

Fall 10-16-2017

The College-Transition Experience: The Role of High School Teachers

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Dawn M. Lewis

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Concordia University (Portland)

College of Education

Doctorate of Education Program

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The College-Transition Experience: The Role of High School Teachers

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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 Teacher Leadership

Brandy Kamm, Ph.D., Faculty Chair Dissertation Committee

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Abstract

Given the high remediation rate in math, reading, and writing of high school seniors who matriculate to college campuses in the United States, educational leaders have explored ways to address and decrease the need for remedial courses at the postsecondary level. Many K-20 leaders have developed programs and courses to bridge the gap between secondary and postsecondary education, but high remediation rates continue to exist. The purpose of this quantitative study was to explore the role of high school teacher college knowledge in the college-transition process. The survey measured responses using a five-point Likert scale and was administered electronically to high school teachers in one large suburban school district in California. The survey contained five parts: demographic information, teacher college knowledge, teacher interactions with guidance personnel, confidence level in supporting students in areas and tasks related to the college transition, and teacher beliefs about the role of the teacher in the college-linking process. Findings indicate that teachers lack college knowledge of key transition topics, such as placement tests, financial aid, and opportunities to partner with postsecondary institutions and have few opportunities to interact with guidance personnel. This lack of knowledge may contribute to the lack of confidence and willingness to support students as they move into higher education indicated by survey results. This research may inform district and school leadership by identifying areas where the role of the teacher could be maximized as a supportive agent in the postsecondary transition process to complement current programs and the work of guidance personnel.

Keywords: remediation, postsecondary transition, college knowledge, college-linking process, student success, professional capital, human capital

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Chapter 1: Introduction

Introduction to the Problem

As high school students graduate, they face many important decisions. As the high school graduation rate has increased in the United States, so has the college enrollment rate (Symonds, Schwartz, & Ferguson, 2011). In 1982, approximately “58 percent of high school graduates planned to attend college...compared to 77 percent in 1992” (Phipps, 1998, p. 15). Over the past 15 years, those deciding to attend college have increased 31%, moving from 13 million in 2000 to 17.3 million in 2014 (National Center for Education Statistics, 2016). The need for a college education is ever more important in today’s global market to ensure that the workforce holds the skills necessary to compete in the information age. According to the National Forum on Education Statistics (2015), “65% of all jobs will require some form of postsecondary education” (p. 1).

With more students attending college in recent years, colleges report more students require remediation prior to undertaking college-level work (Daggett, 2013). Students nationwide test into remedial courses at both four-year and two-year institutions (Chen & Simone, 2016; Hodara, 2013). Remedial courses act as a type of intervention at the college level to help improve the necessary skills in reading, writing, and reading and increase the chances of degree completion (Scott-Clayton, Crosta, & Belfield, 2014). The need for remediation has been a growing problem as the high cost of remediation impacts both students and institutions (Rodríguez, Bowden, Belfield, & Scott-Clayton, 2015; Torraco, 2014). Attempts to discover ways to decrease remediation and analysis of solutions have been important topics of study in recent years.

Many causes lead to lack of college readiness and high remediation rates of high school seniors who will be first-time college students. Lack of college knowledge, lack of course rigor, high school course choices, family background, socioeconomic status, lack of literacy skills, and many more issues can influence students' abilities to move successfully through the college application and matriculation process and onto degree attainment (Conley, 2014; Kealey, Peterson, Thompson, & Waters, 2015). No one area—such as high school course work or family background—causes students to be successful after high school, and not just one deficit leads to student failure at the postsecondary level. The issue of student success is complex, and researchers continue to explore the elements that impact college readiness. However, with only a few college counselors on high school campuses and a greater population of students enrolling in college, more needs to be done to support students in the college-transition process. Expanding the role of the teacher in the college-linking process is one way to increase student postsecondary success (Martinez & Welton, 2014; Shamsuddin, 2016; Tierney & Garcia, 2008).

Background, Context, History, and Conceptual Framework for the Problem

Remediation: Background, Context, and History

Schooling in the United States has evolved as the country has expanded and the population has grown. Ensuring that students have access to different types and levels of schools has been one of the cornerstones of the American way. What began with a focus on learning and strong literacy skills has now shifted to a school system that focuses on college and career preparation (Conley, 2014; Hammack, 2016). At the postsecondary level, students have many options in terms of two-year colleges, four-year institutions, and more specialized career and technical pathways and certificate programs. No matter which course students take, all postsecondary choices require a basic level of skills and knowledge.

With the increase in students enrolling in two- and four-year institutions, many students arrive at their postsecondary school in need of remediation. In 1998, the National Center for Education Statistics reported that 78% of all higher education institutions offered remedial courses, with 100% of two-year institutions providing remedial classes (Phipps, 1998). With the rising costs of tuition at four-year institutions, community colleges in the United States currently house approximately 40% of undergraduate students (Monaghan & Attewell, 2015). Of this 40%, approximately 25-40% of the student population requires remediation (Hodara, 2013, p. 1).

Researchers have analyzed different causes and solutions to understand the problem and assess the effectiveness of current programs. In analyzing factors related to remediation, some researchers have looked at high school course taking, GPA, and test scores and their impact on postsecondary success and as predictors of college readiness (Bahr, 2012; Ferenstein & Hershbein, 2016). Many researchers center their attention on demographics in terms of socioeconomic status, parent level of education, and as a cause for poor basic skills (Bailey, Jeong, & Cho, 2010; Fike & Fike, 2008). Additionally, some researchers have investigated the role of different support personnel on college readiness, such as the school college counselor (Belasco, 2013; Bryan, Moore-Thomas, Day-Vines, & Holcomb-McCoy, 2011; Griffith, 2016).

Other researchers looking at the problem of remediation have analyzed the impact of programs aimed at increasing postsecondary success. Advanced placement courses, dual enrollment program, early and middle colleges, Advancement via Individual Determination (AVID), Upward Bound, and Gaining Early Awareness and Readiness for Undergraduate Program (GEAR UP) represent examples of programs that educators implemented to increase college readiness for all student populations. Research on the effectiveness of these programs is

mostly limited to a few studies that focus on single school sites or single states (Crouse & Allen, 2013; Huerta, Watt, & Reyes, 2013; Woodcock & Beal, 2013).

Moreover, the research on remediation and factors related to it consists mainly of large-scale quantitative studies of longitudinal data or qualitative studies consisting of interviews with students and educators. Many of the longitudinal studies make use of databases with information dating from 1988 to 2002 (Bailey et al., 2010; Bryan et al., 2011; Hill, 2008; Klevan, Weinberg, & Middleton, 2016). Qualitative studies in remediation and college readiness are typically limited in scope to interviews from one school site or area (Griffith, 2016; Hill, 2012; Shamsuddin, 2016). Few, if any, studies survey teachers regarding college readiness topics and their role in the college-linking process. The college-linking process constitutes the different requirements and steps throughout the high school to college transition: doing college research, taking college preparatory and required courses, completing college applications, writing college essays, preparing for college entrance and placement exams, applying for financial aid, and more.

Conceptual Framework

The foundation of this study is based on several different theoretical concepts, namely those related to the development of professional capital and Conley's theories related to college readiness. These theories explain how students develop college readiness skills and the importance of professional capital in impacting the college transition process. Hossler and Gallagher (1987) argued that students learn in stages. During the high school years, students are exploring their postgraduation options. The more exposure students have to information related to the college matriculation process, the more they will be able to make appropriate decisions related to their postsecondary pathways. Perna and Thomas (2008) asserted that many different

influences impact student development, and teachers play a key role not only in preparing students academically but also in presenting and explaining key elements of the college-transition experience. Hargreaves and Fullan (2012) expand on these theories by arguing that teachers with strong professional capital create environments where students can build social capital. Thus, this study will focus on the professional capital of teachers in one district to discover ways, based on the findings, to increase their capital.

Most traditional high school campuses provide college support services through their guidance staff. College counselors (also known as academic advisors) make up part of the guidance staff. With most of the college knowledge and support housed in the guidance office at high school sites, the professional capital related to the college-transition is limited to a few individuals on campus. College knowledge is familiarity with college requirements, college choices, college exams and applications, college essays and scholarships, financial aid options, and more. With the social capital of students developed over time and through many avenues, the more professional capital on each school campus, the greater students will understand and have exposure to the requirements and options related to postsecondary schooling (McKillip, Rawls, & Barry, 2012). Therefore, teachers can play a greater role in the college-linking process through their development of college knowledge. By training teachers and expanding teacher college knowledge, the college-going culture will be strengthened through increased exposure to college information, support of more personnel, and stronger relationships among faculty and students (Holland & Farmer-Hinton, 2009; Shamsuddin, 2016).

The main component upon which this study is based is Conley's (2010, 2014) four keys to college readiness. Three of the keys focus on academic and critical thinking skills, but one major component of success in higher education is knowledge of and acquisition of transitional

skills. The more students understand the tasks involved in transitioning from secondary to postsecondary work, the more likely they will achieve success at the next level. The role of the teacher does not have to be limited to academic preparation, but can be expanded to address Conley's fourth key to college readiness. Therefore, when all faculty and staff on a high school campus combine their professional capital through strong networks of relationships and interactions, the more developed and effective is the resulting social and cultural capital of the student body (Holland, 2016; Perna, 2015).

Statement of the Problem

High school students spend four years preparing for their postsecondary pathways. While some students decide to enter the workforce or military, many students opt to apply at two-year and four-year institutions or technical/vocational schools. Many postsecondary schools require students to take a placement test, which determines their starting point for basic skills courses, such as reading, writing, and math and also act as prerequisites for higher-level courses. California remediation rates mirror the national rate, with approximately 40% of incoming students needing remediation in one or more areas (Chen & Simone, 2016; Hammack, 2016; The California State University, 2016).

One explanation for this deficiency is a lack of the basic skills needed to be successful at the college level (Ben-Peretz, 2011; Hill, 2012; Shamsuddin, 2016). However, another reason may possibly be the lack of college knowledge and overall understanding of and preparation for the matriculation requirements and course rigor (Conley, 2005, 2007). At the local community college, student remediation rates in the district of study mirror those of California at large, with approximately 50% of students attending the local community college and about 40% placing into remedial courses. To address the lack of college readiness among its graduates, the school

district made changes to curriculum, added guidance counselors, strengthened its AVID programs, expanded free afterschool tutoring, and added instructional coaches to enhance teacher effectiveness. One area that is underexplored and underutilized is the classroom teacher as a support agent in the transition to college.

Purpose of the Study

Many educational leaders in K-16 education proposed solutions to or ways to decrease the need for remediation at the postsecondary level. Many of these solutions focus on the creation of programs at the secondary level to increase basic skills and strengthen the connection between high school and college. The purpose of this quantitative study is to explore the role of the teacher in the college-linking process by surveying high school teachers in one large school district to identify areas of strength and weakness related to knowledge of the postsecondary transition. As students move through grades 9-12 and then onto college, high school teachers play the largest role in students' lives since they interact with them daily.

All high school teachers in one large suburban district in southern California will have the opportunity to complete a survey online that utilizes a five-point Likert-scale. The findings of this study may inform district and school leaders regarding the knowledge base school teachers already have as students transition to postsecondary educational pathways to complement the work accomplished by guidance personnel. The results of this study can inform district and school leaders by providing information about types of college knowledge teachers lack and ways in which teachers are willing to help students through the college application and matriculation process. By increasing professional capital through increased teacher college knowledge, teachers may feel more confident and be more willing to play a larger role in supporting students and partnering with guidance personnel to create a stronger college-going

culture on high school campuses that may work to decrease the number of students needing remedial courses.

Research Questions

To understand how much college knowledge is housed in the faculty of one district, a survey tool will be used to measure high school teacher college knowledge in four key areas. The survey begins with questions about simple demographics related to content area and years of teaching experience. The main part of the survey has four sections, each related to the four research questions: Teacher College Knowledge, Teacher and Guidance Personnel Partnership, Teacher Confidence in the College-Transition Process, and the Role of the Teacher in the College-Linking Process. Each section aims to measure the level of teacher understanding, confidence, and willingness to play a supportive role in the college transition.

1. To what extent, if any, do high school teachers feel confident in their college knowledge?
2. To what extent, if any, do high school teachers feel supported and informed regarding college information from guidance personnel?
3. To what extent, if any, do high school teachers feel confident supporting students' college-transition process?
4. To what extent, if any, do high school teachers believe they should play a role in the college transition process?

Rationale, Relevance, and Significance of the Study

This quantitative study fills a gap in the research by exploring the role of the classroom teacher not only as a major contributor to academic preparation of students but also as a supportive role in the college decision, preparation, and matriculation process. Although

secondary teachers are typically viewed solely as content experts, this study will investigate one school district's level of college knowledge and the teachers' capacities to help students through the high school-to-college transition process. This study will use quantitative methods through survey research using statistical procedures.

Many studies exist on the role of the student, parent, or college counselor in the college-linking process, but there is limited research on the role of the high school teacher as a support agent (Shamsuddin, 2016). Researchers studying the problem of remediation often focus on longitudinal data or qualitative data (Bailey et al., 2010; Engberg & Gilbert, 2014; Hill, 2012; Royster, Gross, & Hockbein, 2015). Quantitative studies in this area have largely analyzed student transcripts, predictors of postsecondary success, demographic patterns, or issues with the placement test tool itself (Ferenstein & Hershbein, 2016; Fike & Fike, 2008; McNulty, 2011). Moreover, previous studies on the transition from high school to college have focused on specific programs, such as Advancement via Individual Determination, dual enrollment, Advanced Placement, and GEAR UP (An, 2013; Cahalan & Goodwin, 2014; Huerta & Watt, 2015; Jones, 2013).

Results of this study will serve to inform district and school leaders to explore the role of the classroom teacher and invest in the development of human capital and systematic changes to create a more extensive and effective college-going culture that aids all students in their postsecondary transition. This study aims to analyze the role of the teacher in the college transition process and increase the college-going culture on the high school campuses of the district of study. By identifying areas of strength and weakness in teacher college knowledge and understanding the confidence level and willingness of teachers to play a supportive role in the college-linking process, district and school leaders can develop ways to maximize and utilize the

human capital. New programs and systematic changes to communication and trainings could provide additional information and assistance to students as they matriculate to the postsecondary level and complete all the requirements for enrollment.

All stakeholders could potentially benefit from this study. Teachers could receive training and in-services that match their needs in the area of college matriculation. With more informed teachers, students benefit from faculty who could encourage and assist students with their college questions and needs. Parents could have an additional partner who helps them navigate the often confusing and overwhelming task of college matriculation. High school college counselors can multiply the knowledge base on campus by training teachers with updated information related to college requirements, testing, financial aid, and more. Administrators could benefit from this study by creating school programs and receiving information to make necessary changes that would strengthen the college-going culture at each high school site. As the overall professional capital strengthens on each school site increases, the effectiveness and success of the stakeholders increases as well.

Definition of Terms

A-G Subject Requirements. The California State University and University of California coursework required for acceptance into their institutions. Each letter represents the minimum number of years of coursework per subject area needed to apply to a California public university. For example, the letter B represents the required four years or eight semesters of college preparatory English. The letter C represents three years or six semesters of college preparatory math, such as algebra, geometry, trigonometry, etc. (Venezia, Kirst, & Antonio, 2003).

Advancement via Individual Determination (AVID). AVID is a program offered at thousands of schools both nationally and internationally. Its mission is to close the achievement gap and increase college readiness for all students (Bernhardt, 2013).

College-Going Culture. A school environment that emphasizes college as a postsecondary option for all students where faculty and staff regularly provide access to college materials, speakers, trainings, programs, support, and information. Student understanding of college application and preparation process is increased by the conversations and opportunities provided by the school environment and programs (Holland & Farmer-Hinton, 2009).

College-linking Process. Transition from secondary to postsecondary education in which faculty and staff at the high school level can help. The obligation of the high school to prepare, guide, and support students in their postsecondary pathways (Hill, 2008).

College Readiness. Student possession of the skills, attitudes, knowledge, and competencies necessary for success at the postsecondary level without having to remediate in basic skills courses (Conley, 2014; Scott-Clayton et al., 2014).

Dual Enrollment. Programs that allow students to take college courses while still enrolled in high school. Some dual enrollment programs offer courses on the high school campus, while others have students attend the local community college. Students can sometimes earn both high school and college credit at the same time (Klopfenstein & Lively, 2012).

Early Assessment Program (EAP). The California State University system designed this program to address the high remediation rate of its incoming freshmen. Juniors take the EAP in the form of an objective and written test to assess their basic skills in reading, writing, and math. By measuring college readiness while in high school, the EAP seeks to address the problem of remediation prior to college entrance (Kurlaender, 2014).

Expository Reading and Writing Course (ERWC). Instructional leaders in the California State University system designed this course in 2003 to increase college readiness and academic literacy of incoming freshmen in the areas of reading, writing, and critical thinking. Hundreds of schools across California offer it during the senior year of high school. If students pass the class with a C or higher, they enter their postsecondary studies in the California State system at college level English (Fong, Finkelstein, Jaeger, Diaz, & Broek, 2015).

Guidance. The staff on a high school campus that guides students through their high school years and through the postsecondary transition in terms of academic choices, completion of high school and college entrance requirements and exams, and support for scholarships. They have access to information related to postsecondary options and provide resources and workshops to support students in the college-linking process. Guidance counselors, college counselors, and academic advisors are interchangeable terms (Robinson & Roksa, 2016).

Human Capital. Skills, competencies and knowledge that people have in an organization that increase the value, productivity, and effectiveness of the organization (Hargreaves & Fullan, 2012).

Matriculation. The process of becoming a student at a college or university (Castleman, Owen, & Page, 2015).

Placement Testing. Assessments in mathematics, reading, grammar, and writing that are given upon college admission to determine the correct placement in the respective courses. Placement tests can be computer-based or paper-based tests (Sparks & Malkus, 2013)

Postsecondary. Any type of education following the secondary (high school) level: two-year and four-year institutions along with technical and vocational schooling (Symonds et al., 2011).

Professional Capital. The continual growth and function of the professionals in an organization, which strengthens as human capital and social capital increase (Hargreaves & Fullan, 2013).

Remedial Education. Also known as Developmental Education, remedial education is instruction in the basic skills (reading, writing, mathematics) to address deficiencies in these respective areas to raise students' overall academic competencies (Attewell, Lavin, Domina, & Levey, 2006).

Social Capital. The relationships and social connections among people in an organization that contribute to the growth and success of the organization and the individuals (Bryan et al., 2011).

Teacher Confidence Level. In general, confidence relates the assessment of a person's belief in his or her skills to accomplish a task. In this study, it is the level of familiarity teachers have in their understanding and awareness of each of the elements related to college readiness and the transition to postsecondary studies (Nolan & Molla, 2017).

Assumptions, Delimitations, and Limitations

Assumptions

The assumptions of the current study include the following:

1. The participants will have access to a computer, tablet, or smart phone that enables them to retrieve district email and the survey link.
2. The respondents completing the survey are high school teachers in the targeted population sample.

3. The survey instrument measures teachers' college knowledge, teacher confidence in supporting students in the college transition, teachers' perception of their role in the college transition process, and teachers' interactions with guidance personnel.
4. The teachers completing the survey will respond honestly to each statement.
5. The teachers completing the survey will have a basic understanding of the terminology used throughout the survey that relates to college requirements and testing, financial aid, and college matriculation.

Limitations

This study has several limitations that could impact the findings. First, the study is limited in its scope due to only surveying teachers from one school district. The teachers in this district may have similar backgrounds and experiences that could affect the answers and not provide an accurate measure of general high school teacher college knowledge. Another limitation of the survey is the three-week range of time and time of year that teachers have to complete the survey. This limited time frame and end-of-the-year timing may affect the number of teachers who respond. Moreover, the survey will be conducted via the Internet through an email link. It is possible that someone other than the intended recipient could complete the survey, but it is not likely since the link will be sent through school district email. Teachers self-report the data, which can also impact the findings.

Fourthly, since no demographic information will be collected that relates to gender or school site, it is possible that the results reflect teachers who work at one or a few sites only or may be influenced by an unequal gender ratio. Similarly, if more inexperienced teachers or more experienced teachers respond to the survey, the data collected may not accurately represent the college knowledge or confidence level of the teachers at large. Lastly, participants may not have

answered the survey questions honestly. This may be due to lack of time, lack of clarity of questions or terms, or if they felt badly about their limited knowledge, lack of confidence, or lack of desire to play a role in students' college transition.

Delimitations

Several steps have been taken to limit the scope of the study. Only teachers from one district will be surveyed. Also, only high school teachers will receive the email with the link to the survey to limit the findings to high school teacher college knowledge. Moreover, since the survey will take place during one three-week range, only teachers working during that time frame will have access to the survey.

Summary

Many factors impact student college readiness. No one course, program, person, or book will prepare students for success at the postsecondary level. However, not all students matriculate successfully or arrive to college prepared for their studies. Remediation costs both students and colleges in terms of money, time, and personnel; thus, researchers continue to investigate ways to increase college readiness and student success at postsecondary institutions that could benefit all stakeholders. In addition to implementing programs on high school campuses that address college preparedness, districts can invest in developing professional and human capital by maximizing and utilizing the skills and capacities of their teaching faculty and staff for the greater benefit of the students (Shamsuddin, 2016).

This quantitative study fills the gap in the literature by focusing on the role of the high school teacher as a supportive agent in the college-linking process. Many studies have analyzed the impact of school programs, academic courses of study, and guidance personnel, which all influence the success of students in their postsecondary pathways. However, few, if any, studies

focused on the most prevalent type of personnel on the high school campus, that of the classroom teacher. This survey research will begin the conversation of the role the teacher could fulfill in the college transition process by measuring first the level of college knowledge that high school teachers possess. Other variables that will be investigated are the confidence level of the high school teacher in their college knowledge, their willingness to support students in the transition process, and their interactions with guidance personnel.

In Chapter 2, a review of relevant literature related to college readiness, remediation, and programs created to increase postsecondary success is presented. Chapter 3 contains a description of the study, research methodology, and data analysis that will characterize the research process. Chapter 4 will outline the data results of the survey and analysis of the data. Chapter 5 will provide a summary of the findings, conclusions based on the data analysis, and recommendations for school and district leaders.

Chapter 2: Literature Review

Introduction to Literature Review

The importance of a postsecondary education is at the forefront of many educational conversations as the global market demands more skilled workers than ever before (Martin, Galentino, & Townsend, 2014; McKillip et al., 2012; Symonds et al., 2011). However, American students continue to lag behind their international peers, and lack of college readiness prohibits many students from successful completion of postsecondary degrees (Fleischman, Hopstock, Pelczar, & Shelley, 2010; Holland, 2016). Although many programs for secondary students at the national and statewide levels have attempted to increase student success in higher education, students continue to struggle with degree completion and remediation in the United States (Hill, 2012; Perna & Jones, 2013; Sparks & Malkus, 2013; Torraco, 2014; Venezia & Voloch, 2012). These programs help many students, yet because teachers have daily access to students that can influence and guide their college decisions, educators play a key role in supporting students in their postsecondary pursuits (Shamsuddin, 2016). Therefore, the more equipped teachers are to assist students in the college transition process, the more students will receive the information and support they need to make both informed and appropriate individual postsecondary choices.

The goal of this study is to investigate the level of teacher college knowledge in one southern California school district where remediation at the postsecondary level remains consistently high. College knowledge includes information regarding different types of colleges, the process of choosing majors, application requirements (transcripts, letters of recommendation, SAT/ACT scores, college essays) financial aid, placement tests, and more. Although academic and cognitive skills impact remediation, this study seeks to investigate the gaps in teacher

understanding of the college matriculation process and the level of teacher support for students as they transition to postsecondary institutions.

College readiness is a key factor in postsecondary success. Although academic preparation is critical to success in higher education settings, researchers have identified many other skills and competencies that students need to navigate the college transition process (Conley, 2005, 2010; Perna & Jones, 2013). Conley (2005, 2010) argued that students' attitudes and dispositions also play a vital role in student success. Such skills as time management, goal setting, and self-awareness can impact achievement in higher education. Moreover, Jones (2013) asserted that student knowledge of financial aid and navigating college matriculation process can help open access to colleges and increase college readiness.

In addition to these elements that influence student postsecondary success, one area that is underexplored in the literature is the role of the teacher as a support agent in the college transition. This study will explore the level of understanding that high school teachers have in relation to college readiness, college matriculation at two- and four-year institutions, college remediation, and other issues related to the transition to the postsecondary level. Although family, peers, and guidance personnel play vital roles in the formation of student understanding regarding college matriculation and preparedness, secondary teachers also are highly influential as they advise and prepare students for their future years of schooling. To review the literature, a variety of search engines were utilized and many sources were reviewed. These include ProQuest, ERIC, Google Scholar, EBSCO along with books, student dissertations, and educational publications. Search terms included *college readiness*, *college knowledge*, *remediation*, *high-school-college disconnect*, *postsecondary education*, *secondary education*,

ERWC, college placement, college matriculation, AVID, charter schools, dual enrollment, EAP, Common Core State Standards, and more.

Current literature will be examined related to college readiness in terms of its significance at the international and national levels as well as how national and California state programs seek to prepare high school students for postsecondary pathways. This review will provide the conceptual framework that drives the study in terms of the importance of how students form their view of college along with the role of the teacher in influencing and increasing college readiness among students in relation to social context theory. Additionally, this study is supported by social capital theory (with subsets in human and professional capital), which emphasizes the importance of relationships as key sources of institutional information (Coleman, 1988). This study is also rooted in college readiness theory that discusses the importance of the student-teacher relationship and the need for increased adult support and guidance for students to gain workable and effective college knowledge beyond what current programs and systems offer (Conley, 2014).

With the growing need for a college education, this literature review examined the state of college readiness, focusing on the problem of remediation in basic skills and its effects on students and institutions. With the high number of students requiring remediation across the United States, the current systems in place to support students and decrease remediation were examined (Hafner, Joseph, & McCormick, 2010; Venezia & Voloch, 2012). A review of national and state programs that have attempted to increase college readiness and student success at the postsecondary level were reviewed along with the ongoing problem of the high school–college disconnect. The literature review concludes with a discussion of the role of the guidance

counselor on high school campuses and the need for more schoolwide, systematic approaches to provide secondary students with assistance during the transition to college (Shamsuddin, 2016).

Most studies related to college readiness and the disconnect between secondary and postsecondary education are qualitative in nature, utilizing teacher and/or student interviews, focus groups, and observations to highlight emergent themes and identify critical areas in need of reform to increase student success in higher education settings. Additional studies on college readiness and college knowledge focus on the role of the guidance counselor and are also qualitative in nature (Engberg & Gilbert, 2014; Hill, 2012). Some researchers in this area utilized mixed methods, conducting case studies that analyzed groups of students or the impact of certain policies or curriculum (Farmer-Hinton, 2011; Griffith, 2016; Stone-Johnson, 2015). Most quantitative studies on this topic are longitudinal in nature, and researchers primarily utilized databases of information from student transcripts or test results to explore the effectiveness of certain programs or to determine correlation between student demographics, course selections, and/or remediation and postsecondary success (Bailey et al., 2010; Bryan et al., 2011; Royster et al., 2015).

Conceptual Framework

Student Development of College Knowledge

This study is rooted in the theoretical concepts of student development and college readiness presented by many scholars, such as Hossler and Gallagher (1987), Coleman (1988), Tinto (1993), Perna and Thomas (2008), and Conley (2010; 2014). Hossler and Gallagher (1987) claimed that students develop their understanding of the college process in stages, based on previous research from Chapman (1984) and Litten (1982). The three-stage model includes students' predispositional attitudes toward college, the search process, and the steps involved in

choosing a college. This model describes the learning process as students gain more information about the college application and enrollment processes through different means. This theory emphasizes the importance of the time prior to college and the many factors (parents, teachers, peers, information, etc.) that influence students at each stage (Hossler & Gallagher, 1987).

One major component of student development is that they receive accurate information regarding postsecondary opportunities and options. Studies indicated that in addition to family and demographic background, secondary school experiences contribute significantly to student college knowledge and decision making (Hossler & Stage, 1992; Radcliffe & Bos, 2013).

Therefore, school leaders can utilize student development theory to create systems and a sustainable college-going culture that exposes all students to in-depth college information over the course of the middle and high school years. Holland and Farmer-Hinton (2009) defined college culture as “environments that are accessible to all students and saturated with ever-present information and resources and on-going formal and informal conversations that help students to understand the various facets of preparing for, enrolling in, and graduating from postsecondary academic institutions” (p. 26). Kim and Nuñez (2013) referred to college-going culture as “cultural capital at the school level” (p. 86).

Because students develop their understanding of higher education in a series of stages, the people and experiences involved in that process are critical to student growth and success. Coleman (1988) argued that social capital leads to the creation of human capital. Students gain social capital through exposure to several components, such as support, relationships, and information (Bryan et al., 2011; Holland & Farmer-Hinton, 2009). As students interact with school personnel, they gain the necessary knowledge and skills for postsecondary success and develop their *habitus*, “the internalized system of thoughts, beliefs, and perceptions that is

acquired from the immediate environment” (Perna & Jones, 2013, p. 14). Students without social capital from their families and other institutions rely on the school context, with ongoing exposure to college information as a vital component in the development of their habitus and overall understanding of postsecondary endeavors (McKillip et al., 2012; Perna & Jones, 2013). Studies of student persistence and retention emphasized the importance of the classroom experience and interactions with faculty as key influences that help students develop vital competencies necessary for success in higher education (Huerta et al., 2013; Tinto, 1993).

As students exist and learn in social context and not in isolation, the teacher plays a fundamental role in facilitating student development (Martinez & Welton, 2014; McKillip et al., 2012). In addition to students developing in stages, Perna and Thomas (2008) argued that student development is a result of longitudinal influences beginning early in schooling through secondary levels. Different inputs and layers impact student choices—social/economical, school, family, and student internal contexts. Thus, the school experience plays a formative role in most students’ lives. When social capital of knowledge combines with an ethic of care, schools can create a culture with more productive and effective student–faculty relationships (Holland & Farmer-Hinton, 2009). The professional capital of teachers, therefore, is integral to the development of students and involves transformation of the school culture (Hargreaves & Fullan, 2012). The development of professional capital comes as a result of the collective individual capital (skills, competencies, resources) each educator in a school or district contributes to the community at large (Fullan & Langworthy, 2013). Thus, the more social capital schools have, the more there are “groups working hard in focused and committed ways to bring about substantial improvements” (Fullan & Hargreaves, 2012, p. 33).

In addition to utilizing social development and social capital theories to understand the scope of college readiness, this study is informed by Conley's (2010, 2014) four key components: cognitive strategies, content knowledge, learning skills and techniques, and transition skills and knowledge. While most educators are committed to the first three keys, it is the last key that drives this study. Conley outlined the concept of college knowledge by identifying different types of transition knowledge and skills that students need to be successful in their postsecondary pathways. Knowledge of these five categories can inform school leaders as they design curriculum and programs to enhance the school college-going culture: contextual, procedural, financial, cultural, and personal. The development of these skills and acquisition of transition knowledge are essential components of postsecondary success (Holland, 2016; Tierney & Duncheon, 2015).

The Expanding Role of the Teacher

In addition to the development of social and human capital, this study seeks to explore the role of teachers in a broader context. The concept that each level of schooling is responsible for preparing students for the next level is a common understanding of the importance of vertical alignment (Lym, 2014). Thus, each teacher has a responsibility to prepare students for their upcoming skills and competencies necessary for success at the subsequent level. Integral to the success of education is the effectiveness of the teacher, known as teacher efficacy. To prepare students successfully and comprehensively for further studies after K–12 schooling, teachers need to be effective instructors in their areas of expertise so that student learning is meaningful and significant (Kleinssaser, 2014).

Beyond pedagogical and content area expertise, secondary teachers act as institutional agents in developing and sustaining the school's college-going culture (Perna & Jones, 2013).

Osher et al. (2012) argued that teachers need culturally competent pedagogy that includes instructional approaches and content that are culturally sensitive, match the varying abilities of their students, and address learner deficits. On campuses with great diversity, large student populations, and low counselor-to-student ratio, teachers can help fill gaps by assisting students through the college transition process (Perna, 2015; Shamsuddin, 2016).

Therefore, students benefit from informed and knowledgeable secondary teachers who can guide them not only in their specific content but also in their postsecondary interests and pursuits (Bausmith & Barry, 2011; Martinez & Welton, 2014). Conley (2010) asserted that one key to college readiness is college knowledge, which he defined as:

an understanding of processes such as college admission, including curricular, testing, and application requirements; college options and choices, including the tiered nature of postsecondary education; tuition costs and the financial aid system; placement requirements, testing, and standards; the culture of college; and the level of challenge present in college courses, including the increasing expectations of higher education. (p. 41)

If teachers are at the forefront of student experience and interactions in school settings, teachers can utilize their college knowledge to guide and support students through the college transition process. This exposure to more college information builds cultural capital at the school level and both strengthens and widens the support system for college enrollment (Kim & Nuñez, 2013).

Review of Research Literature and Methodological Literature

A Historical Overview of the American High School System

Since the creation of the American secondary education system, the purpose of the high school years has shifted considerably. The period of 1910 to 1940 is known as the High School

Movement since more and more communities invested in secondary public education. Between 1910 and 1935, the number of youths who graduated from high school grew from 9% to 40% (Goldin & Katz, 1999, para. 6). At this time, “secondary education was transformed into training ‘for life,’ rather than ‘for college’” (Goldin & Katz, 1999, para. 13). The value of a high school diploma increased as that allowed students to not only prepare for college, but also the workforce (Hammack, 2016).

As schools were funded and controlled by local communities, the United States school system often lacked equality in terms of guidelines, accountability, curriculum, and instruction (Cusick, 2014; Goldin, 1999). Legislation in the past 20 to 30 years has greatly impacted the role of education, moving local control into state and federal domains (Cusick, 2014). With the 2001 No Child Left Behind act, educational leaders and institutions became more accountable for individual and organizational growth and progress. Recently, with the adoption of Common Core State Standards, the federal government has tried to unify the public-school system around a set of rigorous standards to ensure equal schooling across stateliness with an emphasis on literacy development. With the need for graduates with higher education and completion of degrees and specialized knowledge, the purpose of secondary education is shifting back to a focus on college readiness (Conley, 2010). According to Hammack (2016), “today the goal is for high schools to graduate all of their students ready for college and careers” (p. 97).

The changing role of community college. Community colleges have offered students an alternative to the traditional four-year university for many years. These two-year institutions provide a less expensive higher education pathway and often serve lower-income and nontraditional students. The United States has over 1,000 community colleges serving approximately 13 million students. In the fall of 2012, “45% of all U.S. undergraduates” (Martin

et al., 2014, p. 221) were enrolled at a community college. Community colleges once served as places to develop new skills, take courses for career advancement, refresh knowledge, or participate in recreational or enrichment classes. Currently, some businesses view community college as forums to train workers in one-year certificate programs or prepare students for specialized career pathways (Nickoli, 2013). With the new student success movement driving the direction of many community colleges, the current emphasis focuses on the importance of degree completion. However, only 19% of students who begin at a community college will graduate with a bachelor's degree (Martin et al., 2014, p. 223). Thus, students who enter community colleges with greater academic skills, college knowledge, and soft skills are more likely to benefit from the vocational training or capitalize on the degree pathway than students who are underprepared or are placed in remedial courses.

The importance of a postsecondary education. Research findings indicate that whether students attend technical schools, community colleges, or four-year institutions, postsecondary education has benefits for both individuals and society at large (Barrow, Brock, & Rouse, 2013; Gardner, Jeweler, & Barefoot, 2011; Martin et al., 2014; Symonds et al., 2011). One hundred years ago, approximately 2% of high school graduates in the United States attended college. Today, that number is almost 70% (Gardner et al., 2011, p. 4). Although many valuable postsecondary pathways exist, completion of a college degree remains a valuable commodity in today's information age. According to Symonds et al. (2011), "Nearly 70 percent of high school graduates now go to college within two years of graduating" (p. 6). Despite these large numbers of students enrolling in college, only approximately 30% of 27-year-olds in the United States have a bachelor's degree or higher (Symonds et al., 2011, p. 9). Moreover, most researchers and scholars agree that "a college education improves an individual's opportunities for economic

security in today's marketplace" (Venezia et al., 2003, p. 6). In addition to increased income, college certificates and degrees create a stronger workforce, decrease unemployment rates, increase personal fulfillment, and build a stronger economy (Darling-Hammond, 2010; Holland, 2016; Kinzie et al., 2004). According to Hooker and Brand (2010) and Abel and Deitz (2014), college graduates will out earn noncollege graduates by approximately \$1 million over the course of their lifetime, and Avery and Turner (2012) argued that "expected lifetime earnings associated with a college degree have increased markedly over time" (p. 176). When people have greater income, they rely less on government support and programs and contribute more to society through "higher productivity, enhanced government revenues and enhanced social equity" (Kinzie et al., 2004, p. 4). Thus, the importance of postsecondary education is ever-increasing as the world shifts from industry-based markets to the information age.

In current international standings, American students rank below their counterparts in terms of reading, math, and science. According to 2012 Programme for International Student Assessment (PISA) results, out of 24 countries tested, the United States ranks approximately (due to possible sampling errors) 17th in reading, 27th in math, and 20th in science (p. 1). Moreover, the United States ranks 15th out of 20 industrialized nations in number of 25- to 34-year-olds with bachelor degrees (Rothman, 2012). Some researchers have argued, however, that these numbers do not accurately reflect current U.S. standings due to overrepresentation of student scores from the most disadvantaged schools caused by a sampling error. A readjusted ranking places the U.S. 6th in reading and 13th in math (Carnoy & Rothstein, 2013). Sjøberg (2015) added that due to translation issues, complex statistical analysis processes, and lack of transparency, PISA results are problematic. Despite potential higher achievement than reported by PISA, to compete in the global market, students will require advanced training and education

as changes take place in technology, business, economics, and more (Blackboard Institute, 2011; Perna, 2015). Studies predict that 60% of the jobs in the near future will require a postsecondary education as opposed to less than half of that number back in the 1970s (Carnevale, Smith, & Strohl, 2010, p. 13).

However, data suggests that American students will struggle to compete with their international peers as they lack the critical thinking and problem-solving skills necessary to meet the demands of the 21st century (Venezia & Jaeger, 2013). Many blame this lack of college readiness on the low levels of rigor in high school and the lack of alignment between high school and postsecondary institutions (Daggett, 2013; Jendian & Dinnion, 2012; Rothman, 2012). To confirm students' lack of preparation, ACT scores in 2016 revealed that only 25% of college-bound students who took the ACT were prepared for the challenges of college-level work in the four core areas: reading, mathematics, English, and science (ACT, 2016, p. 4). Additionally, Daggett (2013) noted that "Among college-bound seniors, only 43% met college-ready standards, meaning that more college students need to take remedial courses" (p. 7). This percentage aligns with the number of students who require remediation at the postsecondary level (Blackboard Institute, 2011).

The definition and importance of college readiness. Each level of education has the responsibility to prepare students for the next level. As elementary teachers train students to succeed in middle school, high school teachers prepare students for postsecondary paths, both career and technical and traditional professions requiring higher education. This concept of vertical alignment is a critical component of setting students up for success (Shore, Dunaway, & Campbell-Whatley, 2016). Research supports the need for high school teachers to have a thorough understanding of the concept of college readiness (Rodríguez et al., 2015). Many

educational leaders have attempted to define college readiness. This term used to mean that students took the necessary courses and completed the requirements to meet college eligibility (Conley, 2007). They earned a certain grade point average and took courses that seemingly prepared them for entry-level postsecondary classes. With so many freshmen entering college unprepared for the academic rigors and collaborative and literacy demands of the changing workplace, the definition of college ready continues to evolve (Komarraju, Ramsey, & Rinella, 2013). Now, college readiness is an all-encompassing term for not only academic eligibility but also the social and cognitive skills along with the contextual knowledge and understanding to navigate higher education systems and pathways (Conley, 2014; Royster et al., 2015).

Although high school graduates may complete the courses to be eligible to enroll in colleges, many studies show that students entering college today are not college ready. Sparks and Malkus (2013) analyzed data collected by the National Postsecondary Student Aid Studies (NPSAS), which allowed them to study data from both public and private institutions and the rate of remediation at both of two- and four-year institutions. Moreover, Karp and Bork (2014) completed a qualitative study by interviewing community college students and professors that focused on the different demands placed on college students, revealing the disconnect between high school and college student roles and demands. Secondary students may demonstrate high school competency by earning high grades and completing graduation requirements, but they lack the necessary skills to read, process, and understand concepts at the college level, the skill set needed to persist through challenges and obstacles, and the transition skills and knowledge to be successful (Conley, 2014; Kealey et al., 2015).

The problem of remediation and placement. As seniors graduate from high school, many prepare to enter the workforce, enlist in the military, or plan to continue their education at

a postsecondary institution. When moving into higher education, some students matriculate at two-year institutions and others at four-year institutions. In the recent past, educational leaders have noted the high rates of remediation among college freshmen at both postsecondary levels (Martinez & Bain, 2014). Nationwide, studies showed that approximately 25 to 40% of freshmen students entering four-year institutions required remediation (Chen & Simone, 2016; Hodara, 2013, p. 1; Rodríguez et al., 2015, p. 1). In recent studies, the percentage of students taking remedial courses in California mirrored the national averages. In 2007, approximately 50% of the students admitted into the Cal State System needed to remediate (Hafner et al., 2010; Hammack, 2016; Venezia & Voloch, 2012, p. 73). According to current Cal State data, 27.5% of first-time freshmen system wide needed remediation in English, and 27.4% in math required remedial coursework (California State University [CSU], 2016).

High remediation rates cause people to question the adequacy and effectiveness of high school instruction and curriculum (Ben-Peretz, 2011). Students who meet college requirements by taking the requisite courses often fail to pass placement tests that demonstrate college readiness in terms of math, reading, and writing (Bahr, 2012; McCormick, Hafner, & Saint Germain, 2013; Ngo & Melguizo, 2015). Student test scores on the Program for International Student Assessment (PISA) demonstrate that American students are falling behind their international counterparts, ranking in the middle for science, reading, and math from the 2012 PISA (Amos, 2013; Desilver, 2015). The current state of remediation in America also causes educators to reassess the K–16 alignment of curriculum and assessment approaches (Daggett, 2013; Perna & Armijo, 2014; Perna & Jones, 2013). Thus, educational leaders and policy makers in the United States continue to discuss necessary systematic and sustainable changes that will

enable students to compete with their international counterparts (Hammack, 2016; Subramaniam & Subramaniam, 2015).

Remediation causes many problems for both students and higher education institutions. For students, taking remedial courses requires additional time and money. Some students have to take extra math and English courses as prerequisites to general education requirements, delaying their movement through the general education process (Bettinger, Boatman, & Bridget, 2013; Cho, 2015). Remediation requires students to pay additional funds for books and supplies and earn credits that are not transferrable to their degrees (Rodríguez et al., 2015). Moreover, the extra time and funds associated with completing remedial work often prohibit students from achieving their educational goals and impact their momentum (Adelman, 2006). Torracó's (2014) research revealed that "40% of students never complete their remedial courses, hindering their access to college-level courses" (p. 1198).

To complicate the issue of remediation, some study findings indicated that placement tests do not accurately place students in correct course levels, causing colleges to use different indicators to measure student readiness (McNulty, 2011; Ngo & Melguizo, 2015; Scott-Clayton et al., 2014). Among the colleges that use standardized tests to place students into math and English courses, the cut-off scores often vary from institution to institution, making the concept of college ready or "just academically prepared" (Fields & Parsad, 2012, p. viii) problematic and un-uniform. Also, colleges vary on how often students can take placement tests or the timing of the initial test, limiting their testing attempts or time to prepare. Thus, students incur financial costs as well as opportunity costs. Many community colleges utilize the ACCUPLACER placement test developed by College Board or the COMPASS developed by ACT (Bettinger et al., 2013; Scott-Clayton et al., 2014).

Students take either electronic or paper tests and can get their results quickly based on cut-off scores that determine placement into transfer level or remedial courses. Due to administrative and opportunity costs, most colleges do not use multiple measures to determine placement and rely solely on placement test scores (Fain, 2012; Ngo & Kwon, 2015). School admission and matriculation officials often review high school GPA, course sequences, grades in core academic classes, AP test scores, and even ACT or SAT scores. Although the use of standardized tests as placement tools provides fast scoring options, use of multiple measures have proven to be accurate and reliable yet more costly in time and personnel (Ngo & Kwon, 2015; Scott-Clayton et al., 2014).

In addition to costs to individual students, colleges also incur great costs to fund remedial programs. Remediation is such a widespread issue that as of 2008, almost every community college offered remedial courses (Fike & Fike, 2008). According to Rodríguez et al. (2015), one million students enter community colleges every year, and 70% of them require remediation (p. 1). Different scholars have attempted to identify the cost to colleges for offering remedial programs. One cost of remediation is the placement testing, which has been estimated to cost anywhere from \$300,000 to \$875,000 per institution, including necessary personnel, materials, time, and more, although this cost is offset through federal Pell grants (Rodríguez et al., 2015, p. 2). However, Martinez and Bain (2014) cautioned policymakers since there are no uniform measures of the costs of remediation and different means of reporting data. To establish more uniform data reporting of student remediation in the first years of college, the Education Commission of the States created a reporting framework so that policy makers and educational leaders could have accurate data and could make reforms based on student needs (Education Commission of the States, 2014).

In California, it is estimated that the Cal State University (CSU) system alone spent \$9.3 million on remedial education in 1995 (Tierney & Garcia, 2008, p. 3). Approximately ten years ago, CSU remediation costs were estimated at \$3,800 to \$5,500 per year per student, which totaled between approximately \$28 million to \$42 million (Tierney & Garcia, 2008). Current estimates put the cost of remediation to U.S. institutions at closer to \$7 billion (Scott-Clayton et al., 2014, p. 371).

Nationwide solutions to the problems of remediation. Educational leaders have sought to decrease remediation and increase college readiness and postsecondary success through the creation of programs and school reforms.

School restructures. Educational leaders in the United States have developed both nationwide and statewide programs to increase college readiness and decrease remediation. One solution to increase college readiness and success in postsecondary pursuits has been school restructures. One type of school restructure is the middle college, which originated in New York in the 1970s through grants from the Carnegie Foundation. In this model, students attend a small high school (limited to 450 students) on a college campus (Lieberman, 2004). Researchers studying middle college suggested that students have increased academic engagement, attendance, and increased grade point average (GPA) among the study's participants (Wilson, 2015). The most statistically significant results of the study indicated that students who attended middle college high schools increased their GPA compared to their GPA while at traditional high schools, indicating increased college readiness.

In 2002, the Bill & Melinda Gates Foundation created the concept of the Early College High School (ECHS) to increase college access and degree attainment, drawing from the middle college model. At ECHSs, students can earn college credits while attending high school as a

result of the high school–college partnership (Lieberman, 2004). As of 2016, 280 early college high schools have opened in the United States (Haxton et al., 2016). Woodcock and Beal (2013) interviewed three graduates from different ECHS programs in Texas. Each of the students commented on the significant academic preparation that attending an ECHS offered them and the importance of peer support and relationships. However, none of the three students indicated that a teacher or counselor had a significant impact on their college transition or success. In an experimental study Haxton et al. (2016) conducted, results showed that students enrolled in ECHSs were more likely to enroll in college and earn a postsecondary degree. Although both ECHS and MCHS programs generally show positive results, research on their success is limited and access to these opportunities is minimal across the United States due to limited locations and number of school sites.

Another type of school restructure that has taken root in the American educational system is charter schools. From 1992 with the first charter school to 2013, over 6,000 charter schools in the United States now serve over two million students (Clark, Gleason, Clark Tuttle, & Silverberg, 2015). Charter schools are public institutions that create a contract (or charter) with a charter authorizer and offer an alternative to traditional public education. Most charter schools tend to be smaller with a median size of approximately 250 students and have more flexibility and freedom with their budgeting, scheduling, and personnel decisions (Halqachmi, 2013; Hammack, 2016). Although few studies have been conducted on the impact of charter schools on student achievement and college readiness, one study of 33 charter middle schools indicated that charter schools are more effective with disadvantaged students in urban areas (Clark et al., 2015). Although charter schools continue to expand, researchers continue to assess their effectiveness at increasing college readiness and preparing students for postsecondary success.

School programs. In addition to school restructures, programs at the district and school levels can help students prepare for postsecondary opportunities. Two precollege programs available to help students transition to college are Upward Bound and Gaining Early Awareness and Readiness for Undergraduate Program (GEAR UP). Upward Bound began in 1964 and serves students of low income and first-generation college students (Glennie, Dalton, & Knapp, 2015). Moreover, “In 1998, Congress authorized GEAR UP to increase the rate at which low-income students are prepared to enroll and succeed in higher education” (Glennie et al., 2015, p. 964). GEAR UP differs from other college readiness programs in that services are offered to whole grades of students versus a selection or group. However, few studies have examined the success of these programs in terms of tracking students in their postsecondary studies. Cahalan and Goodwin (2014) indicated that Upward Bound had positive effects on degree completion, but Glennie et al.’s (2015) analysis of longitudinal data showed that participation in these programs had mixed results on secondary and postsecondary success and persistence rates when compared with nonparticipants in these precollege access programs.

One local solution district leaders support to help students prepare for college is participation in and access to the international program Advancement via Individual Determination (AVID). AVID originated in 1980 to help prepare students for college eligibility. Currently, 16 countries have AVID programs, and nationwide in the United States, 48 states offer AVID to elementary through high school students (Bernhardt, 2013). Traditionally, AVID programs serve lower income, first-generation college students and students in the middle who would benefit from extra services and tutoring (Huerta & Watt, 2015). In recent years, the AVID mission statement has evolved from college entrance and eligibility to college and global readiness for all, recognizing the need for students not only to be accepted into colleges but to be

ready for the rigor of postsecondary coursework. Although some studies show the success of AVID students at postsecondary institutions, not all districts offer AVID so access to this college readiness curriculum within the school day is not equitable (Huerta et al., 2013; Llamas, Lopez, & Quirk, 2014). In the surveyed district, a majority of the comprehensive high schools and 75% of the middle schools offer AVID as an elective. Of the 18,000 students at these schools, approximately 6% or 1,000 students participate in the AVID program (AVID Center, 2016).

Common Core State Standards. Another nationwide initiative that addresses college readiness is the adoption of the Common Core State Standards (CCSS). Created by a group of educators and policy makers in 2009, the CCSS address students' basic skills in which students remediate: reading, writing, and mathematics. National standards enable educational leaders to measure student learning and success in terms of meeting objectives and learning targets, regardless of school or personal demographics (Rothman, 2012). CCSS emphasize critical thinking, argumentative writing, close reading, integration of technology in English/language arts, and more coherence, real-world application, and rigor in mathematics (Shore et al., 2016). These skills represent fundamental competencies that students need at the postsecondary level (Conley, 2014; Phillips, 2015).

Districts nationwide chose to adopt the Smarter Balanced Assessment (SBA) and/or the Partnership for Assessment of Readiness for College and Careers (PARCC) as the testing tool. For 2015, eight states and the District of Colombia reported results for the PARCC. Of the states reporting scores, an average of 40% of 10th and 11th grade students scored college ready in English Language Arts. Mathematics results ranged from 20-30% of the student population identified as college ready in Algebra II, Geometry, and all levels of Integrated Math (Partnership for Assessment of Readiness for College and Careers, 2016).

In California, which largely administered the SBA, results from the first 2015 administration of the California Assessment of Student Performance and Progress (CAASPP) standardized tests indicate room for growth. Of the over 400,000 eleventh grade students tested, 56% met or exceeded the English language arts/literacy standards and 29% of students tested met or exceeded the math standards (California Department of Education [CDE], 2015). However, these initial results of the first statewide assessment of the CCSS continue to demonstrate a wide achievement gap (CDE, 2015).

In the surveyed district, SBA results for both 2015 and 2016 show approximately 70% of all students who were tested met or exceeded English/language arts standards and almost 60% of students districtwide met or exceeded math standards. Because SBA results are in the initial stages, it is unclear how national standards have impacted college readiness on a large-scale. However, this data shows that approximately 30-40% of students have not met the standards in English/Language arts and mathematics, which matches the 30-40% remediation rate at the local community college.

California Landscape of Secondary Graduation and Postsecondary Matriculation

California high school graduation rates have increased over the past five years. With a nationwide average of approximately 75%, California high school students graduate at a rate of 82% as of 2016. This rate is up from 2015 and has increased almost 10% since 2010. Moreover, the dropout rate decreased in 2016 among California students by almost 1% down to 10.7 in 2015 (California Department of Education, 2016a). Although the number of students enrolling in transferrable programs at the California community colleges is consistently around three million students each Fall, the retention rate has increased to 86% as of 2015, up from 80% ten years earlier. For students enrolling in community college at the basic skills (remedial) level, the

retention rate mirrors that of the transfer student, up approximately 5% over the past ten years (California Community Colleges Chancellor's Office, 2016). This data indicates that California students have a strong interest in pursuing their education after high school.

The increase in retention at the community college level directly correlates with the increase in transfers. For example, the transfer rate from California community colleges into the U.C. system has increased by nearly 25% over the past ten years (University of California, 2015). In fall of 2015, 43,000 community college students transferred as juniors into the Cal State system, up from 37,000 in 2010 (CSU, 2016). As the graduation rate from high schools has improved, the graduation rate at the college level has also. As of 2000, approximately 50% of first-time freshmen at Cal State campuses graduated within six years. That rate has increased to nearly 60% today. For transfer students, the graduation rate is nearly 73% within four years (California State University, 2016). Despite increases in student enrollment and transfers within the California college systems, educational leaders have had to combat the problem of remediation and find solutions to ensure even greater student success.

The Cal State University (CSU) solution. California has a wide variety of college options for students. With 100 two-year community colleges and 10 institutions in the University of California system, California also houses 23 campuses in the California State University system (Sylvia, Song, & Waters, 2010). To address—and hopefully decrease the high costs of remedial programs for the Cal State University system—the CSU leadership has made reducing the need for remediation a priority since 1997 (Hafner et al., 2010).

Early Assessment Program. In 2004, a task force was created in a joint effort by CSU, California Department of Education (CDE), and the California State Board of Education. One outcome of the taskforce was the creation of the Early Assessment Program (EAP) in which high

school juniors participate in conjunction with their state standardized testing each spring (California Community Colleges Chancellor's Office, 2015). This test consists of 15 optional multiple-choice questions embedded in both the English/language arts and math state standardized tests taken by high school juniors in the spring of each year. Eleventh grade students also complete a timed writing on the English test. The results of the EAP function as a measurement of college readiness in basic skills of reading, writing, and math, providing students with scores of exempt, conditionally exempt, or nonexempt regarding placement testing (Barnett, Fay, Trimble, & Pheatt, 2013).

According to one study on the effectiveness of the EAP, early notification of students' level of college readiness has worked to reduce remediation rates (Howell, Kurlaender, & Grodsky, 2010). Kurlaender's (2014) research confirmed this finding that early indicators of college readiness are "associated with better first-year outcomes, specifically lower rates of developmental coursework, higher rates of transfer level course enrollment, and higher grades" (p. 51).

Expository Reading and Writing Course. The EAP also consists of professional development opportunities to train high school teachers in literacy instruction (Hafner et al., 2010). Both the Reading Institute for Academic Preparation (RIAP) and the Expository Reading and Writing Course (ERWC) "focus on helping teachers develop a stronger understanding of effective strategies to prepare students for college level reading and writing" (Hafner et al., 2010, p. 17).

ERWC is a course that high schools could offer to prepare students for the rigors of postsecondary reading and writing as opposed to waiting to address the remediation problem at the college level (McCormick et al., 2013). By placing the responsibility on high schools, this

shift could enable more students to come into postsecondary education ready for the rigors of college-level reading and writing without having to take remedial courses and decrease the cost of remediation at postsecondary institutions. ERWC curriculum targets students identified by the Early Assessment Program (EAP) as not college ready. Some high schools in California require students to take ERWC during the senior year while others utilize the curricular modules by placing them in English classes throughout the four years. The course focuses on building students' reading and writing skills as they relate to expository and nonfiction texts as opposed to the traditional literature-based work of comprehensive high schools (Street, Fletcher, Merrill, Katz, & Zulmara, 2008).

As of 2012, 278 of California's 1,246 comprehensive high schools had adopted the ERWC program with over 6,000 teachers trained in ERWC strategies (Jendian & Dinnion, 2012). Some schools utilize the ERWC curriculum during the senior year for students who failed to pass the EAP test as juniors and were identified as noncollege ready. Other schools present the ERWC curriculum in modules spread out over some or all years of high school (McCormick et al., 2013). In both models, students learn rhetorical strategies for reading and writing that they can utilize in their postsecondary work.

Several studies have analyzed the success of ERWC mostly through teacher and student surveys and interviews. Knudson, Zitzer-Comfort, Quirk, and Alexander (2008) studied the success of ERWC in its initial years of implementation. Students enrolled in ERWC during their senior year of 2004-2005 outperformed students who did not participate in ERWC on the augmented English/Language Arts California Standards Test, indicating a higher level of college readiness. Olsen-Rowland (2011) analyzed the impact of ERWC on English Placement Test (EPT) scores from students at 13 different California high schools. However, findings indicated

that ERWC did not have a significant impact on decreasing remediation or increasing EPT scores. In McCormick et al.'s mixed-methods study (2013), teachers found the ERWC curriculum beneficial to students as preparation for college-level reading, writing and thinking.

In this district, approximately 400 first-time freshmen enrolled at Cal State campuses across California in Fall 2015. Due to EAP and ERWC opportunities, most students do not have to take the placement tests and are declared proficient in English after passing ERWC or other course equivalents. Of all the district's graduates, only 5% did not test proficient in English, and 6% were not proficient in math, thus requiring remediation. These scores demonstrate how both the EAP, ERWC, and likely other factors and initiatives have helped to reduce remediation rates at the Cal State system as these statistics are well below the 27% CSU remediation rate for the 2015-2016 school year (CSU, 2016).

The Disconnect Between K–12 and Postsecondary Institutions

Although both national and state programs have attempted to decrease remediation and increase college readiness among high school students, the disconnect between K–12 and postsecondary institutions continues to persist (Creech & Clouse, 2013; Howell et al., 2010; Lym, 2014; Venezia et al., 2003). With low international test scores and rankings, low college enrollment compared to international counterparts, and high remediation rates in the basic skills, researchers agree that more can be done to increase cognitive and noncognitive skills so that students can matriculate successfully and handle the rigors of postsecondary coursework (Barnett et al., 2013; Huerta et al., 2013; Woodcock & Beal, 2013). Research indicates that approximately 30% of college freshmen fail to return to their four-year institution after the first year, and only 31% graduate from two-year institutions (Komarraju et al., 2013, p. 103). In light of these statistics, bridging the gap between secondary and postsecondary pathways is a critical

component for student success. Kealey et al. (2015) recommended many ideas to bridge the K–20 systems: increased communication; standards and course alignment; assessment of college readiness earlier and more often; and continuity of student data, information, and processes between secondary and postsecondary institutions.

California has different types of partnerships between K–12 and postsecondary institutions, including comprehensive and programmatic partnerships (Domina & Ruzek, 2012; Valdez & Marshall, 2013). Research shows that students in districts with strong K–16 partnerships demonstrate higher levels of academic achievement and higher completion rates of college course requirements (Domina & Ruzek, 2012). These requirements are known as A-G, with each letter representing the different subjects students must take for college entrance, such as ‘B’ for four years of English and ‘E’ representing two years of a language other than English. Many schools offer dual enrollment programs, which require collaboration among secondary and postsecondary institutions. Dual enrollment programs enable students to take college courses at a two-year college while completing their high school requirements. Studies of dual enrollment success indicate that students enrolled in this program are less likely to need remediation and have higher GPAs in their first year of college (An, 2013; Jones, 2013). D’Amico, Morgan, Robertson, & Rivers (2013) found that high school students who participated in dual enrollment courses on college campuses showed higher persistent rates in future years of college. Another study found that dual-enrolled students are more likely to enroll at four-year institutions yet outperform traditional students in community college courses (Crouse & Allen, 2013). However, dual enrollment offerings are limited to high schools near two- and four-year institutions (Klopfenstein & Lively, 2012).

Another program that enables students to prepare for college while in high school is Advanced Placement (AP) courses. Students can take college-level classes in a variety of subjects, such as biology, chemistry, calculus, English, and history. At the end of the year, College Board offers the opportunity for students to take an AP test to determine their proficiency with the material. Different colleges use the scores as proof of mastery of the material, and students can count the course as college credit at many institutions. Generally, a score of 3 out of 5 is considered passing, “but there is a move at many institutions to increase the required score to 4 or 5” (Klopfenstein & Lively, 2012, p. 62). As a predictor of success at the postsecondary level, the AP exam score and not just the taking of AP classes proved to be relevant (Shaw, Marini, & Mattern, 2012). Moreover, students from high schools who took at least three AP courses out of a large offering of AP classes performed better in college. This finding suggests that rigor correlates with college readiness (Shaw et al., 2012). Students typically have greater access to AP courses versus dual enrollment or other types of college partnerships since AP courses are taught on high school campuses by secondary teachers.

A third type of college preparatory program is International Baccalaureate (IB). IB programs promote rigor, global awareness, college and career readiness, critical thinking, and other elements that are critical to success at the postsecondary level and in the workplace. The IB Diploma Programme (DP) began in 1968 and helps to bridge the gap between the secondary and postsecondary experiences. Research studies show that students who graduate from the IB Diploma Programme attend college at a higher rate than students who graduate from traditional high schools. Although the national average of students who earn a degree after six years of college is approximately 60%, the graduation rate of students who came from an IB program is

84% (Bergeron, 2015, p. 2). Students who participate in IB studies often develop the persistence and skills needed to achieve success at the postsecondary level.

Some school districts in southern California partner with the local community college high school outreach programs. Not only can students dual enroll, but they can also take college courses on their high school campus. Moreover, incoming college freshman can participate in the program designed to help freshmen transition to the college level. They apply and matriculate early and benefit by getting priority enrollment dates. This program enables college freshmen to get access to impacted courses like math and English that can be difficult to get, which can lengthen their time at the two-year institution. The local community college also offers students the opportunity to retake placement tests if they place into remedial math or English courses. They can participate in another program by taking a workshop and retaking the placement tests after refreshing their basic skills. As of this date, no studies have been conducted to assess the effectiveness of these local programs aimed to decrease remediation and increase college enrollment and overall student success at the postsecondary level.

High school–college connection. Most high schools in America have a guidance department where students can meet with academic and college advisors to help them plan their postsecondary pathways (Shamsuddin, 2016). Guidance personnel attend trainings each year to stay up to date on college enrollment and matriculation processes, testing and course requirements, changes in financial aid and scholarships, and more (Woods & Domina, 2014). This information is passed on to students and their families in a variety of ways. College presentations, college nights, college field trips and visits, and college guest speakers represent just a few of the ways that secondary students gain college knowledge. However, not all students take advantage of the resources and social capital of building a relationship with their

guidance/college counselor. Since there is a limited number of counselors at schools and limited access to the counselors, these school personnel often act as gatekeepers to college access since college information and support may not be shared equally among students (Farmer-Hinton, 2011; Perna & Jones, 2013; Robinson & Roksa, 2016; Woods & Domina, 2014). Despite efforts from both college representatives and school staff, students in the United States continue to test into remedial courses and often fail to complete postsecondary programs (Scott-Clayton et al., 2014).

Lack of college knowledge among secondary teachers. High school students gain college knowledge through many means. Outside sources include parents, friends, media, and other inputs where students gain information about college admissions, expectations, courses, financial aid, and more (Holland, 2016; Linnehan, Weer, & Stonely, 2011; Klevan et al., 2016). Secondary schools in America often provide college counseling through guidance departments and academic advisors (Engberg & Gilbert, 2014; Hill, 2012). Although students may only meet with their academic advisors a few times per year, students interact with their high school teachers almost every day for a total of five hours per week and 180 hours per year. Over the course of four years, students will spend approximately 4,000 hours in class as opposed to only a few hours attending college presentations or meeting with academic advisors. However, typically teachers do not attend the trainings that the guidance staff and administration offer to families that inform them about college requirements, changes in matriculation, and placement testing procedures and requirements since they are not the primary audience. Additionally, teachers do not have the training guidance counselors have to help students in their postsecondary transition (Engberg & Gilbert, 2014). Not only does student lack of college knowledge negatively impact students' college transition, but the underutilized role of the teacher as a source and translator of

college information inhibits students' postsecondary transition (Martinez & Welton, 2014; Shamsuddin, 2016). Developing the professional capital of high school teachers could increase the social capital of all populations of students since teachers interact with the student body at large on a daily basis.

Review of Methodological Issues

Many researchers have studied the problem of remediation, the impact and importance of college readiness approaches and programs, and the roles of college counseling and social capital in the secondary school. These studies fall into three main categories: qualitative, mixed method, and quantitative. The majority of studies appear to be qualitative, consisting of case studies, interviews and focus groups with students and teachers, and data drawn from observations and fieldwork. The second greatest body of research is quantitative, with many studies utilizing the data from longitudinal studies conducted approximately 15 years ago.

Studies on remediation. In examining the problem of remediation, most researchers have utilized quantitative methods by reviewing high school and college transcripts. Researchers analyzed course takings, course completions, math and English levels, test scores, GPA, and other variables to identify predictors of college readiness or cost of remediation (Ferenstein & Hershbein, 2013; Hoyt & Sorensen, 2001; Roth, Crans, Carter, & Ariet, & Resnick, 2001; Royster et al., 2015; Scott-Clayton et al., 2014). Some researchers also analyzed specific variables and demographics to look for patterns in remedial placement and college retention, such as gender, socioeconomic status, school size, and ethnicity (Bailey et al., 2010; Hoyt & Sorensen, 2001; Fike & Fike, 2008). Other researchers used transcript data to analyze the effect of placement into remedial courses on student persistence in college (McNulty, 2011). In addition to these larger studies, other researchers used transcript data to examine a certain

subgroup. Huerta et al. (2013) analyzed transcript data of a smaller sample size of only AVID students to assess the impact of the AVID program and identify variables that impacted college readiness. Researchers who focused on transcript data indicated that high-level math classes, higher high school GPA, and rigorous course takings better prepare students for college-level expectations and decrease the likelihood of remediation. Although this information is valuable to help understand potential correlations between key demographics and remedial placements, transcript data can only provide one piece of the remediation puzzle. Transcript data fails to acknowledge the nonacademic factors that may also influence remediation rates, such as levels of student college knowledge, support networks and personnel, and availability of college resources and information.

Studies on college readiness programs. Although educational leaders and policymakers have developed many reforms and programs to increase college readiness and decrease remediation, research studies to determine their effectiveness are often limited. Several researchers have examined the effectiveness of early college high schools, middle college high schools, and charter schools (Farmer-Hinton, 2011; Woodcock & Beal, 2013). These studies are often qualitative, consisting of interviews with teachers and students to determine variables that lead to college enrollment and success. Researchers concluded that these specialized schools are effective due to increased support, smaller school size, and exposure to college through first-hand experiences.

Only a few studies analyzing the effectiveness of school restructures contain quantitative data. Haxton et al. (2016) conducted a longitudinal study of early college high schools (ECHSs) by analyzing high school in terms of achievement and graduation and college outcomes related to enrollment and performance. Researchers found that students who participated in ECHSs

showed increased college enrollment and degree completion over students who attended traditional high schools, with a focus on underrepresented students. One mixed-method study of middle college high school (MCHS) students included a student focus group and quantitative data, focusing on attendance, GPA, and dropout statistics (Wilson, 2015). Based on qualitative data, Wilson concluded that students felt more supported from teachers and staff and experienced more flexibility at MCHS than at traditional high schools. As a result of quantitative analysis, Wilson found that students' GPAs increased due to MCHS enrollment. Although these researchers utilized many types of methodologies, most studies on school restructures are limited in scope due to sample size and do not have longitudinal data to confirm the long-term impact of these school reforms.

Two school programs that educators use to increase college readiness are AVID and GEAR UP. Researchers investigating the effectiveness of these programs often utilize a variety of methods through student and teacher interviews, surveys, and analysis of transcript data and student outcomes (Cahalan & Goodwin, 2014; Glennie et al., 2015; Llamas et al., 2014). Researchers indicated that students who participated in AVID had higher college retention rates than non-AVID students, increased college readiness transition skills, and valued the support of school personnel and availability of resources (Huerta et al., 2013; Llamas et al., 2014). Researchers have found mixed results on the effectiveness of GEAR UP (and similar precollege access programs), with the greatest effectiveness occurring with traditionally underrepresented students (Venezia & Jaeger, 2013). Although these qualitative and quantitative measures allow the student voice to provide authentic and honest feedback on the value of these approaches, minimal published research shows the large-scale effect these programs have on student postsecondary success.

Some researchers have examined California's EAP and ERWC programs to determine their impact on remediation and college preparedness. Some studies contain quantitative measures, focused on test scores and student data to determine the success of these early assessment tools and targeted ERWC curriculum (Fong et al., 2015; Howell et al., 2010). Based on their analysis of EAP and EPT data, Fong et al. (2015) suggested that participation in EAP decreased the need for remediation by significant amounts. Other studies contain data from surveys and interviews from students and teachers regarding the influence of ERWC, with most participants indicating the positive effects of the new literacy curriculum (Hafner et al., 2010; McCormick et al., 2013). These studies reveal some information regarding the initial implementation of ERWC in the past few years, but educational leaders would benefit from additional studies that show correlation between taking ERWC and success in college composition courses.

College guidance at the secondary level. With the increasing importance of postsecondary education, many studies focused on the role of the college counselor in building social capital for students. Most researchers conducted qualitative studies, including interviews with counselors and students regarding the effectiveness of interactions with high school college counselors. In some qualitative studies, students indicated that they did not receive adequate or equitable information regarding college, AP courses, dual enrollment, or details related to prerequisites for rigorous courses (Bell, Rowan-Kenyon, & Perna, 2009; Martinez & Welton, 2014). Some researchers determined that certain student populations (low income, Hispanic students, etc.) often have some access to college information but may lack support personnel to help them understand or apply the knowledge to their college decision process (Griffith, 2016; Hill, 2012; Shamsuddin, 2016). Wang's (2014) qualitative study confirms the positive role that

educators can have in helping students persist in their studies and supporting them in their high school to college transition. These studies provide helpful information confirming the importance of school personnel (teachers, counselors, staff) in supporting students during the college-linking process.

In conclusion, most of the studies on college readiness are small-scale qualitative studies involving interviews with small sample sizes or focus groups with school personnel or students. Moreover, many of the quantitative studies analyze large databases of transcript information or standardized test results. To date, no quantitative studies are available that survey teachers' college knowledge or interaction with guidance personnel or specific research involving the role of the high school teacher in the college transition process. Many studies advocate for the increased role of the teacher in the college transition process, but no studies were focused on survey data of teachers and their understanding of college matriculation, college requirements and prerequisites, college-level coursework, or financial aid or their perception of their part in the transition process.

Synthesis of Research Findings

College readiness and the problem of remediation represent pivotal topics in education discussions today. Studies show that many students graduate from high school in need of remediation in the basic skills of reading, writing, and/or math (Jendian & Dinnion, 2012; Sparks & Malkus, 2013; Venezia & Jaeger, 2013; Venezia & Voloch, 2012). In addition to cognitive and academic skills and knowledge, college readiness also encompasses many other aspects of student development. Conley (2014) identified several essential areas that secondary school educators can develop in students to prepare them for the transition to postsecondary studies, including learning skills and transition skills and knowledge. Research in the areas of college

knowledge and college transition skills highlight key traits that help students achieve success at the postsecondary level.

Studies show that the problem of remediation has plagued students as they transition to college, demonstrating the need for systemic changes at both the secondary and postsecondary levels (Roth et al., 2001; Sparks & Malkus, 2013). Not only does remediation drain funds from these institutions, but it adds opportunity costs to students (Bettinger et al., 2013). Although programs at the national, state, and local levels help certain student populations gain access to college information, resources, and support, not all students have access to these specialized programs such as AVID, charter schools, and early and middle college high schools (Barrow et al., 2013).

Contributors to college readiness. Researchers agree that many sources contribute to college readiness, such as family background, student course taking, and student college knowledge. Several studies confirmed that parental educational background is one of the key predictive factors of college enrollment (Fong et al., 2015; Howell et al., 2010; Sylvia et al., 2010). With greater understanding of how to apply to college, matriculate fully, and navigate financial aid, students have an advantage over those whose parents lack the skills and knowledge to support students in the transition process. Another key to success in higher education is rigorous coursework at the secondary level (Conley, 2014; Jendian & Dinnion, 2012). Studies showed that students who take advanced placement courses and high-level mathematics or four years of math in high school are more likely to be college ready (Huerta et al., 2013; Roth et al., 2001). Researchers who studied how students access college knowledge identified the importance of human capital and the need for more systematic support for students to increase the college-going culture (Bell et al., 2009; Shamsuddin, 2016; Venezia et al., 2003).

Interactions with key school personnel also contributed to student postsecondary success. Studies revealed that when students have close ties and effective meetings with guidance/college counselors, they feel more confident in the matriculation process (Belasco, 2013; Bryan et al. 2011; Farmer-Hinton, 2011). These studies' findings suggest that the level of professional capital on a school campus positively influences student postsecondary success. Other studies show that the more time counselors devote to college advisement, the higher the four-year college-going rate (Engberg & Gilbert, 2014). However, studies also reveal high school guidance personnel carry high caseloads of students and lack of time can impact the access and equity to college knowledge and resources (Hill, 2012; Shamsuddin, 2016).

Other studies highlighted the role of the teacher not only as an academic catalyst but also as a source of college knowledge and mentorship in the college transition. Findings from several qualitative studies indicated that students often cited teachers as playing critical roles in their postsecondary preparation and success (Griffith, 2016; Huerta et al., 2013; Llamas et al., 2014). Researchers also found that students felt teachers needed to discuss college more and take initiative in helping students navigate college pathways (Hill, 2012; Stone-Johnson, 2015). Since access to college counselors is limited due to caseload and large school populations, researchers recommended that school leaders design many programs and school structures to create a strong college-going culture involving all school stakeholders to increase a college-for-all environment (Royster et al., 2015; Stone-Johnson, 2015).

Programs that impact college readiness. Educational leaders and policymakers have sought to bridge achievement gaps and increase college readiness in many ways. Early college and middle college high schools are one type of restructure that have proven to have a positive impact on student postsecondary success in terms of academic preparation and persistence

(Wilson, 2015; Woodcock & Beal, 2013). Although minimal research has been completed on the effectiveness of charter schools in America (Clark et al., 2015; Farmer-Hinton, 2011), research on the effectiveness of dual enrollment suggests charter schools are effective for certain student populations. This effectiveness may correlate with increased college enrollment programs where students can take courses at the college while still enrolled in high school. Research findings suggest that students who take college courses are more prepared for the level of rigor encountered in higher education and outperformed students in traditional secondary settings (An, 2013; Crouse & Allen, 2013). AVID is another program that seeks to increase college readiness for all students. Although AVID is not available at all schools, studies show that AVID students persist in college at higher rates and have strong development of the skills needed for college transition (Llamas et al., 2014).

In California, educators from the Cal State University system created the EAP and ERWC programs to increase college readiness and decrease the need for remediation at the college level. Several studies show that teachers believe ERWC to have positive impact in increasing students' literacy skills (McCormick et al., 2013). Fong et al. (2015) utilized quantitative data that indicated that students who took ERWC scored higher on the EPT than non-ERWC students. However, other studies revealed mixed results in decreasing remediation rates and impacting EPT scores at the CSUs (Olsen-Rowland, 2011).

Problems related to college readiness. Researchers have identified different factors that contribute to the disparity in college knowledge and resources to support student college transitions. Despite many national and state programs to increase college readiness, research shows that a lack of skills and college knowledge persist among high school graduates (Ben-Peretz, 2011; Hill, 2012; Shamsuddin, 2016). The literature presented many reasons for this lack

of college readiness. One key reason cited by researchers is the lack of equity in college information due to the location of the school (urban and rural), disparities in funding, and lack of sufficient guidance personnel (Burleson, Hallett, & Park, 2008; Martinez & Welton, 2014; Sylvia et al., 2010; Tierney & Garcia, 2008). Moreover, studies showed that students get information disconnected from context that is needed to help them understand the material or often lack access to college information, counseling, or support (Holland, 2016; Linnehan et al., 2011; Shamsuddin, 2016).

In many states, students with English as a second or third language (ESL) face obstacles to become college ready. According to Flores and Drake (2014), “English language learners (ELLs) are one of the fastest growing populations in the United States” (p. 1). States address the issue of ELLs through state-funded programs and local education agencies (LEA). In California, Title III funds based on the No Child Left Behind Act are allocated to LEAs to help increase the success of ELLs and their access to curriculum and services (CDE, 2016b). In the surveyed district, only 10% of the ELL population met or exceeded the college-ready standard for English/Language Arts and 11% for math on the 2016 SBA, according to SBA online data (Harrington, 2016). Based on this data, many ELLs who enter postsecondary institutions will likely need remediation in the basic skills as is consistent with research data (Flores & Drake, 2014). In addition to having to take placement tests, ELLs attending postsecondary institutions often have to take the Test of English as a Foreign Language (TOEFL) exam to measure their proficiency in English.

Many researchers also cited the disconnect between high schools and colleges in terms of curricular alignment and expectations as a cause for lack of college readiness and remediation (Conley, 2014; Martinez & Welton, 2014; McCormick et al., 2013; Tierney & Garcia, 2008).

This disconnect often results from a lack of collaboration and partnerships between secondary and postsecondary educators and leaders. Researchers also cited the disconnect between teachers and guidance personnel and lack of professional development and preservice teacher training on college readiness as a contributor to lack of success at the college level (McKillip et al., 2012; Stone-Johnson, 2015).

Overall, the research supports the need for systemic change to the structure of schools and the roles of both the teacher and guidance counselor in order to increase college readiness and college-going culture that could better prepare students for success at the postsecondary level (Griffith, 2016; Martinez & Welton, 2014; McKillip, et al., 2012; Osher et al., 2012; Stone-Johnson, 2015; Tierney & Duncheon, 2015). Stone-Johnson (2015) recommended adding college advising elements to teacher preservice programs to ensure that teachers develop means to help students learn the necessary soft skills for college success. Farmer-Hinton (2011) encouraged educational leaders to develop informal and formal means of creating college-going culture and the need for school and district leaders to ensure equity of access to resources and information. Royster et al. (2015) asserted the importance of early emphasis on college readiness prior to high school, which can have a significant positive impact on the college application process. Holland (2016) and Martinez and Welton (2014) recommended that schools need greater resources—such as faculty, curriculum, and instruction—that can increase students’ college knowledge to provide equity in social and cultural capital. Perna (2015) argued for more time and attention as necessary to help students navigate, process, and utilize college information with help from all school faculty and staff. To increase student success through the college entry process, researchers recommended that all stakeholders become more involved in the college matriculation/linking process (Bernhardt, 2013; Brown, Wohn, & Ellison, 2016; Llamas et al.,

2014; Shamsuddin, 2016; Stone-Johnson, 2015; Woods & Domina, 2014). These studies provide a solid background of data to guide district and school leaders to enact changes in their approach to developing an effective and sustainable college-going culture through increasing the professional and human capital on high school campuses. Each of these recommendations provides insights on approaches and areas for further investigation and application at the secondary school level.

Critique of Previous Research

Researchers have been investigating factors related to college readiness and the problem of remediation for many years. A handful of studies cannot provide an accurate picture of the issues and problems related to college enrollment, access, placement, and success. Each study is unique in its approach and focus, but they are not without their limitations and flaws. Although findings are important and can identify areas of strength and weakness in education today, many studies would be strengthened by additional research using updated longitudinal data, larger sample sizes, or follow-up studies to confirm findings and conclusions and fill in gaps of information.

Need for current longitudinal data. Many of the quantitative studies that assess college readiness factors utilized data from longitudinal studies. Although these studies used data that was collected over several years that added depth and more comprehensive implications to their findings, educational leaders and policy makers would benefit from more recent data on current theories and approaches related to college transition issues. Moreover, these studies' findings are impacted by the use of a secondary data source that may have influenced their findings. Hoyt and Sorensen (2001) explored how schools employ the clearinghouse strategy of providing resources for the college transition but failed to offer support in utilizing those resources. They used data

from the High School Effectiveness Study (HSES) conducted between 1988 and 1994. The lack of current studies illustrates the need for research related to college readiness and the role of the high school teacher in the college-linking process. Hill (2008) also utilized data from HSES to investigate the college-linking process and brokering strategies. Their findings are important when informing school leaders on approaches to college readiness, but use of updated data would reflect the current conditions more accurately. However, no specific studies of teacher college knowledge are available. Bailey et al. (2010) also used transcript data from the National Educational Longitudinal Study (NELS 88) to explore the impact of remediation on college persistence. Although their findings identify certain student populations most impacted by remediation and problems related to developmental course taking, repeating a similar study with more up-to-date transcript data could better inform educators as they seek to address the current remediation placement process.

The other longitudinal study that many researchers have used was gathered between 2002 and 2004 (ELS 2002) involving survey data from thousands of high school students, parents, administrators, and math and English teachers in addition to transcript data. Bryan et al. (2011) examined this data to explore the role of the school college counselor in the college transition process. Kim and Nuñez (2013) analyzed the survey data collected from students and parents and compared that with location of high school and other demographics to determine the impact of financial and cultural capital on college enrollment. Klevan et al. (2016) analyzed the ELS 2002 study in terms of key college influences on males. Although longitudinal studies provide value in the rich data available to researchers, this data is now fifteen years old. In light of the changes in school restructures, educational approaches and curriculum, national standards, and new national

standardized assessments, new longitudinal studies could provide more relevant data that reflect the current nature of college readiness at the secondary school level.

Gaps in information. In addition to the need for more current data to inform educational reform measures, another problem with research on college readiness is the missing information not addressed by existing studies. Many studies focus on the role of the high school college counselor in the college transition process. Woods and Domina (2014) analyzed ELS 2002 data and determined that counselor caseloads impact students' postsecondary transition. Linnehan et al. (2011) studied patterns of college counselors' postsecondary pathway recommendations when considering race, academic performance, and socioeconomic status, indicating the disparity in advisement practices among students of color and low socioeconomic levels. Similar to Linnehan et al. (2011), Shamsuddin (2016) explored how high school counselors share college information with students and the impact of communication barriers and mixed signals perceived by students. However, only one study interviewed both counselors and teachers to discuss the disconnect between teachers and counselors (Stone-Johnson, 2015). No other study discussed the relationship and communication protocols and patterns between the teacher and the college counselor. No study examined how teachers gain college knowledge or how guidance personnel interact with teachers to share postsecondary information. Studies related to college guidance are limited primarily to the counselor–parent and counselor–student relationships.

When analyzing student perception of programs that increase college readiness, many studies have limited sample size and/or scope. Actual success of these programs is uncertain since few large-scale studies have been conducted. For example, Woodcock and Beal (2013) only interviewed three students who attended early college high schools in Texas. Huerta et al. (2013) analyzed survey data from 36 former AVID students and transcripts from 85, but all

attended high school and college in Texas. When reviewing the effectiveness of dual enrollment programs, Crouse and Allen (2013) studied only students from Iowa. Limitations inherent in these studies are their limited size, limited locations, and/or participation limitations to certain student populations. Just how impactful special programs are on increasing college readiness for students at large remains unclear.

Studies that address the problem of remediation focus on many issues. Several studies on remediation focused on the aspects related to the placement test tool itself (Ngo & Melguizo, 2015; Scott-Clayton et al., 2014). Other researchers examined the cost of remediation to colleges and students (Rodríguez et al., 2015; Sparks & Malkus, 2013). Some researchers traced the course-taking patterns and impact of remediation on college persistence and transfer or degree attainment (Howell et al., 2010; McCormick et al., 2013; Royster et al., 2015; Venezia & Jaeger, 2013). Researchers even warn against the problem of understanding remediation due to the inconsistencies in tools, inaccuracies of data, and varieties of data analysis measures that impact data reporting (Bettinger et al., 2013; Martinez & Bain, 2014). However, researchers studying remediation failed to investigate many topics, such as how much information students had regarding placement tests prior to matriculation, how and how often teachers helped to prepare students for placement testing, gaps in teacher understanding of the matriculation process, and how much those gaps may have contributed to placement in remedial courses as opposed to gaps in students' academic course of study.

A critical limitation of current research is the lack of examination of the role of the high school teacher in the college transition process outside of academic preparation. Some studies focus on the influences students perceived as most influential in preparing them for college (Griffith, 2016; Karp & Bork, 2014). Other studies examined factors that influenced student

persistence once they were in college (Wang, 2014). A few studies do focus on the impact of teachers. Gillmore and Sullivan (2014) analyzed the impact of teacher experiences and beliefs on teaching and learning, but this study is limited to only seven teachers in Texas. Farmer-Hinton (2011) conducted a study of teachers and their role in college readiness, providing a platform for the teacher perspective. Although this is a four-year case study involving 116 interviews (with some overlap of participants during the study) with valuable recommendations on increasing college readiness and equitable access for all students, findings may be limited since participants included teachers at only one urban charter school. Most studies that do utilize surveys or interviews with teachers fail to explore the role of the teacher in helping students with college applications, placement testing preparation, or other components affecting college choice and enrollment.

Another gap present in current studies on college readiness is the lack of research specifically in suburban areas. Because the United States educational reforms have largely been governed by policies like No Child Left Behind Act (2001) and Race to the Top (2009), many programs focus on closing the achievement gap. Therefore, studies often centered on programs and issues related to student success in rural or urban areas (Farmer-Hinton, 2011; Hafner et al., 2010; Holland & Farmer-Hinton, 2009). Moreover, researchers also studied the traditionally underrepresented populations to determine how to increase college enrollment of minority populations and students of color (Hill, 2008; Huerta et al., 2013; Martinez & Welton, 2014). Still other researchers commented on the problem of equitable access to resources and information for students from low-income families (An, 2013; Shamsuddin, 2016; Sylvia et al., 2010). Although students from suburban areas may have higher college-going rates, remediation rates at the community college level of students in the surveyed district demonstrate that college

readiness needs to be improved at schools despite location, ethnic diversity, and/or economic status. When researchers do include the suburban population, they typically combine data from all types of schools and rarely focus solely on suburban data (Engberg & Gilbert, 2014; McNulty, 2011).

Researchers investigating college readiness often utilized quantitative data from educational longitudinal studies that need updated data to confirm findings. Also, critical gaps exist in studies that focus on certain populations or have limitations due to sample size or concentrated area of focus. The literature failed to explore in depth the role of the teacher as an important resource of professional, cultural, and human capital and proponent of college knowledge in the school system and infrastructure. Researchers examined the impact of the high school college counselor, GPA, course taking, special programs, parent background, ethnic background, income level, school size and location, and many other factors that impact college readiness. No quantitative studies specifically survey teachers and their experiences and perceptions of their role in the college linking process, gaps in their college knowledge, or their understanding of curricular alignment with postsecondary coursework.

Chapter 2 Summary

Policy makers, industry leaders, and educators agree that the importance of pursuing higher education in today's global economy is greater than ever. Due to the need for high-skilled workers, the roles of the traditional high school and community college have experienced shifts toward college and career readiness. With college- and career-ready skills largely overlapping, educational leaders are tasked with the challenge of preparing students for the great variety of postsecondary pathways (Conley, 2014). Increasing college readiness does not only mean improving academic or study skills or increasing content knowledge but requires educators to

expand their programs, revisit their approaches, and reform school infrastructures to help students develop essential transition skills.

Many approaches to college readiness at the national, state, and local levels have worked to increase college readiness and prepare students for success at the postsecondary level. Research indicated that school restructures, national initiatives, national state standards, new placement testing policies and tools, partnerships between secondary and postsecondary institutions, and new courses have helped increase college readiness for many students. However, an area that has not been addressed in current school reforms is how to better inform students about and help them through the postsecondary transition process.

Although secondary schools provide guidance through college counselors, the ratio of college counselors to students averages near 300 to 1 or greater. High caseloads hinder counselors from individual interaction and access to information about postsecondary opportunities is often inequitable (Belasco, 2013). School restructures, like charter schools, serve smaller student populations and have helped certain populations experience greater access to higher education. Some school-based programs offer support and seek to close the achievement gap, such as AVID, but small percentages of students participate in AVID or have access to its support system and tools. Despite many national, state, and local attempts to increase college readiness, high remediation rates continue to persist at both four-year and two-year institutions.

In California, the CSU system has worked hard to create programs to address the problem of remediation. Early college readiness screening through the EAP program enables high schools to identify students who need academic support prior to college matriculation. CSU also offers free training for secondary teachers to equip them with strategies and curriculum aligned to college courses to better prepare students for the literacy demands of postsecondary studies. The

local community college has created several programs that strengthen high school–college partnerships and increase student success. Although these efforts have helped to decrease the need for remediation at the state and local institutions, the surveyed district’s graduating seniors continue to test into community college developmental and remedial courses at high rates despite adoption of the CSU Expository Reading and Writing Course (ERWC).

Student development theory indicates that students grow in stages. Research shows that the earlier students learn about postsecondary opportunities and the more people invested in and supporting the college transition process, the greater chance for student success (Robinson & Roksa, 2016). A few national or state programs or local initiatives are not enough to reach all students nor meet the needs of diverse student populations whose cultural capital varies. The more professional and human capital on a school campus, the more the educators at each school site can create a pervasive college-going culture and prepare students as they transition to college. The continuing disconnection between secondary and postsecondary institutions and low college completion rates demonstrate a need for greater systemic approaches and stronger infrastructures at the secondary school level that provide access to postsecondary opportunities, build social and human capital, and increase college readiness.

Due to the high remediation rates across the nation and in local schools, more research needs to be done to investigate the role that the classroom secondary teacher plays in the college-linking process and to assess current high school teacher college knowledge. This quantitative study will allow the researcher to identify gaps in college information, barriers to communication with guidance personnel, levels of teacher awareness and their understanding of issues related to college choices, application process, matriculation/placement, and rigor required in college courses. Additionally, the data and findings from this study can inform this school district, along

with other districts with high remediation rates, of areas that would benefit from continued professional development. This study seeks to help all stakeholders on campus identify their contribution to the college-going culture at their school site to increase overall school support and access to postsecondary opportunities and reduce remediation rates for all students. This study will highlight areas for increased articulation between secondary guidance personnel and teachers that could help close the achievement gaps and positively impact students' college transition. Additionally, this study could identify points of articulation between high school teachers and their postsecondary partners to help increase curricular alignment and student postsecondary success.

Chapter 3: Methodology

Introduction

The transition from secondary to postsecondary education can be challenging for many students. Preparation for success at the postsecondary level is a complex process that involves many factors: participation in rigorous coursework, completion of college requirements, successful matriculation, and the development of skills needed to navigate higher education. Many people provide support and guidance as high school students matriculate and make college choices. High school counselors ensure that students take the required courses and often guide students through the application and financial aid processes (Engberg & Gilbert, 2014; Shamsuddin, 2016). Teachers prepare students by creating a firm foundation of core content knowledge and skills needed to succeed at the next educational level. However, with high remediation rates at the college level in the basic skills of math and English and low counselor-to-student ratios, teachers could play an expanded role in the college-linking process to ensure more students achieve success in their postsecondary pathways (Griffith, 2016; McKillip et al., 2012).

According to theories on student development, student understanding of college results from a process of various steps over time (Coleman, 1988; Hossler & Gallagher, 1987). Educational leaders can use this theory to develop systematic and schoolwide approaches that will help students navigate the college matriculation process. Since students gain information about college over time and in increments, many people impact student college knowledge, such as parents, siblings, counselors, teachers, and peers. Moreover, since students come to high school with varying degrees of college exposure and understanding, high school personnel can provide the social and human capital to enable students to grow academically and socially as

they prepare for their postsecondary opportunities. School and district leaders have the responsibility to ensure that the high school faculty and staff have the professional capital to guide students toward attainable and appropriate postsecondary goals.

In one large suburban district in southern California, approximately 50% of the students attend the local community college upon graduation. Of those 50%, about 40% require remediation in English, math, or both areas. While this problem may be the result of gaps in academic knowledge, other factors contribute to student success, such as study skills, knowledge of placement testing, test-taking skills, computer skills, and key transition skills needed as students move into postsecondary levels (Conley, 2014). To provide assistance to students, teachers also need understanding of the *college-linking process*: the series of activities and deadlines that students must complete to move into postsecondary institutions. Surveying teachers in this large suburban district with a high remediation rate at the local community college helped identify teachers' level of college knowledge in areas such as college requirements, application process, placement testing, financial aid options, and more. The study provided information on the types of collaborations and interactions with guidance department staff, such as college counselors and academic advisors, and can enable district leaders to plan professional development based on identified needs.

This suburban district has six comprehensive high schools with a ratio of college counselors to students at approximately 1:400. Since teachers interact with students on a daily basis, they can assist in creating awareness, promoting information, advising students, and offering support as students grow in their understanding of postsecondary options. To date, limited research has been conducted that measures teacher college knowledge and focuses on specific types of teacher interaction with guidance personnel. This study helped identify gaps in

teacher understanding of college knowledge and can serve to inform district and school leaders of areas to enhance professional development opportunities and ways to promote increased interaction among teachers and college counselors/academic advisors. The findings of this study can inform other school district leaders so they can plan professional development opportunities and create schoolwide or districtwide approaches to creating strong college-going culture on their secondary campuses by increasing the role of the teacher in the college-linking process.

Purpose of the Study

Getting a postsecondary education and graduating with a college degree have become more important milestones in today's competitive global market. In the shift from industrial age to the information age, more jobs require higher education (Daggett, 2013). Teachers have traditionally played the role of preparing students academically for success in their post-high-school endeavors. With more and more students attending college in the United States, the few college counselors on high school campuses struggle to serve the entire student population (Bryan et al., 2011). District and school leaders can utilize teacher expertise and their high-frequency interactions with students to develop a stronger college-going culture and support network for students as they navigate the college matriculation and postsecondary options and processes (Stone-Johnson, 2015).

The guidance department on high school campuses is responsible for helping students meet high school graduation requirements. For students planning to pursue higher education, guidance personnel support them throughout their high school years to help ensure that college requirements are met and students are aware of their postsecondary options. However, more students now apply to colleges and the need for advisement has increased in recent years (Shamsuddin, 2016). Guidance personnel are trained to help students, but they cannot meet the

matriculation needs of the entire student body. Teachers can support the guidance staff if they have the training and knowledge to properly advise and guide students through the steps in the college transition.

The purpose of this quantitative study was to measure high school teacher college knowledge. Research questions focused on four key areas: teacher confidence level in their college knowledge, satisfaction with college information and communication with guidance personnel, confidence in supporting students' postsecondary transition, and beliefs regarding their role in the college transition process based on survey responses from high school teachers in one large suburban school district. The significance of the study may serve to identify areas of weakness in teacher college knowledge and areas where teachers could increase their college knowledge to better support students as they progress toward to their postsecondary studies.

A quantitative survey with Likert scale was distributed to high school teachers to determine their level of college knowledge. The researcher-developed, online survey instrument was reviewed by content experts, revised, and then sent via email to the study population. The participants in this study consisted of high school teachers in one southern California K-12 unified school district that consists of six comprehensive high schools. Each high school has approximately 110 teachers. By identifying gaps in teacher understanding of the college matriculation process, district and school leaders can plan training opportunities and enhance communication protocols between guidance staff and teachers so that each high school strengthens the network of support for students as they gain college knowledge and make postsecondary decisions.

The results of this survey provided data related to the problem that guidance personnel and classroom teachers have few opportunities for interaction with each other, which causes the

college knowledge on campus to be housed in only one department instead of being spread throughout the campus. This lack of interaction limits the professional capital on campus, which then negatively impacts student development of social capital as they make key postsecondary decisions. With a stronger network of support on campus, the goal is that more students make informed postsecondary choices and understand and succeed in key milestones in the college matriculation process, such as the college application process, college choice, placement testing, financial aid decisions, scholarship applications, and more.

Research Questions

Understanding the level of teacher knowledge related to college, teachers' interactions with guidance personnel, and teachers' perceptions of their role in the transition process can help district and school leaders design meaningful ways to maximize the role of the teacher in creating an effective college-going culture on each high school campus. Identifying areas where teachers believe they can increase their support for students in their college transition can aid district leadership as they develop and utilize programs to promote student success at the postsecondary level. The following research questions identify four key areas of study related to the role of the teacher in the college-linking process:

1. To what extent, if any, do high school teachers feel confident in their level of college knowledge?
2. To what extent, if any, do high school teachers feel supported and informed regarding college information from guidance personnel?
3. To what extent, if any, do high school teachers feel confident supporting students' college-transition process?
4. To what extent, if any, do high school teachers believe they should play a role in

the college-transition process?

Research Design

A cross-sectional, quantitative survey study was created for this study to collect and analyze survey data. Conducting survey research via the Internet has become more popular in recent years and allows ease of administration with minimal costs while collecting a lot of data in a short timeframe (Fowler, 2014). Because most educators have access to email and the Internet at school and/or at home, Internet-based surveys can be successful in terms of participation due to ease of completion (Creswell, 2012). Cross-sectional survey design allows researchers to “*examine current attitudes, beliefs, opinions, or practices*” (Creswell, 2012, p. 377, emphasis in original). Much of the research on remediation and factors that influence the college transition is the result of longitudinal studies that collect data over time and qualitative studies that include interviews with teachers and guidance counselors. Thus, a quantitative approach measuring teacher attitudes and beliefs can fill in gaps in the current research on college knowledge since most studies on this topic focus on the influence of guidance counselors or the impact of student and family levels of knowledge on college matriculation outcomes.

Researchers use quantitative approaches in social science research to describe problems and test theses (Creswell, 2012). Quantitative research is often used because it is efficient and economical (Patten, 2011). In educational settings, quantitative approaches allow researchers to measure the responses of a large sample size and often generalize findings to help inform educational reforms and the development of programs (Creswell, 2012). As quantitative researchers frequently utilize surveys, studies can easily be replicated or expanded to further explore research questions and validate findings (Yilmaz, 2013). Use of surveys enables researchers “to obtain information about people’s thoughts and feelings that cannot be directly observed” (Adams & Lawrence, 2015, p. 106).

Qualitative approaches, on the other hand, are often used in research that encourages the researcher to “develop a close, empathetic relationship with the subjects being studied” (Yilmaz, 2013, pp. 312-313). To gather data on teacher college knowledge and interactions with guidance personnel, a survey provided the best means to collect information in a more efficient manner than qualitative tools. Moreover, researchers interested in qualitative study often investigate participants’ lives with in-depth interviews and observations that are not needed for this current study.

This quantitative survey study was designed to measure teacher college knowledge of secondary teachers in a suburban large K-12 district. To determine the level of college knowledge that high school teachers have regarding a wide variety of college readiness topics, the survey tool was created and used to identify areas of strength and weakness and garner data on a wide variety of topics related to teacher understanding and their perception of their role in preparing students for their postsecondary transition. The survey for this study was designed by the researcher to explore teacher interactions with guidance personnel and teacher confidence in their role in the college transition process. To best understand the target population, all high school teachers in the district had the opportunity to respond to survey questions anonymously.

Many researchers use survey research to explore patterns and describe current practices in their respective fields. Surveys can be either paper-based or web-based. Paper-based surveys accrue costs with paper, envelopes, and stamps and have a chance of getting lost in the mail or being answered by someone other than the intended respondent. According to Fowler (2014), as access to the Internet has increased, “the use of the Internet to collect survey data is rapidly increasing” (p. 5). Use of the Internet enables the entire target population to have equal access to the survey tool. Electronic surveys can be embedded in the email itself or respondents can be

invited to visit a separate website (McPeake, Bateson, & O'Neill, 2014). For this study, participants received a link via email using the survey tool, Qualtrics (see Appendix A). This web tool was chosen due to its cost effectiveness, capabilities, accessibility, privacy, and reliability. Although there are drawbacks to a web-based survey, such as low-response rates, the advantages of minimal cost and wide scope of sampling match the parameters of this research study (Fowler, 2014). The web-based survey allowed a large amount of data to be gathered in a short of amount of time from a wide variety of respondents.

Since all high school teachers had the same access through the use of the district email server, bias in the sample was minimal. Teachers on maternity leave, vacation, or family or medical leave had access to check their district email via home computers. All teachers had access to the same survey link through Qualtrics and received one reminder through the district email (see Appendix C). This reminder enabled respondents to take the survey in case they failed to see the initial email or if they forgot or failed to respond to the initial survey email request. Getting direct access to the survey link and receiving a repeat reminder are known to boost online survey response rates (Nulty, 2008).

The Likert scale has been used in survey research to measure respondent attitudes and experiences for many years since the creation of the scale by Rensis Likert (1931). The use of this scale “allows us to perform mathematical operations and statistical analysis on the values from an interval scale” (Adams & Lawrence, 2015, p. 82). This survey had a midpoint in the 5-point scale so that respondents had the option to indicate an undetermined or non-opinion so that survey results demonstrated an accurate picture of respondent college knowledge and was not skewed by forced responses.

Limited research has been done on the topic of high school teacher college knowledge and the specific role of teachers in the college-linking process. Many studies focus on the role of the guidance counselor as the main source of human and professional capital in regards to college information and transition support. However, with increased populations of students attending college in the United States, the need for increased support in the college transition process is apparent (McKillip et al., 2012). The results of this research could provide insight into areas where teachers lack specific knowledge that could benefit students. The findings could also help pinpoint key areas for guidance personnel to train and educate teachers so that college knowledge is not housed in one department with limited human resources on high school campuses.

Target Population, Sampling Method, and Related Procedures

The population of a study consists of the group of people being studied (Adams & Lawrence, 2015). The target population for this study was high school teachers, who are the most common point of contact for students throughout high school. High school teachers are defined as general education and special education teachers who teach at a grade 9-12 institution in any content area, both full time and part time. These teachers provided instruction in the high school classroom during the school year in which the research was conducted. Due to an increase in college attendance among students in the United States, college counselors struggle to support all students moving on to postsecondary studies (Shamsuddin, 2016). This target population was selected since most research on college knowledge focuses on college counselors or students (Griffith, 2016; Hill, 2012; Shamsuddin, 2016). Lacking in the available research is a picture of the teacher role in the college transition, not as an academic agent but as a source of support and information. An assessment of teacher college knowledge and their confidence and perception of

their role as a support to students in their college transition can inform educational leaders and enable them to identify information that can be dispersed to high school faculty to better support students in their college pathways.

A convenience sample was used for this study because the participants were easily accessible and available (Adams & Lawrence, 2015). The sample population for this study represented a convenience sample because they were accessible via the school district Outlook email system. The sampling frame consisted of all high school teachers at comprehensive high schools in one large, suburban school district in Southern California. The district administration granted permission to survey all teachers at the comprehensive high schools. All high school teachers at the six sites from all content areas were chosen for the study to get a thorough picture of the level of college knowledge across sites and subject areas. Participation in the survey was voluntary. The high school teachers in this district serve approximately 18,000 ninth- through twelfth-grade students that range in socioeconomic status from low to high with the majority in the middle-class range. Each of the six high schools has approximately 110 teachers, for a total population size of approximately 650 teachers, who range from first-year teachers to veterans with over 30 years' teaching experience.

A G-Power analysis was conducted to determine the sample size so that the study was not underpowered or overpowered and to determine the alpha level and effect size. A power analysis formula was used to determine the necessary sample size. According to Creswell (2012), most research in the education field uses an effect size of 0.5 and a power criterion of 0.8. Thus, with an effect size of 0.5 and a power of 0.8, the sample size (N) indicated using the Lipsey's Sample Size Table is 65. With a power of .95, the sample size grows to 105 (Creswell, 2012, p. 611). Although approximately 650 teachers were invited to participate in the survey, the desired

sample size for this quantitative study was between 70 and 105 teachers to ensure the necessary power of the sample size.

An application to do research was submitted to the school district leadership. This application outlined the purpose of the survey, research questions and design, participants, and risks and benefits to the district and school sites. The application also contained the survey instrument and consent forms, if required. Each high school principal was notified of the research proposal via email from district officials prior to the distribution of the survey link.

Email addresses were obtained through the school district website. All high school teachers in the district have an individual email address and have equal access to computers housed in their classrooms or offices (physical education teachers). Every high school teacher received an email via their work email portal with a description of the purpose and scope of the research study. Teachers could click on the link to the survey through individual classroom computers or through access to their work email via district webmail portals while at home or school. Teachers received the contact information of the researcher on the initial email and subsequent email so they had the opportunity to email the researcher if they had questions or concerns. When participants clicked on the web link to the survey, they could read additional information related to the study and provide consent before taking the survey. Information on the confidentiality of the survey was explained in detail along with directions on completing the survey. Respondent identity was anonymous and no identifiers were on the survey. The link opened to a 1-page consent form that teachers would agree to before participating in the survey (see Appendix B).

In Part I, the background section of the survey, teachers were asked to identify their main content area, years of teaching in the current school district, years of teaching experience overall,

and the main grade they teach. This information can inform district leaders if they request categorical data, such as identifying certain teachers in specific departments who desire more college knowledge or feel less confident in their ability to help students transition in their postsecondary studies. The findings of this study are not representative of all high school teachers, so results cannot be generalized, but they are still useful. Results can be used to develop a follow-up study utilizing a broader sample population to continue research into noted areas of interest.

Instrumentation

A new online survey was designed by the researcher specifically for this study. It was sent to all high school teachers in a large, suburban school district in Southern California via school district email. Teachers accessed the survey through a link indicated on the initial email. The survey consisted of five sections: Part I: Respondent Demographic Information; Part II: Teacher College Knowledge; Part III: Teacher and Guidance Personnel Partnership; Part IV: Teacher Confidence in the College-Transition Process; and Part V: Role of the Teacher in the College-Linking Process. Sections II to IV of the survey correspond with each of the research questions. All questions in Parts II to V of the survey are closed-ended using the same Likert scale, which allows all answers to have consistent coding for statistical analysis purposes (Creswell, 2012).

Part I of the survey requested demographic information utilizing menus from which participants can choose the correct information. Content areas, years of experience, and main grade level taught were listed to determine departments that each teacher belongs to and levels of experience. This data ensured that sub-groups are evenly represented and data could be reported with more specificity if requested by district leaders.

The survey was composed of 51 questions with answers measured on a five-point Likert scale (see Appendix B for the complete survey), with question 1 acting as the formal consent. The coding to score the data included the following responses: Strongly agree (5); Agree (4); Neither Agree nor Disagree (3); Disagree (2); and Strongly Disagree (1). Each question contained only one topic and was written in positive statements to decrease confusion and measurement error. Definition of terms was clarified using parenthesis in the question itself when necessary. To test internal consistency of the survey instrument since it was a new survey tool, a Cronbach alpha test was conducted.

Additionally, a mean score of 4.00 was chosen as a standard of comparison based on the 5-point Likert scale. In the absence of national, state, district, or other means related to this survey or college knowledge constructs, the score of 4.00 indicated agreement with and knowledge of the survey items. An increase in legislation at all levels of government and the development and implementation of many programs promoting college readiness exemplify the shift in the importance of preparing students for postsecondary education (Conley, 2010). With the national adoption of Common Core State Standards and the increase in college-going populations, it is more important than ever that high school teachers possess strong college knowledge (Hammack, 2016). Considering these trends, the baseline score of 4.00 on the survey represents a benchmark suitable to professionals in education who are preparing students for postsecondary success and representative of those whose knowledge can effectively guide students.

Data Collection

The research study was also presented to a panel of administrators in the surveyed district through an application to perform research. The committee considered the research proposal and

provided feedback on the study design, methodology, and survey tool. Approval from the district was followed by clearance from the Concordia Institutional Review Board (IRB). Data was then collected through a quantitative online survey with a Likert-scale coding system (see Appendix B).

Content Validity

Upon approval from the school district and university IRB, a content review of the survey was conducted to create a reliable and consistent survey tool and increase the validity of the study. The review consisted of approximately fifteen teachers from two nearby, large southern California suburban school districts. Math, English, science, history, physical education, visual and performing arts, and world language teachers from two high schools were invited to review a paper version of the survey. Teachers were asked to give feedback related to clarity of questions and to identify any confusion in survey items, directions, or terminology. They also were asked to time themselves to gauge approximate time needed to complete the survey. The survey instrument (i.e., directions and questions) was revised as needed based on feedback. These content experts were not part of the actual sample surveyed since they were teachers in nearby districts.

College Knowledge Survey Research

Following the content review, the newly revised survey was resubmitted to IRB and the district for final approval as necessary. Approximately 650 teachers received an email with the survey link. All teachers in the target population also received one reminder email on the day teachers returned from spring break. Using Qualtrics online survey tool, data from teacher online surveys was collected and tabulated. Teachers had approximately three weeks to complete the survey, and the survey link was inactive at the end of the three-week collection period. All

collected data was anonymous with no identifying factors related to gender, school site, age, or name. Survey software allowed respondents to skip questions that were confusing or ones they declined to answer. No monetary incentives were offered to participants for their participation in the research study.

Operationalization of Variables

As a quantitative study, there are both independent and dependent variables. According to Creswell (2012), an independent variable “influences or affects an outcome or dependent variable” (p. 116). Since the focus of the study was the beliefs and perceptions of the high school teacher, the independent variable remains consistent as the high school teacher. All participants were current teachers in one school district who work at comprehensive high schools. The key focus of the quantitative study measured how the independent variable of the high school teacher influences four specific dependent variables that each correlate with one section of the survey instrument.

A dependent variable is “an attribute or characteristic that is dependent or influenced by the independent variable” (Creswell, 2012, p. 115). The goal of the study was to measure the four dependent variables: teacher confidence level in their college knowledge, level of teacher interaction with guidance personnel, teacher confidence in assisting students in the college transition, and teacher perception of their role in the college-linking process.

Part II of the survey focused on teacher college knowledge confidence level related to the college transition. This variable of *college knowledge* is defined as teacher knowledge of college requirements, the college application process, college testing (SAT/ACT), placement testing/matriculation, financial aid, scholarships, and deadlines pertaining to these areas. *Teacher confidence* is defined as a level of familiarity teachers have in their understanding and awareness

of each of the elements related to college readiness and the transition to postsecondary studies. Confidence level was assessed based on how teachers rate themselves on the Likert scale, measured by their level of agreement or disagreement with each statement pertaining to a singular aspect of the college transition. Scores of 4.00 or higher indicated a high level of confidence in their college knowledge. Scores lower than 4.00 indicated a low level of confidence since on a 5.00 scale, only the 4.00 and 5.00 signify a measure of agreement with the stated survey item.

Part III of the survey focused on the level of teacher interaction with guidance personnel, often titled academic advisors or college counselors. The variable of *levels of interaction* is defined as the kind of communication teachers experience firsthand throughout the school year with guidance personnel, whether formal through classroom presentations and staff trainings or more informal, via email or face-to-face conversations, and frequency of those interactions. How teachers interact with and receive information and training from guidance personnel related to the college transition was measured separately on a Likert scale. Teachers communicated their opinions regarding their partnership experience with guidance personnel by the level of agreement or disagreement with each type of interaction—classroom visit, staff training, email, and general availability. Scores of 4.00 or higher indicated a high level of interaction with guidance. Scores lower than 4.00 indicated a low level of interaction since on a 5.00 scale, only the 4.00 and 5.00 signify a measure of agreement with the stated survey item.

Part IV of the survey focused on teacher confidence in the college-transition process. *Teacher confidence* level is defined as how teachers perceive their ability to support and assist students in activities related to the transition from high school to postsecondary studies, with emphasis on the following areas: advising students in their course choices, college choices,

college testing, college research, placement testing, financial aid, and scholarships. The dependent variable of teacher confidence was measured by a Likert scale as they self-reported their level of confidence by agreeing or disagreeing with statements related to each area of the college-transition process. Scores of 4.00 or higher indicated a high level of confidence in their ability to assist students. Scores lower than 4.00 indicated a low level of confidence since on a 5.00 scale, only the 4.00 and 5.00 signify a measure of agreement with the stated survey item.

Lastly, Part V of the survey focused on teacher perception of their role in the college-linking process. *Teacher perception* is defined as teacher belief in the level of responsibility they have and their willingness to devote time to assist students in their postsecondary transition. The different ways teachers can assist students include writing letters of recommendation for college application and scholarships, answering questions related to college testing, placement testing, financial aid, and supporting students through the process in general. This variable was measured using a Likert scale as teachers indicate their level of agreement or disagreement of how much teachers should be available to help students throughout each step in the transition process. Scores of 4.00 or higher indicated a high level of willingness to increase their role in the college-linking process, and scores lower than 4.00 indicated a low level of confidence since on a 5.00 scale, only the 4.00 and 5.00 signify a measure of agreement with the stated survey item.

Data Analysis Procedures

The survey instrument included codes using a 5-point Likert scale, often used in social science research (Creswell, 2012). The scale consisted of answers with numerical values ranging from 1-5, with 1 representing Strongly Disagree and 5 representing Strongly Agree. The data was analyzed in terms of each research question, which correlates with each section of the survey. The data is presented in text and tables to describe the results of the dependent variables

measured in the study: teacher confidence level in their college knowledge, level of teacher interaction with guidance personnel, teacher confidence in assisting students in the college transition, and teacher perception of their role in the college-linking process.

Using Qualtrics software, the data was separated based on each section as it correlated to each of the four of the research questions. Use of Statistical Package for Social Science (SPSS) to tabulate data helped minimize errors related to missing data or calculation. Percentages of survey items that were skipped were reported and only complete or nearly completed surveys were used in the final analysis to ensure interpretation of data was accurate (Creswell, 2012). Interval data was tabulated and analyzed to measure the four dependent variables: teacher college knowledge, types of interactions with guidance personnel, teacher confidence and teacher perception of their role in the college-transition process.

The data was analyzed using descriptive statistics, with a focus on mean, mode, and median scores and the spread of scores in terms of standard deviations and variance per section and specific areas of college readiness (Creswell, 2012). Data was analyzed by utilizing these descriptive statistics as they relate to the four sections of the survey and specific topics, such as level of knowledge and confidence in terms of college applications, scholarship application, financial aid applications, testing, and more. Measures of central tendency for key topics were reported to identify trends and themes in the responses. Minimal errors in calculations and data collection occurred since the survey was Internet-based, was not administered in person, and no data was tabulated by hand.

To determine scores for each section of the survey, the mean values for each section were calculated and compared to the test value of 4.00. The value of 4.00 was chosen as a baseline since the survey was designed specifically for this study and no national, state, or district mean

or score was available to use as a comparison. After this step, then the statistical significance of the difference between the mean scores and the test value was evaluated using a one sample *t*-test.

Limitations and Delimitations of the Research Design

Limitations

This research study contained several limitations that could impact the findings. Because participants self-reported, they may have been hesitant to report their honest feelings about their level of college knowledge or their desire to support students in their college transition. To limit this issue, survey responses were anonymous and no identifying information was collected except for years of service and content area. Since surveys were collected via an online instrument and not in person, the anonymity of the Internet could decrease the likelihood of dishonest answers.

Another factor that may have influenced responses is participant knowledge of the purpose of the research and its origination. Since the email contained my contact information in case participants have questions, prior history with me could have influenced how participants complete the survey. This issue was minimized by emphasizing the need for truthful responses so that an accurate understanding of teachers' college knowledge and desire to play a role in the college-linking process could be assessed. Additionally, minimal to no contact took place with the majority of the target population.

A third limitation was the time of year that teachers participated in the survey. Teachers received the survey toward the end of the school year when they are typically less inclined to do extra work. Moreover, the research study was conducted immediately prior to testing season of the Smarter Balanced Assessment and the weeks leading up to Advanced Placement testing and

final exams. The addition of one extra task during this busy time of year could have decreased the number of completed surveys. This limitation was addressed in several ways. First, respondents were offered a range of approximately three weeks to complete the survey, with one reminder to help increase participation. Another way this issue was addressed was by limiting the survey to a ten-minute time commitment. Lastly, the ease of completing the survey by clicking one link and the Likert-scale structure enabled participants to complete the survey with few obstacles or extra time constraints that come with interviews or mailing in completed surveys.

A fourth limitation of the study is the absence of prior studies using this survey instrument. Since this survey was designed by the researcher, there is no national data, state data, district-level data, or any data sets or means to use when comparing or discussing the results of this study. Due to the use of an original survey for this study, the baseline score of 4.00 was chosen for data analysis purposes. The score of 4.00 was chosen based on the 5-point Likert scale. Since a 3.00 represents a value that is inconclusive, the 4.00 value indicated that the respondent has the necessary level of college knowledge and confidence to support students in the college transition. This benchmark limits the results of this survey since using other values lower than 4.00 could alter the findings. Moreover, the survey was never piloted prior to this study, and no pre-test was administered using the survey instrument; therefore, no mean score was available to use as a comparison. To add reliability to the instrument, the survey underwent content validation utilizing content experts who helped revise and clarify survey directions, terms, and questions.

A last limitation is nonresponses. Lack of response influences the findings of the study and can cause the data to inaccurately reflect the level of college knowledge among high school

teachers in this district. The nonresponses then limit the accuracy of the findings (Fowler, 2014). Moreover, more teachers of one content area may have responded or less experienced teachers could have responded more than experienced teachers. One way this limitation was addressed was through ease of the online survey and a user-friendly survey instrument (Creswell, 2012). Also, by providing teachers with an opportunity to complete the survey over several weeks with a reminder email to ensure equal opportunity to respond likely minimized missing data or nonresponses.

Delimitations

This study had several delimitations that could impact the findings. First, the research was conducted in only one district located in a suburban area. The findings and conclusions may not accurately represent other areas of the country, state, or other schools with different demographics. Since this study utilized a convenience sample, the sample was limited to teachers who were included in the district email distribution list for high schools in the district. This sample may not represent the population of other high schools since the student and teacher populations differ across the state and country in different regions.

Another delimitation was the use of a quantitative survey tool with a 5-point Likert scale. The use of all close-ended questions does not allow respondents to explain their answers or elaborate on their beliefs or feelings. The use of a level 3 answer (neither agree nor disagree) could influence the findings since participants have the option of choosing an answer that could be categorized as inconclusive. The number of nonresponses was included in the research findings so that data was presented with accuracy.

A third delimitation of the research is in the survey tool itself. This survey instrument was designed specifically for this study and was not previously used in other research. Since limited

data could be found related to the topic of teacher college knowledge, the collected data was tested against mean scores that were not validated. Moreover, respondents may have interpreted terms in different ways, which could influence survey results. The survey tool may have terms that respondents may not fully understand or have enough prior knowledge to answer questions accurately, such as topics like the California State University Early Assessment Program (EAP), college placement tests, or the Free Application for Federal Student Aid (FAFSA). To offset any confusion, a more clarification of terms and definitions could have been available for reference on the survey tool itself.

Internal and External Validity

One issue that could impact internal validity of this study is participant self-reporting. Some teachers may feel bad if they indicate that they have limited college knowledge or if they are not willing to provide support for students in their postsecondary transition. This feeling could cause teachers to provide dishonest answers to certain survey questions. Additionally, if more teachers from one content area or more teachers with a certain level of experience respond to the survey, then the findings may be less valid.

To ensure validity of the content and terminology used throughout the questionnaire, teachers from two separate high schools in southern California reviewed the survey instrument. The respondents were asked to give feedback regarding questions and terms that were unclear or ambiguous. Participants recorded their feedback on the actual paper survey as they completed it. Feedback was used to revise the survey instrument by addressing unnecessary language, redundancy, and unclear terms or directions. Another way to increase the validity of the survey was to ensure that the questions were clear and that all recipients received the same survey with the same amount of time to respond (Fowler, 2014). To ensure internal reliability of the survey

instrument, a Cronbach alpha test was conducted for each research question. The resulting alpha scores fell above the accepted .70 range for each section of the survey.

Since this study was limited to one school district, the external validity may be limited. To generalize results and apply findings outside the parameters of the study, this survey could be administered in other states and school districts in both rural and urban areas to gain insight into the general level of college knowledge of high school faculty across the United States. In school districts with similar makeup of teacher population in a suburban area, these findings may have proximal similarity.

Expected Findings

Upon review of the survey data, a wide variety of answers and levels of knowledge are anticipated since teachers have diverse backgrounds, years of experience and varying content (Survey Part II). It is likely that most teachers, regardless of experience or content, will have limited college knowledge, especially related to college placement tests, the CSU Early Assessment Program (EAP), college entrance tests (SAT/ACT), and financial aid information, since most teachers focus on their academic content. Teachers will likely feel more confident in their understanding of A-G requirements along with the college application and scholarship requirements since they often advise students on course takings and write letters of recommendation for various scholarships. A-G requirements represent the minimum years and types of high school courses required for all applicants to Cal State and University of California institutions.

Another possible finding is that teachers have limited interaction with guidance personnel (Survey Part III). Since there are only a few guidance counselors on each high school campus, most of them focus their time on interacting with students and parents and spend little time in

classrooms or training teachers. Moreover, teachers will likely indicate that they have not had guidance personnel present in their classrooms since guidance counselors usually meet with students in the guidance office and have limited time each day to complete their responsibilities. In terms of communication via email, this data will likely vary by school site but information from guidance is directed more to students than to teachers. It was anticipated that teachers do not receive formal trainings from guidance personnel due to lack of meeting times built into high school schedules.

In terms of confidence level (Survey Part IV), high school teachers will likely have little confidence in most areas related to the college transition. Teachers will demonstrate weak confidence levels in terms of answering questions related to financial aid, college placement tests, and college websites since they do not receive formal training or routine information updates in these areas. On the other hand, teachers may have more confidence related to advising students in their specific content area course selection and writing letters of recommendation, which are routine tasks in which most high school teachers participate.

Lastly, it was predicted that teachers will desire to play a role in certain areas of the college transition but will not perceive their role to be one of a main supporter to students in other areas. In addition to writing letters of recommendation, high school teachers may be willing to support students as they make college choices, need answers to questions related to the college application, and need help with the transition process in general. However, it is possible many teachers will not perceive their role as teachers as involving time related to helping prepare students for college entrance exams, placement tests, financial aid applications, and possibly even scholarship applications.

The results of the survey will inform the literature related to many topics. There is limited research in the specific area of teacher college knowledge. Although some researchers have investigated the role of student and parent college knowledge, this study will begin the conversation of the role of teacher college knowledge and the importance of building professional, human, and social capital on high school campuses. Additionally, some researchers have studied the relationship between college counselors and students and interactions between guidance personnel and parents. However, little research has been published on communication between guidance staff and teachers.

Moreover, this study can inform district and high school leadership by identifying areas for potential professional development. Training topics could include A-G requirements, community college placement tests, SAT and ACT updates and content, financial aid information, and more. Study findings could also inform teacher preservice programs that begin to train teacher candidates for their role in the college-linking process on secondary campuses in the United States.

Ethical Issues in the Study

All data collection was completed using ethical means with sensitivity to participants. Permission to conduct research was obtained from the participating district leaders. Likewise, the research study was reviewed by the Concordia University, Portland, Institutional Review Board (IRB). Participants had the opportunity to decline participation in the research study by not responding to the email invitation. The purpose and name of the study were clearly communicated to high school principals and district leaders to ensure understanding of the study. There was no financial gain to be achieved through this research for any party involved in the study.

Additionally, steps were taken to minimize risk to research participants and to ensure that the benefits outweighed any risks. The survey tool contained no identifiers, ensuring respondent anonymity and privacy of their answers to survey questions. Participation was voluntary, and there were no negative consequences for nonparticipants or positive consequences for participants. No identifiers related to school site, name, age, or gender were part of the demographic background information, so no information related to these factors was compiled or studied or tracked back to the respondents. Moreover, the ability to skip questions minimized the risk of participants being forced to answer questions that they felt unsure of or confused by. No questions requested information of a sensitive or personal nature and all questions were limited to college readiness issues. Participation or nonparticipation in the research study did not impact social standing, promotion, or employment in the district. The use of Qualtrics for analysis of data maintained the privacy and anonymity of the respondent information. As the researcher, I did not receive the surveys or have access to participant names or identifiers. I did not participate in the study and limited my role to that of a passive agent who measured and described the data.

To reduce bias, all high school teachers at the six comprehensive high schools were invited via email to participate in the survey. All high school teachers have access to a computer either in their own classroom, school library, school computer lab, or teacher workroom or office. Findings may be reported through various means. Upon request from district leaders, all high school teachers and administrators can receive an executive summary of the study's data, findings, and conclusions. Upon request, the district school board members can be debriefed on the findings and implications of the research.

This study could have many potential benefits to participants and the students in the district. By identifying areas in which high school teachers lack college knowledge, district and

school leaders can organize professional development to focus on key areas of college readiness. The survey findings can help leaders identify areas of weakness that could be addressed through various means of communication from guidance personnel to teaching faculty. Professional development opportunities could focus on exact areas in which teachers are interested in learning more and willing to support students, such as college placement tests or scholarship applications. Each high school in the surveyed district has a time built in to their schedule where teachers have flexible instructional time. This time could be utilized to allow teachers to share their college knowledge with students and help support them in their college transition.

A key benefit of this study could be increased articulation between guidance personnel and high school teachers and college and high school faculty. College counselors attend many workshops throughout the year and have specific knowledge that could be shared with high school teachers so that more students are exposed to college information. This possible outcome of increased knowledge, therefore, increases the professional capital of the high school faculty, which can directly impact the development of student social capital with an enhanced understanding of the college-transition process. With greater student college knowledge, students can make more informed decisions regarding college fit and financial aid and increase their understanding of the college matriculation process. The ultimate goal is that a more informed faculty provides greater support for students throughout high school to increase their overall postsecondary success.

Chapter 3 Summary

The goal of this quantitative study was to measure the level of college knowledge of high school teachers in one large suburban school district and their confidence and willingness to support students in their college transition. With more students enrolling in college and the high

rate of remediation among recent high school graduates, the current level of support provided by guidance department personnel can be complemented through the assistance of high school teaching faculty.

To determine the current level of teacher college knowledge and assess their current role in the college-linking process, a voluntary electronic survey was utilized to collect data from high school teachers. The findings can help inform district and school leaders by identifying areas related to college readiness for professional development and specific teacher trainings and classroom support. With clearly defined roles and clarity of college information, teachers can be equipped to help students in their postsecondary transition. Developing the professional capital of the teaching faculty may then increase teacher confidence in providing support throughout the college transition. As students learn in increments, helping students build their own college knowledge over the course of their high school career through systematic and intentional programs and efforts may then increase student social capital and ultimately increase their success in their postsecondary endeavors.

The survey data can also serve to increase communication and partnership with local community colleges where a majority of the student population attends after high school. By analyzing the data, district and school leaders can provide opportunities for high school and college faculty to meet and work to align curriculum and assessments and increase teacher understanding of postsecondary expectations. Ultimately, the goal of the research study is to create a more systematic approach to help develop a strong college-going culture on high school campuses so that students have equal access to college information and a supportive environment throughout the matriculation process.

Chapter 4: Data Analysis and Results

Introduction

The purpose of this quantitative study was to measure high school teacher college knowledge and the perception of their role in the college-linking process using data from an online survey. The research site consisted of one large suburban district in California with respondents from six comprehensive high schools. *College knowledge* is defined for the purpose of this study as high school teachers' understanding of the elements related to the college application, matriculation, and enrollment process. With more jobs requiring higher-level training and more high school students participating in some form of postsecondary education, college knowledge plays a key role in student success in higher education.

The online survey for this study consisted of 51 questions separated into five parts, with the first question acting as the participation consent form (see Appendix B). The first part of the survey focused on demographic information of the survey population and the subsequent parts each related to four different areas of the college transition process: teacher college knowledge, teacher support from guidance personnel, teacher confidence, and teacher willingness to support students in their postsecondary transition. Each of the four survey segments corresponds to the four research questions that guided this study:

1. To what extent, if any, do high school teachers feel confident in their level of college knowledge?
2. To what extent, if any, do high school teachers feel supported and informed regarding college information from guidance personnel?
3. To what extent, if any, do high school teachers feel confident supporting students' college-transition process?

4. To what extent, if any, do high school teachers believe they should play a role in the college transition process?

Much of the prior research in college knowledge focuses on the role of the guidance/college counselor, parents, peers, or programs designed to build college readiness skills. This study was designed to examine the knowledge high school teachers have about the college transition and their willingness to play a larger role in assisting students as they move from secondary to postsecondary schooling. A 5-point Likert scale survey was used to gain quantitative data to measure and discuss teacher knowledge levels, interactions with guidance personnel, confidence levels, and willingness levels. The coding to score the data included the following responses: Strongly agree (5); Agree (4); Neither Agree nor Disagree (3); Disagree (2); and Strongly Disagree (1). A score above 4 indicates a strong level related to the survey section topics, whereas scores of 3 and below indicate low levels of knowledge, confidence, and willingness and low frequency of interaction with onsite college counselors, depending on the survey section.

Survey data can show an overall picture of the current knowledge and attitudes teachers have related to the college-linking process and the role they believe they should take as students move from high school to postsecondary levels of education. District officials reviewed the survey and approved the distribution of the survey through district email distribution lists. All teachers at the six comprehensive high schools received an email with a link to the survey. If they consented to participate in the study, respondents clicked a link to the actual survey created in Qualtrics. The survey was online and anonymous to encourage teachers to provide honest answers in order to gain an accurate picture of teacher knowledge levels and beliefs related to

their role in the college transition. This chapter outlines a description of the sample, a summary of the results for each research question, and analysis of the data.

Description of the Sample

The teachers surveyed in this study consisted of high school teachers in one large suburban district in California. Teachers received an invitation to participate in the survey via email on the district Outlook server. The email was distributed to all teachers in the district at six comprehensive high schools with a population sample of approximately 650 full-time and part-time teachers, including teachers on medical leave, maternity leave, or on a leave of absence/sabbatical. Teachers were able to click on the link and read more about the study and provide consent to take the survey created in the Qualtrics software program. Respondents could skip questions or begin the survey and then exit at any time. While 153 of the 650 teachers started the survey, 105 teachers completed the entire survey. Additionally, 18 teachers only skipped one or two questions, so their surveys were included in the total. Therefore, 24% of the population initially responded to the survey (153), but 19% ($N = 123$) represents the response rate for this sample. The survey window consisted of 24 days, with one reminder email with the survey link sent to the sample population in the final 7 days of the survey window when teachers returned from spring break.

Tables 1-4 display the frequency counts for selected variables. The demographic data shows that a wide variety of teachers took the survey. Of the 123 completed surveys, English teachers represent the highest responders with 31 (25.2%) completing the survey, which correlates with the population of high school teachers since English is a subject all students take for all four years of high school. Core academic teachers from English, science, math, social science, and world languages made up 86.2% of the 123 total number of respondents. The other

13.8% consisted of teachers in the visual/performing arts, special education, physical education, and career/technical education (see Table 1). The frequency counts listed in Table 1 show the variety and number of teachers who participated in the survey by content area.

Table 1

Frequency Counts for Selected Variables: Teacher Content Area (N = 123)

Primary content areas	<i>n</i>	%
English	31	25.2
Mathematics	21	17.1
History/social science	15	12.2
Physical education/health	7	5.7
Science	18	14.6
Visual/performing arts	7	5.7
World languages	14	11.4
Special education	6	4.9
Career technical education/CCA	2	1.6
Not listed	2	1.6

Other demographic data shows total years taught and total years taught in the surveyed district. Table 2 illustrates that a wide variety of teachers responded to the survey, with all levels of experience included in the sample, ranging from new teachers with fewer than 3 years' experience (8.9%) to veteran teachers with over 31 years' experience (4.1%). The median years of total teaching experience was 18 years (see Table 2) and the median years in the surveyed district was 13.5 years as shown in Table 3.

Table 2

Frequency Counts for Selected Variables: Total Years of Teaching (N = 123)

Total years of teaching	<i>n</i>	%
0-3 years	11	8.9
4-7 years	15	12.2
8-11 years	13	10.6
12-15 years	18	14.6
16-20 years	30	24.4

(continued)

Table 2 (continued)

Total years of teaching	<i>n</i>	%
21-25 years	16	13.0
26-30 years	15	12.2
31 or more years	5	4.1

^a *Mdn* = 18.00 years.

Table 3

Frequency Counts for Selected Variables: Total Years of Teaching in District (N = 123)

Total years of teaching in district ^a	<i>n</i>	%
0-3 years	21	17.1
4-7 years	14	11.4
8-11 years	21	17.1
12-15 years	19	15.4
16-20 years	25	20.3
21-25 years	10	8.1
26-30 years	9	7.3
31 or more years	4	3.3

^a *Mdn* = 13.50 years.

The final piece of demographic information collected was the high school grade level that the respondents taught for most of their career. Although high school teachers do often teach all grade levels from 9th grade through 12th grade at some point, the data from this question provides information related to the grade level(s) that each respondent has taught most often. Table 4 shows that all grade levels are represented, with more respondents teaching specifically 10th (17.1%) or 11th grade (16.3%). The data shows a close split between respondents who teach upperclassmen (29.3%) and those who teach lowerclassmen (23.6%). Thus, this sample includes teachers with experience at each grade level along with a variety of years of teaching experience.

Table 4

Frequency Counts for Selected Variables: Main Grade Level (N = 123)

High school teaching main grade level	<i>n</i>	%
9th grade	9	7.3
10th grade	21	17.1
11th grade	20	16.3
12th grade	8	6.5
Mostly underclassmen (freshmen/sophomores)	36	29.3
Mostly upperclassmen (juniors/seniors)	29	23.6

Summary of the Results

This quantitative study sought to examine the level of high school teacher college knowledge and other elements related to the role of the teacher in the college-linking process. Each research question correlated with a specific section of the survey, and survey questions were organized in the order of research questions (RQ) 1 through 4. Part II (Questions 6-28) of the survey contained the majority of questions that focused on specific areas of teacher college knowledge, ranging from college applications (i.e., requirements, letters of recommendations), entrance exams (ACT and SAT), and placement tests to knowledge of A-G (college course) requirements and financial aid (i.e., scholarships, loans, and grants). The second section related to partnerships with guidance personnel (Questions 29-33), and the third (Questions 34-41) and fourth (Questions 42-51) parts focused on level of teacher confidence and teacher perception of their role in supporting students as they transition to postsecondary programs.

To ensure the survey tool was reliable, a review of the survey content was conducted to identify any terms that could be misunderstood or questions that seemed redundant or confusing. Approximately 15 teachers from two different high schools in two neighboring districts read the survey and provided feedback regarding survey directions and questions. Some wording and questions were altered in response to the feedback from the content review to ensure clarity and

reliability of the survey content. Acronyms that are lesser known, such as EAP, were written out and terms such as college entrance exams were clarified with examples (e.g., SAT and ACT) to help respondents understand the content of each question.

To reduce error in the survey data, survey data was entered into the Statistical Package for Social Sciences (SPSS). Data was analyzed in terms of mean, standard deviation, and scales related to individual items in each survey section. To reduce threats to internal reliability, a Cronbach alpha was calculated for each research question using all the questions in the corresponding section of the survey. To be internally reliable, the Cronbach's alpha would be .70 or higher (Creswell, 2012). Table 5 shows the psychometric characteristics for summated scale scores for each research question. The Cronbach alpha score was above .70 for each section, ranging from .92 to .75, indicating internal reliability for similarity of responses throughout the survey tool.

Table 5

Psychometric Characteristics for Summated Scale Scores of Survey Constructs (N = 123)

	<i>n</i>	<i>M</i>	<i>SD</i>	Low	High	<i>α</i>
Items 6-28: Confident in college knowledge	23	3.29	0.67	1.91	5.00	.92
Items 29-33: Level of interaction with guidance personnel	5	2.94	0.85	1.00	5.00	.75
Items 34-41: Confidence supporting college-transition process	8	3.49	0.82	1.25	5.00	.87
Items 42-51: Belief in college-transition role	10	3.60	0.73	1.30	5.00	.90

Note. Ratings based on a 5-point metric: 1 = *strongly disagree* to 5 = *strongly agree*.

Detailed Analysis

In this study, four research questions were examined in relation to teacher college knowledge and the role of the teacher in the college-linking process. For each research question, a rating of 4.00 or higher on the 5-point Likert scale was used as an acceptable threshold for determining levels for each research question. Specific criteria guided the process in determining

respondent confidence (agreement) level with the statements in each survey section. These scores were determined based on the 5-point scale. A score of 4 or 5 (Agree and Strongly Agree, respectively) indicates a high level of teacher knowledge or agreement with the survey question. A score of 3 (Neither Agree nor Disagree) or lower (Disagree and Strong Disagree) indicates a lower level of knowledge. To determine an acceptable level for each research question, an operational definition of each variable was designated to be a score of 4 or 5 from a majority—at least 50%—of respondents. Therefore, for each section of the survey, the mean score was calculated based on 123 completed surveys.

Research Question 1

To what extent, if any, do high school teachers feel confident in their level of college knowledge?

Research question 1 relates to part II of the survey containing items 6-28. Table 6 displays the ratings of teacher confidence in college knowledge with items sorted by highest mean related to research question 1. Five of twenty-three items had a rating of 4 or higher. Items with the highest level of teacher knowledge include item 6, understanding the importance of college knowledge ($M = 4.46$), and item 9, familiarity with the content of college application letters of recommendation ($M = 4.28$). Items with the lowest levels of confidence were items 19 ($M = 2.14$) and 20 ($M = 2.33$), both related to Early Assessment Program (EAP) grading criteria in math and English respectively, tests designed by the California State University system that indicate college readiness in the basic skills.

Table 6

Ratings of Teacher Confidence in College Knowledge Items Sorted by Highest Mean (N = 123)

Item	<i>M</i>	<i>SD</i>
6. Understanding importance of college knowledge	4.46	0.74
9. Familiar with college letters of recommendation	4.28	0.95
23. Can explain financial aid loans vs. grants	4.24	0.85
10. Familiar with scholarship letters of recommendation	4.22	0.91
7. Understand UC and Cal State A-G course requirements	4.02	0.95
25. Familiar with requirements of scholarship applications	3.87	0.95
21. Understand role of FAFSA in financial aid process	3.86	1.10
27. Can explain differences between SAT and ACT	3.62	1.14
24. Understand difference between subsidized and unsubsidized loans	3.58	1.15
8. Understand community college application process	3.57	1.08
26. Familiar with senior year scholarship deadlines	3.22	1.18
18. Understand role of EAP in Cal State English matriculation	3.15	1.32
17. Understand role of EAP in Cal State math matriculation	2.97	1.27
16. Familiar with community college English placement test	2.91	1.27
15. Familiar with community college math placement test	2.89	1.25
28. Aware of articulation opportunities for high school faculty with local universities and colleges	2.89	1.27
22. Familiar with beginning and ending FAFSA deadlines	2.85	1.25
14. Familiar with Cal State English placement test	2.78	1.21
13. Familiar with Cal State math placement test	2.64	1.18
12. Familiar with UC English placement test	2.61	1.13
11. Familiar with UC math placement test	2.49	1.11
20. Familiar with grading criteria for English EAP	2.33	1.15
19. Familiar with grading criteria for math EAP	2.14	0.92

Note. Ratings based on a five-point metric: 1 = *strongly disagree* to 5 = *strongly agree*.

To explore the first research question, Table 7 reports the number of respondents who averaged at least 4 points (agree) on the 5-point scale. A score of 4.00 or higher indicates familiarity with the specific college knowledge topic for the 23 items surveyed in this section. Table 7 displays the frequency counts for scale variables for each section of the survey related to each research questions. For research question (RQ) 1, 20 (16.3%) respondents had an average rating of 4 or higher, whereas 103 (83.7%) respondents had an average rating of 3 or lower.

Table 7

Frequency Counts for Scale Variables (N = 123)

Variable and category	<i>n</i>	%
Items 6-28: Confident in college knowledge level		
Lower rating	103	83.7
4+ rating	20	16.3
Items 29-33: Level of interaction with guidance personnel		
Lower rating	107	87.0
4+ rating	16	13.0
Items 34-41: Confidence supporting college-transition process		
Lower rating	88	71.5
4+ rating	35	28.5
Items 42-51: Belief in college-transition role		
Lower rating	88	71.5
4+ rating	35	28.5

In addition, a one-sample *t*-test was conducted to determine whether the mean values for each research question were significant. The mean values represented in Table 8 were compared to the 4.00 value that would signify a high level of college knowledge. In regards to research question 1, the scale score ($M = 3.29$) was significantly lower than the test value of 4.00, $t(122) = -11.83$, $p = .001$ (see Table 8). Therefore, the data illustrates that high school teachers self-report an overall low level of confidence in their general level of college knowledge.

Table 8

One-Sample t-Tests Comparing Scale Scores Against Test Value (N = 123)

Items	Scale score	<i>M</i>	<i>SD</i>	Difference ^a	<i>t</i>	<i>p</i>
6-28	Confident in college knowledge	3.29	0.67	-0.71	-11.83	.001
29-33	Level of interaction with guidance personnel	2.94	0.85	-1.06	-13.92	.001
34-41	Confidence supporting college-transition process	3.49	0.82	-0.51	-6.86	.001
42-51	Belief in college-transition role	3.60	0.73	-0.40	-6.04	.001

^a Difference between scale score and test value (4.00).

Research Question 2

To what extent, if any, do high school teachers feel supported and informed regarding college information from guidance personnel?

Research question 2 relates to part III of the survey containing items 29-33. For research question 2, Table 9 displays the ratings of how much interaction they have with guidance personnel on their respective school sites with items ranked by highest mean scores. Of the five items in this section, only one achieved a score of 4 or higher: Guidance personnel availability to answer questions about the college process ($M = 4.02$). All other items related to frequency and types of interactions between teachers and guidance personnel received mean ratings ranging from 2.95 to 2.41.

Table 9

Level of Interaction with Guidance Personnel Items Sorted by Highest Mean (N = 123)

Item	<i>M</i>	<i>SD</i>
33. Guidance personnel available to answer questions about college process	4.02	0.87
32. Guidance personnel email college information regularly to teachers	2.95	1.22
31. Guidance personnel update teachers on A-G course changes	2.69	1.23
30. Guidance personnel trained teachers on A-G course requirements	2.60	1.23
29. Guidance personnel have presented in my classroom this year	2.41	1.36

Note. Ratings based on a five-point metric: 1 = *Strongly Disagree* to 5 = *Strongly Agree*.

To examine the second research question related to teacher interaction with guidance personnel, Table 8 reports the number of respondents who had at least 4 points (agree) on the 5-point scale for research question 2. Sixteen (13%) respondents had an average rating of 4 or higher, whereas 107 (87%) respondents had an average rating of 3 or lower. In addition, the scale score ($M = 2.94$) was significantly lower than the test value of 4.00, $t(122) = -13.92$, $p = .001$

(see Table 9). As a result, the data shows that high school teachers do not perceive a high level of interaction with guidance personnel.

Research Question 3

To what extent, if any, do high school teachers feel confident supporting students' college-transition process?

Research question 3 relates to part IV of the survey containing items 34-41. The research question examined teacher confidence in supporting students. Table 10 shows the ratings of teacher confidence in supporting the college-transition process sorted by highest mean scores. Two items scored above the 4 rating: Item 35, confidence writing letters of recommendation for college applications ($M = 4.21$), and item 34, confidence advising students in their content area related to A-G courses—those required for college ($M = 4.13$). Of the eight items in this section, the lowest ratings were in topics related to answering questions related to college placement tests ($M = 3.07$) and the Free Application for Federal Student Aid (FAFSA; $M = 2.95$).

Table 10

Ratings of Confidence Supporting College-Transition Process Items Sorted by Highest Mean ($N = 123$)

Item	M	SD
35. Confident writing letters of recommendation for college applications	4.21	0.87
34. Confident advising students in content area for A-G track	4.13	1.06
38. Confident helping students choose colleges	3.52	1.11
37. Confident answering general financial aid questions	3.45	1.17
40. Confident referring students to websites for college transition help	3.33	1.16
41. Confident helping students with college scholarship applications	3.25	1.23
39. Confident answering general college placement testing questions	3.07	1.19
36. Confident answering student FAFSA questions	2.95	1.27

Note. Ratings based on a five-point metric: 1 = *Strongly Disagree* to 5 = *Strongly Agree*.

To analyze the third research question related to teacher confidence, Table 7 reports the number of respondents who had at least 4 points (agree) on the 5-point scale for research question 3. Thirty-five (28.5%) respondents had an average rating of 4 or higher, whereas eighty-eight (71.5%) respondents had an average rating of 3 or lower. In addition, the scale score ($M = 3.49$) was significantly lower than the test value of 4.00, $t(122) = -6.86, p = .001$ (see Table 8). Therefore, the data suggests that high school teachers do not have a high level of confidence in supporting students in the college transition process.

Research Question 4

To what extent, if any, do high school teachers believe they should play a role in the college transition process?

Research question 4 relates to part IV of the survey containing items 42-51. The final research question focused on the role of high school teachers in the postsecondary transition. Table 11 displays the ratings of teacher beliefs regarding their role in the college transition. Two of the ten items received a rating of 4 or higher: Items 44 and 45 both related to the belief that teachers should be available to write letters of recommendation for college applications ($M = 4.10$) and scholarships ($M = 4.07$). The items with the lowest rankings were items 42 and 43, teacher perception of their availability to help with college applications ($M = 3.19$) and availability to help with financial aid guidance ($M = 2.89$).

Table 11

Ratings of Belief in College-Transition Role Items Sorted by Highest Mean (N = 123)

Item	<i>M</i>	<i>SD</i>
44. Teachers should be available to write college letters of recommendation	4.10	0.87
45. Teachers should be available to write scholarship letters of recommendation	4.07	0.86
(continued)		

Table 11 (continued)

Item	<i>M</i>	<i>SD</i>
50. Gain college knowledge to help students transition	3.80	0.95
49. Utilize tutorial time to help students transition	3.78	1.03
48. Teachers available to help students with college decisions	3.75	0.87
51. Teachers should play larger role in college transition process	3.59	0.96
47. Teachers should be available to help students prepare students for college placement tests	3.45	0.98
46. Teachers should be available to help students prep for ACT/SAT	3.44	1.03
42. Teachers should be available during tutorial to help with college applications	3.19	1.19
43. Teachers should be available during tutorial to help with financial aid guidance	2.89	1.22

Note. Ratings based on a 5-point metric: 1 = *Strongly Disagree* to 5 = *Strongly Agree*.

To examine the fourth research question pertaining to the teacher role in the transition process, Table 7 reports the number of respondents who had at least 4 points (agree) on the 5-point scale for research question 4. Thirty-five (28.5%) respondents had an average rating of 4 or higher, whereas eighty-eight (71.5%) respondents had an average rating of 3 or lower. In addition, the scale score ($M = 3.60$) was significantly lower than the test value of 4.00, $t(122) = -6.04$, $p = .001$ (see Table 8). Therefore, the data indicates that high school teachers do not view themselves as playing a larger role in the college-linking process than they do presently.

Additional Findings

Two independent t -tests were run to determine if statistically significant differences existed in means between demographic groups. The demographic data in Table 4 showed teachers who taught mainly Grades 9 and 10 were combined with those who taught primarily underclassmen for a total of 66. The same procedure was done with teachers of upperclassmen and those who primarily taught Grades 11 and 12. The t -tests for independent means for the four scale scores based on grade level taught are in Table 12. None of the four t -tests were significant.

Table 12

t-Test for Independent Means for Selected Scales Based on Level Taught (N = 123)

Scale score and class taught	<i>n</i>	<i>M</i>	<i>SD</i>	η	<i>t</i>	<i>p</i>
Items 6-28: Confident in college knowledge				.12	1.38	.17
Underclassmen	66	3.21	0.64			
Upper classmen	57	3.38	0.69			
Items 29-33: Level of interaction with guidance personnel				.13	1.42	.16
Underclassmen	66	2.84	0.86			
Upper classmen	57	3.05	0.83			
Items 34-41: Confidence supporting college-transition process				.15	1.70	.09
Underclassmen	66	3.37	0.86			
Upper classmen	57	3.63	0.76			
Items 42-51: Belief in college-transition role				.00	0.01	.99
Underclassmen	66	3.60	0.66			
Upper classmen	57	3.60	0.80			

Note. Pearson correlation between scale score and grade taught. Used as measure of effect size.

Table 13 displays the *t*-tests for independent means for the four scale scores based on total years of teaching experience. Based on Table 2, teachers with 0-15 years of teaching were combined into one total compared with teachers who have taught more than 15 years. Two of the four *t*-tests were significant. Specifically, teachers with 0-15 years had higher scores for confidence supporting the college-transition process ($p = .04$) and belief in their college-transition role ($p = .03$) (Table 13).

Table 13

t-Test for Independent Means for Selected Scales Based on Years of Experience (N = 123)

Scale score and experience	<i>n</i>	<i>M</i>	<i>SD</i>	η	<i>t</i>	<i>p</i>
Items 6-28: Confident in college knowledge				.11	1.17	.24
0-15 years	57	3.36	0.67			
16+ years	66	3.22	0.67			
Items 29-33: Level of interaction with guidance personnel				.00	0.05	.96
0-15 years	57	2.94	0.91			
16+ years	66	2.93	0.80			

(continued)

Table 13 (continued)

Scale score and experience	<i>n</i>	<i>M</i>	<i>SD</i>	η	<i>t</i>	<i>p</i>
Items 34-41: Confidence supporting college-transition process				.18	2.05	.04
0-15 years	57	3.65	0.80			
16+ years	66	3.35	0.82			
Items 42-51: Belief in college-transition role				.20	2.19	.03
0-15 years	57	3.76	0.67			
16+ years	66	3.47	0.75			

Note. Pearson correlation between a scale score and years of experience. Used as a measure of the effect size.

Chapter 4 Summary

The purpose of this chapter was to present the findings of a 2017 online quantitative survey of teachers from six comprehensive high schools in one large suburban California district. The survey contained questions using a 5-point Likert scale with questions divided into sections related to the four research questions. This study used data from 123 surveys to explore the level of teacher college knowledge, teacher interactions with guidance personnel, teacher confidence level in supporting students through the college transition, and teachers' perception of their role the college-linking process.

Each section of the survey examined a different area related to college knowledge and the role of the high school teacher. On the 5-point Likert scale, with 5 representing strongly agree and 1 representing strongly disagree, the average ratings ranged from 3.60 to 2.94, indicating that in each of the four survey constructs, none of the average means met a score of 4 or higher (see Table 5). Additionally, all the constructs explored on the survey received less than 50% of respondents averaging a 4 or higher, thereby showing an overall lack of college knowledge, lack of interaction with guidance personnel, lack of confidence in supporting students in the college-transition process, and lack of viewing themselves playing a larger role in the college-linking process (see Table 7).

Chapter 5 provides a summary of the research with a discussion of the findings and implications of the results, along with how the data relate to previous literature on college knowledge and college readiness. The findings of the study and how they relate to teaching practice, policy, and theory are also discussed. Finally, recommendations for additional research and future studies on teacher college knowledge and the teacher role in the college-linking process are presented.

Chapter 5: Discussion and Conclusion

Introduction

More and more students are pursuing higher education upon their high school graduation. However, many students lack college readiness knowledge and skills that help them in the transition from secondary to postsecondary schooling. This lack of preparation is evidenced in the high frequency rates of student remediation in English and math, both nationwide and locally in California. With the need for postsecondary training in this global market, students' ability to transition successfully into postsecondary studies has never been more important.

The purpose of this study was to add to the limited body of research regarding the role of the teacher in supporting students through the college transition. Although teachers play a key role in the academic development of students as they prepare for life after high school graduation, the results of this study can act as a starting point to determine the role that teachers can play in the college-linking process, from support in application completion to placement testing to financial aid understanding. Much of the research on the problem of remediation and lack of college readiness focuses on programs to assist students, such as AVID, GEAR UP, early college, or dual enrollment, or the role of the guidance counselor. This study sought to fill the gap in the literature by focusing on the role that high school teachers can play to provide greater access to college information and their willingness to provide assistance.

In this final chapter, the results of the survey will be summarized as they relate to each of the four research questions. This chapter will also include a discussion of the results as presented in Chapter 4, along with a discussion of the limitations of the study and the implications of the findings in relation to practice, policy, and theory. The chapter concludes with recommendations for further research on the role of the teacher in the college transition process.

Summary of the Results

Remediation in basic skills courses at the college level has been an ongoing problem in higher education for many years. Not only do students remediate at the community colleges, but four-year universities also provide remedial courses as necessary. Much research has focused on the cost and causes of remediation, with solutions centering mostly on the use of programs to increase college readiness, such as AVID, advanced placement courses, dual enrollment, early and middle colleges, and more. Other research has focused on the role of the college guidance counselor on secondary campuses. Although these programs may experience success in supporting students in the transition to postsecondary studies, little research has been done related to the support role of the teacher throughout the college transition. This study is different from previous research on college readiness and remediation because it isolated the role of the high school teacher in the college-linking process and examined the knowledge and beliefs teachers have related to supporting students in the transition to postsecondary work.

Conley (2005) asserted that student college knowledge is a critical component of success at the postsecondary level and claims that “teachers are very important college advisers” (p. 19). Since teachers have daily interactions with students, their understanding of the college transition and their capacity to support students can directly impact student success. With more students attending college, the role of the high school has shifted to include preparing students not only academically but also by providing access to information related to each step in the college matriculation process (Conley, 2005).

Since students gain college knowledge in stages, secondary teachers and staff play an integral role in providing access to college information (Hossler & Gallagher, 1987; Perna & Thomas, 2008; Radcliffe & Bos, 2013). Therefore, the greater college knowledge high school

educators have, the more likely school sites will have a college-going culture. Building the capacities of the secondary school personnel will increase the professional capital of the teachers and the cultural and social capital of the students (Hargreaves & Fullan, 2012). While individual secondary teachers are experts in their respective content areas, expanding the role of the teacher to that of a key institutional agent with strong college knowledge would allow greater access to essential information related to the successful college matriculation (Kim & Nuñez, 2013; Shamsuddin, 2016).

The purpose of this quantitative study was to explore the level of college knowledge among high school teachers in one suburban school district in California and their role in the college-linking process. Teachers responded to a 5-point Likert scale online survey, with a score of 4 or 5 indicating a strong level of knowledge, confidence, and willingness to play a support role in the college transition.

Survey Results

Each section of the survey correlated with each of the four research questions. Table 5 displays the mean score for each research question. The average score for each section was lower than 4.0, indicating that most respondents had a low level of college knowledge, low level of interaction with guidance personnel, low confidence in supporting students in the college transition, and lack of willingness to support students in their transition to postsecondary studies.

RQ1: College knowledge. Teachers indicated that they feel the most confident in their knowledge related to letters of recommendation, loans and grants, A-G college course requirements, scholarship applications and deadlines, and SAT and ACT college entrance exams (see Table 6). Areas that teachers had the least college knowledge included placement test at both two-year and four-year colleges, articulation opportunities with local higher education

institutions, and the Cal State Early Assessment Program (EAP; see Table 6). These lowest scoring areas of teacher college knowledge correlate with the lack of secondary school relationships with colleges in terms of placement tests and college readiness indicators (i.e., EAP).

RQ2: Interaction with guidance. Of the five survey items related to teacher interaction with guidance personnel, respondents indicated that personnel were available to answer questions. However, the four other items scored below 3.0, indicating a low level of interaction throughout the year with the college experts on secondary campuses (see Table 9). Teacher training, classroom presentations, regular email communications, and updates to A-G college course requirements were areas that teachers indicated they lacked interaction.

RQ3: Confidence level. In this survey section, teachers responded to questions related to their confidence in helping students in key areas of the college matriculation process—from applications to scholarships to financial aid. Teachers felt most confident in writing letters of recommendation for college applications and advising students in their content area in appropriate course taking for college admissions. In the remaining six areas, teachers did not feel confident supporting students. These areas include helping with scholarship applications, answering questions related to college placement tests, financial aid, and FAFSA, and helping with general topics such as college choice (see Table 10). These lower areas correlate with the same lower areas in the first section of the survey on college knowledge.

RQ4: Role of the teacher. The final section of the survey focused on the role high school teachers believe they should play in the college transition. Of the ten items, teachers agreed that they should be available to help with letters of recommendation for college and scholarship applications (see Table 11). The majority of teachers did not believe they should play

a large role in helping students with general college decisions, college entrance and placement tests, college applications, or financial aid issues. These scores indicate that, overall, teachers see themselves having a limited role in the college transition process.

Discussion of the Results

The results of the survey suggest that teachers, on average, do not feel confident in their college knowledge, do not feel supported and informed by guidance personnel, do not feel confident in supporting students in the college transition, and do not believe they should play a role in the college-linking process beyond the traditional roles of providing letters of recommendation. With 50% of students attending community college in the surveyed district, and 40% of those students placing into remedial courses, increasing teacher college knowledge, and in turn student college knowledge, may be one way to help students be more successful as they transition to their postsecondary studies.

Part I: Demographic Data

The survey was divided into five parts, with the first part dedicated to collecting demographic data. This data is important as it shows a wide variety of teachers responded to the survey from ten different content areas, consistent with high school subjects (see Table 1). Although the survey results are not separated categorically by subject matter, of note is that most respondents (86.2%) were from the core academic content areas. These teachers are directly responsible for preparing students for success in postsecondary endeavors, yet they were limited in their knowledge of key elements of the transition process.

Also of importance is how long teachers have taught. The median number of years that respondents have taught was 18 years. This number indicates that those who responded to the survey had a great deal of experience in teaching, with an average of 13 years in the surveyed

district. These teachers were familiar with district protocols have invested a lot of time in the education field. Therefore, the lack of college knowledge indicated by the survey results is not due to a low level of teaching experience or lack of familiarity with secondary education, since only 8.9% indicated they have taught for three years or less (see Tables 2 and 3).

In terms of grade levels taught, the demographic data shows that respondents represented all four high school grades from 9th through 12th (see Table 4). The data also shows that an almost equal number teach lower classmen as those who teach upperclassmen, with 29 9th and 10th grade teachers, 28 11th and 12th grade teachers, and those who indicated a general tendency to teach lower classmen (36) and upperclassmen (29). This data is significant because the majority of respondents do not solely teach lowerclassmen who are less likely to be engaged in making college decisions. The teachers surveyed represent quite evenly the spectrum of grade levels.

Part II: Teacher College Knowledge

The survey solicited teachers' level of college knowledge related to twenty-three different areas, ranging from college applications, entrance exams, and placement tests to financial aid and scholarship information. Teachers scored a 4 or higher on 5 of the items, or 22% of the topics. Therefore, on 18 items, or 78% of topics related to the college transition, teachers did not indicate a strong level of familiarity or knowledge. With a self-reported lack of college knowledge among the secondary faculty of a district, it causes the students to have to get their college knowledge from other sources, such as peers, parents, websites, pamphlets, and guidance counselors. Although these are valid sources of information, teachers represent an important source of transition knowledge and are easily accessible to students.

The highest score on the entire survey was that teachers understand the importance of college knowledge with a mean score of 4.46 (see Table 6, Item 6). Of the 123 respondents, 114 (93%) rated this topic a 4 or 5. Although most teachers agree that college knowledge is important, they themselves lack college knowledge in most topics surveyed. If experts in their field lack understanding of elements of the college matriculation process, how can students be expected to master and successfully navigate those same areas? If teachers are charged with the task of preparing students for their postsecondary studies, how can they do so if they lack understanding of the key tasks in the college matriculation process?

The lowest levels of college knowledge all related to the college placement tests at the three levels of public higher education in California: the University of California system, the California State system, and the community college system (see Table 6, Items 11-20). Teachers also indicated a low level of knowledge related to FAFSA deadlines, but ten of the bottom twelve items concerned their knowledge of placement tests and the EAP (Cal State early assessment program). With mean scores ranging from the highest at 3.15 down to 2.14, a great majority of teachers do not have familiarity with the expectations of their postsecondary counterparts. Consistent with this lack of knowledge of placement grading criteria and questions is an equal lack of knowledge of opportunities to articulate and partner with faculty from local colleges and universities (see Table 6, Item 28). Only 42 (34%) of the 123 respondents agreed that they were aware of articulation opportunities. These results indicate a need for teachers, professors, and school and district leaders at the secondary and postsecondary levels to meet and align their expectations and share information necessary for successful college matriculation.

Part III: Teacher Partnership with Guidance Personnel

This section of the survey contained five questions related to the frequency and levels of interaction between teachers and guidance personnel. Of the four areas of the survey, this section had the lowest overall frequency counts. According to Table 7, 107 (87%) of the 123 respondents had average ratings of less than 4.00, indicating low levels of interaction between faculty and guidance. These low scores are consistent with the low level of college knowledge among teachers. One area of strength indicated by the data is that guidance personnel are available to answer questions related to the college matriculation process (see Table 9, Item 33). Being available is vital so that faculty can voice opinions and solicit information when needed so that students and teachers have accurate college transition knowledge.

This section of the survey helped identify areas to strengthen on the high school campus in order to facilitate a greater exchange of information among stakeholders. Teachers indicated a low level of communication related to training and updates in college course requirements (see Table 9, Items 30 and 31). Since teachers advise students during registration for the upcoming year, it is vital that they are kept abreast of changes in the state and university systems so they can provide accurate information. One way to increase the partnership between guidance and teachers is to schedule more classroom visits from guidance personnel. Guidance personnel typically visit classrooms during registration to answer questions, but often only once per year and only in one content teacher's classroom. This item scored the lowest rating and could be one way to expose students to more college information. Additionally, these visits would enable teachers to stay up to date on college topics since they would host the guidance staff in their classrooms and also be exposed to updated information.

Another survey item with low results related to receiving information from guidance through email or other means (see Table 9, Item 32). Although some schools do often send out guidance announcements to teachers via email, the mean score was only 2.95 out of 5.0, with 50 (41%) of 123 respondents giving a rating of 4 or 5. Guidance personnel could ensure that teachers are kept informed by sending key announcements to teachers to share with their students. Information could be sent separated by announcements for different grade levels since many core academic classes contain students in the same grade level, such as English and history courses. Teachers could share key deadlines with students and explain requirements during advisement, homeroom, or tutorial (free instructional time).

Other low mean scores related to A-G requirements, the high school coursework colleges require, such as four years of English and two years of a world language (see Table 9). Respondents indicated that they have not received training in A-G requirements ($M = 2.60$) nor have they received updated information on A-G requirements ($M = 2.69$). A-G approved courses can change each year; therefore, guidance personnel attend conferences to stay informed. However, core content teachers who advise students during registration do not always have accurate or up-to-date information. Only 41 (33%) of 123 teachers indicated that they have received updated A-G information in the past year. Guidance personnel could hold workshops on professional release days or during staff meetings prior to registration so that teachers can help students make appropriate choices for their skill levels but also in relation to their postsecondary goals.

Part IV: Teacher Confidence in Supporting Students During the College Transition

Lack of teacher confidence in supporting students through the college transition directly related to their lack of college knowledge. Of the eight areas surveyed in this section,

respondents had the most confidence in the areas in which they have the most experience—writing letters of recommendation for college applications and advising students in their own content area (see Table 10, Items 34 and 35). Teachers indicated they did not feel confident in supporting students in relation to answering questions regarding financial aid and FAFSA, helping students choose colleges or complete scholarship application, referring them to websites, and answering questions about college placement exams.

One of the lowest scores in teacher confidence was how teachers felt about answering questions regarding placement tests (see Table 10, Item 39). With a mean score of 3.07, or 68 (55%) teachers scoring 3 or below, it is clear that the majority of respondents lack confidence in this area. Many programs have been developed to address the problem of remediation, but not much has been done to educate teachers about the actual placement tests that students need to take as they matriculate into college. The University of California, California State schools, and community college system all require students to enter at the transfer level in English and math, or require them to take remedial/developmental courses. These results suggest that those who prepare students academically for college coursework do not have confidence in their ability to answer questions related to placement tests because they lack knowledge about them (see Table 6, Items 11-20).

Part V: Role of the Teacher in College Transition

Of key concern is the perception some teachers have of their role in the college-linking process. Most teachers surveyed perceived their role as limited to traditional support in terms of writing letters for college applications and scholarships (see Table 11). On a 5-point scale, the mean score for teachers who believed they should play a larger role in the college transition process was 3.59 (Item 51). On this item, 60% of teachers gave a rating of 4 or 5, and 16% gave

a rating of 1 or 2. Of note is the large number of 24% who rated this topic with a 3. This data may suggest that teachers have not considered increasing the role they play or are uncertain what that would look like. Moreover, while some teachers are willing to expand the support they provide, many teachers do not view themselves as responsible for giving more guidance. This lower number could be due to the lack of teacher college knowledge or the lack of a model for increasing the high school teacher's level of participation in the transition process.

Two other key questions in this section of the survey focused specifically on the role teachers were willing to play in the transition process. When asked if respondents were willing to gain college knowledge to help support students, 72% of teachers responded with a 4 or 5 rating (see Table 11, Item 50). Only 13% of teachers were unwilling to gain knowledge, and 15% gave a rating of 3, meaning they were unsure or they did not have strong opinions on the topic. This data indicates that most teachers are willing to gain the necessary knowledge to aid students as they move into postsecondary studies.

Additionally, 78% of teachers indicated they would be willing to use some tutorial time (unstructured instructional time built into the district high school schedule) to help students through the transition process (see Table 11, Item 49). Only 15% of respondents rated this topic a 1 or 2, showing disagreement, with 7% giving a rating of 3. Although the mean scores for these items did not reach the 4.00 threshold, the means were very close, indicating that a majority of teachers are willing to play a supportive role. Providing teachers with the college knowledge they lack could increase both their confidence and their willingness to help students move successfully into their postsecondary pathways.

With the problem of remediation remaining unsolved after the implementation of new standards, college initiatives, federal-, state-, and district-level school programs, solving this

problem at a local level is of great necessity. Since many factors contribute to remediation at the postsecondary level, school districts would benefit from examining the problem locally. With a high graduation rate, high student participation in advanced placement and rigorous courses, and high grade point averages in the studied district, expanding the support system and increasing the professional capital of the teaching faculty could help decrease the high remediation rates.

Although a clear majority of respondents agreed that college knowledge was important in the successful transition to college (see Table 6, Item 6), their lack of knowledge and lack of willingness to increase their role pose a problem. Secondary teachers would need to understand the local remediation problem to help them take ownership of the issue in order to increase their participation in helping students fully matriculate without the need for remedial coursework.

Additional Results

Worth noting are the results of two independent *t*-tests related to the demographic data. The first *t*-test compared the means of teachers of upperclassmen (grades 11 and 12) with those of teachers of underclassmen (grades 9 and 10). The means were compared for each of the four areas of the survey with the corresponding scale score. Table 12 displays the data that in each area, none of the *t*-tests were statistically significant. This data suggests that teachers who teach the lower grades of high school have similar college knowledge and confidence levels as those who teach upperclassmen. Additionally, teachers of differing grade levels have similar interactions with guidance and perceive their role in the college-linking process in similar ways (Table 12).

A second independent *t*-test was conducted to compare scores of teachers with varying years of experience. Comparison of means related to levels of college knowledge and interaction with guidance showed no statistical difference. This data indicates teachers with different levels

of experience have similar levels of college knowledge, but do differ in their confidence levels and their perception of their support role in the college transition. Teachers who are newer to education indicated they have more confidence in their college knowledge (Table 13). This difference may be due to the fact that these respondents may have attended college more recently than more veteran teachers. Less experienced teachers also indicated that they would be willing to play a larger role in terms of helping students move from secondary to postsecondary levels (Table 13). This data is consistent with the fact that teachers with 0-15 years of experience had higher confidence levels as well. School leaders could use this data to develop workshops that train all teachers in key transitional skills (i.e., advising students and supporting them with college applications) so that both new and veteran teachers feel confident, and, therefore, are perhaps more willing, to support students in the college-linking process.

Discussion of the Results in Relation to Literature

Although many scholars have studied the problem of remediation at the postsecondary level, limited research has been conducted related to teacher college knowledge and the role of the high school teacher in the college-linking process. Many researchers have analyzed longitudinal data related to high school grade point average and course taking as predictors for college success (Ferenstein & Hershbein, 2016; Royster et al., 2015; Scott-Clayton et al., 2014). Other studies discussed special programs and their level of impact on preparing students for postsecondary studies (An, 2013; Huerta et al., 2013; Jones, 2013; Llamas et al., 2014). Some researchers focused on the role of the secondary college counselor as playing a significant role in helping students transition to college (Belasco, 2013; Bryan et al., 2011; Griffith, 2016).

This study differs from previous research by solely examining teacher college knowledge and teachers' beliefs about their role in the college-linking process. Moreover, this study is set in

a suburban setting unlike many previous studies that focused on low-income or urban areas (Farmer-Hinton, 2011; Hafner et al., 2010). Prior studies on college readiness largely consisted of qualitative studies comprised of interviews with administrators, guidance personnel, and teachers (Griffith, 2016; Hill, 2012; Shamsuddin, 2016). This study sought to measure teacher college knowledge as a starting point for the discussion of possibly increasing the role of the teacher as a key agent of support as students transition into postsecondary work. While scholars have emphasized the importance of students having key transitional knowledge as elements of college readiness, this study fills a gap in the literature by examining teacher college knowledge and its potential impact on student success (Conley, 2005, 2010).

The results of this study confirm the belief that K–12 institutions are disconnected from their higher education counterparts. High remediation rates often indicate a disconnect between institutions in terms of academic preparation (Leese, 2010; Venezia & Voloch, 2012). Additionally, faculty from both secondary and postsecondary levels rarely have opportunities to interact and share data and ideas so as to build a partnership (see Table 6, Item 28). These survey results not only show the lack of college knowledge teachers have regarding key steps in the matriculation process, but also point to a lack of confidence and willingness to increase their role. In part IV of the survey, out of eight ways teachers can support students as they transition into postsecondary studies, teachers only felt confident in writing letters of recommendation and advising students in their content area (see Table 10). These areas represent the most common tasks secondary teachers complete on a yearly basis in support of students as they matriculate. However, the matriculation process consists of many more steps where teachers could help if they had the college knowledge, such as financial aid guidance, entrance and placement test support, and scholarship advisement.

Due to the higher number of students attending college, the low number of college counselors on high school campuses, and the need for equal access to college information, utilizing the teacher to play a greater role in the college-linking process is a logical next step for secondary schools. Shamsuddin (2016) recommended that teachers and guidance counselors at urban schools work together to create a cohesive program that enables students to transition to postsecondary institutions with both strong academic skills and also the college knowledge necessary to matriculate successfully. This study confirms the need for more partnership between all faculty and staff on high school campuses, whether urban or suburban, so that students can be exposed to accurate and timely information that is necessary for college matriculation (see Table 6, Item 28).

Previous studies have focused on low-income and underrepresented students and the lack of equitable access to college information and support during the matriculation process (Griffith, 2016; Hill, 2012). The results of this study show that the problem of equitable access may also extend into suburban areas as well as teachers possess varying amounts of college knowledge and willingness to support students through the postsecondary transition (see Table 5). With high remediation rates from students in suburban areas as well, the role that faculty and staff play could be a pivotal element in improving student college knowledge and understanding of the key components in moving into higher education. Previous studies confirm the importance of adult support in persisting through the college transition (Llamas et al., 2014; Wang, 2014). Currently, high school teachers play a limited role in the college transition outside of academic preparation. With more students attending college and limited support personnel to help them, increasing the role of the teacher may reduce remediation rates while strengthening the college-going culture of high school campuses.

Limitations

There were several limitations to this study. First, this study included only high school teachers and was conducted in one large suburban school district in California. Moreover, the survey was conducted later in the second semester of the school year prior to state and AP testing, which is a busy, and often stressful, time for many secondary teachers. Some teachers may have disregarded the invitation to participate in the survey due to the timing of the data collection. The survey window included a 24-day period, 10 days of which were over spring break. All high school teachers received an email via district Outlook system with a link to the survey. During this time, the district was encountering some issues with WIFI and server disruptions that could have impacted delivery of emails. The district permitted one reminder email within the survey window when teachers could receive the survey link a second time.

A total of approximately 650 teachers at the six comprehensive high schools received the email and reminder, with 153 teachers beginning the survey during the survey window, and 123 completing the survey. This total represents approximately 19% of the survey population. It is possible that a greater number of teachers could have participated in the survey if an additional reminder email was sent or if the survey window did not include spring break when most teachers were offsite and off work. Therefore, results are limited by the timing of the survey and to the knowledge, experiences, and beliefs of this specific sample population.

Secondly, since the survey was conducted online, teachers could easily opt not to participate or begin and not finish the survey. If the survey had been in person through a personal visit to each school site surveying teachers during lunch or after school, perhaps a higher percentage of teachers would have completed the survey. Since the survey was only conducted in one district, the results may be different if a wider sample of teachers were surveyed in other

districts. The survey was also limited to a suburban area, whereas teachers in rural and urban areas may have a different level of college knowledge or beliefs regarding assisting students in their college transition. Moreover, teachers self-reported their answers on the survey, which could influence the validity of the survey. Teachers may be tempted to indicate knowledge where they may lack understanding or may indicate a willingness to help students when they may lack motivation.

Thirdly, the survey tool itself contained 51 questions, with the first question being the consent to participate in the study. The remaining 50 questions were all closed-ended with no option to explain answers. While this survey design provided quantitative data related to teacher knowledge, confidence, and beliefs, it limited participants to the options provided and limited the types of responses participants could make. With some option for open-ended answers, teachers could explain answers or provide additional comments that could give deeper insight into teachers' beliefs and understanding of the survey topics. Additionally, the length of the survey may have impacted participants as they continued through the survey and opted not to complete it. A shorter survey may have yielded higher participation rates or a larger number of completed surveys.

Lastly, the findings of this study are limited due to the use of 4.00 as the baseline score and hypothetical mean. This value was chosen since there is neither national data to compare to nor previous use of this survey. The use of 4.00 could impact the findings and conclusions of this study as lower values, such as 3.0 and 3.5, could affect the discussion and implications of each research question.

Implications of the Results for Practice, Policy, and Theory

The purpose of this study was to explore how high school teachers could, and if they would be willing to, expand the role they play as a support agent in the college transition. The

survey identified strengths and weaknesses in terms of specific college knowledge, levels of interaction with guidance personnel, and teacher confidence and willingness to support students as they transition into higher education. Since more students attend college, and with secondary schools having a counselor-to-student ratio of 1 to 400, school leaders must design ways to increase support throughout the transition process (Griffith, 2016; Martinez & Welton, 2014; McKillip et al., 2012; Osher et al., 2012; Stone-Johnson, 2015). Increasing teacher capacities and utilizing teacher knowledge and skills allow school and district leaders to increase support and student social capital without adding programs or personnel.

Implications for Teaching Practices

Although teachers indicated that they understand the importance of college knowledge, the survey results identified key areas where teachers do not feel confident in their knowledge. Most of these areas centered on placement tests, both at the university and community college level. Teachers are unaware of the requirements and components of these exams and, therefore, are unable to prepare them for the exams (see Table 6). Moreover, teachers indicated in the final sections of the survey that they did not feel confident helping students prepare for placement tests ($M = 3.07$), nor did they believe it was their role to prepare them ($M = 3.45$; see Tables 10 and 11). How students score on placement tests impacts many factors, such as student attitude, motivation, finances, course trajectory, and transfer and degree completion rates. Designing professional development opportunities to bring in university and community college partners to expose teachers to the placement tools could help teachers understand the role, content, and importance of the placement test.

Another area teachers lacked knowledge was related to the Cal State placement test known as the Early Assessment Program (EAP; see Table 6). All students who attend public high

schools in California take a math and English EAP test at the end of their junior year embedded in the state standardized test. The goal of this test is to provide feedback to teachers, parents, and students related to student performance in the basic skills of reading, writing, and mathematics. If students pass the EAP, they are considered college ready in these skill areas and do not require remediation at universities in the Cal State system. Currently, however, the University of California and the community colleges do not accept the EAP results as indication of college readiness or as tools for placement at their institutions. Although it is not pertinent for all high school teachers to be familiar with the EAP, it is essential that students, parents, and English and math teachers understand the requirements and ramifications of EAP exams.

Part III of the survey questioned teachers about their interactions with guidance personnel. The guidance counselors and staff act as the college experts on campuses. They house the information and are responsible for ensuring that students, teachers, and parents have access to essential facts and deadlines regarding college admissions. Of note are four key areas that indicate gaps in the communication between teachers and guidance personnel: communication via email, updates related to A-G course requirements, training in A-G requirements, and guidance presentations in classrooms (see Table 9). There are different ways to communicate information to teachers so they can act as partners with guidance to ensure students have accurate and timely college information. However, if teachers do not feel they have the necessary information to support students, then they will neither be confident nor willing increase the role they play in the college-transition process.

School and district leaders can use this information to design different ways to increase communication between guidance personnel and teachers. Guidance staff could train teachers in professional development workshops. They could also send out weekly or monthly

emails/newsletters with critical deadlines and key information related to college admissions and financial aid applications. Additionally, many schools have handbooks that detail policies and outline curriculum, graduation requirements, and other important information. Teachers need to be aware of course offerings, college-preparatory courses, career and technical pathways, advanced placement and dual enrollment options, and other elements that impact college admissions and increase college readiness. During tutorial, homeroom, or advisement periods, teachers and students could review changes and ensure that all students are aware of opportunities that impact their postsecondary pathways.

Because college knowledge encompasses many topics (e.g., college requirements, applications, entrance and placement tests, financial aid, scholarships), secondary teachers could become experts in one area. For example, math teachers could be the financial aid experts on the campus, social science teachers could be knowledgeable regarding scholarship information, and English teachers could be the placement and entrance test experts. By sharing the college knowledge across disciplines, then every teacher could be an expert in one piece of the complex postsecondary matriculation puzzle. Sharing the burden of housing the college knowledge with the guidance office could enable more students to have access to a wider scope of information than if it is housed in just one place on campus.

Implications for Educational Policies

The results of this survey could inform leaders of teacher credential programs as well as state and district educational leaders. As university professors develop curriculum and prepare preservice teachers for a career in education, coursework could be created that exposes students in credential programs to the importance of college knowledge and early access to college information. As Stone-Johnson (2015) recommended, secondary preservice teachers could

become aware of research and effective practices related to decreasing college remediation rates and could investigate ways to promote student success in the college matriculation process.

Leaders of teacher preparation programs across the United States could increase teacher college knowledge by exposing preservice teachers to college placement tests, financial aid information, and other essential information that would give all teachers entering the workforce a solid understanding of the skills and knowledge necessary to increase college readiness at the secondary level.

At the state and district levels, results of this study could inform educational leaders as they plan professional development workshops and seminars. Workshops could include updates on college requirements, studies of postsecondary success factors, information related to college entrance and placement tests, and other areas where teacher college knowledge was limited (see Table 6). Additionally, district and school leaders could create more opportunities for secondary teachers to partner with postsecondary personnel. According to Table 6 (item 28), most teachers were not aware of opportunities to interact with local universities and colleges. By creating professional councils and encouraging and supporting teachers to attend college-related workshops, educational leaders could help ease the transition from secondary to postsecondary pathways through an increase in knowledge and understanding among faculty members at both levels.

Implications for Educational Theories

The results of this study confirm the need for increasing professional capital among teachers. Table 7 illustrates that 103 (83.7%) of the 123 teachers had an average score of 3 or lower on items related to their level of college knowledge. This lack of knowledge correlates with the lack of teacher confidence in supporting students (RQ3). Only 28.5% of respondents felt

confident in supporting students in the college transition (see Table 7). This result is likely due to the practice of increasing college knowledge as mostly a priority for the college or guidance personnel on secondary campuses. However, with high remediation rates continuing at both two-year and four-year institutions, exposing all high school teachers to updated information on college entrance and placement tests, college course requirements, college application requirements, and other related topics would likely increase student social capital (Hargreaves & Fullan, 2012). Investing in the development of human capital can have far-reaching effects on teacher quality. The higher the level of professional capital of teachers and other school personnel, the more likely students will be able to make informed decisions about their high school course takings and other choices that impact their postsecondary education (McKillip et al., 2012).

Additionally, the concept of increasing the professional capital of teachers can be related to the proficiency approach to learning. While this conceptual model focuses on the development and assessment of both the hard and soft skills (proficiencies) needed for postsecondary success, the proficiency theory also recognizes the impact of college knowledge (Perna & Jones, 2013). This conceptual model originated in Conley's research and directly relates to Conley's four keys of college readiness by emphasizing the importance of both skills and knowledge as key factors in postsecondary readiness and success. Not only do students need to be academically ready to handle coursework in higher education, but they need a high level of transition knowledge to navigate the move into postsecondary work (Conley, 2005, 2010; Perna & Jones, 2013). Although most secondary schools focus on strong academic preparation, this theory seeks to ensure that students have the skills they need for postsecondary success as well as equal access to this transitional knowledge. If teachers expand their own college knowledge, then more students

will have exposure to the necessary information they need to matriculate successfully. These survey results demonstrate the need for teachers to have training and professional development to increase their level of college knowledge so that student college readiness increases.

Recommendations for Further Research

The problem of remediation at the college level has been examined for many years, with a focus on programs, placement tests, and academic preparation and course of study. However, very little research focuses on high school teacher college knowledge and the role of the teacher in the college-linking process. Matriculating successfully to college requires access to college information that is often housed solely by guidance/college counselors or those affiliated with special programs, such as AVID and GEAR UP. Although many studies have documented the importance of these school personnel and programs, the body of research on remediation would benefit from studies that specifically focus on college knowledge and the teacher role in the college transition.

This study was only conducted in one school district in California. Surveying high school teachers in other school districts on a larger scale could provide a more accurate picture of the depth and breadth of teacher college knowledge and their confidence and willingness to play a larger role in the postsecondary transition process. This study could also be replicated in urban and rural settings to compare findings with suburban areas to find points of commonality and difference. Identifying common areas where teachers lack college knowledge could inform state and district educational officials as they determine school policies and plan professional development trainings.

Expanding the study to include both quantitative and qualitative questions could be beneficial. This methodological design could provide a more accurate view of the teacher role in

the college pipeline. Open-ended questions related to teacher college knowledge and their attitudes regarding their role in the college-linking process could provide more detailed understanding of key issues. Qualitative data could offer insights into why teachers answered certain questions in specific ways or why they view their role within certain specifications or limitations. Moreover, qualitative studies that include interviews with students could focus on ways teachers have provided or can provide additional transition support to help identify ways teachers could guide students through the college matriculation process. Students may be able to provide insights that quantitative data is unable to demonstrate or uncover. Interviews with college counselors could focus on how teachers can partner with guidance personnel to improve communication and help promote college knowledge as they interact with students on a daily basis.

This study did not contain in-depth exploration of results related to categorical data based on different teacher populations, such as content area, years of experience, gender, or school site. Data analysis of different subgroups could provide information related to whether certain content-area teachers have more college knowledge or college knowledge decreases as years of teaching increases. This information could inform teacher credential programs or new teacher induction programs based on findings.

Some research suggests that early access to college information influences students' postsecondary choices (Royster et al., 2015). Therefore, this study could be conducted at the middle school or junior high level. Findings could inform leaders of ways to increase teacher college knowledge at this early secondary level so students have a wider base of college knowledge prior to entering high school and access to college information would be increased. Building the professional capital of all secondary teachers, not just high school teachers, would

enable students to have a solid base of knowledge regarding college expectations and course requirements upon entering ninth grade. Students could better understand the impact of their course trajectory and the various postsecondary available to them based on their high school course taking.

Conclusion

Teachers are tasked with many responsibilities. Although most secondary teachers focus mainly on growing students' knowledge in their specific content area, the task of ensuring that students are college ready is one that must be the responsibility of all faculty and staff in order to create a successful college-going culture. High school college counselors alone cannot handle the growing numbers of students who desire to pursue postsecondary goals. This problem is evident in the high number of students who place into remedial courses at the college level. Failing to meet the academic requirements of placement tests may only be one cause of the high remediation rates. Another cause of remediation may be that students lack critical college knowledge that is an integral part of successful completion of all the requirements of college matriculation. College knowledge is not only something that students need, but their mentors and educators must also possess the knowledge so they can guide and support students through the college-transition process

This survey study of teachers measured the level of college knowledge teachers have and explored the role they are willing to play in supporting students in moving into higher education. Teachers in one district completed an online survey by clicking a link via email and consenting to participate in the study. Teachers had 24 days to complete the survey and received one email reminder. One hundred and twenty-three teachers from six high schools participated in the study, represented by all content areas with a span of teaching experience from one to over thirty years.

The study consisted of four research questions that explored high school teachers' knowledge and confidence in terms of supporting students through the college-transition process. The majority of respondents do not feel confident in their college knowledge, do not often receive information and support from guidance personnel, do not feel confident supporting students, nor are they willing to play a supportive role in helping students as they transition into postsecondary studies beyond the traditional roles they already fulfill.

This survey study acts as a starting point to expand the discussion of college knowledge. Previous literature focused on the importance of students' transition knowledge as they move from secondary into postsecondary schooling. However, the more college knowledge the faculty and staff have on each high school campus, the greater the professional capital. Greater teacher capital increases the capital of students, equipping them to navigate the college matriculation steps with more ease and success. The results of this survey demonstrate a greater need for teachers to partner with the college experts on secondary campuses and their colleagues in higher education so that the college knowledge can be shared among all educators and more students can have greater access to vital information related to postsecondary pathways.

The findings of this study can serve many purposes at both K-12 institutions and their higher education partners. Educational leaders at both the secondary and postsecondary levels can use this survey data as the basis for developing regular opportunities for more articulation among K-16 educators. School districts, whether urban or suburban, can identify areas of weakness in teacher college knowledge and create professional development workshops to ensure that all teachers are up to date on college application requirements, appropriate course takings, placement test content and grading criteria, financial aid opportunities, and more. Since schools already have experts with this knowledge in guidance departments, school leaders need

to utilize the resources they already have to invest in the professional capital of all faculty and staff. School leaders can also make use of home room, advisement, or tutorial times already built into school schedules to provide support for students as they research postsecondary options, complete applications fill out FAFSA forms, apply for scholarships, and other tasks in the college matriculation process. Many students do not have home support and rely solely on guidance from school personnel to help them transition successfully to fulfill their future goals and dreams.

Although policy makers and educators continue to make strides in increasing academic standards, creating uniform assessments, and holding school leaders accountable for their results, students continue to test into remedial courses. Remediation costs students money and time and places burdens on postsecondary institutions. Many programs seek to prepare students for the rigors and expectations of higher education, but remediation rates continue to remain high nationwide. Educational leaders in the K-16 systems need to consider other solutions to the remediation problem, such as increasing the support personnel who help students gain key transition knowledge that is integral to postsecondary success. Secondary teachers may be the key to bridging the gap between these institutions, but they must be given time, resources, and opportunities to create college partnerships and to take professional development workshops so that they can better equip the next generation.

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Appendix A: Initial Email

Dear High School Teacher,

I am requesting your voluntary participation in a doctoral survey research study. I am a fellow high school teacher in the district, and the results of this survey will be part of my doctoral work at Concordia University, Portland. The study is titled Assessing Teacher College Knowledge and the Role of the High School Teacher in the College-Linking Process.

The purpose of the quantitative study is to measure the level of teacher college knowledge. After graduation, many XXXX students test in to remedial math and English courses at the college level. It is the goal of this research to identify areas of teacher college knowledge strength and weakness in order to possibly increase the role of the teacher in the college transition process and positively impact student success at the postsecondary level.

No identifying information will be collected on the survey (name, school site, age, gender, etc.). All information and answers provided are anonymous, and neither the school district nor school sites will be named in the study. Results of the survey will be shared with district officials upon request.

The online survey will take approximately 10 minutes and has 50 questions using a Likert 5-point scale. Please click the link below to begin the online survey. You can skip any questions if you are not sure of the answer or if you feel the question does not apply to you.

Survey link: https://cuportland.co1.qualtrics.com/jfe/form/SV_bOsaU10xWjnBZf7

The survey link will be available from March 22nd to April 15th. If you have any questions or comments to share with the researcher, please feel free to contact me at dawlewis@mail2.cu-portland.edu.

Thank you for your time and input. It is greatly appreciated.

Dawn Lewis

Doctoral Candidate, Concordia University, Portland

Appendix B: Survey

SURVEY OF TEACHER COLLEGE KNOWLEDGE AND THE TEACHER'S ROLE IN THE COLLEGE TRANSITION

1.

This study consists of this online survey. We expect approximately 100 volunteers to take this online survey, which can be completed between March 22nd and April 15th. This online survey will ask you questions about your teaching experiences, like how many years you have taught and your content area. You can skip a question if you want to skip and not answer. Completing the survey should take less than 15 minutes of your time.

There are no risks to participating in this study other than the everyday risk of your being on your computer as you take this survey. The benefit is your answers will help us determine areas where teachers could help support students in their postsecondary transition and areas where guidance personnel and school faculty can partner together to increase student success at the postsecondary level. You could benefit by reflecting on your college knowledge and the role you would be willing to play in assisting students as they transition to higher education.

Your personal information will be protected. This survey is firewall and password protected so that only the researcher (me) can see your answers. I will keep this in strict confidence. The information/topic of the questions is not sensitive or risky. However, if you were to write something that might allow someone to possibly deduce your identity, we would remove this information and we would not include this information in any publication or report. And data you provide would be held privately. All data will be destroyed three years after the study ends.

You can stop answering the questions in this online survey at any time if you want to stop.

Please print a copy of this consent form for your records. If you have questions you can talk to or write the principal investigator, Dawn Lewis, at dawlewis@mail2.cu-portland.edu. 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. OraLee Branch (email obranch@cu-portland.edu or call 503-493-6390). Please make a copy of this question or print out the original invite email for your records. Thank you for participating.

Click "YES" below to consent to take this survey.

Yes

*Thank you for participating in this research study. All participant identities will be anonymous, and participation in the survey is optional. Please choose only **one** answer per question that best describes your teaching experience. Use the mouse or side bar to scroll down when possible.*

Part I: Demographics

2. Choose one primary Content Area:

English
Mathematics
History/Social Science
Physical Education
Science
Visual/Performing Arts
World Languages
Special Education
Career Technical Education/ROP
Not listed

3. Please indicate total years of teaching (including this year):

0-3 years
4-7 years
8-11 years
12-15 years
16-20 years
21-25 years
26-30 years
31 or more years

4. Please indicate your total years of teaching in this district (including this year):

0-3 years
4-7 years
8-11 years
12-15 years
16-20 years
21-25 years
26-30 years
31 or more years

5. Please choose the main grade level taught during your high school teaching career: (choose only one answer)

9
10
11
12
Mostly underclassmen (freshmen/sophomores)

Mostly upperclassmen (juniors/seniors)

Please read each statement carefully and choose the answer that best corresponds with your experience and beliefs. If you are unsure of how to answer, feel free to leave the answer blank. (Listed above each question is the topic being explored.) [The scale was next to each question on the actual survey]

1 – Strongly Disagree 2 – Disagree 3 – Neither Agree nor Disagree 4 – Agree 5 - Strongly Agree

Part II: Teacher College Knowledge

6. I understand the importance of college knowledge (i.e. knowledge of application requirements, college entrance exams, placement tests, financial aid, etc.) as a key component of college readiness.
7. I have a solid understanding of the UC and Cal State A-G college course requirements.
8. I have a solid understanding of the community college application process.
9. I am familiar with the necessary content for the generic college letter of recommendation.
10. I am familiar with the necessary content for the generic letter of recommendation for college scholarships.
11. I am familiar with the UC placement test for math.
12. I am familiar with the UC placement test for English.
13. I am familiar with the Cal State placement test for math.
14. I am familiar with the Cal State placement test for English.
15. I am familiar with the community college placement test for math.
16. I am familiar with the community college placement test for English.
17. I understand the role of Early Assessment Program (EAP) in the Cal State matriculation process for math.
18. I understand the role of the Early Assessment Program (EAP) in the Cal State matriculation process for English.
19. I am familiar with the grading criteria for Math EAP placement test.
20. I am familiar with the grading criteria for English EAP placement test.

21. I understand the role of the Free Application for Federal Student Aid (FAFSA) in the financial aid process.
22. I am familiar with the beginning and ending deadlines for the FAFSA.
23. I can explain to students the difference between loans and grants.
24. I understand the difference between subsidized and unsubsidized loans.
25. I am familiar with the requirements of a basic scholarship application.
26. I am familiar with general/typical scholarship deadlines during the senior year.
27. I can explain to students the differences between the ACT and the SAT college entrance exams.
28. I am aware of articulation opportunities for high school teachers to partner and work with local colleges and universities.

Part III: Teacher and Guidance Personnel Partnership

Please read each statement carefully and choose the answer that best corresponds with your experience and beliefs. If you are unsure of how to answer, feel free to leave the answer blank.
 [The scale was next to each question on the actual survey]

1 – Strongly Disagree 2 – Disagree 3 – Neither Agree nor Disagree 4 – Agree 5 - Strongly Agree

29. Guidance personnel have made presentations in my classroom this year.
30. Guidance personnel have trained teachers at my school site this year on A-G college requirements.
31. Guidance personnel update teachers at my site on changes to A-G requirements and approved courses.
32. Guidance personnel send college information regularly to teachers via email/faculty listserv.
33. Guidance personnel are available to answer my questions regarding the college transition/application process as needed.

Part IV: Teacher Confidence in the College-Transition Process

Please read each statement carefully and choose the answer that best corresponds with your experience and beliefs. If you are unsure of how to answer, feel free to leave the answer blank.
[The scale was next to each question on the actual survey]

1 – Strongly Disagree 2 – Disagree 3 – Neither Agree nor Disagree 4 – Agree 5 - Strongly Agree

- 34. I feel confident advising students in my content area as they register for high school classes on the A-G track.
- 35. I feel confident writing letters of recommendation that align with the criteria for college applications.
- 36. I feel confident answering student questions about FAFSA.
- 37. I feel confident answering general questions about financial aid (i.e., loans, grants, scholarships).
- 38. I feel confident helping students with the college choice process (determining college fit).
- 39. I feel confident answering questions related to college placement testing.
- 40. I feel confident referring students to college-related websites for help during the college-transition process.
- 41. I feel confident helping students with college scholarship applications.

Part V: Role of the Teacher in College-Linking Process

Please read each statement correctly and choose the answer that best corresponds with your experience and beliefs. If you are unsure of how to answer, feel free to leave the answer blank.
[The scale was next to each question on the actual survey]

1 – Strongly Disagree 2 – Disagree 3 – Neither Agree nor Disagree 4 – Agree 5 - Strongly Agree

- 42. I believe teachers should be available during tutorial to help students complete college applications.
- 43. I believe teachers should be available during tutorial to help students navigate financial aid decisions and paperwork.
- 44. I believe teachers should be available to write letters of recommendation for college applications.
- 45. I believe teachers should be available to write letters of recommendation for scholarship applications.

- 46. I believe teachers should be available to help prepare students for college entrance exams (ACT/SAT) that relate to their content area (e.g., English, math, science, world language).
- 47. I believe teachers should be available to help prepare students for college placement tests.
- 48. I believe teachers should be available to help students with college decisions in general.
- 49. I would be willing to utilize some tutorial time to help prepare students for the college transition.
- 50. I desire to gain more college knowledge so I can better serve my students as they transition to postsecondary studies.
- 51. I believe teachers should play a larger role in the college-transition process (than they do now) since all students need equal access to college knowledge.

Appendix C: Follow-Up Email

Welcome back from spring break!

This is a follow-up email regarding my doctoral research study through Concordia University Portland on teacher college knowledge. ***I know that your time is valuable, and I appreciate those who have already taken the time to complete the survey.***

If you have not completed the survey already, I would appreciate your participation in the study. Your input is valuable so we have an accurate picture of the level of college knowledge among XXXX high school faculty.

No identifying information will be collected on the survey (name, school site, age, gender, etc.). All information and answers provided are anonymous, and neither the school district nor school sites will be named in the study. Results of the data averages and summaries will be shared with district officials upon request.

The online survey will take approximately 10 minutes and has 50 questions using a Likert 5-point scale. Please click the link below to begin the online survey. You can skip any questions if you are not sure of the answer or if you feel the question does not apply to you.

Survey link: https://cuportland.co1.qualtrics.com/jfe/form/SV_bOsaUI0xWjnBZf7

The survey link will be available through Saturday, April 15th. If you have any questions or comments to share with the researcher, please feel free to contact me at dawlewis@mail2.cu-portland.edu.

Thank you for your time and input. It is greatly appreciated.

Dawn Lewis

Doctoral Candidate

Concordia University, Portland

Appendix D: Statement of Original Work

The Concordia University Doctorate 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:

1. 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.
2. 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*.

Dawn Michele Lewis

Digital Signature

Dawn Michele Lewis

Name (Typed)

October 16, 2017

Date