focused on examining how and if dual enrollment impacts students in the most remote districts in Alaska. The demographic data that was collected proved that the available courses reflected the ethnic majorities in most of the districts, that students participating in dual enrollment courses showed very little difference

based on gender, and that the courses were primarily available to upperclassmen. Additionally, there was little discernable difference between the data collected in Alaska and that from the identified districts in rural Texas.

## **Theme 2: Student Access to Dual Enrollment Programs in Profiled School Districts**

This theme, the essential focus of the study, was motivated by the literature study itself. The review of research showed that little pertinent knowledge existed on school districts in rural Alaska, which led to the creation of this research question. Based on collected data, the conclusions proved beyond a doubt that Alaskan school districts, like their Texas counterparts, have full, and largely unhindered access to dual enrollment programs; in fact, the only limitation to student participation is lack of motivation or the requirement of qualification via an entrance exam. Even the most remote districts have access to both core curriculum and elective courses, thanks to the partnership they maintain with a cooperating college or university.

## **Theme 3: Perceived Benefits of Student Access to Dual Enrollment Programs**

The literature established the positive benefits that dual enrollment offers to student participants (Edmunds et al., 2013). The findings from the study mirrored the literature, with administrators largely united in their belief that the most important advantages were students' access to higher academic rigor and the possibility of saving money by receiving college credit while still in high school. Many of the benefits that school administrators cited were similarly discussed in studies conducted in other states at different times. This correlation lends credence to the viability of the dual enrollment program and how it can potentially benefit students regardless of their location and other possible variables.

#### **Theme 4: Obstacles to Student Participation based on Access and Location**

This theme, student participation, was largely unexplored in previous studies. Additionally, the obstacles that the study data highlighted were unique to and relevant to the profiled districts. Among the obstacles cited were a lack of qualified teachers, distance to certified instructors that were willing to help students, concerns over Internet access, and limited awareness of the availability of the program.

#### **Theme 5: Other Opportunities**

The final research question sought to establish remedies if dual enrollment was not present or very limited in its availability. Potential remedies were one of the unknown areas that the study sought to address. As previously reported, the findings in this general area showed that an overwhelming majority of administrators agreed that online high school courses might serve as a substitute in the absence of a dual enrollment platform for students.

#### **Limitations**

Great effort was made to limit any shortcomings that might affect the useful outcomes of the study. Nonetheless, potential limitations might include: (a) sample size, (b) potential biases from the researcher who served as the interviewer during the data collection phase, (c) the time of year the study was conducted, (d) the preparation level of administrators, and (e) the documented technology problems that occurred during the data collection.

In order to try to address these limitations, the study was designed with an awareness of potential problems so as to minimize their effect. The sample size was previously discussed, and the selection method detailed and justified. Because of the desire for scholarly inquiry, the researcher sought to suppress any biases or preconceived expectations of the outcomes by thoroughly examining the literature and the districts that were being profiled to validate that the



research questions were unanswered. Likewise, the concerns about the time of year the data was collected have been explained and any concerns about limiting factors led to changes to the design plan as noted. The preparation level of the administrators was largely entrusted to those being interviewed. Despite their busy schedules, each official was prepared with the needed information, which helped provide details for the findings. Finally, the concern over the technology problem has been well documented. While the lack of recording is unfortunate, the researcher has a great deal of experience conducting interviews and had already developed a technique that provided for detailed and verbatim notes of what the participants related. Additionally, follow-up phone calls were not needed, because at the end of the interview the researcher went back and checked each response with the interviewee to establish its correctness and credibility.

### **Implications of the Results for Practice, Policy, and Theory**

One of the primary motives for this research study has been to produce findings that will be useful to school administrators and education policymakers who might recognize the potential that dual enrollment might have for secondary students in all parts of Alaska where the program might be either initiated or expanded. To facilitate this process, the researcher provides some suggestions on how the findings in this study might impact future practices, policies, and theories that affect the discipline.

#### **Implications for Practice**

One way that school administrators can broaden access to courses that offer the opportunity for greater rigor and college success is to seek grants, cultivate support, and develop policies that help expand opportunities for students. One example of such a program was launched by the US Department of Education in 2015. Recognizing the potential impact that dual

enrollment programs such as dual credit, advanced placement, and early college high school offer, the Department of Education created an initiative allowing for the expansion of federal Pell Grants to offer low income students greater access to dual enrollment without the financial constraints (US Department of Education, 2015). One of the many points highlighted in the study is that dual enrollment is a process which ensures that participating students benefit from having access to college-level courses, which affects their readiness because of higher academic rigor.

### **Implications for Policy**

Greg Abbott (2017), the current governor of Texas, has proposed a far-reaching educational policy initiative focused on bringing digital learning to all areas of Texas. To quote from the governor's statement:

Many students—especially those in rural areas—stand to benefit from online courses because they give students the option to take courses that are not available in the schools that students currently attend. These courses can include rigorous, college preparatory, dual enrollment, and advanced placement courses. Students may also access a broad array of foreign languages, electives, and career and industry course options. Other students—those who are at risk of dropping out—may benefit from online courses because of the scheduling flexibility these courses provide. (p. 2)

Abbott's (2017) plan is one example by which to bring dual enrollment to more students in a more effective manner. Knowing that dual enrollment affects student learning, policymakers and other stakeholders would be well advised to emphasize significant expansion of the dual enrollment concept. Policies that might impact an expansion of the program would largely consist of adding or modifying existing school regulations regarding student access and

requirements toward graduation. In addition, financial support would help to establish and expand such programs and address the obstacles in all districts, most importantly rural districts that have less access to tax revenue, colleges, and connectivity.

### **Implications for Theory**

Chapter 2 reviewed pertinent literature and theories related to dual enrollment that had been formulated over the past decade, which influenced the design of this study. The findings in the literature led to several conclusions that defined the framework for the research study. First, data collected in multiple studies established that dual enrollment, in its various forms, has had a positive impact on student rigor in high school and readiness when entering postsecondary studies (An & Taylor, 2015; Radunzel et al., 2014). Additionally, research has also demonstrated that issues of equitable application of dual enrollment have limited the program's impact in the area of ethnicity (James et al., 2017). Within this wider scope of academic research, this study adds to the collective body of knowledge on dual enrollment as an educational topic. The conclusions from this research expand the understanding about the equitable application of dual enrollment as an educational imitative related to both the limitations of location and the access available to an underrepresented student population. Also, the data indicated that financial requirements of dual enrollment emerge as a limitation to student access. Finally, all the studies that were cited in Chapter 2 provided data that was collected in the contiguous United States. This study expands the boundaries of dual enrollment research by being among the first whose primary research focus was centered on rural areas of Alaska.

### **Recommendations for Further Research**

While this study was limited in its scope and concentrated on a small area, the outcomes can be extended and applied to many rural districts in other parts of the country. However, the

study has also raised the possibility of additional areas for further research including ethnic, social, and environmental factors that limit access, financial variables, and comparative research. Each of these topics lends itself to further research to extend the current findings. The following describes the likely areas of study:

Although ethnicity was a part of the considerations for this study, it was not the primary area of concentration. Previous literature has established the limits of dual enrollment success based on ethnic application (James et al., 2017). Ethnic access to and success in dual enrollment is an area of great potential for future researchers and would make a notable contribution to the field of dual enrollment studies. Also, a review of the replies to IQ3 regarding the benefits of dual enrollment for students leads to another distinct area of interest: that access to such programs is not limited by rural location as much as it is restricted by human and social barriers including lethargy, lack of awareness, and parental support. This sub-theme clearly emerged in data that was collected in both states and offers an important reflection on other factors that affect student participation in dual enrollment.

Future studies might focus on the challenges of financing dual enrollment programs and the limitations that lack of monetary resources place on the participants and the providers. Administrators in both Texas and Alaska suggested that parents and school districts have concerns about making college credit earning classes a financially viable option for students coming from low-income households. While funding was a greater concern for districts in Texas, fiscal issues remain a potential obstacle for many rural schools who have students that are economically disadvantaged. Furthermore, in an era of excessive debt and limited state and federal funding, the ability of districts to provide a variety of programs can prove challenging with limited financial resources.

Another area of interest for future study is the possibility of comparing the findings from this or other studies to similar inquiries conducted in different geographical areas. It would be interesting to investigate the access to educational programs that students have in an area such as the more isolated islands of Hawaii or an international location, such as rural areas of the Philippines or comparable parts of Southeast Asia. Additionally, during the review of literature for this study, it became clear that there was very little research that examined the impact of rural location on dual enrollment programs. Studies in rural areas could be applied in many ways to future research. The findings in this study did establish that the targeted rural districts had some level of dual enrollment access. However, an understanding of dual enrollment access could be extended even further with additional research. Lastly, a future study that profiles successful models of dual enrollment might offer administrators and policymakers more ideas and models of success to help guide decision making as they seek to expand and improve their own programs.

### **Conclusion**

Personal experience led to the selection of this topic, as did a passion for dual enrollment opportunity for students. The researcher has observed over many years and in various assignments that students need to be challenged to help them reach their full potential and develop their critical thinking abilities. Students, many of whom are focused on a college career, rely on their teachers to provide the learning opportunities to meet the challenge. This study has demonstrated using strong evidence that dual enrollment is an effective way to impact students' college and career readiness and place them, especially those who are at risk, on a more secure path toward postsecondary studies.

This study, narrow in focus but important in subject, was conducted to answer a question regarding educational access in an unfamiliar area and the least populated region of the country. Regardless of these facts, the needs and dreams of the students in rural Alaska should not be limited any more than those of a student in the urban areas of North Carolina or the suburbs of Houston. The best way for students in remote Alaska to achieve success and live a secure life is through the opportunities of postsecondary studies whether in college or a vocational training program. A flourishing system of dual enrollment can have a positive effect on this outcome. While the study established that even the most remote Alaskan students have access to such programs, few take advantage of the opportunity for a variety of reasons that find place in the research findings.

Beyond the primary research question, this study also examined the benefits and obstacles of dual enrollment in remote areas, and other means to provide greater rigor to the secondary student. The study could not have been successful without the contributions of the many people involved in its formulation, collection of data, and conclusion through the analysis and attachment of meaning. Analyzing the data results, it becomes obvious that dual enrollment is a viable and crucial means of delivering meaningful learning to even the most remote regions.

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## **Appendix A: Interview Questions**

The following questions were used to guide the conversation during the research phase of the study:

### **Demographic Questions**

- Interview Question 1 (IQ 1): How many students in your district are currently part of a dual enrollment program? How many are male and female? What are their grade levels?
- IQ 2: What are the different ethnic subpopulations that are a part of a dual enrollment program?

### **Survey Questions**

- IQ 3: What types of dual enrollment programs are available to students who are interested in participating in such a program?
- IQ 4: What benefits do you believe your students derive from participation in dual enrollment programs?
- IQ 5: What obstacles do you believe your students face with respect to participation in dual enrollment programs?
- IQ 6: If your district does not offer dual enrollment, what is the reason for not having such programs available for students?
- IQ 7: If your district does not offer dual enrollment, what do you believe is the impact on students?
- IQ 8: In what way does the rural location of your district affect your access to dual enrollment coursework versus the access available to urban districts?

- IQ 9: What other remedies could be provided to students who do not have the opportunity to participate in dual enrollment programs

## **Appendix B: Coding Procedure**

Number of participants who are participating in dual enrollment	Coded “P”
Grade level of students participating in dual enrollment	Coded “L”
The gender of students participating in dual enrollment	Coded “G”
The ethnicity of students participating in dual enrollment	Coded “E”
Details the courses available in districts establishing level of access	Coded “C”
Analyzes the benefits acquired by students participating in dual enrollment	Coded “B”
Analyzes the obstacles to students that might limit access	Coded “O”
Seeks to study the impact of rural location on dual enrollment access	Coded “R”
Investigates other program possibilities for those not participating	Coded “OR”



### **Appendix C: Recruitment Email**

Dear Mr. Smith,

My name is Corey Weiss and I am conducting a research study in partial fulfillment of requirements toward my Doctor of Education degree at Concordia University-Portland. My focus is to investigate the access that rural school districts have to dual enrollment programs in the state of Alaska and compare those findings to similar districts in the rural areas of Texas. I would like to invite you to participate in my research by interviewing you as a leader of your school district and as someone with an understanding of your organization's curriculum needs. I have attached a consent form that I would need you to fill out in order to proceed with this process. I have also included an advance copy of the questions so that you can reflect prior to our conversation. The interview will be conducted by telephone at a time suitable to you and will last no longer than 30 minutes. Please return the consent form to me by email as an acknowledgment of your agreement to participate. Also, please include the date(s) on which you could visit sometime over the course of the next couple of weeks. Thank you so much for your consideration. I look forward to speaking with you soon.

Corey Weiss

## **Appendix D: Participant Consent Form**

Concordia University-Portland Institutional Review Board

Approved: May 15, 2017      Will Expire: May 15, 2018

### **CONSENT FORM**

**Research Study Title:** Dual Enrollment and Rural Alaska: A Qualitative Case Study Examining Student Access and Impact

**Principal Investigator:** Corey Weiss

**Research Institution:** Concordia University-Portland

**Faculty Advisor:** Dr. Brandy Kamm

#### **Purpose and what you will be doing**

The purpose of this research is to gather data related to rural Alaskan school districts' access to dual enrollment programs as compared to rural school districts in western Texas. We expect approximately 10 volunteers. No one will be paid to be in the study. We will begin enrollment on May 15, 2017 and end enrollment no later than two weeks later. To be in the study, you will be given advance copies of questions relating to the study. Once the consent has been received, a mutually beneficial time will be agreed upon in order to have a telephone interview, which will last no longer than 30 minutes, to discuss the questions. I will audio record your and my telephonic conversation as you answer the questions. I am doing this to make sure that I get your answers as you intend to provide them. I will translate the audio to a digital file and then delete the audio. I am doing this because a voice could be a way for someone else to identify a person. So, this deletion of the audio will be an additional measure to keep your answers confidential. Your transcribed answers and all of your personal data will be protected with a password and encrypted data storage method. Although the audio will be deleted as soon as the accuracy of transcription is confirmed, all other study documents will be deleted seven years after the completion of the study.

#### **Risks**

There are no risks to participating in this study other than providing your information. However, we will protect your information. Any personal information you provide will be coded so it cannot be linked to you. Any name or identifying information you give will be kept secure. When I look at the data, none of the data will have your name or identifying information. We will only use a secret code to analyze the data. We will not identify you in any publication or report. Your information will be kept private at all times and then all study documents will be destroyed 7 years after we conclude this study.

#### **Benefits**

Information you provide will help the researcher derive conclusions regarding dual enrollment programs that can benefit district administrators in rural areas that are making decisions about providing greater access for their schools.

**Confidentiality**

This information will not be distributed to any other agency and will be kept private and confidential. The only exception to this is if you tell us abuse or neglect that makes us seriously concerned for your immediate health and safety.

**Right to Withdraw**

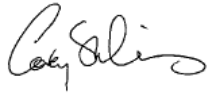
Your participation is greatly appreciated, but we acknowledge that the questions we are asking are personal in nature. You are free at any point to choose not to engage with or stop the study. You may skip any questions you do not wish to answer. This study is not required and there is no penalty for not participating. If at any time you experience a negative emotion from answering the questions, we will stop asking you the questions.

**Contact Information**

You will receive a copy of this consent form. If you have questions you can talk to or write the principal investigator, Corey Weiss at [Researcher email redacted]. If you want to talk with a participant advocate other than the investigator, you can write or call the director of our institutional review board, Dr. Ora Lee Branch (obbranch@cu-portland.edu or call 503-493-6390).

**Statement of Consent**

I have read the above information. I asked questions if I had them, and my questions were answered. I volunteer my consent for this study.

Participant Name	Date
Participant Signature	Date
<b>Corey S. Weiss</b>	<b>4/22/17</b>
Investigator Name	Date
	<b>4/22/17</b>
Investigator Signature	Date



Investigator: Corey S. Weiss;  
c/o: Professor Dr. Brandy Kamm  
Concordia University-Portland  
2811 NE Holman Street  
Portland, Oregon 97221

## **Appendix E: Statement of Original Work**

The Concordia University Doctor of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously- researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy. This policy states the following:

### **Statement of academic integrity**

As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.

### **Explanations**

#### ***What does “fraudulent” mean?***

“Fraudulent” work is any material submitted for evaluation that is falsely or improperly presented as one’s own. This includes, but is not limited to texts, graphics and other multi-media files appropriated from any source, including another individual, that are intentionally presented as all or part of a candidate’s final work without full and complete documentation.

#### ***What is “unauthorized” assistance?***

“Unauthorized assistance” refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:

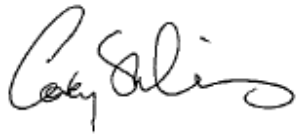
- Use of unauthorized notes or another’s work during an online test
- Use of unauthorized notes or personal assistance in an online exam setting
- Inappropriate collaboration in preparation and/or completion of a project
- Unauthorized solicitation of professional resources for the completion of the work.

## Statement of Original Work

I attest that:

I have read, understood, and complied with all aspects of the Concordia University–Portland Academic Integrity Policy during the development and writing of this dissertation.

Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly referenced and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the Publication Manual of The American Psychological Association.



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Digital Signature

Corey S. Weiss

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Name (Typed)

November 10, 2017

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Date