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A Case Study of Strategic Governance in the Implementation of Guided Pathways at
Scale at California Community Colleges

A Dissertation by

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Irvine, California

School of Education

Submitted in partial fulfillment of the requirements for the degree of

Doctor of Education in Organizational Leadership

August 2018

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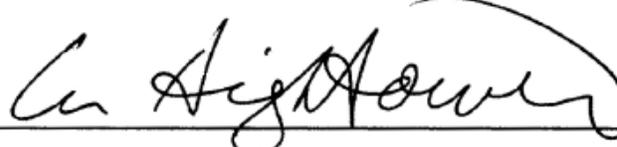
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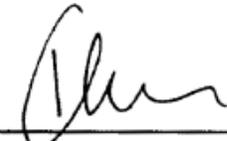
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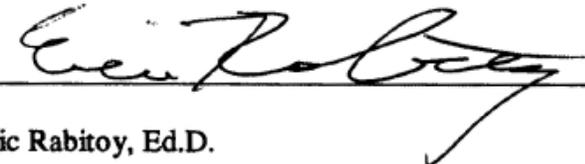
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The classic text, the *Tao Te Ching*, describes the paradox of water—“Nothing in the world is as soft and yielding as water. Yet for dissolving the hard and inflexible nothing can surpass it” (Lao & Mitchell, 1999, “78,” para.1). Through this metaphor, Lao Tzu extols the virtues of flexibility and perseverance in the face of formidable obstacles. Just as water flowing around a rock alters its shape, exercising these virtues has changed me. However, this personal growth would not have been possible without the unwavering and unconditional support of certain individuals in my life.

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ABSTRACT

A Case Study of Strategic Governance in the Implementation of Guided Pathways at Scale at California Community Colleges

by Hayley Ashby

Purpose: Community colleges across the United States are implementing systemic reforms in response to calls for increased student success. Guided pathways is a framework for holistic redesign that coordinates institutional improvements in multiple areas to increase impact. Since California community colleges are in the early stages of adopting guided pathways, research on the decision-making processes of college leadership in applying this framework is limited. The purpose of this multiple case study was to describe the role of strategic governance in the implementation of guided pathways at scale at California community colleges.

Methodology: This phenomenological qualitative study used a multiple-case embedded case study methodology to collect data aligned with the four imperatives of strategic governance theory. Semistructured interviews were conducted with 15 campus leaders involved in guided pathways implementation at three community colleges in Southern California. Archival records and documentation were used to triangulate the data.

Findings: Colleges balance the imperatives of involvement, efficiency, environment, and leadership across the domains of strategic planning and governance when implementing guided pathways. Inclusiveness, intentional alignment, interdependent leadership, and internal/external synergy emerged as essential elements of strategic governance during pathways efforts.

Conclusions: Community colleges leverage inclusive and credible strategic planning and governance systems to create a stable foundation for institutional redesign. A networked

system that interfaces informal elements with formal structures promotes and accelerates efficiency, while a proactive, reflective, student-centered approach to managing environmental demands helps maintain focus. Interdependent leadership mechanisms that are culturally compatible and responsive to institutional needs facilitate efficiency and involvement in implementation. The guided pathways framework provides colleges with a systemic model for developing overall institutional effectiveness.

Recommendations: Community college leaders should deliberately increase engagement in decision-making processes and strengthen the integrity of strategic planning and governance systems. Leaders should define the parameters of pathways teams, establish logical connections between informal and formal structures, and encourage mutual reliance in pathways leadership. Leaders should cultivate a systems mindset and use embedded reflective practices to guide implementation.

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CHAPTER I: INTRODUCTION

U.S. higher education is experiencing an existential crisis as economic, cultural, technological, and political forces reshape the 21st-century landscape (Levin, 2001). For community colleges, rising educational costs, technology advancements, and an increasingly diverse population are disrupting the basic tenets upon which the college system was founded (Bailey, Jaggars, & Jenkins, 2015a; Kuh et al., 2015). Community colleges in California are producing too few graduates at a time when more skilled workers are needed to sustain the economy and raise millions out of poverty (California Community Colleges Chancellor's Office, 2016c).

Low graduation rates and public skepticism about the quality of postsecondary education have resulted in a national completion agenda (Bailey, 2016). The federal government and private foundations have set bold goals to increase the number of students who complete a community college degree or certificate (Bill & Melinda Gates Foundation, n.d.; The White House, 2011). In response to calls to incentivize higher performance at community colleges, California passed the Seymour-Campbell Student Success Act of 2012 sparking a statewide college success movement (California Community Colleges Chancellor's Office, 2012). In California, the Student Success Initiative has led to action aimed at reforming college structures and practices to support student completion (California Community Colleges Chancellor's Office, 2015b).

Multiple theoretical frameworks can be applied to why and how college leaders engage in change efforts including guided pathways initiatives. Birnbaum (1992) focused on cognition, noting that academic leaders interpret their environment through bureaucratic, collegial, political, and symbolic frames. Schuster, Smith, Corak, and

Yamada's (1994) theory of strategic governance recognizes leadership at multiple levels using the imperatives of involvement, efficiency, environment, and leadership.

While leadership can be demonstrated by multiple individuals in an institution, Kotter (2014) suggested that rapid environmental movement requires transformative change, which in turn necessitates highly effective leaders. As heads of their institutions, college presidents should be inspiring and mobilizing leaders of systemic change efforts, possessing a unique set of skills and abilities (Perlstein, 2013).

Studies stress the need for college presidents to be intentional in their decision making when engaging in large-scale innovations like guided pathways (Lipka, 2013). Scaling initiatives so that they impact all students across every stage of their college experience can present significant financial and operational challenges (Bailey, 2016). College presidents need to think creatively and strategically so that they can prioritize actions and leverage funds effectively to create lasting change in their institutions (Aspen Institute, 2014). While the student success movement focuses on completion, college presidents need to plan with the end in mind (Strobel & Christian, 2017), concentrating on student outcomes that lead to credentials of labor-market value (Lipka, 2013).

Background

The background covers eight primary sections aligned with the purpose of the study. First, the changing environment in higher education in the United States is examined with a focus on community colleges, specifically those in California. Second, the national call to action to increase student success is discussed along with the thematic shift in community colleges from access to success. Third, college governance is described through the lens of strategic governance, which provides the theoretical

framework for the study. An overview of the role of the college president in leading educational institutions comprises the fourth section. Fifth, national reform initiatives provide context for regional change efforts at California community colleges, with an emphasis on guided pathways in the sixth section. Seventh, leadership in change initiatives is presented, including the role of college presidents in implementing guided pathways in California community colleges. The last section addresses gaps in the literature that indicate the need for the study.

Changing Environment of Higher Education in the United States

Postsecondary institutions provide undergraduate educational opportunities to 17.3 million students at thousands of institutions across the United States (Kena et al., 2016). By producing the educated workers essential to a healthy national economy, colleges and universities serve as instruments of social mobility and prosperity (Bill & Melinda Gates Foundation, n.d.). However, 21st-century developments have led to contextual changes that are placing pressure on educational institutions to revise priorities and practices that pivot toward student completion (Bailey, 2016; Kuh et al., 2015).

Five trends driving this completion agenda are “changing student characteristics and needs; unrelenting technological advances that stretch institutional resources and revolutionize when, where, and how students learn; more intense competition for students; less forgiving economic circumstances; and widespread skepticism about the quality of higher education” (Kuh et al., 2015, pp. 9-10). These trends indicate the need for measurable and cost-effective innovations that take into consideration students’ diverse backgrounds and learning needs (Kuh et al., 2015).

Changing environment for community colleges. Community colleges in the United States enroll approximately 10 million students each year, which represents 36% of the total enrollment in the nation’s institutions of higher learning (National Center for Education Statistics, 2013-2014). Offering an array of certificates and degrees, community colleges provide a variety of learning opportunities to meet multiple educational goals. Community colleges are a gateway to gainful employment and intergenerational, upward mobility preparing students for careers or transfer to a 4-year institution (Miller, Valle, Engle, & Cooper, 2014). With minimal admission requirements and maximum flexibility, community colleges’ open-door policy reflects a commitment to providing education for a diverse population, especially individuals who had previously been excluded from such opportunities (Bahr, 2013). Community colleges are “the new ‘frontier’—the entry point to higher education for first-generation and low income students who aspire to become educated citizens and workers” (Weinbaum, Rodriguez, & Bauer-Maglin, 2013, p. 8).

Community colleges were initially designed to promote low-cost access to higher education (Bailey et al., 2015a; Jenkins, 2011; Miller et al., 2014). Grounded in the philosophy that everyone has the right to a postsecondary education, the original mission of the community college was to ameliorate the socioeconomic constraints to educational access that inhibited full participation in American democracy (Miller et al., 2014). The paradigm shift in higher education from maximum access to optimal success has caused community colleges to reexamine core academic functions. In response to this changing environment, community colleges across the country are reconsidering how programs of

study are organized and how instruction and support services are offered (Bailey, 2016; Kuh et al., 2015).

Changing environment for California community colleges. With 2.4 million students enrolled each year, California's 114 community colleges provide educational opportunities for 25% of all students in community colleges nationwide (Community College League of California, 2017). Their emphasis on social mobility and workforce development mirrors the focus of community colleges across the country. Responsive to the communities they serve, California community colleges offer certificate and degree programs in over 350 different fields tailored to the needs and priorities of regional business, industry, education, and government partners (Baime & Baum, 2016; California Community Colleges Chancellor's Office, 2015a).

While California community colleges have an affinity with the local populations they serve, they face a number of challenges in supporting the state's economy. A skills gap exists in several of California's priority sectors, especially in science, technology, engineering, and math fields (California Community Colleges Chancellor's Office, 2015a). California faces a projected deficit of 1 million middle-skill workers, who hold credentials, certificates, or associate's degrees, and a shortage of 1.1 million workers with bachelor's degrees. This mismatch between the jobs available in the region and the skills of workers contributes to millions of Californians living near the poverty line (California Community Colleges Chancellor's Office, 2016c; Warner, Gates, Ortega, & Kiernan, 2012).

At a time when California community colleges need to produce more skilled workers, graduation rates remain low and flat. Only 40% of all first-time students at

public 2-year institutions in the 2011 cohort earned a certificate or degree within 3 years (National Center for Education Statistics, 1999-2011). The need to address the shortage of skilled workers and demonstrate the value of a college education has resulted in a call to action. California community colleges are seeking “to improve transfer rates, to close achievement gaps among underrepresented students, to improve completion rates and to advocate for more investment in public higher education” (California Community Colleges Chancellor’s Office, 2016c, p. 4).

Demands to Increase Student Success in Higher Education in the United States

National conversations about postsecondary attainment, especially the need to improve graduation rates, have created a sense of urgency around the issue of student success (Bailey, 2016). In 2008, the Bill & Melinda Gates Foundation announced a national goal to double the number of low-income students who complete a certificate or degree by the age of 26 by the year 2025 (Russell, 2011). In 2009, President Barack Obama set a national goal that by the year 2020, the United States would have the highest proportion of college graduates worldwide (U.S. Department of Education, 2011b). In the same year, the Lumina Foundation (n.d.) declared its “Big Goal,” calling for 60% of Americans to complete a certificate or degree by 2025.

Student success in community colleges. Calls for action to increase success in higher education have created conspicuous ripples felt by community colleges across the United States. As Alfred (2011) noted,

Community colleges are under significant pressure to focus on completion and to push more students across the finish line. The usual agents of accountability—

government agencies, accrediting associations, and foundations—are clear about their expectations for completion and show no signs of backing off. (p. 111)

To remain viable, community colleges are adjusting their institutional framework to align with the current educational landscape (Alfred, 2011). The proposal of policy designed to incentivize higher performance at community colleges complemented the movement in several states toward performance-based funding (Bailey et al., 2015a). As of 2015, nearly three fourths of states had enacted or were transitioning from funding community colleges based on enrollment to funding based on student outcomes (National Conference of State Legislatures, 2015).

Student success in California community colleges. California has been cautious in transitioning to performance-based funding. State legislators responded to Obama’s 2020 completion goal by passing California Senate Bill 1143. California Senate Bill 1143 called for the Board of Governors to establish a task force to research student success models and best practices, and to develop a plan for improving student success based on its recommendations (Cal. S. B. 1143, 2010). The California Community Colleges Student Success Task Force (2012) provided 22 policy recommendations in eight focus areas aimed at strengthening the California Community Colleges system by realigning resources with student achievement. Subsequently, California passed the Seymour-Campbell Student Success Act of 2012, which launched a panoply of reform initiatives geared toward helping colleges increase transfer rates and certificate and degree completion (California Community Colleges Chancellor’s Office, 2012).

Theoretical Framework of Strategic Governance

Multiple theories exist for framing why and how college leadership engages in completion reform efforts. Birnbaum (1992) proposed that academic leaders interpret their institutional environment through four cognitive frames—bureaucratic, collegial, political, and symbolic. Schuster et al. (1994) acknowledged the need to address leadership at all levels in the institution, including faculty leadership, union leadership, administrative leadership, and presidential leadership. Schuster et al.'s four imperatives, which include involvement, efficiency, environment, and leadership, were used to situate the study of change leadership in California community colleges through a strategic governance lens.

Role of the President in Higher Education

University and college presidents face significant challenges as a result of a rapidly changing world (Eddy, Sydow, Alfred, & Garza Mitchell, 2015). As the leaders of complex systems, presidents balance a multitude of responsibilities to meet a variety of institutional needs (Bolman & Gallos, 2011). Traditional duties under the president's purview include leading the administrative team, supervising operations, allocating resources, determining policies, setting institutional priorities, and hiring (Pierce, 2014). The president is the chief fundraiser as well as the primary spokesperson responsible for fostering connections with the community, government agencies, and local businesses (Jacobson, 2016). In addition to cultivating external partnerships, presidents in higher education must engage and inspire internal stakeholders by creating an atmosphere conducive to collaboration and innovation (Nelson, 2014).

Role of the president in community colleges. The characteristics that distinguish community colleges from other types of institutions impact the focus of college presidents. A recent survey of community college presidents identified several key educational concerns including “financial matters, enrollment management, politics and public safety, personnel management and staffing, competition from other institutions, and educational matters” (Jaschik & Lederman, 2017, p. 12). Demands to increase student success at community colleges have required presidents to ensure that the mission, policies, and practices at these institutions are optimally aligned to support student learning. Community college presidents also play a pivotal role in leading change, which has required the development of specific leadership skills and competencies (American Association of Community Colleges [AACC], 2005; Aspen Institute, 2013).

Role of the president in California community colleges. Presidents at community colleges in California operate within the context of local environmental conditions. As the largest system of public 2-year postsecondary institutions in the nation, California community colleges serve a diverse population of students with an assortment of educational goals (Foundation for California Community Colleges, 2017a). Due to the diversity within the state, California community college presidents are conscious of equity gaps and have developed strategies to ensure that all students are able to achieve their learning goals (California Community Colleges Chancellor’s Office, 2017i). Presidents in California community colleges strategically allocate resources and aggressively pursue grant opportunities to bridge deficiencies in state funding. At the same time, presidents must stay apprised of state policies and regulations so as to avoid

pitfalls and maximize opportunities. Finally, the implementation of various accountability measures requires community college leaders to collect, analyze, report, and use institutional data effectively to inform continuous improvement and planning (Eddy et al., 2015).

Reform Initiatives in Higher Education

National student success initiatives have been encouraged and supported by the federal government and private foundations (Bailey, 2016; Baldwin, Bensimon, Dowd, & Kleiman, 2011; Russell, 2011). While only \$2 billion of President Obama's \$12 billion American Graduation Initiative was approved by Congress, this proposal launched a cascade of reform activities. In 2011, the College Completion Tool Kit provided governors with strategies for developing customized state action plans for improving higher education (U.S. Department of Education, 2011a). A number of federal grant opportunities have followed to encourage institutions to develop innovative solutions to promote persistence and completion in postsecondary education (Russell, 2011).

Reform initiatives in community colleges. The shift in focus from access to success in higher education in the United States has resulted in numerous reform efforts designed to improve student outcomes in community colleges. In 2004, the Lumina Foundation along with seven founding partners launched Achieving the Dream, a national initiative designed to improve success in community colleges, particularly among low-income students and students of color (Rutschow et al., 2011). In 2010, the Bill & Melinda Gates Foundation provided funding for Completion by Design, a partnership initiative that included nine community colleges from three states whose goal

was to significantly increase completion rates for low-income students while maintaining affordability, access, and quality (Baldwin Grossman et al., 2015).

Reform initiatives in California community colleges. In California, the passage of the Seymour-Campbell Student Success Act of 2012 has resulted in research and initiatives aimed at re-orientating college structures and practices to support educational outcomes for students (California Community Colleges Chancellor’s Office, 2012). In 2012, the California Community Colleges Board of Governors and Chancellor’s Office began implementing the 22 recommendations of the Student Success Task Force under the umbrella of the Student Success Initiative (Seymour-Campbell Student Success Act, 2012). By 2016, actions had been initiated for each recommendation in all eight focus areas (California Community Colleges Chancellor’s Office, 2015b). In 2016, the California Guided Pathways Project was launched to help 20 community colleges adopt and implement the guided pathways framework (Foundation for California Community Colleges, 2016). In addition, the 2017-2018 Governor’s Budget provided \$150 million in one-time grants to California community colleges to bolster student success through local guided pathways programs (Brown, 2017).

Guided Pathways

Studies on high-impact practices resulting from reform initiatives have identified guided pathways as the single most effective strategy for improving student success (Bailey et al., 2015a; Couturier, 2012; Jenkins & Cho, 2013). According to the American Association of Community Colleges (AACC, 2014), a guided pathway is “a highly structured, coherent educational experience that is built around and through an area of study” (p. 11). Couturier (2012) described guided pathways as routes through college

“helping students enroll early in program streams that lead to a major, and keeping students engaged and progressing until they complete credentials with labor market value” (p. 1).

The guided pathways model developed by Bailey et al. (2015a) is a holistic framework for institutional reform wherein colleges “create clear, educationally coherent program pathways that are aligned with students’ end goals, help students explore and select a pathway of interest, and track and support students’ progress along their chosen pathway” (p. 199). As an alternative to the cafeteria college model in which students are given an array of curricular options with passive support and limited guidance, the guided pathways model informs the design of clear roadmaps that encourage completion. California colleges are using the model to redesign institutional structures, policies, and practices as they relate to programs, support services, and instruction over piecemeal approaches to improvement (Bailey et al., 2015a).

Role of the California Community College President in Reform Initiatives

Leadership plays an essential role in the strategic implementation of change efforts in response to external forces. Literature suggests that the pace of environmental change is accelerating, exerting more pressure than ever on higher education to adapt in transformative ways to globalization in economic, cultural, technological, and political domains (Levin, 2001). Kotter (2012) suggested that a multistep change process capable of overcoming the inertia of the status quo “cannot be employed effectively unless it is driven by high-quality leadership” (p. 22). The role of leaders is to set the direction and use strategies to inspire and mobilize others to achieve a vision for a better future (Kotter, 2014).

Transforming community colleges into institutions with high levels of student success requires effective leadership (McClenney, 2013). According to the Aspen Institute, “while strong leadership can be exercised by people throughout an institution, every high-performing community college has a first-rate president” with “a special set of qualities and know-how that enable them to lead” (Perlstein, 2013, p. 2). As leaders of change efforts at their institutions, the role of college presidents is to sustain a focus on access and success, take significant risks to advance initiatives, create lasting change, articulate a strategic vision for their colleges, and raise and allocate resources aligned with success (Perlstein, 2013).

California community college presidents implementing innovations at scale, including guided pathways, require competencies that will assist their institutions in achieving breakthrough results without sacrificing access, opportunity, and quality (AACC, 2005; Bragg et al., 2014). The literature stresses the need for college presidents to be strategic and deliberate in deciding whether to adopt guided pathways and how to implement the model across their institutions (Aspen Institute, 2014; Lipka, 2013).

Research Gap

The rise of the completion agenda in higher education has resulted in a number of reform initiatives that have been discussed in the literature (Russell, 2011). However, many of these studies concern student success initiatives that focus on short-term, uncoordinated efforts centered on individual institutional components (Baldwin Grossman et al., 2015). While a number of colleges in the eastern United States have implemented guided pathways at scale, California community colleges are just beginning to adopt a systemic pathways model (Community College Research Center, 2016). As a

result, studies on the decision-making process of California community college presidents in adopting and implementing the guided pathways model are exiguous.

Statement of the Research Problem

The literature describes the movement toward accountability in higher education over the last couple of decades, elevating the importance of postsecondary attainment, especially in community colleges (Bailey et al., 2015a). Community colleges have been challenged to increase graduation and retention rates to not only warrant public investment in education but also ensure the strength of the economy (California Community Colleges Chancellor's Office, 2015a). A plethora of state and national initiatives have examined evidence to determine barriers to success and to develop strategies to improve student outcomes (Rutschow et al., 2011). Innovations in the area of student success have been the subject of intense study in recent years; however, these small-scale, segment-specific initiatives have been found to have limited sustainable positive effects (Bailey, 2016).

Literature related to institutional redesign is beginning to emerge and take center stage. Recent research has indicated that traditional methods of reform are inadequate and that significant improvement will require transformation under the guidance of quality leadership (Bailey et al., 2015a; Kotter, 2014). Community college presidents need to be adept at leading and coordinating complex, large-scale change efforts (Perlstein, 2013). Kezar (2014) noted that college presidents need to engage a variety of stakeholders and consider multiple perspectives in their decision making. Moreover, presidents need to think holistically when aligning governance structures, communication

strategies, professional development, and college resources with systemic change goals (MDRC, 2014).

While studies agree that leadership is a critical factor in large-scale change efforts, leadership principles within the context of institutional redesign are primarily discussed in abstract terms (Bailey et al., 2015a). A common set of specific leadership strategies tied to profound and lasting organizational change, especially as they relate to guided pathways, is not discernable in the literature (Kimmens, 2014). Moreover, the guided pathways model provides few particulars on ways to address political and social dynamics as part of the change process (Rose, 2016).

As change efforts in community colleges evolve based on continued experimentation and study, so does the function of leadership in implementing reform initiatives (Kezar, 2014). However, the small number of California community colleges that are engaged in comprehensive and integrated reform makes the development of common leadership principles difficult (Community College Research Center, 2016). The parsing of leadership themes allows for an examination of how these themes collectively relate to community colleges' ability to achieve high-level student outcomes (Kimmens, 2014). Moreover, the spread of large-scale innovations requires that information on the dynamics of change be shared across institutions (Bragg, 2015). Understanding why and how college leaders in California community colleges implemented a guided pathways model will provide insights based on direct experiences with this framework.

Purpose Statement

The purpose of this multiple case study was to describe the role of strategic governance in the implementation of guided pathways at scale at California community colleges.

Research Questions

1. What role does strategic governance have in the implementation of guided pathways at scale at California community colleges?
 - a. What role does *involvement* have in the implementation of guided pathways at scale at California community colleges?
 - b. What role does *efficiency* have in the implementation of guided pathways at scale at California community colleges?
 - c. What role does *environment* have in the implementation of guided pathways at scale at California community colleges?
 - d. What role does *leadership* have in the implementation of guided pathways at scale at California community colleges?
2. What are the patterns of convergence and divergence in the role of strategic governance in the implementation of guided pathways at scale between California community colleges?

Significance of the Problem

Research in higher education is replete with studies of initiatives and interventions designed to increase student success in response to the completion agenda. The paradigm shift in higher education from maximum access to optimal success has led postsecondary institutions to reexamine core academic functions, particularly at

community colleges (Bailey et al., 2015a). Research on institutional improvement suggests that only systemic, large-scale reforms will lead to significant gains in student attainment (Jenkins & Cho, 2013). As California community colleges heed the call to progress from small-scale innovations to comprehensive, institutional redesign, uncertainties related to implementation abound (Rose, 2016). Large-scale reform models, like guided pathways, provide a framework for change but not a prescription (Strobel & Christian, 2017).

Research on institution-wide initiatives seeks to elucidate leadership strategies to facilitate complex change. In recognizing the crucial role of leaders in change efforts, competencies and tools have been developed to describe leadership qualities, especially of college presidents, necessary for such endeavors (AACC, 2005; Aspen Institute, 2014). However, there has been limited study of how college presidents and other institutional leaders navigate the unique political and social dynamics of their institutions during guided pathways implementation (Rose, 2016). Governance issues discussed in relation to guided pathways narrowly focus on cultivating relational trust and refocusing college governing bodies on issues of practice (Bailey et al., 2015a).

A study of California community colleges' experiences in implementing guided pathways contributes information to a burgeoning field of knowledge related to designing student success initiatives at scale. Research findings describe the multidimensional nature of transformational change (Klempin & Karp, 2015) as it relates specifically to guided pathways. Furthermore, the study provides insight into how college presidents make decisions aligned with Schuster et al.'s (1994) strategic imperatives of involvement, efficiency, environment, and leadership during institutional redesign.

Ultimately, this research has the potential to provide a clearer understanding of the change and decision-making processes of California community colleges engaged in systemic institutional reform such as guided pathways. Colleges may use the findings to gain a greater awareness of how leadership is coordinated across different realms of the institution to enable transformative change. Finally, an understanding of which strategic imperatives are most essential during change efforts and how they interrelate to collectively effect change could inform and promote institutional redesign at community colleges statewide.

Definitions

The following operational and theoretical definitions were used in the study:

American Association of Community Colleges (AACCC). AACCC is the main advocacy organization for the nation's 1,200 community colleges serving 13 million students. The association informs and influences federal and state policy through innovative programs, research, and outreach (AACCC, n.d.-b).

California Community Colleges. A system of publicly funded higher education institutions in California consisting of 114 colleges serving 2.1 million students (**source?**). A board of governors and a state chancellor provide leadership for the colleges, which offer workforce, basic skills, and transferable courses leading to certificates, degrees, and transfer to 4-year institutions.

Completion agenda. A call to action issued by legislators, foundations, and educators for higher education institutions to increase the number of individuals with degrees and certificates (Bailey, 2016; Bailey et al., 2015a; McClenney, 2013).

Framework of indicators. Developed by the California Community Colleges Chancellor's Office (2016a) as part of the Institutional Effectiveness Partnership Initiative (IEPI), the framework guides college and district goal setting through indicators in the areas of "fiscal viability, student performance, accreditation status, and compliance with federal and state guidelines" (para. 1).

Guided pathways. Clear, coherent, and highly structured curricular paths designed to help students achieve their educational goals in a specific area of study (AACC, 2014; Bailey et al., 2015a).

Pathways Project. A national initiative led by the AACC (n.d.-a) dedicated to "building capacity for community colleges to design and implement structured academic and career pathways for all of their students" (para. 3).

Reform initiatives. Coordinated activities tied to goals and strategies focused on improving institutional outcomes, increasing productivity, analyzing policies, or implementing best practices (Bailey et al., 2015a; Russell, 2011).

Scaling. The process of broadening the impact of innovation through depth, sustainability, spread, and shift to improve outcomes for the greatest number of learners within and across institutions (Bragg, 2015; Coburn, 2003; Kezar, 2014).

Strategic governance. A theoretical framework proposed by Schuster et al. (1994) that focuses on approaches "that successfully blend the requirements of intelligent strategic planning with those of legitimate, participative governance" (p. 11).

Strategic imperatives. Elements of strategic governance, including involvement, efficiency, environment, and leadership, that are essential to decision making in higher education (Schuster et al., 1994).

Student outcomes. The result of a college education as measured by institutional data linked to key performance indicators including completion, remediation, transfer, and success (California Community Colleges Chancellor's Office, 2017e).

Student success. An individual's attainment of an educational goal as measured by metrics of achievement and progression linked to certificate and degree completion and transfer (California Community Colleges Student Success Task Force, 2012).

Transformative change. Multidimensional change that occurs in response to rapid environmental movement that influences structures, processes, and attitudes within an organization (Klempin & Karp, 2015; Kotter, 2014).

Delimitations

The study was delimited to public 2-year postsecondary institutions in California that implemented guided pathways in conjunction with the AACCC Pathways Project.

Organization of the Study

The remainder of the study is organized into four chapters followed by references and appendices. Chapter II provides a review of the literature on the changing environment in higher education, demands to increase student success, reform initiatives including guided pathways, strategic governance theory, and the role of the college president in leading change. Chapter III describes the research design and methodology of the study and provides a description of the population, sample, and procedures for data collection and analysis. Chapter IV presents the results of the data collection and provides an analysis of the findings. Chapter V comprises the findings, conclusions, implications for action, recommendations for future research, and concluding remarks.

CHAPTER II: REVIEW OF THE LITERATURE

This chapter synthesizes the literature relevant to the study. The landscape of higher education in the United States is examined, including the changing environment in community colleges, especially those in California. The demands to increase student success are discussed as an impetus for change. Strategic governance theory is then introduced to describe the theoretical propositions associated with the study. Next, the role of the [college?] president in multiple sectors of higher education is defined. A review of past and current reform initiatives is also provided, followed by a dedicated explanation of guided pathways. Finally, the role of California community college presidents in planning and implementing institution-wide transformational change is explained.

Changing Environment of Higher Education in the United States

The number of students enrolled in colleges and universities in the United States underscores the importance of higher education to society. In Fall 2015, 19.9 million students attended degree-granting postsecondary institutions (McFarland et al., 2017). As a result of societal forces and the role of education in promoting economic prosperity in the knowledge age, postsecondary institutions are subject to a host of external pressures (Altbach, 2002a; Kuh et al., 2015). Economic, demographic, and technological factors exert influence on higher education priorities, structures, and practices as well as inform educational agendas (Altbach, 2002a; Bailey et al., 2015a). Moreover, confidence in the value of higher education has decreased as calls for accountability have increased, raising expectations for evidence of student achievement as a measure of institutional quality (Alfred, 2011).

Kuh et al. (2015) identified and summarized the various trends underlying 21st-century higher education (Table 1). The five major determinants of the present educational landscape are student demographics, technological advances, competition, financial support, and educational quality.

Table 1

Current Trends Driving Change in Higher Education

Trend	Description	Implication
Changing student characteristics and needs	Students with varied learning styles come from diverse family, educational, and community backgrounds; students are more mobile, attending multiple institutions.	Institutional adjustments should be responsive to learners' background and needs; student learning is difficult to assess across institutions.
Technological advances	Today's students are digital natives and take more online classes.	Institutions need to understand the impact of technology-mediated instruction on learning.
Competition for students	The number of high school graduates remains static or has declined.	Institutions need to attract and retain students and help them matriculate.
Economic and competitive forces	Financial support for colleges has declined as the pressure to reduce college costs has increased.	Innovative approaches to instruction are required to make the most of available funding; data should be used to determine whether new approaches are effective.
Skepticism about educational quality	Public confidence in the quality of American postsecondary education is waning.	Evidence of student success is necessary to demonstrate the value of higher education.

Note. Adapted from *Using Evidence of Student Learning to Improve Higher Education* (pp. 9-10), by G. D. Kuh et al., 2015, San Francisco, CA: Jossey-Bass.

Changing Environment for Community Colleges

Historical context is essential to understanding the evolving community college environment. Higher education expanded dramatically during the first half of the 20th

century following the end of World War II (Altbach, 2002b; Erickson, 1997). The federal government took action to reaffirm equal access to educational opportunity as a political and economic necessity in a democratic society (Miller et al., 2014).

Democratizing opportunities for education at the postsecondary level led to the establishment of community colleges (Brubacher & Rudy, 2008). In an effort to promote social mobility through education, the government sought to reduce financial and geographic barriers so that every American could be “enabled and encouraged to carry his education, formal and informal, as far as his native capacities permit” (President’s Commission on Higher Education, 1947, p. 101).

In addition to social influences, economic factors also contributed to the expansion of community colleges. The return of World War II veterans and the subsequent rise of the baby boomer generation resulted in the economic need to produce a more highly educated workforce (Bailey et al., 2015a). Technological developments in the advanced industrial era also placed more emphasis on creating skilled workers (Watson & Watson, 2013). The federal government’s focus on increasing educational opportunities for all centered on expanding public institutions, including community colleges, through legislation and funding in the form of financial aid (Brubacher & Rudy, 2008).

During the 20th century, access was the prime policy issue for community colleges in the United States as a result of environmental pressures. Trow (2007) referred to this period of time as the “mass” phase in the development of higher education (p. 243). During this stage, the emphasis was on the transmission of skills for a wider range of technical occupations rather than on the molding of minds and character for elite roles

in society (Trow, 2007). The access agenda led to remarkable enrollment in community colleges, which became higher education's fastest growing sector (Erickson, 1997). Community college attendance soared from 217,500 students in 1950-1951 to more than 10 million students in the mid-1990s (Brubacher & Rudy, 2008). The number of public community colleges also increased significantly from 25 in 1910 to 1,155 in 2000 (Phillippe & Sullivan, 2005).

Following a period of rapid growth during the latter half of the 20th century, environmental shifts resulted in changes to community college funding and accountability (Alfred, 2011; Selingo, 2013). Colleges expended significant amounts of money on facilities and faculty to support the explosion in enrollment in the 1950s and 1960s, thereby increasing the need for financial support. Colleges raised tuition, and the federal government subsidized these increases for low-income students through federal loans and grants established through the Higher Education Act (Selingo, 2013). States also supported community colleges through financial aid programs and taxpayer dollars. Between 1980 and 1990, tuition increased 132% at public 2-year colleges, outpacing inflation (The College Board, 2017). During this time, federal financial aid transitioned from primarily grants to mostly loans, placing more of the fiscal responsibility for education on individuals. Altbach (2002a) noted that these influences led to a philosophical shift in the way education was viewed. While initially seen as a "public good" to be supported by society as a whole, education was subsequently perceived as a "private good" that should be individually financed by the beneficiary (Altbach, 2002a, pp. 1023-1024).

The commodification of education combined with competing economic priorities, especially during the Great Recession in the late 2000s, contributed to financial difficulties for community colleges (Alfred, 2011; Altbach, 2002a). At the same time, society began to question the value of education. While public 2-year colleges remained the most affordable educational option, “students, parents, and policymakers began to ask what they were getting in return for their money” (Bailey et al., 2015a, p. 6). In viewing education as a product, students became more selective and concerned not only with access but also with the quality of educational opportunities, leading to increased competition between institutions (Altbach, 2002a).

In addition to economic forces and changes in public perception, demographic realities and technological advances influenced the community college landscape in the second half of the 21st century (Baime & Baum, 2016; Kuh et al., 2015). As educational opportunities expanded and enrollment increased, the student population at community colleges became more diverse and more closely reflected the demographics of the surrounding service areas (Altbach, 2002a). Students attending community colleges today range in age, race/ethnicity, ability, and income level (Baime & Baum, 2016). Furthermore, technological innovation has resulted in the transition from an advanced industrial era to a knowledge age (Trow, 2007). As Watson and Watson (2013) explained, educational institutions are now expected to cultivate knowledge workers capable of sustaining and advancing knowledge-based economies. Trow (2007) proposed that the confluence of these external influences led to the transition to a “universal” educational model that focuses on the “adaptation of the ‘whole population’ to rapid social and technological change” (p. 243).

Changing Environment for California Community Colleges

Following national trends, community colleges in California grew rapidly during the second part of the 20th century (Erickson, 1997). The California Community Colleges system, consisting of 42 institutions serving 52,000 students in 1936, has become the largest system in the nation today with 114 colleges and 2.4 million students (Community College League of California, 2017; Erickson, 1997). The passage of the Donahoe Higher Education Act of 1961 resulted in the separation of community colleges from K-12 districts, and the state legislature established a Board of Governors in 1967 to develop systematic policy for colleges across California (Livingston, 1998). The *Master Plan for Higher Education in California, 1960-1975* guided the early development of statewide postsecondary education by differentiating California Community Colleges from the University of California and California State University systems (California State Department of Education, 1960).

As open-access institutions, California community colleges were expected to “bear the most extensive responsibility for lower division, undergraduate instruction” in support of university transfer, career and technical education, and basic skills (California Community Colleges Student Success Task Force, 2012, p. 6). California colleges are a vehicle for social mobility and workforce development in alignment with the needs and priorities of local business, industry, education, and government partners (Baime & Baum, 2016). California community colleges provide credentials to 80% of firefighters, law enforcement officers, and emergency medical technicians in the state. Moreover, 70% of nurses receive their education from California community colleges, and transfers from community colleges to the University of California schools result in 48% of

bachelor's degrees in science, technology, engineering, and mathematics (Community College League of California, 2017).

California community colleges have demonstrated adaptability to environmental changes in local service areas through developments and policy directions over time (Altbach, 2002a). Altbach (2002a) noted that institutional realities were broadly guided by societal factors or external compliance tied to funding. Kuh et al.'s (2015) environmental change drivers provided further explanation of the specific pressures faced by these institutions within the context of their communities, including changing demographics, economic pressures, and public skepticism.

Exemplifying a universal model of higher education, community colleges serve a student population that reflects the demographic makeup of the surrounding communities (Baime & Baum, 2016; Trow, 2007). An examination of the demographics of community college enrollment revealed that 2-year public institutions disproportionately serve "low-income, immigrant, first-generation, and ethnic minority students" (Bailey et al., 2015a, p. 1). While once referred to as underrepresented and nontraditional, these students now constitute the norm in California community colleges (Altbach, 2002a).

According to the California Community Colleges Chancellor's Office (2017c), over 67% of enrolled students are individuals of diverse ethnic backgrounds. Community colleges in California have experienced significant growth in Hispanic student populations over the last decade, increasing from 29% in 2007-2008 to 44% in 2016-2017 (Baime & Baum, 2016; California Community Colleges Chancellor's Office, 2017c). Moreover, the number of students age 25 or older beginning or returning to college has increased to 40% overall (Foundation for California Community Colleges,

2017a). A significant segment of the state's population lacks the basic skills needed for postsecondary success, and the percentage of individuals with less than a high school diploma is projected to increase through 2020 (Kelly, 2005). Greater diversity and significant growth in populations with educational deficits present challenges for California community colleges striving to develop the state's workforce and elevate personal economic success (Altbach, 2002a; Kelly, 2005).

Like shifting demographics, fluid economic conditions exert pressure on California community colleges, whose enrollments and appropriations fluctuate with the business cycle (Romano, 2012). Community colleges are dependent on external support from local and state funding sources; therefore, sustainability is an ongoing struggle contingent on economic realities (Baime & Baum, 2016). Funding mechanisms and levels of financial support have changed over time, significantly impacting how these institutions operate (Altbach, 2002a).

Local sources initially supported community colleges' operating expenses in California; however, by 1980, the state had become the primary funding source (Livingston, 1998). According to Erickson (1997), community colleges' dependency on state funds led to increased competition with other public services for resources. This increased competition occurred at a time of declining enrollment and shrinking revenues due to the passage of tax limitation legislation, including Proposition 13 (Erickson, 1997). Concern over the economic losses experienced by California community colleges led to calls for comprehensive reform through Assembly Bill 1725 (California Community Colleges Student Success Task Force, 2012). One of the major provisions of the bill was to "revise the procedures and criteria for the allocation of funds to

community college districts” based on average daily attendance to implement “a system of program-based funding” (California Community Colleges Board of Governors, 1989, p. 6). Subsequent legislation further modified state apportionment formulas to allow colleges to receive growth funding for increases in full-time-equivalent students (Edwards & Leichty, 2009). Presently, California community colleges are primarily supported by a combination of Proposition 98 General Fund, local property taxes, and student fees (Taylor, 2016).

The close connection between community colleges and labor market conditions has been demonstrated in the research (Romano, 2012). A comparison of enrollment data with community college revenues over a 20-year period beginning in 1967 revealed that “attendance is countercyclical—enrollments rise when unemployment rises, and fall when unemployment falls” (Betts & McFarland, 1995, p. 744). Community college funding is often unable to keep pace with statewide economic expansion and contraction (Edwards & Leichty, 2009). When unemployment rates and enrollment increase, colleges receive less funding due to economic strains; however, when the economy prospers, colleges struggle to meet enrollment targets even as funding is restored or augmented (Betts & McFarland, 1995; Romano, 2012).

Erickson (1997) maintained that the state government failed to sufficiently address the root causes of California community colleges’ financial difficulties, leading to continued instability. Historically, funding for California community colleges has not been commensurate with the University of California and California State University systems (Savage, 1985). This disproportionality in funding led Assemblyman Tom Hayden, chairman of the Higher Education Committee, to lament that the state pays the

“most for the kids who are the easiest to educate and the least for the ones who pose the toughest educational challenge” (as cited in Savage, 1985, p. 21). Inadequate funding and allocations tied to growth continue to be problematic for California community colleges, which have experienced a 70% decline in funding since 2008 (Erickson, 1997; Stout, 2017).

The transfer of financial responsibility for California community colleges from the local to the state level resulted in increased public scrutiny and calls for accountability (Erickson, 1997). During the mid-1980s, government commissions were tasked with evaluating how state funds were being used, especially “the increasing pattern of deficit spending by certain districts” (Commission on California State Government Organization and Economy, 1986, p. 1). In light of California community colleges’ financial difficulties, uncertainty regarding fiscal responsibility was tied to issues of management and governance (Erickson, 1997). The state sought to provide clarification and remedy the situation by passing legislation that required the development and implementation of “a comprehensive community college educational and fiscal accountability system” (California Community Colleges Board of Governors, 1989, p. 6).

Accountability was subsequently linked to the concept of effectiveness and began to gain significance for educational institutions in the 1990s (Alfred, 2011; Head, 2011). Head (2011) proposed that public calls for effectiveness originated from perceived deficiencies related to the cost of education and the employability of graduates given their acquired knowledge and skills. The focus on institutional effectiveness was amplified during the recession in 2008 when limited community college resources were stretched to support dramatic increases in enrollment, leading to concerns about

educational quality (Alfred, 2011). These concerns were voiced by several external accountability agents including (a) the state, as a major source of community college funding; (b) the federal government, as a provider of federal student aid; (c) accrediting agencies, which ensure institutional quality; (d) regions and employers, who pay taxes, serve on elected boards, and make use of college services; and (e) other policy organizations that track and publish institutional performance data (Ewell, 2011).

Calls for accountability in the 21st century have resulted in the development of statewide performance measurement systems including the Accountability Reporting for the Community Colleges (ARCC) system, the Student Success Scorecard, and the Institutional Effectiveness Partnership Initiative Indicators Portal (California Community Colleges Chancellor's Office, 2017f, 2017g). However, increased transparency has elevated rather than assuaged concerns regarding student completion at California community colleges (Metzker & Heiman, 2016). Low college completion rates have spurred action and legislation at the state level, creating a sense of urgency to adopt priorities and practices aligned with student success (California Community Colleges Chancellor's Office, 2012).

Demands to Increase Student Success in Higher Education

Within the context of a dynamic and uncertain environment, higher education “remains in a state of dynamic evolution, much like the culture which surrounds it and sustains it” (Brubacher & Rudy, 2008, p. 441). Changing expectations for higher education in the United States have demanded that colleges and universities prioritize student success in addition to student access (Alfred, 2011). In 1990, the passage of the Student Right-to-Know Act required higher education institutions to be more transparent

about student persistence and graduation rates (Russell, 2009). As a result, the National Center for Education Statistics of the U.S. Department of Education developed a standardized system for educational data designed to “improve the comparability, quality, and usefulness of data collected from states and other education entities on the condition of education in the nation” (Cooperative Education Data Collection and Reporting Standards Project Task Force, 1991, p. iii).

Completion data gathered following the implementation of the Standards for Education Data Collection and Reporting for postsecondary education revealed that graduation rates for colleges and universities were low (Bailey, 2016). Data showed that by Spring 1994, 53% of students who enrolled in 4-year institutions in 1989-1990 had completed a bachelor’s degree, and only 7% of students enrolled in 2-year colleges had completed an associate’s degree or certificate (T. D. Snyder & Hoffman, 2000). The number of graduates has not significantly increased over time, as the 6-year completion rate for students who began at 4-year institutions in 2009 was 59%, while the 6-year graduation rate for students who entered 2-year institutions in 2012 was only 29% (McFarland et al., 2017).

Graduation rates have become “an essential lever for institutional improvement” as higher education has transitioned from a singular focus on access to a dual focus on access and completion (Wyner, 2012, p. 15). Consequently, national and state conversations have focused on strategies to increase the completion of degrees and certificates (Bailey, 2016; Miller et al., 2014). Calls to action from the federal government and major foundations have led higher education to adopt a completion agenda (Russell, 2011).

Upon entering the White House in 2009, President Obama set a 2020 completion goal calling for the United States to achieve the highest rates of educational attainment in the world (Fry, 2017). At the same time, both the Lumina Foundation and the Bill & Melinda Gates Foundation established goals and funded initiatives aimed at increasing the number of college graduates by 2025 (Matthews, 2012; Russell, 2011). Kuh et al. (2015) suggested that these calls for change intensified the need for postsecondary institutions to provide evidence of student learning and success, stating, “In the end, enduring confidence in American higher education will be defined by our performance, by the quality of college graduates, and by the impact of the innovation creativity, and service colleges and universities render society” (p. 12).

Student Success in Community Colleges

Community colleges have been the subject of intense focus as external accountability players have called for increases in the proportion of students with a college degree or credential (Ma & Baum, 2016). Community colleges are open-access, low-cost institutions that enforce minimal requirements and provide maximum flexibility for students in reaching their goals (Bahr, 2013). As Bahr (2013) noted, “The three core missions of the community college—upward transfer, workforce development, and community education—encompass an immeasurable array of potential academic outcomes and means of achieving those outcomes” (p. 139). Moreover, community colleges play a unique role in the higher education system as a crucial entry point for both first-generation, low-income students and adults who require further vocational training (Ma & Baum, 2016). These institutions are under pressure to innovate in accordance with the completion agenda while facing challenges introduced by gainful employment

regulations and a movement toward tuition-free college and performance-based funding (AASCU Government Relations, 2017).

While the need to increase student success across all sectors of higher education has been at the forefront of national discourse, considerable attention has been placed on 2-year postsecondary institutions (Ma & Baum, 2016; Sloane, 2016). The federal government, private foundations, and national associations have acknowledged and praised the character of these institutions and the opportunities they provide to the students who attend them. At the same time, community colleges have been challenged to better meet the needs of 21st-century students and the economy (AACC, 2012).

In 2010, Obama referred to community colleges as “the unsung heroes of the American education system” providing “a gateway to millions of Americans to good jobs and a better life” (The White House, 2011, p. 11). The Lumina Foundation (2017), recognizing the importance of community colleges to reaching its Goal 2025, prioritized pathways to initial credentials, which are “a first step on the ladder” to social and economic mobility (p. 5). The Bill & Melinda Gates Foundation also focused early efforts on community colleges by promoting and funding programs to improve remediation, develop standard effectiveness metrics, and encourage innovative completion strategies (Russell, 2011). In 2012, the American Association of Community Colleges (AACC, 2012) and the 21st-Century Commission on the Future of Community Colleges provided recommendations for “reclaiming the American Dream” by setting a goal to increase completion rates by 50% at community colleges by 2020 (p. 5).

As part of ongoing efforts to increase college completion, the federal government has taken action to address concerns about the cost of postsecondary education and

students' return on investment (U.S. Department of Education, 2017). In 2014, the U.S. Department of Education finalized gainful employment regulations designed to "hold career training programs accountable for putting their students on the path to success" (para. 1). The gainful employment regulations were intended to protect students from incurring loan debt they could not repay because their program of study did not lead to consistent employment with sufficient wages (U.S. Department of Education, 2014). While the regulations targeted low-quality programs and deceptive practices at for-profit institutions, the standards also impacted career education programs at community colleges (Bradley, 2014). To remain eligible for federal student aid grants and loans, institutions must meet debt-to-earnings metrics, report student information related to those metrics, and disclose information on performance and outcomes (Association of Community College Trustees, 2014).

In addition to addressing student debt, the federal government has taken aim at college affordability as part of the completion agenda. In 2015, the White House launched the America's College Promise proposal "to make two years of community college free for responsible students, letting students earn the first half of a bachelor's degree and earn skills needed in the workforce at no cost" (The White House, Office of the Press Secretary, 2015, para. 2). A significant investment of \$61 billion was pledged over the next decade to partner with states in reforming community colleges to provide tuition-free access and increased completion (U.S. Department of Education, 2016). As a result, a variety of college promise programs have been launched across the nation (Stout, 2017). As of May 2017, there were 234 promise programs at community colleges in 43 states and Washington, DC (Penn Alliance for Higher Education and Democracy, 2017).

Demands to increase student success at the federal level have trickled down to state governments, which have long been concerned about institutional performance in the context of limited state revenues, a growing demand for college-educated workers, and eroding public confidence in the value of higher education (Dougherty & Natow, 2015; Stout, 2017). According to Reindl and Reyna (2011), the current approach to budget allocation, based on enrollment figures and previous-year funding levels, does not motivate institutions to prioritize student retention and completion. Performance funding, which “directly connects state funding to an institution’s performance on indicators such as student persistence, credit accrual, and college completion,” has been used by state policymakers to incentivize institutional effectiveness (Dougherty et al., 2016, p. 147; Sponsler, Pingel, & Anderson, 2015). As of 2016, 30 states had adopted or were in the process of developing performance-funding formulas (M. Snyder & Fox, 2016). While recent literature focuses on the efficacy of this approach as an accountability strategy, performance-funding policy is expected to mature and expand in the community college sector (Hillman, 2016; Holly & Fulton, 2017; Sponsler et al., 2015).

Student Success in California Community Colleges

While demands to increase student success have been directed toward community colleges across the country, the call to action has been especially vociferous in California for a number of reasons. First, California community colleges have a long tradition of low tuition and open access, which makes them a crucial onramp in the state’s system of higher education (Foundation for California Community Colleges, 2017b; Selingo, 2013). The proportion of undergraduate students who attend community colleges in the state is 60%, which is 14% more than the national average (Taylor, 2016). Second, with the

sixth largest economy in the world, California must produce skilled and educated workers to sustain both the state's economy and the country's global competitiveness (California Community Colleges Chancellor's Office, 2015a; Foundation for California Community Colleges, 2017b).

California has responded to national completion goals set by policymakers and advocates by passing legislation designed to research and implement student success strategies. Following the passage of California Senate Bill 1143 in 2011, the California Community Colleges Board of Governors established a Student Success Task Force that developed 22 actionable recommendations designed to accomplish the following:

1. Increase College and Career Readiness . . .
2. Strengthen Support for Entering Students . . .
3. Incentivize Successful Student Behaviors . . .
4. Align Course Offerings to Meet Student Needs . . .
5. Improve the Education of Basic Skills Students . . .
6. Revitalize and Re-Envision Professional Development . . .
7. Enable Efficient Statewide Leadership & Increase Coordination Among Colleges . . .
8. Align Resources with Student Success Recommendations (California Community Colleges Student Success Task Force, 2012, pp. 2-3)

The recommendations were implemented through a combination of regulations, systemwide policies, local initiatives, and legislation including the Seymour-Campbell Student Success Act (2012).

The Student Success Task Force recommendations provided a roadmap for positive systemic changes at California community colleges (Foundation for California Community Colleges, 2017b). However, the impact on student outcomes has been minimal despite the \$890 million in state funding provided to colleges to enhance student success (Gordon, 2017). Continued concern regarding institutional performance prompted the state chancellor to develop a strategic vision for California community colleges in 2017 (Foundation for California Community Colleges, 2017b). Chancellor Eloy Ortiz Oakley's *Vision for Success* identified the outstanding, persistent challenges faced by the system and set clear and specific goals for improvement. The six systemwide goals called for increases in the proportion of students who earn a degree or certificate, transfer, or find employment in their field of study, and they called for decreases in equity gaps, regional achievement gaps, and the number of units students earn by completion (Foundation for California Community Colleges, 2017b). Furthermore, colleges were encouraged to refine and align their local goals with the systemwide priorities to facilitate collective and coordinated movement.

The state chancellor has not been alone in demanding improvements to institutional performance as evidence of effectiveness at California community colleges. The Accrediting Commission for Community and Junior Colleges (ACCJC, n.d.) also emphasizes “academic quality, institutional effectiveness, and, ultimately, student success through the creation and application of standards of accreditation and related policies” (para. 1). Along with regional accrediting commissions across the country, ACCJC has adopted standards for guiding the evaluation of multiple segments of institutional operations from academic programs to student activities (Ewell, 2011).

The Southern Association of Colleges and Schools Commission on Colleges (1997) originally described institutional effectiveness as a broad concept allowing individual colleges the freedom to develop criteria appropriate to their own context and purpose. Institutional effectiveness was later defined as “the systematic, explicit, and documented process of measuring performance against mission in all aspects of an institution” (Southern Association of Colleges and Schools Commission on Colleges, 2018, p. 121). In recent years, specific performance criteria have been established as a result of “escalating demands to evaluate institutional effectiveness” and technological advances that can produce “the kinds of comparative measures of performance that realizing the concept of institutional effectiveness requires” (Ewell, 2011, p. 24). The current ACCJC standards adopted in 2014 explicitly connect student success to academic quality and institutional integrity (Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges [ACCJC WASC], 2014). Through a comprehensive self-evaluation and peer-review process, California community colleges are required to demonstrate “academic quality and continuous improvement through ongoing assessment of learning and achievement” in pursuit of “institutional excellence” (ACCJC WASC, 2014, p. 1).

Theoretical Framework of Strategic Governance

Environmental pressures on higher education have a history of aggravating tensions between constituency groups on how to respond to calls for change (Schuster et al., 1994). Escalating demands to enhance student success at California community colleges, coupled with accountability measures that demonstrate marginal improvements in student completion, have resurrected governance concerns (Bruno & Stankas, 2017;

Gordon, 2017; Reed, 2017). California community colleges have a bilateral shared governance structure, which provides responsibilities to both locally elected boards of trustees and the California Community Colleges Board of Governors (Community College League of California, 1999). This structure complicates colleges' ability to develop responsive policies and practices that are effective, efficient, and politically acceptable to all institutional stakeholders (Schuster et al., 1994).

The literature on how to successfully navigate large-scale institutional change is beginning to emerge as initial completion reform efforts are assessed (Jenkins, Lahr, & Fink, 2017); however, the "contradictory demands" of governance and strategic planning in this context "have not been fully theorized" (Reed, 2017, p. 429). Previously developed theories related to strategic planning and governance in perpetually evolving academic environments may yield insights for today's higher education leaders. Both Birnbaum's (1992) cognitive frames theory and Schuster et al.'s (1994) strategic governance framework provide recommendations for balancing these opposing forces.

Cognitive Frames Theory

One prominent theory associated with leading institutional improvement involves the concept of cognitive frames. Birnbaum's (1992) cognitive frames theory viewed educational institutions through four distinct points of view: structural, collegial, political, and symbolic. Cognitive frames theory is compatible with the shared governance structure of California community colleges because it recognizes both formal and informal leadership roles among constituent groups. According to Birnbaum, leadership is not solely ascribed to executive-level administrators but also shaped by

other leaders, whose “collective influence is generated by formal or informal institutional structures in which interaction is regularized and expected” (p. 105).

The structural frame is the most frequently used lens as it identifies traditional leaders by “their position in the hierarchy, involvement in decision making, technical or professional competence, or perceived exercise of power” (Birnbaum, 1992, p. 111). Birnbaum (1992) noted that the structural frame is associated with individual roles in senior administration, especially college presidents and provosts, as delineated on organizational charts. The political frame is the next most commonly used frame and was linked to leaders who “helped acquire resources, influenced others, ‘made things happen,’ were open to influence, shared power, or were seen as representatives of important campus groups” (Birnbaum, 1992, p. 111). While administrators may be viewed through a political lens, individuals from other constituency groups, including faculty, staff, and student leaders, may also be connected to this frame (Birnbaum, 1992).

The collegial frame can be similarly applied across multiple levels in the institution and is related to those individuals with a human relations orientation. Birnbaum (1992) characterized these leaders as “team players” who were “fair, encouraged others to participate in institutional life, had ‘the personal touch,’ or led by example” (p. 112). Finally, the least common of the cognitive frames is the symbolic frame, which was associated with leaders who personified the institution’s mission or values, or communicated a vision or broader perspective (Birnbaum, 1992). The four cognitive frames represent the multitude of vantage points through which higher education change efforts can be viewed.

Strategic Governance Theory

Another framework applicable to the California community college environment is Schuster et al.'s (1994) strategic governance theory. The erosion of public trust in higher education, the relentless pace of change, and the movement toward continuous improvement informed the development of strategic governance theory (Leslie, 1996). In addition, strategic governance was proposed amidst observations that educational institutions were adopting more hierarchical versus participatory modes of decision making in response to external environmental pressures (Schuster et al., 1994). The trends identified by Schuster et al. (1994), underpinning the theory of strategic governance, are still relevant today as they resemble the change drivers referenced in recent higher education literature (Kuh et al., 2015; Stout, 2017).

Schuster et al. (1994) described strategic governance as comprising two necessary yet contradictory domains that must be harmonized to ensure effective decision making: "Planning and governance are indispensable components of strategic decision making, and the differences between them must be reconciled to take advantage of their respective strengths" (p. 193). The strategic planning domain falls primarily within the realm of administration and is externally influenced and responsive (Schuster et al., 1994). According to Schuster et al., decision making in the strategic planning domain is hierarchical and future oriented. Conversely, the governance domain is faculty driven and concerned with addressing internal operational issues (Schuster et al., 1994). Decision making in the governance domain is more participatory and vetted through internal groups and committees (Leslie, 1996; Schuster et al., 1994).

Four main forces exert pressure on the strategic planning and governance domains: involvement, efficiency, environment, and leadership (Schuster et al., 1994). These four imperatives are described in Table 2.

Schuster et al. (1994) noted that strategic imperatives exert pressure on the two domains in different ways. While some imperatives reinforce one another, others conflict, resulting in tension between them (see Figure 1). For example, “The demands for salient leadership and for efficiency tend to be convergent . . . [but] the value of involvement, which tends to be cumbersome and time-consuming, militates against the value of crisp, relatively efficient decision making” (Schuster et al., 1994, p. 196).

Table 2

Four Strategic Imperatives

Strategic imperative	Value
Involvement	The value of inclusiveness, of reaching out to internal and external stakeholders, of involving them as participants in the processes that yield strategic decisions
Efficiency	The value, all the more compelling under conditions of financial constraint, of obtaining greater outputs (results) with fewer inputs (resources) and doing so with dispatch, avoiding the delays viewed as the curse of participatory governance
Environment	The value of identifying elements in the environment, primarily external to the campus, and accommodating those elements that have a legitimate role (in varying degrees) in postsecondary education
Leadership	The value of having proactive, vigorous, decisive leadership to shape an institutional vision, to orchestrate efforts, and to deploy resources astutely to realize institutional goals

Note. Adapted from *Strategic Governance: How to Make Big Decisions Better* (p. 195), by J. H. Schuster, D. G. Smith, K. A. Corak, and M. M. Yamada, 1994, Phoenix, AZ: Oryx Press.

STRATEGIC GOVERNANCE DOMAINS AND IMPERATIVES

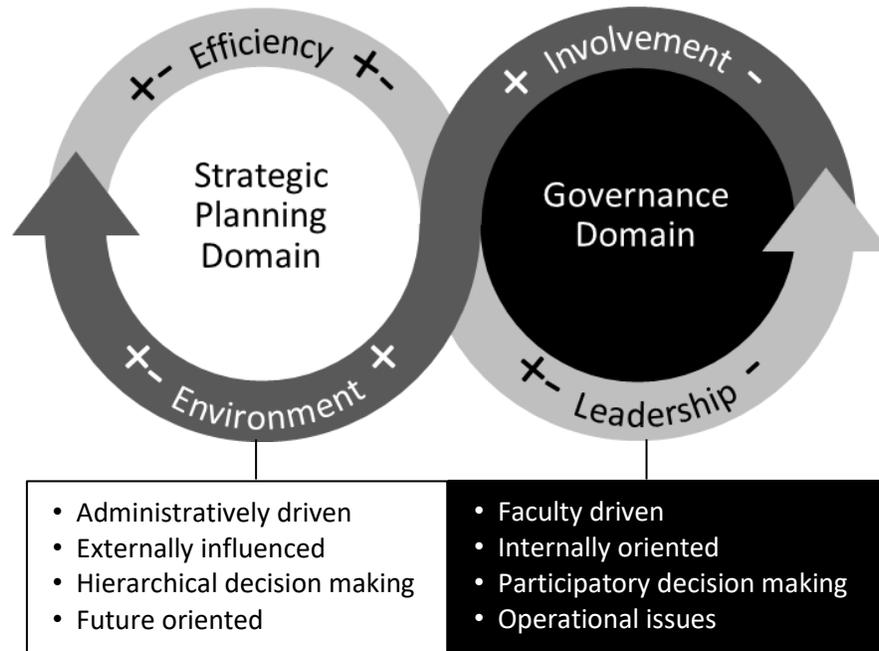


Figure 1. Strategic governance domains and imperatives. Adapted from *Strategic Governance: How to Make Big Decisions Better* (p. 195), by J. H. Schuster et al., 1994, Phoenix, AZ: Oryx Press.

Role of the President in Higher Education

As the lead administrator responsible for steering the institution, the president in higher education plays a pivotal role in governance. Colleges and universities are complex systems that are in a constant state of flux (Bolman & Gallos, 2011; Kania, 2017; Watson & Watson, 2013). The president juggles a myriad of responsibilities that touch every corner of the institution from daily operational functions to challenges and opportunities that arise as a result of environmental pressures (Pierce, 2014). The complexity of higher education requires presidents to possess the intellectual capacity, acumen, and self-knowledge necessary to understand, interpret, and navigate ambiguity (Bolman & Gallos, 2011).

A host of strategic and operational responsibilities fall under the purview of the college or university president. According to Pierce (2014), the president must coordinate with stakeholders to set the direction for the institution via a strategic vision that is aligned with the mission and informed by data and fiscal realities. Nelson (2014) referred to the president “as the exclusive interpreter in deciding which issues inside and outside the gates bear sufficiently on the college’s core mission and principles” (p. 1). The president also leads the administrative team, oversees operations, and makes decisions regarding budget, policy, institutional priorities, hiring, and promotion (Pierce, 2014). Another presidential responsibility vital to the health and effectiveness of the institution is fundraising, which requires building and maintaining relationships with community, civic, and government leaders (Jacobson, 2016; Nelson, 2014). Jacobson (2016) stressed the importance of the president’s role as spokesperson, noting that communication helps promote progress on institutional priorities and initiatives, and it builds a personal brand and institutional profile. Finally, “as ‘persuader-in-chief’ in the eyes of constituents,” the president needs to inspire others and facilitate collaboration to effectively leverage institutional resources (Nelson, 2014, para. 15).

In addition to attending to traditional responsibilities, presidents in higher education today must respond to an increasing number of unprecedented challenges as a result of economic, societal, political, and technological pressures (Bowen & McPherson, 2016; Gagliardi, Espinosa, Turk, & Taylor, 2017; Nelson, 2014; Pierce, 2014). Due to diminishing and unpredictable funding, presidents are investing more time and energy than ever into major campaigns to raise money to sustain and develop institutions (Nelson, 2014). At the same time, presidents are expected to supply extensive

institutional evidence of effectiveness and academic quality as public support for higher education declines and expectations for student completion increase (Kuh et al., 2015). A more diverse student population, racial tensions, and federal actions that impact students further complicate the job of the president (Bowen & McPherson, 2016). Finally, presidents must determine how and when to implement technological innovations that foster student engagement and improve teaching and learning (Pierce, 2014).

Role of the President in Community Colleges

Community college presidents share many of the same responsibilities as head administrators at other types of higher education institutions; however, the unique character of community colleges augments the challenges these leaders face (Baime & Baum, 2016). Specifically, community college presidents must address higher expectations for student success while coping with less economic stability (Baime & Baum, 2016). The level of volatility in the community college environment has redefined the role of presidents, who must adapt and develop “new strategies and skills that will enable their colleges to thrive” (Perlstein, 2013, p. 3). While college presidents must still fulfill the traditional responsibilities associated with their roles, other qualities and competencies have become necessary for effective leadership in the community college environment (AACC, 2013; Perlstein, 2013).

In a 2017 survey conducted by Inside Higher Ed and Gallup, community college presidents identified several key issues guiding institutional priorities, including “financial matters, enrollment management, politics and public safety, personnel management and staffing, competition from other institutions, and educational matters” (Jaschik & Lederman, 2017, p. 12). Escalating calls to increase student completion have

concentrated on community colleges as crucial gateways to higher education and the workforce for many first-generation, low-income students and students of color (Ma & Baum, 2016). In addition, funding structures for community colleges, which are based on a combination of tuition revenues and state allocations, vary significantly across the country (Education Commission of the States & Center for Community College Policy, 2000). Presidents at community colleges that rely heavily on state subsidies are under more intense economic pressure than leaders at institutions with more stable funding mechanisms (Baime & Baum, 2016). Results of the *American College President Study 2017* supported these findings as 61% of presidents “agreed that their biggest frustration was never having enough money,” prompting 85% of college leaders to forecast a greater dependency on private gifts, grants, and contracts in the future (Gagliardi et al., 2017, p. 41).

Mounting expectations for community colleges have subsequently changed the expectations for the leaders of those institutions (AACC, 2013). In response to calls for greater levels of completion, educational advocates have defined specific competencies and core qualities for college presidents (AACC, 2013; Aspen Institute, 2013). The AACC (2013) developed a “leadership continuum” with evolving competencies related to (a) organizational strategy; (b) institutional finance, research, fundraising, and resource management; (c) communication; (d) collaboration; and (e) community college advocacy (p. 6).

Taking into consideration the rapidly changing community college environment and the pressures to increase student success, the Aspen Institute (2013) also identified qualities of exceptional presidents:

1. Deep Commitment to Student Access and Success . . .
2. Willingness to Take Significant Risks to Advance Student Success . . .
3. The Ability to Create Lasting Change Within the College . . .
4. Having a Strong, Broad, Strategic Vision for the College and Its Students,
Reflected in External Partnerships . . .
5. Raise and Allocate Resources in Ways Aligned to Student Success (pp. 5-9)

As the quality and performance of community colleges are scrutinized, so too are the skills of the president in catalyzing reform and increasing institutional capacity (Aspen Institute, 2017; Eddy et al., 2015).

Role of the President in California Community Colleges

Without a national system for community colleges, 2-year postsecondary institutions have evolved to meet regional needs and adapt to local conditions (California Community Colleges Chancellor’s Office, 2015a). The variables that differentiate California community colleges determine the focus and priorities of the presidents at these institutions (Baime & Baum, 2016). Conditions tied to system structure, student demographics, and funding have implications for the role of the California community college president (Baime & Baum, 2016; California Community Colleges Chancellor’s Office, 2017d; Watson & Watson, 2013).

The distinctive nature of California community colleges provides essential context for the role of the presidents leading these institutions. As the largest system of community colleges in the nation, California community colleges are versatile, serving a diverse population of students with an assortment of learning goals (Foundation for California Community Colleges, 2017a). Presidents are responsible for instituting

policies and practices that close achievement gaps for underrepresented students through three integrated statewide programs: the Basic Skills Initiative, the Student Equity Program, and the Student Success and Support Program (California Community Colleges Chancellor's Office, 2017i). At the same time, each president ensures that the mission of the college is aligned with students' wide range of goals, including basic skills education, transfer, and workforce preparation (California Community Colleges Chancellor's Office, 2015a). Striving to meet the needs of all learners while satisfying state requirements is a delicate balancing act that college presidents are required to master (Foundation for California Community Colleges, 2017b).

California community college presidents must operate within the limits of existing funding arrangements when managing institutional resources (Perlstein, 2013). State funding for California community colleges is unpredictable because allocations are based on formulas tied to student attendance and growth, which fluctuate with regional unemployment rates (California Community Colleges Chancellor's Office, 2001; Romano, 2012). Tuition costs for public higher education in California are also low, with revenues accounting for only 21% of the total funding received per full-time-equivalent enrollment (State Higher Education Executive Officers, 2016). Moreover, the movement toward eliminating tuition at community colleges has gained significant momentum in California where \$15 million in grant funding was provided in 2017 to support a rising tide of tuition-free College Promise programs (California Community Colleges Chancellor's Office, 2017b; Smith, 2017).

The movement toward performance-based funding and the popularity of state grant aid has also increased California community college presidents' need to make

financial decisions that are strategic and data driven yet innovative (Foundation for California Community Colleges, 2017b; Pierce, 2014). The state has investigated and rejected the broad implementation of outcomes-based funding as a strategy to promote student success in California community colleges; however, funding formulas based on institutional performance metrics have been introduced through categorical programs (California Community Colleges Chancellor's Office, 2016b; California Community Colleges Student Success Task Force, 2012). State grant opportunities are also more plentiful as lawmakers have embraced these programs as a means of encouraging promising new methods aligned with student success (Foundation for California Community Colleges, 2017b). Many of these grant opportunities call for college presidents to partner with other educational sectors and local industry to develop student success initiatives (California Community Colleges Chancellor's Office, 2016c).

Reform Initiatives in Higher Education

Improving student outcomes in higher education has been a consistent focus since the beginning of the 21st century (Bailey et al., 2015a). The publication of the U.S. Department of Education Spellings Commission report on the future of higher education suggested that the nation had taken "postsecondary superiority for granted," resulting in a complacency that had stalled innovation and halted evolution (U.S. Department of Education, 2006, p. ix). The realization that other nations were outperforming the United States in educational attainment led to grave concerns about economic mobility, global competitiveness, and the future of the American dream (AACC, 2012). The subsequent calls to action that formed the completion agenda in higher education resulted in a plethora of reform initiatives (Baldwin, Alfred, & Sydow, 2017). While the federal

government determined the trajectory of higher education, major foundations and associations amplified the call to action and provided funding to investigate student success strategies and support institutional reforms (Russell, 2011).

The announcement of President Obama's national goal for increasing educational attainment in 2009 was followed by a number of educational program proposals (Baldwin et al., 2017). The American Graduation Initiative, initially intended to provide \$12 billion to support community colleges over 10 years, ultimately provided \$2 billion to support student completion (Bailey et al., 2015a). Another \$20 million grant program associated with the Fund for the Improvement of Postsecondary Education's Comprehensive Program was made available in 2011 along with the release of the *College Completion Tool Kit* (Russell, 2011; U.S. Department of Education, 2011a). Between 2014 and 2016, the U.S. Department of Education awarded \$135 million in First in the World grants to colleges and universities to support innovation and completion programs (U.S. Department of Education, 2015).

Educational initiatives launched by major foundations and associations complemented the federal government's completion agenda (Baldwin et al., 2017). Philanthropic agencies, notably the Lumina Foundation and the Bill & Melinda Gates Foundation, invested significantly in higher education reform (Bailey et al., 2015a; Bernstein, 2013). The various initiatives summarized in Table 3 all addressed the overarching goal of increasing completion; however, the programs and projects varied in focus and participation (Russell, 2011).

Russell (2011) noted that the first wave of reform initiatives were largely uncoordinated and somewhat duplicative, which created the potential for “initiative fatigue” and inefficiencies in the use of limited resources (p. 3). Lessons learned from

Table 3

Summary of Major U.S. Higher Education Reform Initiatives

Initiative name	Focus	Participants
Access to Success (A2S)	Increase college graduates in participating states; ensure graduates are more broadly representative of states’ high school graduates	Public 2-year and 4-year institutions
College Completion Agenda	Increase the proportion of 25- to 34-year-olds who hold an associate’s degree or higher to 55% by the year 2025	Two-year and 4-year institutions, systems, and policy agencies
College Completion Initiative	Increase the numbers of students who complete certificates, associate’s degrees, and bachelor’s degrees so that 60% of each state’s adults ages 25 to 64 will have one of these credentials by 2025	Member states of the Southern Regional Education Board
Adult College Completion Network	Share promising ideas and proven practices that help identify adults with some prior credit not enrolled in postsecondary education, and build pathways to help them reenroll and complete a certificate or degree	Regional organizations, state agencies, city programs, nonprofit organizations
Complete College America	Increase the number of Americans with a college degree or credential of value and close attainment gaps for traditionally underrepresented populations	Higher education institutions in the Alliances of States
Compete to Complete	Raise college completion awareness; create common completion and productivity measures; develop best practices and policy actions; provide completion grants to states; train governors’ senior advisors	National governors
Ensuring America’s Future by Increasing Latino College Completion	Inform, engage, and sustain efforts to promote the role of Latinos in making the United States the world leader in college degree completion	Two-year and 4-year institutions

Note. Adapted from “A Guide to Major U.S. College Completion Initiatives,” by A. Russell, 2011, *AASCU Policy Matters*, pp. 5-17 (<http://www.aascu.org/policy/publications/policymatters/2011/collegecompletion.pdf>).

these initial efforts led researchers to conclude that small, independent innovations tied to student success are insufficient (Achieving the Dream, 2016). According to Stout (2016), comprehensive reform at national, state, and local levels requires “creating a compelling and unified case for change, calling for and expecting better results, and mobilizing key internal and external stakeholders . . . to connect reform from within the field to the calls for reform coming from outside the field” (p. 99). As a result, the second phase of reform initiatives in higher education has emphasized long-range, collective action aimed at large-scale, systemic change (Achieving the Dream, 2016; Foundation for California Community Colleges, 2017b; Russell, 2011).

Reform Initiatives in Community Colleges

Community colleges factored heavily into Obama’s overall strategy for increasing completion in higher education due to the number of low-income and disadvantaged students those institutions serve (The Executive Office of the President, 2014). Taking a cue from the federal government, private foundations set goals and funded numerous projects targeting the community college sector (Baldwin et al., 2017). Notable community college completion initiatives included Achieving the Dream: Community Colleges Count, the College Completion Challenge, the 21st-Century Initiative, and Completion by Design (Baldwin et al., 2017; Russell, 2011).

Achieving the Dream, sponsored by the Lumina Foundation in 2004, was emblematic of the first generation of reform initiatives launched in response to the national completion agenda (Bailey, 2016). Achieving the Dream originally comprised 28 community colleges in five states, but it has evolved into a national nonprofit organization that now includes over 220 institutions in 39 states and the District of

Columbia (Achieving the Dream, n.d.; Baldwin et al., 2017). Aimed at improving completion at community colleges, especially for low-income individuals and students of color, the program helped “community colleges build a ‘culture of evidence’ by using student records and other data to examine students’ performance over time and to identify barriers to academic progress” (Rutschow et al., 2011, p. iii). Achieving the Dream was influential in promoting early efforts to monitor student performance data to devise and implement effective reforms (Brock, Mayer, & Rutschow, 2016). Insights from the initial Achieving the Dream colleges have informed the development of a model for institutional improvement and a capacity framework and assessment tool to guide present and future completion reform (Achieving the Dream, 2009, 2016).

The College Completion Challenge was initiated by the Bill & Melinda Gates Foundation in 2010 and brought together six national associations “to promote the development and implementation of policies, practices and institutional cultures that will produce 50 percent more students with high quality degrees and certificates by 2020, while increasing access and quality” (Russell, 2011, p. 11). The associations issued a joint statement recognizing the crucial role community colleges play in meeting state and national goals, and reaffirming the need to increase completion (McPhail, 2011). Sixty-five community colleges accepted the completion challenge and committed to adopting the recommended policies and practices (Russell, 2011).

As a follow-up to the College Completion Challenge, the AACC launched a 21st-Century Initiative in 2011. Led by the 21st-Century Commission on the Future of Community Colleges, the goal of the initiative was “to educate an additional 5 million students with degrees, certificates, or other credentials by 2020” (AACC, 2012, p. v).

The commission's report provided a framework for change for community colleges with recommendations linked to redesigning students' educational experiences, reinventing institutional roles, and resetting the system (AACCC, 2012).

While a number of community college reform initiatives broadly supported 2-year institutions nationwide, others such as Completion by Design more narrowly focused on regional student success efforts (Russell, 2011). Completion by Design was a 5-year initiative that began in 2011 and included nine community colleges in three states: Florida, North Carolina, and Ohio (Baldwin Grossman et al., 2015). The project was unique in that colleges were not provided with set recommendations. Instead, they were encouraged to design institution-wide reforms by considering their students' total college experience, from the point of first contact prior to enrollment through the completion of a credential or transfer to a 4-year institution (Baldwin et al., 2017). A "loss and momentum" framework identified risks and opportunities at the crucial phases of connection, entry, progress, and completion (Brock et al., 2016, p. 27). Completion by Design laid the groundwork for applying a systems perspective to institutional reform efforts and helped initiate national dialogue about the importance of structured, guided pathways (Baldwin Grossman et al., 2015).

Reform Initiatives in California Community Colleges

Calls to increase completion at community colleges and the subsequent reform movement drew the attention of the Community College League of California in 2010. Noting the size and scope of the California Community Colleges system and its requisite contribution to Obama's 2020 goal, the Commission on the Future called to "increase certificate and associate degree completions by 1 million by 2020" (Lay, 2010, p. 9). The

following year, the California Community Colleges Board of Governors established the Student Success Task Force, whose recommendations would serve as the foundation for the first generation of coordinated, statewide improvements (California Community Colleges Chancellor's Office, 2014).

The passage of the Seymour-Campbell Student Success Act of 2012 served as the catalyst for numerous reforms at California community colleges as part of a systemwide comprehensive plan known as the Student Success Initiative (California Community Colleges Chancellor's Office, 2014). Four of the Student Success Task Force recommendations were implemented through statewide policy, including (a) mandatory assessment, orientation, and educational planning; (b) requirements for declaring an educational goal; (c) academic standards for students with fee waivers; and (d) new conditions for Student Success and Support Program (Steenhausen, 2014). Other major activities supported by the state to increase student success at California community colleges are summarized in Table 4.

Following the implementation of the Student Success Task Force recommendations, the 2017 *Vision for Success* report ushered in a second generation of reform efforts designed to achieve transformational change at California community colleges (Foundation for California Community Colleges, 2017b). The California Community Colleges Chancellor's Office has advocated for a "greater coherence across initiatives" that promotes collective movement in the direction of "a singular North Star for the system: Helping every student meet his or her defined end goal" (Foundation for California Community Colleges, 2017b, p. 23). The integration of the Basic Skills

Table 4

California Community Colleges Student Success Initiatives

Year	Name	Description
2013	Student Success Scorecard	Developed a college accountability system that reports persistence, 30 units completed, remedial course progression rate, combined graduation and transfer rates, and career and technical education (CTE) rates; implemented an online Salary Surfer tool to show graduates' potential earnings after receiving a certificate or degree
2013	Basic Skills Initiative	Provided an electronic resource guide that includes reflections on previous basic skills efforts and their impact on student success, and best practices to guide future projects; supported the investigation of alternative basic skills models for acceleration
2013	Student Success and Support Program	Supports core services related to admissions, assessment and placement, new student orientation, counseling, educational planning, and at-risk follow-up
2013	Student Equity Program	Ensures equal educational opportunities and promotes student success for all students through the development of a plan with specific goals and actions to address disparities
2013	Adult Education Program	Supports regional planning efforts to build a more unified adult education system consisting of K-12 schools, community colleges, community-based organizations, and other providers
2014	Common Assessment Initiative	Developed common assessment tools for English, math, and English as a second language (ESL); investigated multiple measures
2015	Technology Initiatives	Supports technology applications to support students, including education planning tools, common course management system platform and services, and online education planning tools
2015	Institutional Effectiveness Partnership Initiative	Provides professional development resources and opportunities; developed a framework of indicators to measure student performance and outcomes, accreditation status, fiscal viability, and programmatic compliance with state and federal guidelines

Note. Adapted from *Implementation of Student Success Task Force Recommendations*, by California Community Colleges Chancellor's Office, 2015b, pp. 1-5 (http://californiacommunitycolleges.cccco.edu/Portals/0/StudentSuccessInitiative/SS_TaskForce_2015-12-11.pdf).

Initiative, Student Equity Program, and Student Success and Support Program reflects the system's new coordinated approach toward reform initiatives (California Community Colleges Chancellor's Office, 2017a).

Guided Pathways

The state of California has embraced one reform in particular, guided pathways, as an umbrella initiative for organizing and guiding student success efforts systemwide (Foundation for California Community Colleges, 2017b). In 2016, the California Guided Pathways Project was launched to assist 20 community colleges in “weav[ing] together current reform initiatives into an integrated, institution-wide approach to student success” (Foundation for California Community Colleges, 2016, p. 1). In addition, the 2017-2018 Governor's Budget provided \$150 million in one-time grants to California community colleges to bolster student success through guided pathways programs (Brown, 2017).

The guided pathways model is a holistic framework for institutional reform wherein colleges “create clear, educationally coherent program pathways that are aligned with students' end goals, help students explore and select a pathway of interest, and track and support students' progress along their chosen pathway” (Bailey et al., 2015a, p. 199). The guided pathways model is built on four pillars (see Figure 2) associated with clarifying educational paths, helping students enter a path, keeping students on a path, and ensuring students are learning (Institutional Effectiveness Partnership Initiative, 2017). As an alternative to the cafeteria college model in which students are given an array of curricular options with passive support and limited guidance, the guided pathways model informs the design of clear roadmaps for students that encourage completion (Bailey et al., 2015b).

FOUR PILLARS OF GUIDED PATHWAYS



Figure 2. Four pillars of guided pathways. Adapted from *Pathways Workshop Training Materials*, by Institutional Effectiveness Partnership Initiative, 2017 (<http://iepi.cccco.edu/Portals/0/uploads/Pathways%20Workshop/Pathways%20OC%20Binder%20FINAL.pdf>).

There are several potential benefits for community colleges that adopt and implement a guided pathways model. Students are able to complete certificates and degrees without taking additional unnecessary credits due to simplified decision making, predictable schedules, targeted support, progress monitoring, and frequent feedback (AACC, n.d.-a). Since the model provides a framework for institutional reform, community colleges can customize the implementation of guided pathways to fit the needs of the local environment (Institutional Effectiveness Partnership Initiative, 2017).

While the guided pathways approach has the potential to positively transform students' educational experience and dramatically increase completion rates, the model requires significant changes to complex institutional organisms (Johnstone, 2015). The model recommends a coordinated redesign of college structures, policies, and practices as

they relate to programs, support services, and instruction over piecemeal approaches to institutional improvement (Bailey et al., 2015a). As Johnstone (2015) noted, the implementation of guided pathways constitutes a paradigm shift that “requires a hard look at the values and beliefs on which our systems are based” (p. 3).

While the nonprescriptive nature of guided pathways allows institutions to be flexible in their approach, the model provides little guidance to colleges on how to address political and social barriers to implementation (Rose, 2016). As a result, community colleges that do not possess all of the essential capacities to undertake guided pathways may not reap the benefits of the model (AACC, n.d.-a). Emerging research has focused on the implementation of guided pathways at community colleges and tools to assess the degree of adoption (Community College Research Center, 2017; Jenkins et al., 2017).

Recent studies on early community college adopters of guided pathways illustrated the importance of change management to successful institutional reform in accordance with the model (Jenkins et al., 2017). Jenkins et al.’s (2017) research provided “insight into how colleges are planning and implementing guided pathways reform” using the framework of Kotter’s eight-step change leadership process (p. 6). Stakeholders were interviewed on the three phases of change: creating a climate for change, engaging and enabling the whole organization, and implementing and sustaining change (Jenkins et al., 2017). Johnstone and Karandjeff (2017) found that issues raised by early adopters reflected a shift in mindset leading to questions about “issues related to cultural change, implications for the student experience, practical concerns for educators, [and] operational considerations” (pp. 5-6). Lessons learned from this research have

advanced discussion on how California community college leaders can best navigate, facilitate, and sustain the transformational change of whole systems during major reform efforts (Change Leadership Advisory Committee, 2017).

Role of the California Community College President in Reform Initiatives

Leadership is the most essential component of transformation in higher education (McClenney, 2013). Redesigning a community college into a high-performing institution requires the efforts of many, but without a skilled president at the helm, reform efforts will fail to spread and achieve lasting impact (Bragg, 2015; Perlstein, 2013). The role of the California community college president is more complicated than ever due to the demographic, political, economic, and technological factors that have accelerated change and heightened expectations in higher education (Aspen Institute, 2017; Kotter, 2014). During these turbulent times, successful institutional redesign depends on “who leads our colleges and how they lead” (Eddy et al., 2015, p. 2). Research on early change efforts based on guided pathways supports the need for a shift in approach to the college presidency (Jenkins, 2017). Evidence suggests that effective community college presidents in California are looking to leadership models that utilize a conscious change framework and a systems perspective to build institutional capacity and mobilize collective movement “around a Big Opportunity” (Kotter, 2014, p. 131; see also Anderson & Ackerman-Anderson, 2010; Kania, 2017).

The current context of higher education requires California community college presidents to be courageous and assertive leaders of change at their institutions (Foundation for California Community Colleges, 2017b). As Gagliardi et al. (2017) stated, “While some perceive today’s fraught environment as perilous, it is also the case

that a unique opportunity exists for transformational change in higher education—change that will require creative and innovative leadership” (p. ix). The skills and competencies that have served presidents well in the past are no longer sufficient as colleges must stretch to increase performance within the limits of state policies, governance structures, and uncertain resources (Alfred, 2011; Bolman & Gallos, 2011). The implementation of guided pathways comes with challenges linked to reshaping institutional culture and additional costs associated with human resources, professional development, and technology (Bailey et al., 2015a). The broad adoption of guided pathways at California community colleges has consequently focused attention on the transformational leadership skills needed to produce deep, systemic change (Bakersfield College, 2014; Change Leadership Advisory Committee, 2017).

To address these perils, presidents are priming their colleges for success by creating a climate receptive to change and building institutional capacity (Achieving the Dream, 2016; Jenkins et al., 2017). Jenkins et al. (2017) discovered that presidents at colleges that participated in the AACC Pathways Project “had previously taken steps to cultivate cultures of openness to change and innovation” even prior to joining the initiative (p. 39). College leaders were intentional in creating a foundation for change by communicating a compelling vision for student success informed by data and documented in a strategic plan with measurable goals (Jenkins et al., 2017). Furthermore, presidents at pathways colleges took action to increase the capacity for change by including stakeholders from across their institutions in the reform efforts. In addition to reshaping culture at the institutional level, presidents also addressed, on an

individual basis, “the fear and anxiety that inevitably come with big changes generally, and with pathways specifically” (Jenkins et al., 2017, p. 43).

This multilevel approach to change is aligned with the conscious change leader accountability model proposed by Anderson and Ackerman-Anderson (2010). Conscious change leadership promotes the idea that leaders must “attend to both internal and external dynamics at the individual, relationship, team, and organizational levels” (Anderson & Ackerman-Anderson, 2010, p. 4). One of the roles of California community college presidents in implementing large-scale reform is to increase capacity through integrated processes that attend to mindset, behavior, culture, and systems (Anderson & Ackerman-Anderson, 2010). College presidents are developing institutional capacity with the assistance of frameworks and assessment tools. Achieving the Dream’s (2016) capacity framework acknowledges that “changing campus culture and student outcomes is a daunting task, requiring self-reflection, critical thinking, and feedback” (p. 2). To ensure the success of guided pathways implementation, presidents must first build capacity in the areas of (a) leadership and vision, (b) equity, (c) teaching and learning, (d) engagement and communication, (e) strategy and planning, and (f) policies and practices (Achieving the Dream, 2009).

The literature also shows that community colleges are adopting a systems leadership approach to large-scale initiatives like guided pathways (Kania, 2017). According to Kania (2017), complex systems are difficult to comprehend and manage because they contain interdependent, interrelated, and interacting components that may act unpredictably when combined. Academic leaders need to resist the temptation to reduce complex systems to their individual parts (Bolman & Gallos, 2011). The guided

pathways framework was developed in response to the discovery that small-scale initiatives aimed at improving only segments of the institution did not lead to significant changes in the system overall (Bailey et al., 2015a). California community college leaders must use a systems perspective and aim for coherence when implementing and sustaining change efforts (Foundation for California Community Colleges, 2017b; Kania, 2017).

One of the strategies suggested by systems leadership is multidimensional thinking, which uses different lenses to frame complexity (Bolman & Gallos, 2011). Anderson and Ackerman-Anderson (2010) referred to these lenses as sights, suggesting that change leaders need to “turn inward” to solve complex problems and develop the ability to see systems, see process, see internal/external, and see consciously (pp. 101). Kania (2017) emphasized the need for leaders to facilitate the exploration of multiple mental models to uncover and understand the hidden assumptions behind actions and behaviors. In addition to developing their own awareness, college presidents must also help others to see multiple perspectives as part of the change process (Anderson & Ackerman-Anderson, 2010). Providing opportunities for professional development is one way college presidents can help stakeholders make sense of changes and acquire the knowledge and skills necessary to implement reforms (Jenkins et al., 2017; MDRC, 2014).

Finally, systems leadership is associated with “shifting collective focus from reactive problem-solving to co-creation” (Kania, 2017, slide 19). The guided pathways framework recommends that community college presidents make adjustments to governance structures to enable broader engagement through cross-functional teams

(Bailey et al., 2015a). This bilateral approach to college governance was supported by Kotter (2014), who recommended a dual system of governance that uses a traditional hierarchy for managing operations and a network of change agents for addressing strategic issues. While governance structures are locally constructed and vary widely across California community colleges, presidents leading institutional redesign are enabling collective action by functionally aligning reform efforts both internally and externally (Foundation for California Community Colleges, 2017b; Jenkins, 2011).

Summary

The review of the literature provided essential context for understanding how large-scale reform initiatives are implemented at California community colleges. The higher education landscape has changed significantly over the past century in response to rapid environmental change (Altbach, 2002a; Kuh et al., 2015). The failure of U.S. higher education to adequately adapt to external pressures has resulted in the stagnation of educational attainment (AACC, 2012; U.S. Department of Education, 2006). With the threat of economic decline looming, calls to produce a greater number of highly educated workers have intensified with a focus on community colleges as “engines of social and economic progress” (California Community Colleges Chancellor’s Office, 2016c, p. 4; see also Baldwin et al., 2017). As a result, community colleges “are at the center of a tension between two worlds—one in which they are praised as purveyors of opportunity and the other in which they are criticized as impediments to student achievement” (Eddy et al., 2015, p. 2).

Theories related to academic leadership provide insight into decision making in higher education in response to external change drivers. Strategic governance in

particular provides a framework for bridging the conflicting domains of strategic planning and governance (Schuster et al., 1994). As the administrative head of the institution, the president must effectively balance multiple operational and strategic responsibilities (Pierce, 2014). The California community college president must align institutional priorities to the completion agenda despite the challenges posed by reduced funding, increased competition, and diminished public confidence in higher education (Bailey, 2016; Foundation for California Community Colleges, 2017b).

The shift in focus from strictly access to access with success has resulted in the propagation of completion initiatives nationwide (Russell, 2011). California community colleges have launched a panoply of interventions aimed at increasing student success (California Community Colleges Chancellor's Office, 2015b). Despite substantial investments in human and financial capital, significant improvements in student completion at California community colleges have been elusive (Gordon, 2017). The California Community Colleges Chancellor's Office has launched a second wave of reform efforts based on a collective, comprehensive reform model (Foundation for California Community Colleges, 2017b). Guided pathways, a "systemic redesign of the student experience from initial connection to college through to completion," has been adopted as a unifying framework for community colleges across California (Bailey et al., 2015b, p. 2).

Academic leadership plays a crucial role in leading large-scale change efforts like guided pathways. The skills and competencies community college presidents need to successfully lead comprehensive reform efforts are beginning to emerge. The literature has proposed a blended approach to transformational leadership for college presidents

based on conscious change leadership and systems leadership (Anderson & Ackerman-Anderson, 2010; Kania, 2017). However, research related to how presidents address political and social barriers within their institutions when implementing guided pathways is still in its infancy (Rose, 2016).

Theories related to governance and strategic planning acknowledge that tension is an inherent part of decision making in community colleges (Schuster et al., 1994). Bolman and Gallos (2011) noted that the “governance conundrum gives rise to distinctive assets and liabilities in higher education. The same processes that foster individual creativity, initiative, and flexibility also buttress institutional inertia” (p. 7). The state’s action in setting a strategic vision for student success that focuses on guided pathways has further disrupted the balance between strategic planning and shared governance in California community colleges. Therefore, research on how Schuster et al.’s (1994) strategic imperatives of involvement, efficiency, environment, and leadership function and interrelate is needed to further inform successful guided pathways implementation at California community colleges.

CHAPTER III: METHODOLOGY

Overview

The methodology chapter reviews the purpose statement and research questions, and it describes the research design of the study. A case study approach using a multiple-case embedded design was used to describe the role of strategic governance in the implementation of guided pathways at scale at California community colleges. The methodology also defines the population and sample of the study. Data were collected using interviews, documentation, and archival records. The researcher interviewed college personnel involved in guided pathways implementation at three California community colleges. Finally, the chapter describes the data collection and data analysis procedures, along with the limitations of the research design.

Purpose Statement

The purpose of this multiple case study was to describe the role of strategic governance in the implementation of guided pathways at scale at California community colleges.

Research Questions

1. What role does strategic governance have in the implementation of guided pathways at scale at California community colleges?
 - a. What role does *involvement* have in the implementation of guided pathways at scale at California community colleges?
 - b. What role does *efficiency* have in the implementation of guided pathways at scale at California community colleges?

- c. What role does *environment* have in the implementation of guided pathways at scale at California community colleges?
 - d. What role does *leadership* have in the implementation of guided pathways at scale at California community colleges?
2. What are the patterns of convergence and divergence in the role of strategic governance in the implementation of guided pathways at scale between California community colleges?

Research Design

The study employed a qualitative phenomenological research design that used a multiple-case embedded case study. The aim of the study was to describe how Schuster et al.'s (1994) strategic governance imperatives of involvement, efficiency, environment, and leadership factored into the implementation of guided pathways at scale at California community colleges. Data from interviews, documentation, and archival records were collected from multiple community colleges to provide an extensive description of pathways implementation through the lens of strategic governance.

Qualitative Design

The use of qualitative methodology allowed the researcher to gather the type of data most appropriate to the study's purpose and research questions. Qualitative research is a form of in-depth study that utilizes data collected in person and through observation from individuals in their natural environment (McMillan & Schumacher, 2014). Unlike quantitative methods that present results as numerical data, qualitative research produces narrative responses in the form of words (Patten, 2012). The researcher analyzes the data to determine trends associated with the study's variables. Patton (2015) noted that

qualitative methods contribute to “meaning making” by “interpreting the data of qualitative inquiry to find substantively meaningful patterns and themes” (pp. 4-5).

Multiple-case embedded case study design. According to Creswell (2013), case study is an exploration of “a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information” (p. 97). In the context of real-life situations, case study is a research design that is particularly well suited to illuminating and describing complex social phenomena (Yin, 2014). Yin (2014) described case study as a form of empirical inquiry that can be used to understand the “how” and “why” of contemporary circumstances, including group behavior and organizational processes. Yin provided a twofold definition of case study that describes the scope and features of this research method. A case study accommodates situations in which there are (a) “more variables of interest than data points,” (b) multiple data sources used for triangulation purposes, and (c) existing theoretical frameworks that inform data collection and analysis (Yin, 2014, p. 17).

The characteristics of case study were compatible with the scope and features of the study. Each implementation of guided pathways is a contemporary event situated in a unique and complex California community college environment. In studies on the adoption of innovations in schools, “Each school might be the subject of an individual case study, but the study as a whole covers several schools and in this way uses a multiple-case design” (Yin, 2014, p. 56). A multiple-case design was used as three colleges were studied with each college treated as an individual case. Each college case involved several embedded units of analysis. Yin (2014) described an embedded unit of

analysis as “a lesser unit than the main unit of analysis, from which case study data will be collected” (p. 238). The subunits for each college case included units of analysis that provided information to answer the research questions and test the theoretical framework (see Figure 3).

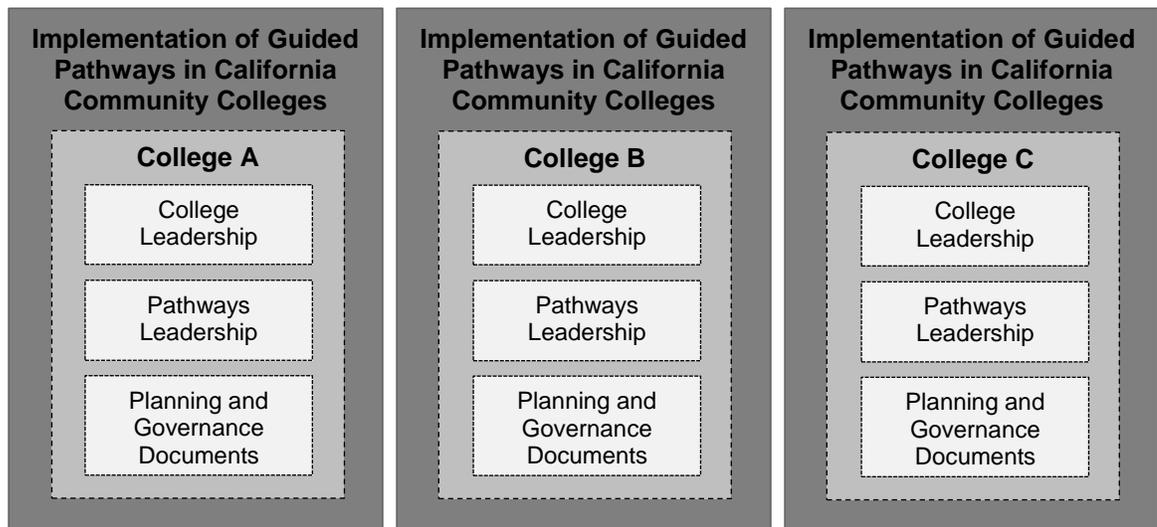


Figure 3. Multiple-case embedded case study design. Adapted from *Case Study Research: Design and Methods* (p. 50), by R. K. Yin, 2014, London, England: Sage.

Case study is a recommended method for education, because it allows for a holistic perspective. This approach does not break institutional systems into smaller parts, which preserves a view of how they function as a whole (Check & Schutt, 2011). A multiple-case embedded case study provided the depth necessary to increase the understanding of strategic governance themes associated with effective student pathways implementation. Moreover, the use of replication logic increased the robustness of the study’s findings. Replication enabled a cross-case analysis that resulted in the identification of patterns of convergence and divergence based on the theoretical framework (Figure 4). As a result, this research design increased the potential for

understanding how strategic governance is coordinated across community colleges to enable transformative change.

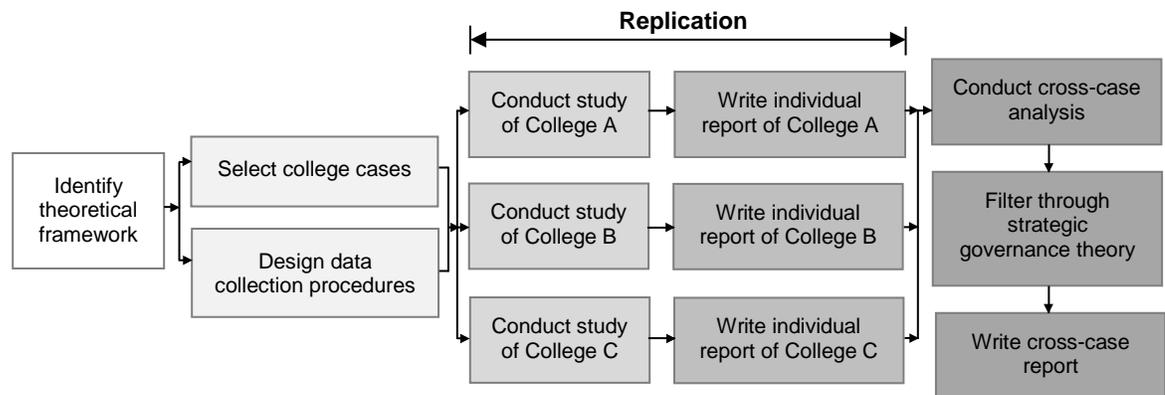


Figure 4. Multiple-case embedded case study procedure. Adapted from *Case Study Research: Design and Methods* (p. 60), by R. K. Yin, 2014, London, England: Sage.

Phenomenology. The application of qualitative methods for this multiple-case embedded case study specifically aligned with a phenomenological framework. Phenomenological inquiry concentrates on “descriptions of what people experience and how it is that they experience what they experience” (Patton, 2015, p. 117). Yin (2014) referenced phenomenon in the first part of a twofold definition of case study. According to Yin, case study intently focuses on current real-world phenomena, “especially when the boundaries between phenomenon and context may not be clearly evident” (p. 16). The phenomenological underpinnings of the study supported a research design that collected in-depth data from participants to understand the meaning, structure, and essence of their experiences in a California community college setting.

Population

According to McMillan and Schumacher (2014), population is “a group of individuals or events from which a sample is drawn and to which results can be generalized” (p. 5). Due to the qualitative nature of the research and the small number of

cases investigated, the study aimed to produce analytical inferences rather than statistical generalizations to a larger population (Yin, 2014). In multiple-case studies, the researcher must choose cases carefully taking into consideration the identified theoretical framework and propositions (Yin, 2014). The population was selected based on the candidates' experience with the phenomenon of guided pathways as filtered through strategic governance theory.

The population of the study included community colleges in the United States that were selected to participate in the American Association of Community Colleges (AACC) Pathways Project. This population was selected based on the nature and scope of the project, the diversity of the institutions that participated, and the rigorous criteria used to select them. AACC (2017) represents 1,108 community colleges across the country, including 982 public institutions. Thirty community colleges from 17 states were involved in the project, which consisted of a series of pathways institutes scheduled from 2016 to 2018. Colleges were selected by AACC to participate in the Pathways Project based on a "serious commitment to transformational work at scale to improve college completion and equity in student outcomes" (AACC, n.d.-a, para. 11). Each college assembled a leadership team to develop institutional knowledge of pathways reforms, collect data on student success metrics, and evaluate the training institutes.

Target Population

McMillan and Schumacher (2014) observed that "site selection, in which a site is selected to locate people involved in a particular event, is preferred when the research focus is on complex microprocesses" (p. 350). The development of clear criteria for site selection aligned with the study's purpose and research questions is crucial (McMillan &

Schumacher, 2014). AACC previously screened community colleges that participated in the Pathways Project based on the institutions' commitment to comprehensive reform using a guided pathways model. The researcher used an additional criterion linked to geographic location to identify the target population for the study.

The target population was purposively delimited to community colleges in California for several reasons. First, the California Community Colleges system is the largest higher education system in the United States with a total of 114 institutions serving 2.1 million students (Community College League of California, 2017). Second, California has the sixth largest economy in the world and is under pressure to supply highly educated, skilled workers to support and grow the economy (California Community Colleges Chancellor's Office, 2015a). Third, California community colleges are located in the same state as the researcher, which facilitated data collection.

In alignment with the purpose, research questions, and the established criterion, the target population consisted of three community colleges located in the Southern California region of the state. In addition to location, the three colleges shared other institutional similarities of relevance to the study. Each college had a formal governance structure reflected in an organizational chart with a board of trustees as the policy-making body and the president as the chief executive officer. All of the colleges used a shared governance structure that included (a) faculty leadership through an academic senate, (b) classified staff representation through a classified senate, and (c) student leadership through an associated students governing body. In addition, faculty and staff leadership was provided by employee unions—a Faculty Association/California Teachers Association (CTA) and a California School Employees Association (CSEA),

respectively. Finally, each college had an inclusive strategic planning process guided by the college mission and goals and informed by institutional data.

Differences in institutional characteristics also existed between the three colleges with respect to student enrollment, the percentage of full-time faculty, and the age of the institution. According to 2015-2016 data provided by the California Community Colleges Chancellor's Office's (2017h) "2017 Student Success Scorecard," the enrollment of the target population ranged from 8,543 full-time-equivalent students (FTES) to 31,385 FTES. The percentage of full-time faculty employed at the colleges varied from a high of 67.8% to a low of 48.5%. The age of the institutions also differed, as the oldest of the three colleges was founded in 1913 while the youngest was established in 1985 (California Community Colleges Chancellor's Office, 2017h).

Sample

A sample is defined as a small group derived from a general population from which data are gathered (McMillan & Schumacher, 2014). Patton (2015) stated, "Qualitative inquiry typically focuses on relatively small samples, even single cases selected purposefully to permit inquiry into and understanding of a phenomenon in depth" (p. 52). Statistical generalizability was not a goal of the study; therefore, the researcher used nonprobability sampling of a small number of participants.

Nonprobability sampling allowed for the collection of information for the study that was rich and illuminative (Patton, 2015). McMillan and Schumacher (2014) noted that this type of sampling is most commonly used in educational research. A combination of purposive sampling and snowball sampling was used to determine the study's sample.

Selection of cases. Purposive sampling was used to select the cases for the study. When conducting case study research, there is no formula for determining the number of cases to include; instead, the researcher must rely on personal judgement (Creswell, 2013; Yin, 2014). The level of replication and the degree of certainty required by the study determined the sample size (Yin, 2014). The selection of three cases allowed for literal replication given that the strategic governance theory was “straightforward and the issue at hand [did] not demand an excessive degree of certainty” (Yin, 2014, p. 61).

Per Patten (2012), the researcher used purposive sampling to intentionally seek out colleges that could provide relevant information to answer the study’s research questions. The sample included all of the potential cases in the target population, due to the small number of AACC Pathways Project participants in California and their ability to provide insight on the four strategic imperatives of involvement, efficiency, environment, and leadership in the context of guided pathways. The cases in the sample were identified by locating a list of project participants on the AACC website. The researcher confirmed that the cases fit the study’s criteria by reviewing organizational charts, strategic planning documents, and other descriptive information relevant to strategic governance on the colleges’ websites. Institutional similarities related to strategic planning and governance substantiated the feasibility of literal replication.

Selection of interview participants. Snowball sampling was used to select interview participants from each case. According to McMillan and Schumacher (2014), snowball sampling “is a strategy in which each successive participant or group is named by the preceding group or individual” based on particular qualities specified by the researcher (p. 351). According to Patten (2012), snowball sampling is appropriate in

instances where institutional contacts are unknown or difficult to locate. This sampling method relies on establishing trust to locate interviewees: “If the initial participants trust the researcher, they may also identify other potential participants and convince them to trust the researcher” (Patten, 2012, p. 51).

The researcher initiated the sampling process by asking the president of the college used for pilot testing to send an introductory letter to the presidents at the case colleges. The researcher then followed up with another letter that explained the purpose of the study and invited the president to participate. Once the invitation to participate was accepted, the researcher asked the president to identify four others at the college who were

1. involved in the initial planning and implementation of guided pathways at the college,
2. employed at the college for a minimum of 2 years, and
3. adults over the age of 18.

The use of snowball sampling ensured that the researcher was able to locate 15 interview participants for the study.

Instrumentation

As the investigative agent responsible for collecting and analyzing data, the researcher is the primary instrument in qualitative research (Creswell, 2013; Patton, 2015). Creswell (2013) noted that qualitative research by definition calls for the researcher to use an interpretative lens to reflexively engage with multiple sources of data to understand a complex problem. Yin (2014) suggested that researchers require sound judgement when interpreting data to strengthen validity and reliability. For this case study, the researcher used reasoning and logic when making decisions and judgement

calls during data collection to ensure that data were gathered in accordance with the theoretical framework of the study. Moreover, the researcher attended to the technical aspects of collecting data while exercising “sufficient care to avoid potentially biased procedures” (Yin, 2014, p. 72).

Multiple sources of data for the case study were derived from documentation, archival records, and interviews. The researcher used standardized, open-ended interviews, also referred to as semistructured interviews, to collect data to address the study’s research questions (McMillan & Schumacher, 2014). According to Patten (2012), semistructured interviews are not restricted to predetermined questions as they allow the interviewer to also ask unscripted clarifying and probing questions. The interview design was consistent with “phenomenological studies [that] investigate what was experienced, how it was experienced, and finally, the meanings that the interviewees assign to the experience” (McMillan & Schumacher, 2014, p. 382). The semistructured format gave interview participants the opportunity to provide insights based on how they “construct reality and think about situations” (Yin, 2012, p. 12). The use of standardized questions presented in the same sequence facilitated the comparison, organization, and analysis of interview data (McMillan & Schumacher, 2014).

The researcher developed an interview script aligned with the study’s purpose and research questions (Appendix A). The script included potential probes designed to “explore unexpected, unusual, or especially relevant material revealed by the participant” (Patten, 2012, p. 153). The theoretical framework of strategic governance, which informed the study’s research questions, served as the basis for the interview questions. Schuster et al.’s (1994) theory of strategic governance focused on approaches that blend

strategic planning with participatory governance, consisting of imperatives related to involvement, efficiency, environment, and leadership. A crosswalk that mapped interview questions to the four strategic imperatives ensured that the theoretical propositions were comprehensively addressed (Appendix B).

Validity

Multiple perspectives on the concept of validity exist in the literature on qualitative research. In attempting to synthesize these various definitions, Creswell (2013) described validation as “an attempt to assess the ‘accuracy’ of the findings, as best described by the researcher and the participants” (pp. 249-250). Implicit in this definition was the recognition that validation is a process that is largely dependent on the researcher’s representation of the findings. McMillan and Schumacher (2014) supported this viewpoint when referring to validity as “the degree of congruence between the explanation of the phenomena and the realities of the world” (p. 354). To ensure the accuracy of the study’s findings, the researcher incorporated multiple strategies into data collection and analysis procedures. These strategies included the standardization of language, pilot testing, recorded interviews, and transcript review.

Standardization of language. The standardization of language during multiple phases of the research process contributed to the study’s validity. An interview guide specified the wording and order of each question to ensure that interview questions were “clear, understandable, and answerable” (Patton, 2015, p. 467). The researcher worded interview questions in the study participants’ language to promote clarity (McMillan & Schumacher, 2014). When applicable, introductory information was used to contextualize questions or define terms. Definitions of terms, especially related to the

study's theoretical framework, promoted mutual understanding during data collection (McMillan & Schumacher, 2014). The interview guide also included language for probing questions used at the researcher's discretion for clarifying or elaborating responses (Patton, 2015).

Pilot test and key observer. Another strategy used to strengthen the validity of the study was a pilot test. The aim of the pilot test was to evaluate interview questions for clarity and procedures for researcher bias (McMillan & Schumacher, 2014). The pilot test included members of the pathways leadership team at the researcher's institution who were representative of the target population but not part of the study's sample. Following each test interview, the researcher solicited feedback from the participant using questions designed to improve the interview questions (Appendix C). The researcher also invited a college administrator with a doctoral degree and experience in institutional effectiveness and qualitative research to observe the test interviews. The researcher reflected on each test interview using a set of specific questions and discussed the responses to those questions with the key observer to further guide revisions to interview questions and procedures (Appendix D). Furthermore, feedback from the key observer was used to improve the researcher's interviewing technique, including both verbal and nonverbal cues.

Recorded interviews and transcript review. Additional steps were taken both during and following the interviews to ensure validity during data collection. With the participants' consent, the interviews were recorded and sent to a third-party transcription service to promote accuracy. Participants were also provided with the option to review their transcripts and to provide feedback to clarify the written record of the interview.

McMillan and Schumacher (2014) emphasized the importance of the researcher and interviewees agreeing on “the description or composition of events and especially on the meanings of these events” (p. 354). Recording interviews and providing the opportunity for transcript review established the congruence necessary for the accurate representation of the phenomenon of the study.

Reliability

In social science research, reliability refers to the consistency and repeatability of measures and procedures (Salkind, 2011; Yin, 2014). Davies and Dodd (2002) remarked that reliability requires “care in the application of research practices, which are reflected in an open account that remains mindful of the partiality and limits of our research findings” (p. 280). The literature often connects reliability in qualitative research with the concept of rigor, which is equated with thoroughness, precision, and accuracy; and trustworthiness, which is a measure of rigor (Cypress, 2017; Davies & Dodd, 2002). In striving for rigor in case study research, Yin (2012) suggested that researchers adopt systematic procedures for the collection and analysis of data. In this case study, the researcher intentionally incorporated strategies designed to reinforce credibility into the design and implementation of the study (Noble & Smith, 2015). These strategies included the creation of a case study protocol, the use of data triangulation, and the selection of an intercoder. The researcher further enhanced reliability by documenting research procedures, which helped ensure consistency across the multiple cases included in the study.

Case study protocol. The reliability of the study was enhanced through the use of a case study protocol, which established procedures for data collection (Yin, 2014). The

case study protocol encapsulated the researcher's "mental line of inquiry" aligned with the study's purpose and research questions (Yin, 2014, p. 240). The protocol consisted of an interview guide and directives for gathering documentation and archival records for each case (Appendix E). These guidelines facilitated the systematic and comprehensive gathering of data during all phases of the research.

The interview guide was used to assist the researcher in maintaining focused interactions during interviews by predetermining the issues to be discussed. As described by Patton (2015), an interview guide "provides a framework within which the interviewer could develop questions, sequence questions, and make decisions about which information to pursue in greater depth" (p. 439). In accordance with the guide, the researcher asked the interviewees the same questions in the same order with some variation in the follow-up questions based on the responses. The procedures for collecting data from documents and archival records detailed the type and source of the data gathered from each institutional site. The researcher's line of inquiry served as the basis for these procedures to ensure that the data gathered were relevant and comprehensive (Yin, 2012).

Triangulation. Accuracy and confidence in case study findings hinges on the convergence of multiple sources of evidence (Creswell, 2013; McMillan & Schumacher, 2014; Yin, 2014). Data triangulation refers to the use of multiple data sources to corroborate findings by documenting codes and themes associated with the phenomenon of study to create "converging lines of inquiry" (Yin, 2014, p. 121). In this study, the researcher utilized triangulation by collecting data using multiple instruments, including interviews, documentation, and archival records (Figure 5).

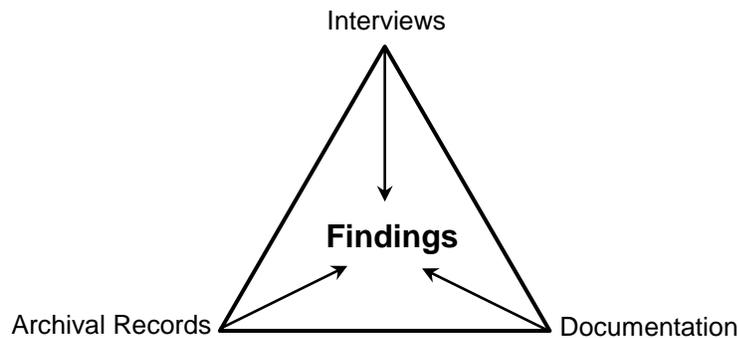


Figure 5. Convergence of evidence. Illustrates how multiple sources of evidence corroborated findings in the case study. Adapted from *Case Study Research: Design and Methods* (p. 121), by R. K. Yin, 2014, London, England: Sage.

The interviews gathered data from a variety of perspectives, as participants were selected from several constituency groups including administrators, faculty, and classified staff. Interview participants were also drawn from multiple administrative, academic, and student services areas at the colleges. Triangulation allowed the researcher to identify consistencies across data sources to support the study’s findings and strengthen the validity of the research.

Intercoder reliability. Another form of triangulation used to ensure quality by mitigating researcher subjectivity was investigator or analyst triangulation (Patton, 2015; Yin, 2014). Investigator triangulation contributed to intercoder reliability or the degree to which independent coders or analysts came to the same conclusions when separately evaluating qualitative data (Lombard, Snyder-Duch, & Bracken, 2010). Establishing intercoder reliability was a procedural necessity during content analysis. Without intercoder reliability, the results and interpretation of data could be called into question, and reduce overall confidence in the study (Lombard et al., 2010). The use of multiple evaluators reduced the chance that the findings expressed the personal biases and perspectives of a single researcher (Patten, 2012).

The researcher invited a community college administrator with a doctoral degree in instructional technology and experience in institutional research in higher education to participate in coding. Lombard et al.'s (2010) recommended process for intercoding reliability was observed, which began with selecting appropriate indices and tools for analysis, and specifying minimum acceptable levels of reliability for the indices. A pilot test confirmed an appropriate level of reliability and was followed by an assessment of the reliability of the full sample, which involved the coding of randomly selected units representing 10% of the entire sample. Next, the researcher resolved coding disagreements to allow for the reliability sample to be incorporated into the full sample. Finally, intercoder reliability was clearly reported demonstrating an acceptable level of agreement measured by coefficients of .80 or greater (Lombard et al., 2010).

Data Collection

Case study research employs multiple methods of data collection from multiple sources; and multiple sources of evidence are more essential for case study research than any other method (Creswell, 2013; Yin, 2014). The greatest benefit of using multiple sources of evidence was that it allowed for “the development of converging lines of inquiry” (Yin, 2014, p. 120). This convergence enabled data triangulation, which aided the researcher in corroborating findings, thereby strengthening construct validity. Evidence examined during case study may include documentation, interviews, observations, archival records, and physical artifacts (Yin, 2014). Data for this study were gathered through interviews, documentation, and archival records. The data collection procedures aligned with the study’s purpose statement and research questions. Table 5 describes the types of data gathered from each institutional case in the study.

Table 5

Documentation and Archival Records

Source	Interviews	Documents	Archival records
College	Semistructured interviews: <ul style="list-style-type: none"> • President • Chief academic officer • Faculty members • Other members of the Pathways Project Team 	<ul style="list-style-type: none"> • Mission, vision, and values • Meeting minutes on pathways • Organizational charts • Committee structure • Strategic plans 	<ul style="list-style-type: none"> • Institutional scorecard
AACC		<ul style="list-style-type: none"> • Assessment tool results • Advance work for institutes • Action plans from institutes 	<ul style="list-style-type: none"> • Key performance indicators

Interviews

The researcher initiated contact with interviewees by way of an introductory e-mail or phone call, which was followed by a formal e-mail invitation to participate. The e-mail invitation was sent prior to the interview and included, as file attachments, the Brandman University Research Participant’s Bill of Rights (Appendix F) and the informed consent form (Appendix G).

The researcher scheduled 1 hour, in-person, web conference, or phone interviews at least 1 week in advance, taking into consideration the participants’ preferences for meeting date, time, and location. Face-to-face interviews allowed the researcher to provide appropriate nonverbal feedback to facilitate the interview process and “encourage greater depth in responses” (Patton, 2015, p. 469). In the interest of replication, the researcher adhered closely to the previously prepared interview script (Appendix A). The researcher began with a self-introduction and explanation of the study’s purpose. The

consent forms were reviewed, including the audio-recording authorization, and participants were invited to ask questions about any part of the interview process. The researcher then summarized the confidentiality agreement and reminded the interviewees of the option to decline to answer any question or halt the interview altogether.

The script contained a prompt for the researcher to request permission to begin recording. In addition to accurately capturing participants' verbatim responses, recording the interviews allowed the researcher to focus on listening attentively to the interviewees. The researcher supplemented the audio recordings with strategic notes that captured key phrases, main points, and essential terms (Patton, 2015). Patton (2015) acknowledged the importance of note taking for pacing the interview and providing a failsafe in the event of recorder malfunction. The length of the recordings varied depending on the extent and style of the participants' responses.

Once all interviews were conducted, the researcher sent the audio recordings to a transcription service. Upon receiving the completed transcripts, the researcher reviewed each one and sent individual transcripts to those participants who opted to review the content for accuracy. Feedback provided by participants was logged and informed the researcher's revisions to the transcripts.

Documentation and Archival Records

Sources of evidence collected for the study included documentation and archival records. According to Patton (2015), "Organizations of all kinds produce mountains of records, both public and private, on paper, digitally, and online" (p. 376). Evidence sources were institution specific and the method of retrieval varied depending on the college. A three-step process for collecting documentation and archival records was

utilized based on Yin's (2014) recommendations for collecting case study evidence. First, the researcher conducted systematic searches of college and other relevant websites to identify information sources pertinent to the study. Second, the investigator conducted fieldwork by visiting campus locations that provide access to materials not available online. Finally, the researcher asked interviewees for suggested sources that could contribute to an understanding of guided pathways through a strategic governance lens. To promote efficiency, materials were organized and triaged according to their significance to the research questions. The researcher cataloged and described each item with information about the creator, location, and relevance to the study.

Human Subjects Considerations

The researcher is responsible for adhering to standards and guidelines for conducting educational research in an ethical manner (McMillan & Schumacher, 2014). Accordingly, the researcher followed established procedures to protect the human subjects who participated in the study. Prior to any data collection, the Brandman University Institutional Review Board approved the study's research proposal and protocol (Appendix H), including the interview script (Appendix A).

The college presidents at each site were sent an e-mail invitation to participate in the study with a request for permission to conduct research at the institution. This request included (a) an introduction; (b) a brief description of the study, including the purpose; and (c) information on data collection (Appendix I). Upon receiving institutional permission, the researcher e-mailed each potential interviewee an invitation to participate that included the Brandman University Research Participant's Bill of Rights (Appendix F) and informed consent forms (Appendix G). Interviewees signed one consent form to

agree to participate in the study and another to provide permission for the interview to be audio recorded, with an option to review the transcript for accuracy.

The researcher took steps to ensure confidentiality and the appropriate storage of data collected during the study (McMillan & Schumacher, 2014). The consent forms described confidentiality and data storage procedures. Colleges and interviewees were coded, and the names of individuals and locations were removed from the transcripts. Any files referencing the names of colleges or participants were securely stored in a locked drawer and would be retained for a period of 3 years following the completion of the study. After that time, the researcher will properly dispose of any confidential files associated with the study.

Data Analysis

According to Yin (2014), data analysis in case study is a process of “examining, categorizing, tabulating, testing, or otherwise recombining evidence to produce empirically based findings” (p. 132). High-quality analysis examines all evidence, considers possible rival explanations, focuses on the central issue of the study, and utilizes researcher expertise gained through prior study (Yin, 2014). These principles, which underlie quality in case study research, served as the basis for the development of a comprehensive and systematic process for data analysis.

The analysis of case study data differs from the analysis of statistical data in that analytical strategies have not been standardized and techniques for analyzing data have not been well described in the research literature (Yin, 2014). No single uniform approach to data analysis for case study exists. Consequently, researchers must customize a data analysis strategy to each case study prior to data collection, and

integrate that strategy into the overall research methodology of the study (Creswell, 2013; Huberman & Miles, 1994). In the absence of a prescribed recipe for data analysis, the investigator relied on Yin's (2014) menu of analytical strategies and techniques to devise an approach for the case study. The data analysis process (Figure 6) involved source and case analysis, pattern matching, framework filtering, cross-case synthesis, and rival explanations. These steps in the data analysis process, which ultimately resulted in the development of the study's conclusions, are described in detail in the sections that follow.

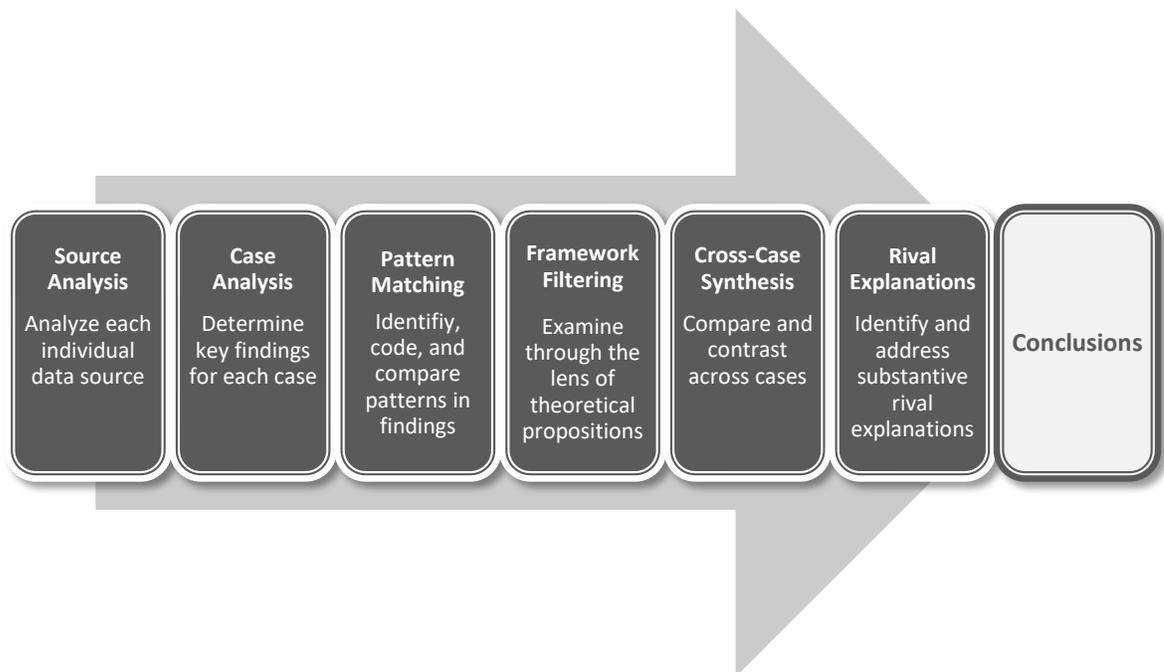


Figure 6. Data analysis process. Illustrates how data were analyzed for the case study.

Analysis and Interpretation

According to Yin (2014), one of the hallmarks of a quality analytic strategy is its ability to use all possible sources of evidence to address the research questions, reducing susceptibility to alternate explanations. Data collected from interviews, documentation, and archival records resulted in a significant amount of information to be processed and

analyzed. Digesting and simplifying raw qualitative data were essential to addressing the complexity of the phenomenon investigated through the study's multiple cases (Patton, 2015). The researcher began by inventorying the data to ensure completeness. The data were then organized into discreet computer files, using consistent naming conventions, and placed into labeled electronic folders. Next, the researcher used a narrative approach to begin analyzing the data.

The process for data analysis took into consideration the use of phenomenological data collection methods and employed a complementary approach to narrative analysis. Van Manen (1990) proposed the use of phenomenological reflection as a means of uncovering essential meaning. Reflection began during fieldwork and was expressed as notes written during and shortly after data collection. Note taking continued during the initial stages of interpretation as the researcher read through each interview transcript, document, and archival record to gain a comprehensive view of every source. The notes were instrumental in determining key findings for each case holistically, since the process allowed the researcher to “move backward or forward” through the data—questioning conclusions that might be made and considering evidence that might support those conclusions (Yin, 2014, p. 136). Phenomenological reflection on interview transcripts, documentation, and archival records helped identify patterns and develop themes with “certain qualities such as focus, a simplification of ideas, and a description of the structure of the lived experience” (Creswell, 2013, p. 195).

Coding and Pattern Matching

An essential step in the data analysis process was the coding of data sources. Procedures for content analysis reduced the “complexity of reality” by “identifying,

coding, categorizing, classifying, and labeling the primary patterns in the data” (Patton, 2015, p. 553). The researcher coded the data in stages, building on a preliminary analysis of the source material to develop a systematic way of organizing and describing the data collected. While the researcher developed the framework for the case study manually through coding, qualitative analysis software eased information retrieval, comparison, and linking. The researcher used Atlas.ti 8.0 to “reveal meanings and relationships” in the data during content analysis (Atlas.ti, n.d., para. 1).

The researcher constructed preliminary codes based on a review of the notes taken during and shortly after data collection, which were guided by the theoretical framework. To ease processing, interview transcripts, documentation, and archival records were uploaded into the Atlas.ti software as digital files and organized into groups by document type. The researcher first read through each piece of data in the software, highlighted relevant text passages, and linked them to the list of initial codes. The process continued with a second reading of the data with the intention of identifying patterns and consolidating codes into themes. Once a formal list of codes was developed, the codes were manually entered into the software through free coding. As warranted, codes were renamed, merged, split, and placed into groups in accordance with the theoretical framework. Once the classification system was finalized, the researcher conducted a third reading of the documents to ensure that all relevant text passages were identified and linked to the appropriate codes.

Pattern matching was used throughout the process of coding to maintain focus on the study’s purpose and research questions. Yin (2014) identified pattern matching as “one of the most desirable techniques” for case study due to its potential to strengthen

internal validity (p. 143). The researcher used pattern matching to compare patterns identified in the data with patterns predicted prior to data collection. Accordingly, the researcher compared the patterns discovered in the data with those related to Schuster et al.'s (1994) theoretical framework. The predicted patterns that served as the basis for comparison were specifically derived from the four strategic imperatives of involvement, efficiency, environment, and leadership (Table 6).

Table 6

Predicted Patterns Based on the Theoretical Framework

Strategic imperative	Pattern
Involvement	Including and involving internal and external stakeholders in the strategic decision-making process
Efficiency	Obtaining greater results with fewer resources expeditiously through participatory governance
Environment	Identifying environmental elements and responding to those elements appropriately
Leadership	Having leadership that establishes institutional vision, coordinates action, and deploys resources in service of goals

Filtering Through Theory

Preliminary interpretation of the data guided the selection of a primary data analysis approach. Yin (2014) noted that relying on theoretical propositions is a general strategy that may be applied to case study analysis. This primary analytic strategy was well suited to the study because Schuster et al.'s (1994) strategic governance theory was interwoven into the purpose statement and research questions. The four elements of strategic governance essential to decision making in higher education were involvement, efficiency, environment, and leadership (Schuster et al., 1994). These strategic

imperatives constituted the theoretical propositions through which all interview responses, documentation, and archival records were filtered to determine codes and themes. Thus, the theoretical propositions served as organizing principles for the study and established the researcher's analytical priorities (Yin, 2014).

Cross-Case Synthesis

Cross-case synthesis was another analysis technique recommended by Yin (2014) for use with multiple-case studies. This technique proved useful for comparing and contrasting findings across the three community colleges. While the process began with separate treatments of each individual case, the findings of the series of cases were ultimately aggregated and synthesized (Yin, 2014). The researcher developed word tables that displayed case data according to categories aligned with one of the four strategic imperatives included in the strategic governance theory. The resulting arrays deepened the analysis by allowing the researcher to confirm or deny expectations established by the study's theoretical framework. Cross-case synthesis supported the replication logic as "each case could sequentially build support for the appropriate theoretical proposition" (Yin, 2014, p. 174).

Rival Explanations

The data analysis process concluded with identifying and examining possible rival explanations. Yin (2012) maintained the value of using this analytic strategy in combination with other techniques, noting that a researcher can "reach an acceptable degree of certainty" about a case study's conclusions "by identifying the most plausible rivals and collecting data to determine whether the rivals can be rejected" (p. 118). Addressing and rejecting rivals also contributed to increased confidence in the study's

findings. Two types of rivals were considered during analysis. Craft rivals related to common concerns associated with the design and implementation of the study, while real-world rivals addressed substantive issues connected to the research (Yin, 2014). The investigator considered craft rivals related to threats to validity and investigator bias. Other real-world influences associated with rival theories and societal trends were also considered.

Limitations

As a unique mode of empirical inquiry, case study maintains rigor when systematic procedures are followed and bias is mitigated (Yin, 2014). In conducting the study, the researcher strove to observe these principles. However, the possible limitations of the study's research design are enumerated below:

1. The study was limited by its small sample size and sampling method. The three cases were selected through nonprobability sampling; therefore, the sample was not representative of the larger population. Consequently, the results of the study could not be statistically generalized to other community colleges (Creswell, 2013; Yin, 2014).
2. The uniqueness of college structures and cultures resulted in contextual differences that limited the ability to exactly replicate the study and draw inferences from the sample to the target population (Creswell, 2013).
3. Limitations also resulted from the selection of research sites (cases), as the participating institutions were located in one homogeneous region in Southern California.

4. Personal biases were potentially introduced through instrumentation. Interview participants may have provided false information, withheld details, or been influenced by researcher presence. Creators of the documentation and archival records analyzed during the study may have injected bias or factual errors. Finally, the study was susceptible to researcher bias as data were filtered through the perspective and experiences of the individual carrying out the study (Patton, 2015).
5. The study was also constrained by the standardization of the interview protocol. The use of semistructured interviews reduced the researcher's flexibility and may have limited the "naturalness and relevance" (Patton, 2015, p.438) of the participants' responses.

Summary

Chapter III reviewed the methodology of the study. A restatement of the study's purpose and research questions provided context for the chosen research design, which was based on Yin's (2014) multiple-case embedded case study model. This chapter then identified and described the population and sample of the study. The methodology concluded with a description of the data collection and data analysis procedures and a review of the research design's limitations. Chapter IV presents the findings and provides an analysis of the data collected through the study.

CHAPTER IV: RESEARCH, DATA COLLECTION, AND FINDINGS

The stagnation of educational attainment and the threat of economic decline have prompted higher education leaders to explore holistic approaches to improving institutional structures and processes (AACC, 2012; Baldwin et al., 2017; Klempin & Karp, 2015). Leaders at California Community Colleges have adopted guided pathways as an overarching framework for transforming colleges into more effective institutions with higher rates of student success (Foundation for California Community Colleges, 2017b). The planning and implementation of reforms aligned with guided pathways have required college presidents to build institutional capacity within the domains of strategic planning and governance while attending to mindset, behavior, culture, and systems (Achieving the Dream, 2016; Anderson & Ackerman-Anderson, 2010; Schuster et al., 1994).

While the literature is replete with studies on the implementation of small-scale, short-term student success initiatives dedicated to individual institutional components, research on leading guided pathways efforts at California community colleges is sparse (Baldwin Grossman et al., 2015; Bolman & Gallos, 2011). Consequently, this study investigated the role of strategic governance in the implementation of guided pathways at scale at California community colleges. To answer the associated research questions, the researcher collected documents and archival records, and interviewed 15 individuals involved in local guided pathways efforts at three California community colleges. This chapter presents the research findings including the purpose statement and research questions, a summary of the research methods and data collection procedures, a

description of the population and sample, and a presentation of data by case and across cases.

Purpose Statement

The purpose of this multiple case study was to describe the role of strategic governance in the implementation of guided pathways at scale at California community colleges.

Research Questions

1. What role does strategic governance have in the implementation of guided pathways at scale at California community colleges?
 - a. What role does *involvement* have in the implementation of guided pathways at scale at California community colleges?
 - b. What role does *efficiency* have in the implementation of guided pathways at scale at California community colleges?
 - c. What role does *environment* have in the implementation of guided pathways at scale at California community colleges?
 - d. What role does *leadership* have in the implementation of guided pathways at scale at California community colleges?
2. What are the patterns of convergence and divergence in the role of strategic governance in the implementation of guided pathways at scale between California community colleges?

Research Methods and Data Collection Procedures

The study used a multiple-case, embedded case study design to describe how Schuster et al.'s (1994) strategic governance imperatives of involvement, efficiency,

environment, and leadership factored into the implementation of guided pathways at scale at California community colleges. As detailed in Chapter III (Figure 3), each college was treated as an individual case and each college case included several embedded units of analysis to answer the research questions and test the theoretical framework. A qualitative phenomenological approach was used to collect data from each college case through semistructured interviews, documents, and archival records. Replication logic increased the robustness of the study and enabled a cross-case analysis that resulted in the identification of patterns of convergence and divergence based on the theoretical framework. To ensure consistency, the researcher adhered closely to an interview script developed in alignment with the strategic imperatives defined by the theoretical framework.

The research design, interview questions, and data collection procedures were approved by the Brandman University Institutional Review Board (BUIRB) on April 17, 2018 (Appendix H). An informed consent form and research participant's bill of rights outlined the methods used to ensure the confidentiality and privacy of the case colleges and study participants. The researcher provided these documents to all interview participants and the head of research at each case site as part of the college's institutional research approval process. For in-person interviews, participants signed the consent form in the presence of the researcher prior to answering any questions. For phone and web conference interviews, participants scanned the signed consent form and sent it to the researcher via e-mail. All interviews were audio recorded and sent to a transcription service. Upon receiving the transcripts, the researcher reviewed the content for accuracy and spelling. To protect the identity of the case sites and individual participants, the

researcher assigned a unique code to each name, and replaced proper names with codes in the transcripts. For triangulation purposes, the researcher collected planning and governance documents related to the implementation of guided pathways at the college. The researcher retrieved documents and archival records from college websites, and asked interview participants for suggested materials that could contribute to an understanding of guided pathways through a strategic governance lens.

The researcher used Yin's (2014) menu of analytical strategies and techniques to devise an approach for data analysis. As described in Chapter III (Figure 6), the data analysis process involved source and case analysis, pattern matching, framework filtering, cross-case synthesis, and rival explanations. First, the researcher constructed preliminary codes aligned with the theoretical framework based on a review of the notes taken during and shortly after data collection. The researcher then coded data from each college case using the preliminary codes and additional codes that emerged from the data. After the initial coding, a second review of the data resulted in a refined list of 50 codes. The researcher compared the patterns predicted by the theoretical propositions with the patterns actually discovered in the data and synthesized the codes into 10 subthemes. The researcher then filtered the data through the theoretical framework by analyzing the codes associated with each research question. As a result of this process, four major themes emerged, which are detailed in the findings. Following the separate analysis of each individual case, the findings for the series of cases were aggregated into arrays based on the strategic imperatives. The researcher used these tables to conduct a cross-case analysis that compared and contrasted findings across colleges.

Population and Sample

The population of the study included the 30 community colleges in the United States that were selected to participate in the American Association of Community Colleges (AACC) Pathways Project. The target population was purposively delimited to community colleges in California for the following reasons. First, California Community Colleges is the largest higher education system in the United States with a total of 114 institutions serving 2.1 million students (Community College League of California, 2017). Second, California has the sixth largest economy in the world and is under pressure to supply highly educated, skilled workers to support and grow the economy (California Community Colleges Chancellor's Office, 2015a). Third, California community colleges are located in the same state as the researcher, which facilitated data collection. In alignment with the purpose, research questions, and the established criterion, the target population consisted of three community colleges located in the Southern California region of the state. All of the colleges have a formal governance structure reflected in organizational charts, use a shared governance process, engage in collective bargaining through employee unions, and have inclusive strategic planning processes. The case colleges varied in age and size, as measured by full-time-equivalent students (FTES).

The sample for the study included three case colleges and 15 interview participants. The researcher used a combination of purposive sampling and snowball sampling to select the case colleges and interview participants. The sample included all of the potential cases included in the target population, due to the small number of AACC Pathways Project participants in California and their ability to provide insight on the four

strategic imperatives in the context of guided pathways. The cases in the sample were identified by locating a list of project participants on the AACCC website. Snowball sampling was used to select interview participants from each college case. Upon receiving approval to conduct the study at the case site and interview the college president, the researcher asked the president to identify four other formal or informal leaders involved in guided pathways efforts. These leaders were required to have been employed at the college for a minimum of 2 years and be adults over the age of 18. The final sample included a total of 15 individuals. Participants were classified as college leaders or pathways leaders (Table 7). Several participants held a dual leadership role serving as both a college leader and a pathway leader.

Table 7

Interview Participants: Leadership Role by Case

Case site	College leadership	Pathways leadership	Dual leadership
Case A	4	3	2
Case B	3	3	1
Case C	5	3	3
Total	12	8	6

Demographic Data

Data collection included the gathering of demographic data from all interview participants to facilitate a deeper understanding of the study’s sample (McMillan & Schumacher, 2014). During the interview process, the researcher collected demographic information on participant age, gender, position, and number of years in the current position.

Participants' ages at the case sites demonstrated generational diversity falling within a range of 20 to 79 years of age (Table 8). Eleven of the 15 participants were aged 40 to 69 with the majority falling into the 50-59 age range.

Table 8

Participant Demographics: Age by Case

Case site	20-29	30-39	40-49	50-59	60-69	70-79
Case A	1		1	2	1	
Case B		1		3	1	
Case C			1	1	1	1
Total	1	1	2	6	3	1

The sample included gender diversity across cases with six participants identified as male and nine as female. The participants' gender by case site is detailed in Table 9. Case B and Case C had nearly equal numbers of male and female participants; however, participants at Case A were predominately female.

Table 9

Participant Demographics: Gender by Case

Case site	Male	Female
Case A	1	4
Case B	3	2
Case C	2	3
Total	6	9

Participants were asked to specify their position title and associated position classification (Table 10). Ten of the 15 participants at the case sites were administrators, including the three college presidents. Faculty were underrepresented within Case C as

only one faculty member was interviewed compared with four administrators; however, one of those administrators had recently left a faculty position to accept an administrative role.

Table 10

Participant Demographics: Position Classification by Case

Case site	Administration	Faculty
Case A	3	2
Case B	3	2
Case C	4	1
Total	10	5

The sample reflected diversity in the number of years participants had served in their current position at the case sites. Table 11 displays data relative to participants' tenure in their respective role. The participants were evenly distributed between the ranges with the exception of 26 years and above. According to these data, the sample included participant perspectives across the time continuum at the case sites.

Table 11

Participant Demographics: Years in Current Position at Case

Case site	≤ 5 years	6-15 years	16-25 years	≥ 26 years
Case A	1	2	1	1
Case B	2	1	2	
Case C	2	2	1	
Total	5	5	4	1

Presentation of the Data

This section presents the data and findings of the study discovered through the research and resulting analysis. In accordance with the prescribed methodology, each case is presented separately and discussed relative to Research Question 1 and the four corresponding subquestions. Following the discussion of the individual cases, Research Question 2 is addressed through a cross-case analysis.

Case A: Research Question 1

What role does strategic governance have in the implementation of guided pathways at scale at California community colleges?

The analysis of the data for Case A revealed that intentional alignment and inclusiveness were the most essential elements of strategic governance in guided pathways implementation. Interdependent leadership and maintaining internal/external synergy also played a role in pathways efforts. Table 12 describes the frequencies of the themes across all data sources.

Table 12

Case A: Rank and Frequency of Themes Related to Strategic Governance

Theme	Interviews		Artifacts	
	Freq.	Sources	Freq.	Sources
Inclusiveness	324	5	208	5
Intentional alignment	374	5	439	5
Interdependent leadership	256	5	59	5
Internal/external synergy	152	5	181	3

Interview data were the primary source of analysis, while artifacts corroborated themes that emerged from the participants' responses to the interview questions. The

case study protocol (Appendix E) guided the collection of artifacts. Artifacts for Case A included the educational master plan; the integrated Basic Skills Initiative, Student Equity, and Student Success and Support Program Plan; and other guided pathways documents related to communication, leadership, and implementation.

Each main theme was aligned with subthemes discovered during data analysis that were associated with the study’s theoretical propositions. The number and frequencies of subthemes confirmed the significance of the corresponding main theme to the research question. The themes, related subthemes, and subtheme frequencies are displayed in Table 13.

Table 13

Case A. Research Question 1: Frequency of Subthemes from Interviews

Main theme	Subtheme	Freq.
Inclusiveness	Broad, genuine participation	93
	Collaboration and teamwork	81
	Developing knowledge and expertise	84
	Shared understanding and goals	66
Intentional alignment	Defining/refining structure	271
	Systematic communication	72
	Technology development and data use	31
Interdependent leadership	Leadership at multiple levels	164
	Leading change	92
Internal/external synergy	External engagement	152

Note. Subthemes are aligned with corresponding main themes. Shading designates the rank of individual subthemes with the highest frequencies indicated by the darkest shading.

The subtheme of defining and refining structure was critical to intentional alignment during guided pathways effort. The subtheme of leadership at multiple levels also emerged as significant during pathways implementation. The section that follows

describes the main themes of inclusiveness and intentional alignment. The subtheme of defining and refining structure is included in the description of intentional alignment, while leadership at multiple levels is detailed separately.

Intentional alignment. Participants indicated that evaluating institutional structures and practices through the lens of guided pathways has resulted in actions to improve internal and external alignment. One interviewee affirmed,

We really are looking at pathways as our framework. Everything we should do really should be around our four pillars. When you think of it that way, there isn't much that we don't do that doesn't fit a pillar. And if it doesn't, we need to reconsider what we're doing. (A2)

For Case A, intentional alignment has been critical to operationalizing and “scaling up” (A4) guided pathways at the college.

Participants provided several examples of how internal structures and processes have been defined or refined through strategic planning and “vetted” (A3) through shared governance. The membership, leadership, roles, and responsibilities of committees, taskforces, and teams have been deliberately structured to support guided pathways implementation—“We each play a role in guiding whatever committees that we share or are a part of, whatever departments we oversee, and then we also have responsibility for guided pathways through our . . . structure” (A3). One college leader described how the Curriculum Committee assessed and realigned professional development, “Professional development was before done in just a very passive way. Whoever brought an idea, you could do it. But now there is very structured professional development” (A5). In addition to “repurposing our professional development dollars” (A5), participants

discussed how the college was leveraging categorical funds to implement guided pathways: “We reorganized all the money into one gigantic pot and then we strategically looked at the four pillars of guided pathways and used money to get those four pillars accomplished” (A4).

Interviews and artifacts describe how intentional alignment extends to structuring communication. Pathways teams are constituted with members, who are selected “because they represent a key constituent group” (A3) and “serve as liaisons to and from those constituent groups” (A3). Dated communication tasks are distributed to team members based on expertise via a communication plan, which formalizes roles and responsibilities. One participant explained, “So, we know when we need to communicate, specifically with our students” (A4). Strategic planning and shared governance processes have been used to structure how and what data are shared at the college. Implementation activities “roll up” (A3) to shared outcomes and goals expressed as “momentum points” (A5) aligned with guided pathways. Participants noted that the college defined momentum points and “shifted to providing data based on pathways” (A5) to “streamline planning” (A3) and provide “feedback to motivate and keep the momentum” (A5).

Inclusiveness. Interview participants universally communicated that broad, genuine participation was essential during guided pathways implementation. Involvement was intentionally cultivated to mobilize efforts toward institutional redesign centered on student success. Engagement focused initially on being “as inclusive as possible” (A1) to not only communicate the value of the approach but also to provide the opportunity to develop a “knowledge base” (A5) and shared understanding of the

framework: “I think at first, it was a lot of let’s get people in a room and just talk. But let’s get broad engagement, let’s talk about what this thing is, give everyone their Guided Pathways 101” (A3). Achieving a “critical mass” (A1) of engaged individuals, who were energized by the work and motivated to “drive” (A3) it forward was prioritized early on. Participants referred to “lessons learned” (A2) from moving too quickly without involving stakeholders, which resulted in “inadequate progress” (A3) and the need to “backtrack” (A2):

Following my first involvement in an institute I was very excited, decided I was like a unicorn. I was out of the gate and I had developed all kinds of documents.

I mean, I had a three-year plan of how we were going to implement this. . . . What I did not realize was I was on the frontier by myself. (A2)

While college leaders were pleased with the “level of engagement and ownership that we have experienced in the partnership that we have with administration, faculty, and with staff” (A1), they acknowledged the need to continually increase involvement, build trust, and “educate people” (A5). As guided pathways implementation has evolved at the college, inclusivity has been manifested in increased collaboration and teamwork. Cross-disciplinary discussion involving all constituency groups has created a “synergy” (A5) and “snowball effect” (A1), resulting in “curricular shift” (A5) and the construction of meta-majors. As one participant explained, “Working across the silos and across the disciplines and really focusing with students there in the classroom and their needs has basically been a tremendous, informal change in our attitude and in the way that we do business” (A4).

Leadership at multiple levels. For Case A, leadership in guided pathways implementation occurred at multiple levels and was distributed across the college using a blended approach. As the leader of the institution, the president has “invested” (A3) in guided pathways and provided “direct support” (A5) to move efforts along. Participants described how the president has introduced the guided pathways framework to the college, encouraged broad engagement and “discussion” (A3), set “priorities” (A3) and “expectations” (A3), and structured “committee time” (A3) and activities to maintain “focus” (A5). While the college does not have a dedicated pathways administrator, stakeholders perceived those administrators who oversee counseling, and student success and equity as leaders due to their positional alignment with guided pathways.

Interviewees noted that deans and other administrators “were asked to lead” (A1) pathways teams at the college. One participant explained that the administrative leads “facilitate structure” (A1), “clarify the path” (A1), foster “dialogue” (A1), and “make sure that they’re progressing the way they should be” (A1). Administrative leads use their “positional leadership” (A1) to simultaneously represent the college to the team and the team to the college.

Faculty members also have leadership roles on pathways teams, which include a faculty lead and a discipline lead. Participants explained that faculty leadership often relies heavily on “influence” (A2) and “expertise” (A3). Participants identified the academic senate president as “an important part of the level of leadership and support necessary” (A2). In addition, department chairs and faculty leads of shared governance committees, such as curriculum and assessment, are included in the “formal structures” (A5) that support guided pathways implementation.

College stakeholders indicated that the leadership mechanism for guided pathways uses a “distributed leadership model” (A5) that has matured over time. Artifacts gathered during data collection describe the structure, composition, and responsibilities of leads on teams and task forces. Distributing leadership in guided pathways has resulted in the development of “experts” (A3), who represent multiple constituency groups and different areas of the college: “We’re starting to make a move toward allowing folks to specialize a bit more. . . . I think people feel empowered in that, people get excited by the idea of becoming an expert in a particular area, and a go-to person” (A3). Participants explained that the “exchange of leadership” (A1) has facilitated communication and “motivated” (A3) individuals by allowing them to be “the drivers of the work” (A3).

Case A: Research Question 1a

What role does involvement have in the implementation of guided pathways at scale at California community colleges?

Involving internal stakeholders in the planning and implementation of guided pathways at Case A centered on issues of alignment and organization as demonstrated by the frequency of the defining and refining structure subtheme. Table 14 describes the frequencies of the top five subthemes at this college and their alignment with the main themes of Research Question 1.

Interview participants described the need to “identify” (A1) and “codify” (A1) the work, since guided pathways provides a framework and not a formula for institutional redesign. Past discussions focused on how to “operationalize” (A1), “institutionalize”

(A2), and “integrate” (A3, A4, A5) guided pathways principles into all aspects of the college, including governance structures, planning documents, and resource support.

Table 14

Case A: Top Five Subthemes Related to Involvement

Subtheme	Freq.	Main theme
Defining and refining structure	79	Intentional alignment
External engagement	58	Internal/external synergy
Broad, genuine participation	57	Inclusiveness
Collaboration and teamwork	54	Inclusiveness
Leadership at multiple levels	52	Interdependent leadership

Participants noted that involvement was essential to making “a shift into a guided pathways institution, into helping the entire college approach guided pathways as an integration into our day-to-day as opposed to this other thing that we spend an hour a day doing” (A3). For Case A, involving stakeholders in guiding structural alignment further organized efforts through the definition of specific “roles” (A1) or “positions” (A1, A3) imbued with pathways-related “responsibilities” (A3, A4).

Participants often connected defining and refining structure to the subthemes of broad, genuine participation, and collaboration and teamwork. Convening groups and involving stakeholders in strategic decisions related to guided pathways served two purposes. Firstly, participation resulted in a “process of dialogue” (A1) that was “Socratic in nature” (A1) and facilitated the understanding and design of structure. One participant noted that involvement helped individuals to see “that they now had the dual responsibility. They were citizens of their discipline, but they were also a citizen of the

pathway” (A5). Secondly, participants referred to the value of structuring involvement to sustain trust and maintain forward momentum:

And I was just thinking, trust can start with relationship and everything, but if you don’t have a structure that sustains it, you can lose trust quickly. And so there needs to be an effort to create that understanding, and a commitment to educate people. (A5)

Case A: Research Question 1b

What role does efficiency have in the implementation of guided pathways at scale at California community colleges?

The ability to accomplish tasks with minimal time, effort, and money during guided pathways implementation depended on defining and refining structure. Participant responses related to structuring focused on efficiency as an iterative process grounded in shared goals and connected to resource alignment. Leadership at multiple levels emerged as a subordinate subtheme that was also significant to efficiency for Case A. Table 15 describes the frequencies of the top five subthemes at this college and their alignment with the main themes of Research Question 1.

Table 15

Case A: Top Five Subthemes Related to Efficiency

Subtheme	Freq.	Main theme
Defining and refining structure	165	Intentional alignment
Leadership at multiple levels	55	Interdependent leadership
Collaboration and teamwork	34	Inclusiveness
External engagement	30	Internal/external synergy
Broad, genuine participation	30	Inclusiveness

Defining and refining structure. College leaders noted that initial restructuring efforts resulted in “inefficiency” (A1, A5). Inefficiency in the early stages of pathways implementation was viewed as “built in” (A1) and “embedded” (A1) in the process. One participant characterized the inefficient use of resources as an “investment” (A5) in generating the forces and “energy to be able to get a lot of the curricular shift to happen” (A5). Several individuals described how the college has been “intentional” (A3) in developing efficiency over time using a multiphased approach, especially in terms of structuring committees, planning committee work, and reorganizing categorical funds and professional development dollars to support pathways activities (A1, A4, A5). One college leader described the process of building efficiency in mathematical terms, “I don’t see it as a linear equation. I see it more as . . . exponential in nature” (A1). Structuring college efforts around “intended outcomes and goals” (A2, A3) and “momentum points” (A3, A5) has streamlined pathways efforts and dramatically increased efficiency.

Leadership at multiple levels. The subtheme of leadership at multiple levels was also associated with efficiency in the implementation of guided pathways for Case A. Participants most frequently referred to the roles of formal leadership and distributed leadership when describing how pathways work moved forward at the college. Formal leaders with pathways responsibilities assigned either by executive leadership or by virtue of their position were essential to framing, facilitating, and motivating efforts (A1, A3, A5). For example, the college president promoted efficiency by requesting that “every single person on management, but also every committee, create an annual work plan—a roadmap of how we are going to accomplish what we want to accomplish” (A3).

Some participants regarded formal leadership as “a double-edged sword” (A1) that was deliberately minimized during implementation to encourage the broader exposure, “understanding” (A5) and localized application of the “pathways construct” (A5). To promote flexibility, leadership was distributed across the college through implementation teams or governance bodies: “We’re keeping up to date with the kind of leadership we need; we’re agile and putting people where we need them to move different kinds of work. And, we have moved a lot of work” (A4).

Case A: Research Question 1c

What role does environment have in the implementation of guided pathways at scale at California community colleges?

For Case A, recognizing environmental elements outside of the college and responding to them appropriately was a function of increased external engagement. Table 16 displays the frequencies of subthemes and their related main themes for Research Question 1c.

Table 16
Case A: Top Five Subthemes Related to Environment

Subtheme	Freq.	Main theme
External engagement	111	Internal/external synergy
Defining and refining structure	59	Intentional alignment
Broad, genuine participation	30	Inclusiveness
Leading change	29	Interdependent leadership
Developing knowledge and expertise	23	Inclusiveness

Participants identified numerous external forces that impacted guided pathways implementation. College leaders referenced past and present state legislation that had

“influenced our work both positively and negatively” (A1) including the Associate Degree for Transfer Program enacted by SB 1440 and AB 705, which established new regulations related to the placement and completion of transfer-level coursework in English and math. California Community Colleges State Chancellor’s Office policies associated with performance-based funding, and the integrated Basic Skills Initiative, Student Equity, and Student Success and Support Program were also mentioned as significant environmental factors. The AACC Pathways Project was cited as a major “external catalyst” (A5). Participation in the AACC institutes provided opportunities to engage with colleges from across the country that were implementing the guided pathways framework.

College leaders described a variety of ways in which the institution engaged with environmental elements. Firstly, legislation and policy framed internal conversations and shaped practices. One participant noted that while state mandates are “all rooted in great ideas” (A1), guidelines for implementation are often ambiguous, leaving it “up to the colleges to figure out what that means for them, how to be compliant” (A1). Another individual described how the college was using guided pathways as a “lens” (A3) to “make sense” (A3) of “every decision that’s made whether it’s legislation or policy that comes out of the Chancellor’s Office or our strategic direction with the college” (A3). Secondly, the college used its experiences in implementing state requirements to “influence” (A5) external direction and decisions. The relationship between the state Chancellor’s Office and the college was described as a reciprocal one: “Being bold, providing leadership, and being engaged is the best way to shape the outcome even at the state level” (A5). Finally, responding to the external environment has rallied the college

around “core values” (A5) and purpose. For example, the policy related to student equity required the college to review indicators linked to the Student Success Scorecard for disadvantaged populations. Conversations about equity at the college have allowed “people to see the kind of moral imperative of the work” (A3) and focus on community needs: “Educating people, getting them graduated to either transfer or to go into the workforce. I would say that’s the primary external pressure” (A2).

Case A: Research Question 1d

What role does leadership have in the implementation of guided pathways at scale at California community colleges?

The subtheme with the highest frequency related to Research Question 1d was leadership at multiple levels. Defining and refining structure was also significant to the role of leadership in strategic governance for Case A. Table 17 illustrates the frequencies of the top five subthemes at this college and their alignment with the main themes of Research Question 1.

Table 17
Case A: Top Five Subthemes Related to Leadership

Subtheme	Freq.	Main theme
Leadership at multiple levels	179	Interdependent leadership
Defining and refining structure	129	Intentional alignment
Leading change	64	Interdependent leadership
Systematic communication	53	Intentional alignment
Collaboration and teamwork	49	Inclusiveness

Leadership at multiple levels. Leadership at multiple levels emerged as the subtheme most closely associated with leading guided pathways implementation. As a

result of the college's integrated approach to pathways, no single leader had been assigned positional responsibilities to move the work forward: "We don't have a director of guided pathways or a dean of guided pathways or even a VP of guided pathways, and that's because it's really all of our responsibility" (A3). Guided pathways "leads" (A4, A5) were described as both individuals and groups operating in formal and informal capacities. Individual leads included administrators, faculty, classified staff, and students. Groups or teams responsible for leading pathways efforts consisted of shared governance committees, task forces, administrative groups, and student government leadership.

Participants explained that a "blending" (A5) and "exchange" (A1) of leadership roles had enabled the college to make progress in guided pathways implementation. Administrative leads used their formal, positional authority to "facilitate structure" (A1, A3), establish "expectations" (A3), and provide "support" (A1, A3, A5) for resource needs. Informally, administrators used their position to "encourage" (A1) and "engage" (A1) college stakeholders by relying on "the power of relationships" (A1)—working with people "human to human" (A1) and sustaining "trust" (A5). Participant A3 described how the college president in particular epitomized this blended role, explaining that the president is "incredibly loved," "very respected," and "has such a proven reputation of doing good work and doing the right thing." As the head of the institution, the president has also "invested fully in guided pathways" (A3), established "expectations" (A3), and "created conditions for all of us to do that work" (A3). Participants noted that informal leadership has leveraged "influence" (A2, A3) to implement guided pathways, especially when approaching "touchy topics" (A2). Influence at the college is closely associated

with expertise; for example, faculty members were recognized as essential leaders in pathways efforts due to their subject area expertise and knowledge of curriculum.

College leaders stated that a “combination of influence as well as position” (A2) has been used to institutionalize guided pathways.

Defining and refining structure. For Case A, defining and refining structure has enabled blended leadership in the implementation of guided pathways. The exchange of formal and informal leadership roles has been made possible through structural alignment and a clear “definition” (A5) of “distributed leadership” (A5). Participants noted that college committees and task forces were organized and constituted to ensure “representation” (A5), “communication” (A3), and accountability. College artifacts, especially documents related to guided pathways leadership and communication, confirm the study participants’ perspectives by detailing structure, team composition, leads, and specific responsibilities. The artifacts describe how pathways leadership is distributed and cultivated, so individuals know what roles they play—“every administrator, every educational advisor and counselor, a ton of discipline faculty, a whole bunch of student affairs folks are on teams where they have specific roles that they serve to support students within cohorts across meta majors” (A3). The interview and artifact data illustrate the interplay of distributed leadership and formal structure. Described by Participant A5 as a “yin and yang,” formal structure balances distributed leadership by minimizing “chaos” and “ambiguity” thereby maximizing “agility,” “innovation,” and “empowerment. “

Case A: Unexpected Findings

An analysis of the data collected from Case A resulted in two unexpected findings related to the role of strategic governance in the implementation of guided pathways. The difficulty in aligning pathways with transfer institutions was the first unexpected finding. Participants cited the complexities of the higher education landscape in California with its multiple, institution-specific transfer patterns as a “barrier” (A3) to structural alignment. As one interviewee explained, “Fundamentally for me, pathways are about clarity, and it’s just made everything kind of murky and that’s tough” (A3). The college has responded to environmental complications linked to transfer pathways by increasing internal and external engagement, especially counselor involvement, collaboration with local transfer partners, and advocacy for “detailed policies” (A5) at the state level.

The second unexpected finding was related to the exchange of influence between the college and state policy makers. Participants expressed frustration with the need to passively respond to legislation that has “mandated” (A1) college efforts or “strongly expected us to function in a certain way” (A1). Participant A2 explained that a perceived “lack of guidance” and “ambiguity” related to the guidelines for the local implementation of policy has led to “unrest” and “angst.” Another interviewee noted that despite promoting guided pathways as an umbrella framework for transformation, the state has introduced new policies that leave the college “trying to juggle all of the initiatives once again. . . . And I think, governance wise, it’s created a rift where we had built a lot of bridges, and collaboration and cooperation” (A4). Participant A5 indicated that despite “going through the fire” the college has responded with “optimism” and a belief in “the

power of influence” to impact the “direction” at the state level: “We need to be empowered to be able to give feedback to the state, and have faith that they too will go through an evolutionary cycle.” For Case A, a sophisticated understanding of guided pathways in the context of the external environment has empowered the college to simultaneously adapt to change and affect change.

Case B: Research Question 1

What role does strategic governance have in the implementation of guided pathways at scale at California community colleges?

The analysis of the data for Case B revealed that inclusiveness and intentional alignment were the most essential elements of strategic governance in guided pathways implementation. Interdependent leadership and maintaining internal/external synergy also played a role in pathways efforts. Table 18 describes the frequencies of the themes across all data sources.

Table 18

Case B: Rank and Frequency of Themes Related to Strategic Governance

Theme	Interviews		Artifacts	
	Freq.	Sources	Freq.	Sources
Inclusiveness	317	5	123	5
Intentional alignment	300	5	186	5
Interdependent leadership	259	5	33	5
Internal/external synergy	140	5	51	4

Interview data were the primary source of analysis, while artifacts corroborated themes that emerged from the participants’ responses to the interview questions. The case study protocol (Appendix E) guided the collection of artifacts. Artifacts for Case B

included college reports created for accreditation and strategic planning purposes as well as guided pathways documents describing positions, committee structures, and work plans.

Each main theme was aligned with subthemes discovered during data analysis that were associated with the study’s theoretical propositions. The number and frequencies of subthemes confirmed the significance of the corresponding main theme to the research question. The themes, related subthemes, and subtheme frequencies are displayed in Table 19.

Table 19

Case B: Research Question 1: Frequency of Subthemes From Interviews

Main theme	Subtheme	Freq.
Inclusiveness	Broad, genuine participation	123
	Collaboration and teamwork	57
	Developing knowledge and expertise	79
	Shared understanding and goals	58
Intentional alignment	Defining/refining structure	192
	Systematic communication	62
	Technology development and data use	46
Interdependent leadership	Leadership at multiple levels	142
	Leading change	117
Internal/external synergy	External engagement	140

Note. Subthemes are aligned with corresponding main themes. Shading designates the rank of individual subthemes with the highest frequencies indicated by the darkest shading.

The subtheme of defining and refining structure was critical to intentional alignment during guided pathways effort. The subtheme of leadership at multiple levels also emerged as significant during pathways implementation. The section that follows describes the main themes of inclusiveness and intentional alignment. The subtheme of

defining and refining structure is included in the description of intentional alignment, while leadership at multiple levels is detailed separately.

Inclusiveness. For Case B, broad, genuine participation was vital to guided pathways implementation. Participants indicated that employees at the college are internally motivated, and “push back on external pressures” (B2) and decisions that are “top-down” (B3, B4). The institutional culture required that pathways implementation be “homegrown” (B2, B3) with “faculty buy-in every step of the way” (B2). Interviewees pointed to the guided pathways work plan as an example of how the culture impacts pathways efforts at the college. This artifact was purposefully written to be “generic” (B2) to allow for additional time for discussion and flexibility when implementing changes.

The college is forward thinking and tries to “get a leg up” (B2) on policy changes before they are mandated through legislation or funding. Participants explained that college stakeholders have “a lot of passion and commitment” (B5) for what they do, which results in an “organic” (B2) exploration and early adoption of strategies to increase student success “on their own” (B3). Leaders pointed to the early implementation of “acceleration” (B3, B4), “mandatory academic planning” (B3), and “multiple measures” (B4) to illustrate the effectiveness of their “faculty-led process” (B3) of engagement at the college. Interviewees remarked that many of these student success approaches that “they have been doing for years” (B2) “at scale” (B4) fall under the “umbrella” (B2) of guided pathways. The college expressed a belief that previous success in implementing changes using an inclusive process predicted future success when implementing guided pathways in the same way. As one participant explained,

If you involve everybody, while it might take longer, the implementation pain is easier. So, once we implemented things, because it took us a year to talk about it, we thought about every single potential issue, that once we did it, we were able to do [it] full scale. . . . That is my sense, and I think in terms of guided pathways, it's similar. (B4)

For participants, the results of a recent climate survey validated their shared belief in the value of inclusiveness. Moreover, the survey results showed that many college stakeholders involved in implementation “see the vision” (B4) and have “bought into the vision” (B4) of guided pathways.

Intentional alignment. Participants repeatedly described how the college was creating structure around guided pathways as they “understand” (B4) and “relate to this movement” (B3). Interviewees explained how the coordination of guided pathways efforts has progressed over time—“trying to figure out who was leading and how to organize it has been an evolution” (B3). The college used a systematic and inclusive process to develop the structure to support implementation. One participant noted that structuring activities have been “informal” (B3), “iterative” (B4), and have advanced through recursive discussion, “just constantly talking . . . and then [having] the same discussion over” (B4). College stakeholders remarked that over the last year they have raised “the formality level” (B3) of roles and responsibilities for individuals and committees involved in guided pathways. While still “figuring it out” (B3), participants expressed a shared belief that improved structural alignment was helping them “actually take the bull by the horns and make some progress” (B2).

The college provided several examples of how internal structures associated with guided pathways have been defined or refined. Participants described a “new concept structure” (B3) that depicts cross-functional subgroups as “spokes” (B3) around a central hub with the primary pathways workgroups at the center. These pathways workgroups, which had initially functioned independently “have just completely merged and are working tremendously together” (B5). Moreover, while guided pathways leadership was initially “advertised” (B1) as a single faculty coordinator position, the college has multiplied this role to meet the needs of the evolving structure. When two equally-qualified individuals applied for the position, both were appointed to serve as pathways “co-coordinators” (B3). Then, when a third “informal leader” (B3) emerged through academic senate involvement in implementation, the college formalized that role to establish “tri-coordinators” (B3).

Leadership at multiple levels. Throughout the interviews, participants discussed the critical role of leadership in coordinating guided pathways work. Participation in the national Pathways Project, which required the involvement of individuals in certain positions at the college, provided guidance in developing the “leadership mechanism to make sure that this is successful” (B5). Participants described pathways leadership as multidimensional with stakeholders representing various constituency groups sharing varying levels of leadership responsibility.

While attending the Pathways Project institutes, college administration determined that “there had to be a really strong faculty component here or else it wasn’t going to go anywhere, period” (B3). Consequently, interviewees explained that the president, vice presidents, and other administrators play more of a supporting or

“facilitator-type” (B3) role. As the head of the college, the president introduced guided pathways and arranged for outside “thought leaders” (B5) to come in and speak during college events to “slowly fold in the concept” (B5). One participant indicated that the dean assigned to guided pathways initially had a “stronger” (B3) role, but has “release[d]” (B3) some leadership responsibilities as faculty pathways coordinators have become more prominent. The academic senate has also been “critical in leadership” (B5), especially in addressing faculty concerns about the impact of pathways on course offerings or workload. Participants also noted that informal faculty leaders have become more essential to pathways efforts, because “they understand it from the faculty perspective and they’re talking to their peers” (B4).

Interviewees explained that the reliance on faculty to lead guided pathways implementation has resulted in some “stumbling around in the dark” (B1) due to the lack of “any formal training in how to lead a big initiative” (B3). Pathways leaders stated that “we’re learning as we go” (B3) and “dancing on hot coals” (B2) as involvement increases, questions arise, and “opposition” surfaces (B3). Participation in “intensive” (B4) leadership development sponsored by an external agency has been a “good experience” (B3) and “powerful” (B4) for those leading pathways efforts. This training has also been helpful in structuring leadership at the college and addressing questions such as “What does it mean to lead? What roles do we play?” (B3).

Case B: Research Question 1a

What role does involvement have in the implementation of guided pathways at scale at California community colleges?

For Case B, involvement in the planning and implementation of guided pathways required the broad, genuine participation of college stakeholders. Internal engagement focused on inclusiveness as a means of building a solid foundation for guided pathways efforts. Table 20 lists the top five subthemes and frequencies that emerged from the data.

Table 20

Case B: Top Five Subthemes Related to Involvement

Subtheme	Freq.	Main theme
Broad, genuine participation	61	Inclusiveness
Developing knowledge and expertise	42	Inclusiveness
Leadership at multiple levels	39	Interdependent leadership
External engagement	38	Internal/external synergy
Defining and refining structure	37	Intentional alignment

Participants consistently noted that a pathways approach necessitates widespread involvement, because it has a broad scope that requires systemic “campus-wide change” (B3). Unlike other initiatives, guided pathways is “a wraparound type of idea. Where a lot of the other ones . . . they’d involve a couple of different schools possibly, but it wouldn’t be all inclusive, and so if somebody didn’t want to participate in it, they wouldn’t have to” (B1). Interviewees expressed the need for extensive engagement, because “every single faculty, every single department, every single program is technically involved in it” (B4). The college demonstrated an awareness and sensitivity to the fact that California community colleges have staff unions, “very strong” (B4) faculty unions, and “many constituency groups on campus” (B4). Moreover, participants highlighted the importance of having a “faculty-led process of getting involved” (B3) supported by shared governance.

During the interviews, campus leaders extolled the value of involving many stakeholders from multiple areas representing all constituency groups. In addition to faculty and administrators, the college has intentionally included classified staff and students in guided pathways discussions to provide “valuable insight” (B4). The college has also engaged the board of trustees: “Our one trustee that’s been involved has had a role there. We’re looking at how we can realign resources to support a new model” (B5). Participants described involvement as a vehicle for creating a “sustainable” (B5) implementation of guided pathways “at scale” (B3, B4):

I think because it takes us quite some time to discuss it and involve all constituency groups, not just faculty, it also involves student services, you also involve IT, that when we make a decision, I believe this is the strength of us that once we implement it, it’s more thought through because we’ve involved so many people. (B4)

Case B acknowledged that time and efficiency was sacrificed early on to build the engagement necessary for eventual success in full pathways implementation. Participants believed that bringing “more people to the table” (B5) helps create “stability” (B4) and an “incredible foundation” (B5) that leads to a smoother implementation without surprises and “unanticipated consequences” (B5).

Case B: Research Question 1b

What role does efficiency have in the implementation of guided pathways at scale at California community colleges?

For Case B, efficiency in implementing guided pathways was contingent on defining and refining structure to organize engagement and pathways-related activities.

Table 21 describes this subtheme and other significant subthemes at this college related to the strategic imperative of efficiency.

Table 21

Case B: Top Five Subthemes Related to Efficiency

Subtheme	Freq.	Main theme
Defining and refining structure	105	Intentional alignment
Leading change	46	Interdependent leadership
Broad, genuine participation	42	Inclusiveness
Leadership at multiple levels	33	Interdependent leadership
Systematic communication	33	Intentional alignment

At Case B, developing efficiency in guided pathways implementation has been the result of “evolving” (B3) roles and structure. Throughout the interviews, participants expressed the need to be “patient” (B2), “careful” (B3), “slow and methodical” (B5) when implementing guided pathways. As Participant B2 explained, efficiency in initial guided pathways efforts was not a function of “productivity” or “about getting to an end quickly.” Guided pathways implementation at the college was “inefficient by design” (B5) to ensure positive outcomes for students, sustain involvement, and facilitate lasting change. As one pathway leader stated,

The efficiency that we would like to see is not going to be in terms of a quicker timeline or a quicker deliverable. We’ve had to change our timelines, we’ve had to change our deliverables, and say we took two steps forward and we took one back. This is just the way it is. (B2)

While guided pathways implementation was originally unstructured—“it’s like everyone got thrown into a pool and we’re all bobbing around trying to figure out what’s going on”

(B3)—external forces have stimulated the creation of formal structures to promote clarity and efficiency. Participants reported increased collaboration between committees and groups with pathways responsibilities and described the development of a “new structure concept” (B3) that delineates functions, coordinates activities, and establishes communication channels (B1).

Leaders at the college indicated that guided pathways needed to be “rooted” (B3) in “structure that creates buy-in” (B4). Participants noted that some individuals at the college were “struggling with how messy this is” (B3) and described efforts to “legitimize” (B2, B3) pathways authority and decision making, especially as it relates to leadership and resource allocation. The academic senate has taken an active role in developing “charges” (B3) and “proposals” (B3) that address structural alignment issues related to pathways. Guided pathways has also been “melded” (B3) into the strategic plan “so it is a strategic initiative of the college” (B3). Another way the college has developed legitimacy is through the definition of specific roles and responsibilities. Multiple interviewees ascribed progress in guided pathways implementation to the creation of a dedicated coordinator position, which was ultimately filled by two individuals. One participant described these co-coordinators as “passionate” faculty members, “who volunteered and they had the abilities to be those great communicators, to be very interactive, very receptive to people’s comments and criticism” (B4).

Case B: Research Question 1c

What role does environment have in the implementation of guided pathways at scale at California community colleges?

Recognizing environmental elements outside of the college and responding to them appropriately required meaningful engagement with external forces and entities. Table 22 displays the external engagement subtheme along with the other top subthemes associated with Research Question 1c.

Table 22

Case B: Top Five Subthemes Related to Environment

Subtheme	Freq.	Main theme
External engagement	109	Internal/external synergy
Defining and refining structure	54	Intentional alignment
Leading change	41	Interdependent leadership
Shared understanding and goals	32	Inclusiveness
Technology development and data use	29	Intentional alignment

Participants cited a number of external elements that have informed guided pathways efforts. Participant B4 discussed several previously implemented state initiatives including “multiple measures,” “acceleration,” corequisites, and “associate degrees for transfer.” Interview data also referred to recent state policy connected to performance-based funding (B3, B4), transfer-level coursework in English and math (B1, B2, B4), and online community college (B3). Case B has engaged with the county office of education and local high schools, where the college teaches some courses, to discuss guided pathways and “how we could relate that to K12” (B2). One interviewee characterized coordination with transfer institutions as “difficult” (B1) and a “big fight” (B1). The differing requirements of the California State University system and University of California system were described as a “hurdle” (B1) that complicated the development of “roadmaps” (B1). As a participant in the national Pathways Project, the

college attended a series of institutes sponsored by the AACC. Individuals also attended the Leading from the Middle Academy offered by the RP Group, which has provided “powerful” (B4) leadership training “surrounding guided pathways” (B4).

External engagement related to guided pathways work has led the college to realign resources, develop professional knowledge and abilities, and “step up” (B5) implementation. The state’s integration of categorical programs put “pressure” (B5) on the college to ensure that program activities “have [an] identifiable connection to guided pathways in place . . . to protect the funding, protect really the projects” (B5).

Participants explained that involvement with external entities such as the AACC and the RP Group have provided professional development opportunities to both increase pathways knowledge and hone leadership skills to help “move the institution forward” (B4) with “this fundamental change in our school” (B1). Finally, legislation and state initiatives have “galvanized” (B3) pathways implementation efforts and involvement: “We knew we needed to kick this into a higher gear and now we have even more motivation. We do have to get this organized and really do something about it” (B3).

Case B: Research Question 1d

What role does leadership have in the implementation of guided pathways at scale at California community colleges?

The subtheme with the highest frequency related to Research Question 1d was leadership at multiple levels. Defining and refining structure was also significant to the role of leadership in strategic governance for Case B. Table 23 illustrates the frequency of the top five subthemes at this college and their alignment with the main themes of Research Question 1.

Table 23

Case B: Top Five Subthemes Related to Leadership

Subtheme	Freq.	Main theme
Leadership at multiple levels	165	Interdependent leadership
Defining and refining structure	103	Intentional alignment
Broad, genuine participation	64	Inclusiveness
Leading change	55	Interdependent leadership
Collaboration and teamwork	50	Inclusiveness

Leadership at multiple levels. Data collected for Case B demonstrated that leadership in guided pathways implementation is occurring at multiple levels at the college. Participants described the college president as committed and “passionate” (B4) about guided pathways, and a firm believer that the work needed to be “faculty-driven” (B1) and “faculty-led” (B1). Participant B5 explained that the president’s role was to serve as an “information person, resource person,” “to develop leadership mechanisms,” and to “lay out the reasons to look at it and to engage in it, what are the advantages, be clear about the challenges.” As Participant B3 noted, the administrative lead assigned to pathways also rejected a “top-down” approach and instead served as a “point person,” coordinator, and “facilitator” to “schedule meetings,” “communicate,” and provide funding “to help things happen.”

As faculty members, the pathways co-coordinators were perceived as “spearheading” (B3) efforts; however, their leadership role was dependent on influence and “respect” (B2) as much as position. One participant explained,

I thought originally that was the position of the person that was going to be the leader, and I have found out that other people don’t agree with that thought. . . . I

came to find out it's not an authority position, it's a, we need to convince the faculty as a whole to adopt this. (B1)

Shared governance also played a role in conferring leadership in guided pathways implementation. Participant B2 identified faculty who serve on the academic senate guided pathways workgroup as “leaders in their own right,” because “they carry the message and they support the message of guided pathways” to their constituency groups and disciplines. Interviewees repeatedly referred to one individual on the academic senate workgroup who came from a traditionally “skeptical” (B3) discipline and “rose up as highly involved and articulate and energetic” (B3). This informal leader works closely with the pathways co-coordinators to direct implementation at the college.

Defining and refining structure. For Case B, defining and refining structure to support guided pathways has helped “build” (B1) and legitimize leaders. Interviewees explained that the institutional “culture” (B3) determined the “leadership structure that was appropriate” (B4) for guided pathways. When discussing pathways leadership, one participant stated that that “there’s a very fine line between the administration leading this and the faculty leading this” (B2). College administration and academic senate agreed on the need for a faculty pathways coordinator to establish leadership that would be accepted and respected campus-wide:

You have to have somebody lead it, you just have to. You can’t say we want this to happen and then not have a leader to do it. A leader is not just somebody who gets paid to do it, but is acknowledged by the community as being the leader for that purpose. (B2)

Participants indicated that the need to formalize structure increased as the pathways co-coordinators conducted “road shows” and “more people started getting involved with the debate” (B3). As a result, the college has compensated key “informal” (B2, B3) faculty leaders to recognize and “legitimize” (B3) their role in guided pathways implementation. Interviewees also indicated that structuring engagement has helped develop and multiply faculty leaders to assist the pathways coordinators, who are “pulled in too many directions” (B1) and have “all these different things” (B1) to do. The desire to “branch out” (B1) and “build in external sub-leaders” (B1) to address individual area needs and “get groups specifically moving forward” (B1) illustrated a structural movement toward distributed leadership.

Case B: Unexpected Findings

An analysis of the data resulted in two unexpected findings that were not predicted by the theoretical propositions. The first finding related to the value of analyzing the internal environment during guided pathways implementation. The college conducted a “climate survey” (B4) of employees to determine their degree of involvement in guided pathways and “opinion” (B3) of the pathways approach. The survey asked, “Have you heard about guided pathways?” and “Would you be able to explain it to a colleague?” (B4). The survey also asked employees to indicate their level of approval of the guided pathways approach. Leaders described the survey as an “interesting tool” (B3) to gauge “understanding” (B4). Participant B3 noted that the survey results were a “good indicator” of progress and a “measure” of “support” or “opposition” to implementation. Another interviewee explained that the survey,

Helped us to realize it's important to have dissenting voices, it's important to have them here, because they often do touch on things that are important and that need to be thought through, but they are, in this case, not representative of the general feelings at this moment. (B4)

Pathways leaders will be sharing the results of the survey campus-wide to further increase engagement and buy-in. Furthermore, the survey will be regularly administered "every two years" (B3) as a means of determining progress in guided pathways implementation.

The second unexpected finding concerned the college's self-awareness related to progress and involvement in guided pathways implementation. When interviewees reflected on efficiency, they noted that they did not have much of a "product" (B5) or "outcome" (B4) to show for their time and efforts thus far. Nevertheless, the college accepted "inefficiency" (B2, B5) as a consequence of broad engagement. Stakeholders were "optimistic" (B2) and "appreciative" (B2) of the "discussion" (B4) and "encouraging engagement" (B5) around guided pathways. Participants stated that "guided pathways really gets all the creepy-crawlies out of the closet" (B2), but they viewed "resistance" (B3) and "debate" (B3) as an intrinsic part of "participatory governance" (B5). To adequately address "fear" (B2) and other concerns related to leading "fundamental change" (B1), the college recognized the need for additional professional development and supported leadership "training" (B1, B3) for those "intimately involved" (B1) in guided pathways implementation.

Case C: Research Question 1

What role does strategic governance have in the implementation of guided pathways at scale at California community colleges?

The analysis of the data for Case C revealed that the most essential elements of strategic governance in guided pathways implementation were inclusiveness and intentional alignment. Interdependent leadership and maintaining internal/external synergy also played a role in pathways efforts. Table 24 describes the frequencies of main themes across all data sources.

Table 24

Case B: Rank and Frequency of Themes Related to Strategic Governance

Theme	Interviews		Artifacts	
	Freq.	Sources	Freq.	Sources
Inclusiveness	451	5	120	5
Intentional alignment	378	5	221	5
Interdependent leadership	218	5	43	5
Internal/external synergy	165	5	73	5

Interview data were the primary source of analysis, while artifacts corroborated themes that emerged from the participants' responses to the interview questions. The case study protocol (Appendix E) guided the collection of artifacts. Artifacts for Case C included the educational and facilities master plan, accreditation documents, and agendas for strategic planning and college-based pathway events.

Each main theme was aligned with subthemes discovered during data analysis that were associated with the study's theoretical propositions. The number and frequencies of subthemes confirmed the significance of the corresponding main theme to

the research question. The themes, related subthemes, and subtheme frequencies are displayed in Table 25.

Table 25

Case C: Research Question 1: Frequency of Subthemes From Interviews

Main theme	Subtheme	Freq.
Inclusiveness	Broad, genuine participation	145
	Collaboration and teamwork	107
	Developing knowledge and expertise	127
	Shared understanding and goals	72
Intentional alignment	Defining/refining structure	281
	Systematic communication	60
	Technology development and data use	37
Interdependent leadership	Leadership at multiple levels	134
	Leading change	84
Internal/external synergy	External engagement	165

Note. Subthemes are aligned with corresponding main themes. Shading designates the rank of individual subthemes with the highest frequencies indicated by the darkest shading.

The subtheme of defining and refining structure was critical to intentional alignment during guided pathways effort. The subtheme of external engagement also emerged as significant during pathways implementation. The section that follows describes the main themes of inclusiveness and intentional alignment. The subtheme of defining and refining structure is included in the description of intentional alignment, while external engagement is detailed separately.

Inclusiveness. For Case C, inclusiveness was critical to the role of strategic governance in the implementation of guided pathways. Administrators at the college have extensive prior experience as faculty serving in local and state academic senate leadership roles. Participants felt that this background has helped shape the institutional

culture at the college, which “really values faculty voice” (C2) and “inclusive decision making” (C2). In regard to guided pathways implementation, one college leader explained,

It takes everybody here. Whether you’re working in financial aid or you’re working in parking to get students their parking permits, to the faculty and the counselors. It takes everybody to collaborate to make pathways accessible to students and the college accessible. (C2)

From the beginning, the president demonstrated a commitment to getting “people on board” (C1) with guided pathways by involving the academic senate in the decision to apply for the national AACC Pathways Project. Participants indicated that the administrator who oversees guided pathways efforts believes in broad, genuine participation in pathways implementation. The campus lead has focused on “gathering people” (C1) together through the pathways workgroup and campus meetings devoted to various elements of the framework: “We had convenings where we would bring 100 faculty together and we would work together on things” (C1).

Interviewees explained that involvement in guided pathways implementation has focused on “exploration” (C3), “discovery” (C3), and debate about “the right thing to do for students” (C2). Participants noted that the individuals who are “at the table” (C1, C3) have become involved in pathways efforts for a variety of reasons. While some faculty immediately “stepped up” (C5) and “took the reins” (C5) in guided pathways work, because they saw the “benefits” (C5) for students, others got involved “to stop all of the evil that shall soon ensue” (C2). Despite initial opposition, some faculty resisters

“slowly came around” (C2) to see guided pathways as “something that could actually be good for students . . . [and] a worthwhile pursuit” (C2).

Intentional alignment. A number of participants described how the structure and organization of guided pathways work at the college has developed. Generally speaking, the college has used its existing shared governance structure of “workgroups, taskforces, committees, and councils” (C3) to approach guided pathways implementation. The college explained that the AACC Pathways Project did not provide funds for implementation attached to a specific timeline. As a result, early guided pathways efforts were less structured as “it was ours to pick and choose what we wanted to do” (C2). Unlike other state programs that provide funding, the college was not required to meet certain “metrics” (C2) in a finite amount of time.

Interviewees noted that engagement in guided pathways implementation originally mirrored the structure and membership of the “core team” (C3) put together for the national Pathways Project. The pathways workgroup has evolved to include more individuals working on more discrete activities (C1). Participants noted that while the college was selective and “intentional” (C3) in involving people with certain roles to advance guided pathways work, the institution was also “flexible enough” (C3) to include others with necessary experience or expertise. One participant explained that members of the workgroup interact with one another based on their “experience” (C3) rather than their “formal roles” (C3). Furthermore, “institutionalizing” (C5) the pathways workgroup has also resulted in somewhat of a “break down” (C3) of “defined roles” (C3) to enable a broader more holistic view of the student experience:

It's allowing people to see things outside of their defined role and understanding in the guided pathways framework that one of the pillars, clarity and message, is not "clear to me" that matters. It's 'clear to the student' that matters. (C3)

External engagement. Participants indicated that Case C has a tendency to "implement early" (C3), because stakeholders are "willing to try new things and take the lead and then assess whether it works or not" (C1). Voluntary participation in the national Pathways Project demonstrated Case C's philosophical approach to change. Interviewees explained that the college "chooses" (C2) to engage with environmental elements before they become requirements, which results in "external opportunity" (C1) rather than "external pressure" (C1). As one interviewee stated, "We had sort of a culture that would support this kind of work . . . it gave us a chance to look around at how we were serving students and maybe take a fresh look at it" (C1). Participants also explained that the college was motivated to implement guided pathways as a result of reviewing student success data and "looking for ways to improve completion and equity" (C3). The college was not extrinsically motivated by funding or compliance: "You know this was really our choice that we went into this. So I don't know that external factors impacted us at all . . . it wasn't because of the money that we were doing this" (C2).

Early involvement in guided pathways has given the college a "head start" (C1) and changed "the way the external environment comes to us" (C3). Participants indicated that early pathways implementation has allowed the college to "transition" (C5) into the state guided pathways program, which does provide money to support guided pathways efforts. For Case C, identifying environmental needs and trends, and responding to them in a timely manner, has facilitated advocacy: "We implement early enough so that we

have information that we can use to help influence” (C3). The college is able to use its experience to guide the development of programs so that they are “workable” (C3). As one interviewee explained, “We’re finding ways to both influence and adapt the external pressures to stay within the Guided Pathways framework” (C3).

Case C: Research Question 1a

What role does involvement have in the implementation of guided pathways at scale at California community colleges?

Involving internal stakeholders in the planning and implementation of guided pathways at Case C was connected to issues of leadership and structural alignment as demonstrated by the frequency of the subthemes, leadership at multiple levels and defining and refining structure. Table 26 describes the frequency of the top subthemes at this college and their alignment with the main themes of Research Question 1.

Table 26

Case C: Top Five Subthemes Related to Involvement

Subtheme	Freq.	Main theme
Leadership at multiple levels	82	Interdependent leadership
Defining and refining structure	81	Intentional alignment
Broad, genuine participation	72	Inclusiveness
Developing knowledge and expertise	67	Inclusiveness
Collaboration and teamwork	47	Inclusiveness

Leadership at multiple levels. For Case C, leadership at many levels was essential to engaging college stakeholders in guided pathways implementation. Participants indicated that from the outset the president “absolutely supported inclusive involvement in guided pathways” (C2). Prior to participating in the AACC Pathways

Project, the president sought approval from faculty through the academic senate and “assured us that this would be a process where faculty voice would be respected” (C2). The president also engaged administrators in guided pathways efforts by sharing information in “president’s cabinet” (C4). One interviewee noted that the president selected an administrative pathways lead with a broad background in both instruction and student services who understood that the “work had to be inclusive” (C1). The administrative lead has focused on creating “a ground swell of people saying, ‘Yes, this is the right thing to do’” (C1) by organizing pathways “convenings” (C1) and inviting faculty “practitioners” (C1) from a variety of areas. The administrative lead has utilized “support teams” (C1)—deans, student services, and information technology—to assist in organizing events and engaging college stakeholders in guided pathways efforts. These teams have encouraged the involvement of individuals from their respective areas.

Faculty leadership has also played a critical role in involvement in guided pathways implementation. Participants noted that the academic senate president read the pathways “purpose statement” (C1) to the whole college to demonstrate that “the faculty senate was on board” (C1). The academic senate also nominated faculty to serve on the guided pathways workgroup. Many faculty leaders, including department chairs and senate committee chairs were “tapped” (C5) to participate on the pathways workgroup. These faculty leaders were encouraged to get involved in pathways implementation, because they serve in multiple leadership roles at the college. One interviewee stated that “we have really good faculty leadership now that has recognized we need to do some things differently” (C4).

Defining and refining structure. The interview data also revealed that involvement at the college was facilitated through organization and structure. College stakeholders described how participation in the AACC Pathways Project assisted initial efforts to structure engagement: The pathways implementation team “started out as a workgroup during those two years that we were participating in the AACC effort to involve a cross-section on campus” (C5). As one participant explained, the workgroup was originally designed for efficiency: “We did an opportunity assessment and looked at several areas where we thought we could make the most progress given the culture and status of the college and the various aspects of the project” (C5). Leadership was “strategic” (C3) and “intentional” (C3) in involving faculty on the workgroup who held specific roles or positions and “were likely ambassadors and champions” (C5).

Participants noted that over time inclusion and representation in guided pathways implementation has become more “broad” (C2) and the structure for engagement has become more “flexible” (C3). One interviewee stated, “I think like with any new initiative you’re going to gather folks by position and have that discussion, and then you expand your group from that point forward” (C3). The workgroup has become a “huge team” (C2) that is “very cross-functional and collaborative” (C2). Participants indicated that “there’s an open door” (C2) when it comes to joining pathways efforts. The way that members “interact” (C3) during guided pathways discussions has also become more informal as roles and titles are now secondary to “experience” (C3) and expertise. Finally, structural changes to engagement in guided pathways implementation have encouraged the inclusion of stakeholders from different areas of the college such as the “library” (C5) and “IT” (C3).

Case C: Research Question 1b

What role does efficiency have in the implementation of guided pathways at scale at California community colleges?

The ability to accomplish tasks with minimal time, effort, and money during guided pathways implementation depended on defining and refining structure. Table 27 describes the frequency of the top five subthemes at this college and their alignment with the main themes of Research Question 1.

Table 27

Case C: Top Five Subthemes Related to Efficiency

Subtheme	Freq.	Main theme
Defining and refining structure	143	Intentional alignment
Broad, genuine participation	56	Inclusiveness
Developing knowledge and expertise	56	Inclusiveness
Collaboration and teamwork	46	Inclusiveness
External engagement	41	Internal/external synergy

Participants universally agreed that “efficiency was a low priority” (C3) during early pathways implementation, because the change required “an institutional transformation at scale” (C3). While the national Pathways Project expected the college to implement the framework in 2 years, the college felt that a 5-year timeline was more realistic. Pathways work at Case C “start[ed] slow” (C1) and focused on exploration, getting “buy-in” (C3), and “looking for opportunities” (C3) to build upon existing efforts to gain “traction” (C3). Interviewees noted that the college initially used the national Pathways Project as a model for organizing and structuring implementation: “We have a workgroup that’s been meeting since we started two and a half years ago every other

week” (C1). The college held events focused on specific pathways components and provided “a place for people to gather and food” (C1) to help “generate that energy” (C1). Pathways leadership structured these meetings to facilitate “clarity” (C4) by “helping everybody [to] understand what it is they were doing. Kind of respecting their knowledge and time and having enough structure and follow up so that if there was work to be done in between, it got done” (C4).

Interviewees stated that structure has become more essential since the state now offers guided pathways funding contingent on the submission of a “work plan” (C2) with institution-set goals. As one participant explained, with the national Pathways Project “there was no money attached. So it wasn’t as though we were being held to meeting these metrics, and that we had to meet them in this amount of time in order to continue funding” (C2). The college has refined structure in guided pathways implementation to move the work forward. The main workgroup has broken up into new groups “that are creating and implementing on their own” (C1). Interviewees explained that pathways meetings are organized around “an issue or something to be decided on or worked on or brainstormed” (C1). The college also pointed to the use of institutional data in pathways discussions as an efficiency that helps to “change perception” (C1) and “debunk the old myths” (C1). Whenever possible, the college also tries to “integrate” (C3) pathways elements into its “regular processes” (C3). Participants described how technology has supported the integration of electronic educational planning and program mapping.

Case C: Research Question 1c

What role does environment have in the implementation of guided pathways at scale at California community colleges?

For Case C, recognizing environmental elements outside of the college and responding to them appropriately was a function of external engagement. Defining and refining structure was also a factor in the college’s response to external forces. Table 28 displays the frequencies of subthemes and their related main themes for Research Question 1c.

Table 28

Case C: Top Five Subthemes Related to Environment

Subtheme	Freq.	Main theme
External engagement	121	Internal/external synergy
Defining and refining structure	104	Intentional alignment
Developing knowledge and expertise	44	Inclusiveness
Broad, genuine participation	32	Inclusiveness
Shared understanding and goals	30	Inclusiveness

External engagement. Participants referred to a number of external forces and entities that have influenced guided pathways efforts at the college. Throughout the interviews, stakeholders described how the AACC Pathways Project informed pathways implementation (C1-C5). As a participant in the Pathways Project, the college conducted “self-assessments” (C5) and reviewed institutional “data in ways that we hadn’t . . . before” (C1). Interviewees characterized completion data as an “external pressure” (C3) that has been a “persuasive” (C2) force during pathways discussions. The college identified the California Community Colleges Guided Pathways Program as another environmental element that has impacted local pathways efforts—“And then we’ve got the challenge of meeting the work plan requirements . . . and the goals” (C2).

Case C responded to external factors related to guided pathways in a variety of ways. Participants explained, “We help change the way the external environment comes to us” (C3) through advocacy and engagement. One interviewee stated that “leaders at all levels” (C3) promote college “principles” (C3) by presenting at conferences and getting involved with organizations across the state. The college has responded to state policy by adapting implementation to simultaneously meet external requirements and the guided pathways framework. For example, participants noted that state initiatives related to assessment, placement, basic skills, equity, and student success and support have been folded into pathways efforts. College stakeholders have also increased “collaboration” (C2) with K-12 and transfer institutions—strengthening “relationships” (C1) and forging agreements to enhance career and transfer pathways: “We have more articulation agreements than any other college right now” (C1).

Defining and refining structure. Case C interview data revealed that external forces play a significant role in structural alignment in guided pathways implementation. Participants recognized the value of structure through their involvement in the national Pathways Project. The institutes provided a model of how to organize pathways efforts to keep the work moving forward:

It gave us a structure. It said okay let’s talk about this first, and then this, and then this. And it feels like you don’t have to try and eat the whole elephant at the same time. You can do it one bite at a time. (C1)

Environmental elements that provide funding to support guided pathways components also informed structure. The college has “cross-walked” (C1) guided pathways activities

with the requirements of programs and grants that provide support for implementation so that it “fit it into our planning, budgeting, and implementation process” (C3).

While the college has adapted local processes to align with external forces, the institution has also incorporated environmental elements related to guided pathways “into our model” (C3). Participants explained how pathways implementation has been approached using the college’s existing structure: “We have a series of workgroups, taskforces, committees, and councils. Each of these have their role in the shared governance and we know what they mean, and we apply them uniformly to problems that come up” (C3). Regardless of external pressures, faculty involvement and shared governance are essential “principles” (C3) in guided pathways decision making that guide structure at the college. Interviewees referred to the implementation of the Strong Workforce Program and dual enrollment as examples of how the college has stayed true to these principles and “changed the paradigm” (C3) when necessary to accommodate environmental elements.

Case C: Research Question 1d

What role does leadership have in the implementation of guided pathways at scale at California community colleges?

The subtheme with the highest frequency related to Research Question 1d was leadership at multiple levels. Defining and refining structure was also significant to the role of leadership in strategic governance for Case C. Table 29 illustrates the frequency of the top five subthemes at this college and their alignment with the main themes of Research Question 1.

Table 29

Case C: Top Five Subthemes Related to Leadership

Subtheme	Freq.	Main theme
Leadership at multiple levels	139	Interdependent leadership
Defining and refining structure	115	Intentional alignment
Broad, genuine participation	84	Inclusiveness
Developing knowledge and expertise	65	Inclusiveness
Collaboration and teamwork	62	Inclusiveness

Leadership at multiple levels. Participants described leadership in guided pathways implementation at the college as multilayered. The president of the college served as the initial “point of connection” (C1) between the campus and guided pathways. After introducing the framework and “articulating” (C4) why the college should participate in the national Pathways Project, the president “set up processes” (C3) and gave “general and specific guidance” (C3). For example, the president appointed an administrative “campus lead” (C1) as the head of the “formal leadership structure” for pathways (C1). Participants indicated that the role of the campus lead was to ensure that pathways implementation was “inclusive” (C1) and “integrated” (C1) into college processes. Interviewees also consistently referred to the academic senate president as a leader in guided pathways efforts. The academic senate president coordinated with college leadership on the “decision to apply” (C1) for the national project, attended pathways institutes, assisted in the integration of pathways into the “planning, budgeting, and implementation process” (C3), and served as a communication link to and from the academic senate.

The interview data demonstrated that informal leadership also played a significant role in guided pathways implementation. Participants noted that informal leaders come from multiple constituency groups across all areas of the college, including instruction, student services, institutional research, information technology, marketing, and library and learning resources (C2, C5). Informal leadership was cultivated through the pathways workgroup, which has multiplied leadership as members “lead their own workgroups [that] have broken off” (C1). The college has been “strategic about the roles of the people who were involved” (C3) in the pathways workgroup to ensure that those with positional responsibility for implementing strategies were involved. Interviewees stated that the membership of the workgroup changes depending on the nature of the work (C5). As a result, informal leadership roles were exchanged as the various components of guided pathways were implemented. One participant referred to a counselor, who

doesn't have any leadership responsibilities, but she definitely has become the face for the guided pathways program on campus. She's reached out to the departments . . . to share both the benefits of mapping and why they would want to create pathways. (C5)

Defining and refining structure. Organizing and structuring formal and informal leadership played a significant role in the college's orchestration of guided pathways efforts. Participants explained that the college initially formed a “six-member core team” (C3) for the Pathways Project, which “oversaw this initial two-year period” (C3) of implementation. This “core team” (C3) composed of executive-level administrators and faculty leaders in shared governance constituted the formal leadership

structure for local guided pathways implementation. Another key element of the formal leadership structure was the “campus lead” (C1)—an academic administrator and a core team member who was selected by the president.

Informal leadership was built into the formal structure for guided pathways from the outset. One interviewee noted that the core team “brought a variety of people in” (C3) through the Pathways Project institutes to participate in the implementation process. The original pathways workgroup has expanded over time to include other individuals at the college. Several members of this group have emerged as informal leaders as a result of the expansion of the workgroup structure. According to one interviewee,

That group worked as a unit for the first two years and this year we decided to get into the weeds. We broke up into four workgroups and they have invited other people to join them so they meet once a month and then we get together and report out and make sure we are all staying on the same page. (C1)

Participants indicated that expanding the formal leadership structure to include informal team leaders has provided “critical support” for pathways activities (C1).

Case C: Unexpected Findings

Two unexpected findings connected to the role of strategic governance in the implementation of guided pathways emerged through an analysis of Case C data. The first unexpected finding related to college stakeholders’ perspectives on the California Guided Pathways Project, which is modeled after the AACC Pathways Project.

Participants were concerned that the California Guided Pathways Project is too prescriptive and limiting in its approach to pathways implementation: “I expected that as the state began to be more interested in guided pathways it would be recognized as a

framework rather than as a solution” (C3). One interviewee indicated that the California Pathways Project seemed to focus on limiting student options and choice, instead of “helping students be ready to make informed choices to help them through barriers [and] changing institutional practices that are not responsive to student situations” (C3). Finally, participants were concerned about the state’s expectations and presentation of the pathways work:

As I talked to other colleges who are trying to implement this, it’s hard for colleges to get started on the right foot. If they see it as a menu and limiting and a solution, then they’re not going to go through the low efficiency discovery process that we found was so important in discovering how to make it work for our students with our culture. (C3)

The second unexpected finding related to the college’s application of “guided pathways thinking” (C3) to external barriers to student success that are not addressed in the framework. In addition to barriers that exist “on the pathway” (C3), the college has identified other “life factors” (C3) that impede students’ educational attainment. While students can apply for free tuition through the California College Promise Grant, many students cannot afford to pay for childcare, transportation, and other practical needs. Using guided pathways implementation as a lens, the college has taken steps to view the student experience holistically to ascertain the “true cost of a community college education” (C3).

Cross-Case Analysis: Research Question 2

What are the patterns of convergence and divergence in the role of strategic governance in the implementation of guided pathways at scale between California community colleges?

An analysis of the data for all three cases related to strategic governance resulted in the discovery that inclusiveness and intentional alignment are most essential during guided pathways implementation. Table 30 displays in ranked order the overall frequencies of the themes across all cases for interview and artifact data.

Table 30

Across Cases: Rank and Frequency of Themes

Theme	Interviews		Artifacts	
	Freq.	Sources	Freq.	Sources
Inclusiveness	1,092	15	451	15
Intentional alignment	1,052	15	846	15
Interdependent leadership	733	15	135	15
Internal/external synergy	457	15	305	12

The researcher identified patterns of convergence and divergence between cases by comparing the rankings of the themes at each college. Table 31 displays the main themes and frequencies by case along with the overall frequencies across cases for each theme. The theme of inclusiveness, which had the highest frequency count overall, was ranked first at Case B and Case C, and second at Case A. Intentional alignment also ranked high overall, but appeared in the first position for Case A, and the second position for Case B and Case C. The themes of interdependent leadership and internal/external

synergy were more consistently ranked across the colleges, appearing in the third and fourth positions respectively.

Table 31

All Cases: Comparison of Themes From Interviews

Main theme	A	B	C	Overall
Inclusiveness	324	317	451	1,092
Intentional alignment	374	300	378	1,052
Interdependent leadership	256	259	218	733
Internal/external synergy	152	140	165	457

The researcher also compared the rankings of subthemes across all three cases to identify patterns of convergence and divergence. Table 32 displays the subtheme frequencies for each case and overall.

Table 32

All Cases: Comparison of Subthemes From Interviews

Main theme	Subtheme	A	B	C	Overall
Inclusiveness	Broad, genuine participation	93	123	145	360
	Collaboration and teamwork	81	57	107	245
	Developing knowledge and expertise	84	79	127	290
	Shared understanding and goals	66	58	72	196
Intentional alignment	Defining/refining structure	271	192	281	744
	Systematic communication	72	62	60	194
	Technology development and data use	31	46	37	114
Interdependent leadership	Leadership at multiple levels	164	142	134	440
	Leading change	92	117	84	293
Internal/external synergy	External engagement	152	140	165	457

The subtheme of defining/refining structure appeared with highest frequency at all three colleges and was the highest ranking subtheme overall. Conversely, technology development and data use was the lowest ranking subtheme at each site and had the lowest overall frequency. The subtheme of collaboration and teamwork was inconsistent across cases with a much lower level of frequency at Case B. Leadership at multiple levels and leading change were ranked higher at Case A and Case B, suggesting that these subthemes had a greater impact on interdependent leadership at these sites than at Case C.

The overall patterns of convergence and divergence related to the themes and subthemes based on an analysis of their rankings are summarized in Table 33. These patterns are discussed in detail in the sections that follow.

Table 33

Across Cases: Patterns of Convergence and Divergence

Themes	Patterns of convergence	Patterns of divergence
Main themes	<ul style="list-style-type: none"> • Interdependent leadership • Internal/external synergy 	<ul style="list-style-type: none"> • Inclusiveness • Intentional alignment
Subthemes	<ul style="list-style-type: none"> • Defining and refining structure • Technology development and data use 	<ul style="list-style-type: none"> • Collaboration and teamwork • Leadership at multiple levels • Leading change

Overall patterns of convergence. Interdependent leadership contributed to the role of strategic governance in guided pathways implementation for all three cases. Leadership at the colleges relied on both formal and informal mechanisms working in concert to move guided pathways work forward. At all three sites, the presidents possessed a sophisticated understanding of guided pathways, which they shared across

the college. In addition to introducing the concept to college stakeholders, the presidents committed to adopting guided pathways and were fully invested in implementation. Formal leadership relied on authority legitimized by position or title to facilitate pathways efforts by (a) providing opportunities for discussion and collaboration, (b) encouraging involvement, (c) communicating broadly, and (d) supplying resources to support efforts. Informal leadership leveraged influence through relationships to engage, motivate, and persuade college stakeholders. At all three colleges, formal leadership and informal leadership were interwoven and exchanged as needed to support the guided pathways work. Moreover, informal leaders were cultivated and often transitioned into formal leadership roles as implementation matured. Artifacts provided by the colleges illustrated how leadership in guided pathways implementation was multiplied and distributed across the college through cross-functional teams.

Another pattern of convergence between cases was the significance of internal and external synergy to guided pathways implementation. Participants across the colleges identified a range of environmental factors that have impacted pathways efforts, including the national Pathways Project, state policy and legislation, completion rates, and equity data. All of the colleges acknowledged the need to harmonize the internal and external environments to minimize pressure and distraction during guided pathways implementation. To ameliorate environmental disruption, the colleges have been proactive and responsive in their approach to external elements. Participants expressed a belief that their institutions were selected for the national Pathways Project because of prior success in identifying and adapting to environmental forces. Involvement in the national project provided time and opportunity to explore the framework in the context of

the internal environment to discover how it could be integrated. Interviewees consistently noted that the colleges institutionalized external requirements such as the state's Guided Pathways Program, in accordance with their unique institutional culture and practices. All cases perceived the relationship between the internal and external environments as symbiotic; therefore, the colleges use information and experience gleaned from guided pathways implementation for advocacy purposes to influence external elements.

The subtheme of defining and refining structure had the highest overall frequency and emerged as a pattern of convergence across all cases. The colleges aligned institutional structures with the guided pathways framework most prominently in the areas of involvement and leadership. Implementation was organized to engage individuals from a variety of areas and constituency groups in guided pathways conversations and activities. Participants described how the colleges developed formal pathways leadership structures and supported informal leadership roles as they emerged through implementation. The structure of guided pathways has evolved to meet the needs of the colleges depending on the stage of implementation. The national Pathways Project provided initial structure for guided pathways efforts at the colleges. During early implementation, pathways groups were small and engagement was loosely structured to promote involvement, increase knowledge, and strengthen buy-in. As guided pathways work has progressed, the colleges have refined and formalized structures as demonstrated through the participants' responses and artifact data, which describe the configuration of pathways committees and workgroups. Pathways implementation teams have grown to include stakeholders from across the college, which has enhanced collaboration and

resulted in the branching off of subgroups to work on discrete tasks. Structures to ensure communication and distribute leadership responsibilities help to build efficiency as guided pathways implementation matures.

Technology development and data use was the lowest ranking subtheme at each case site and overall. While participants consistently indicated that technology and institutional data provided critical support during guided pathways efforts, this subtheme appears to be indirectly related to the role of strategic governance in pathways implementation. College stakeholders consider technology and research functions to be essential components of the institutional infrastructure. For this reason, personnel with positional responsibilities in information technology and institutional research often served on pathways implementation teams. The case sites have used technology as a tool to operationalize guided pathways components related to meta-majors, program maps, student educational plans, and early alert. Participants described how institutional data have been used during guided pathways implementation to focus and stimulate discussion, change perceptions, inform activities, measure progress, and sustain momentum. Participants' belief that technology development and data use provide foundational support to not just guided pathways but all college activities may explain why this subtheme appeared with low frequency across cases.

Overall patterns of divergence. The value of inclusiveness in guided pathways implementation varied slightly between cases. Participants at all of the colleges asserted that broad, genuine participation was a necessity during implementation; however, only interviewees at Case B and Case C viewed inclusiveness as the top priority. Differences in institutional culture and progress in implementation were factors that appeared to

influence the significance of this theme to the college. Participants at Case B indicated that other student success strategies at the college were implemented using a methodical, inclusive process that was faculty led. The college tended to push back on external pressures and top-down directives. As a result, inclusivity was valued over early efficiency so that stakeholders could discuss and consider all aspects of guided pathways. Case B expressed a belief that inclusivity during pathways implementation would result in sustainable changes to the institution. Interviewees noted that this inclusive approach to guided pathways efforts was slow and inefficient; however, the college was beginning to gain momentum and make progress in implementation.

Case C also placed a high value on shared governance and stated that inclusive decision making was part of the culture. Early implementation concentrated on bringing stakeholders together for focused convenings modeled on the Pathways Project institutes to encourage involvement and buy-in. Interviewees felt that the college has made considerable progress in guided pathways implementation and they are now assessing the work to identify gaps and areas for improvement. Case A explained the value of increasing and sustaining involvement in guided pathways through communicating the benefits, building a knowledge base, and developing shared understanding. Participants at the college consistently credited progress in implementation to the leadership of the president, who has fully invested in pathways, established clear priorities, and established expectations for action based on momentum points. Interview and artifact data demonstrated that the college has transitioned into a second phase of implementation.

Another pattern of divergence relates to the theme of intentional alignment. All of the colleges spoke extensively about the need to organize and structure guided

pathways implementation, but this theme appeared more frequently in the data for Case A. This college has operationalized guided pathways components and uses the framework for internal alignment across the institution. Case A committees, task forces, and teams have been restructured to support implementation at scale. Participants indicated that guided pathways leadership, strategies and roles have been clearly defined and integrated into positional responsibilities. Teams of experts are dedicated to achieving shared institutional outcomes tied to guided pathways.

For Case B, structure associated with pathways implementation has been more informal, and was developed through the college's iterative and inclusive process. The college has raised the level of formality by defining pathways leadership, committees, and responsibilities. The new structure that has emerged articulates how cross-functional workgroups and subgroups coordinate activities and communicate to move the work forward. Case C participants explained that the college was implementing guided pathways using the same shared governance process and structure that it universally applies to all change initiatives. A core team, which was formed as a result of participation in the national Pathways Project, was used to originally guide implementation efforts. This small, centralized team has now evolved into a large, cross-functional workgroup with subgroups focused on specific pathways elements.

The subtheme of collaboration and teamwork showed the greatest variation between cases. While this subtheme ranked fairly low overall, it was a more significant factor in implementation for Case A and Case C than for Case B. The colleges' stage in implementation appeared to be connected to the prevalence of collaboration and teamwork. Participants at Case B indicated that implementation was ramping up at the

college and pointed to guided pathways road shows, summits, and outside speaker engagements as examples of internal collaboration. The focus of collaborative efforts has been to involve stakeholders in pathways discussion and debate. Teamwork at the college has occurred through pathways workgroups and subgroups, which have been structured to facilitate communication and the implementation of specific tasks.

For Case A, collaboration included professional development opportunities that engaged individuals across disciplines and constituency groups. Activities such as book panels and Summer Bridge helped create internal synergy through dialogue and brainstorming. Collaboration with K-12, transfer institutions, and outside organizations supported external alignment through discussion, partnerships, and agreements.

Interviewees described how pathways teams encouraged systematic communication through selective membership and interdependence through positional expertise.

Participants at Case C also provided examples of internal and external collaboration.

Local events and off-site conferences helped develop understanding and facilitate decision making based on data and guided pathways principles. Interviewees indicated that collaboration has strengthened relationships between instruction and student services, and has brought stakeholders together from disparate areas of the college to work together on student success activities. Pathways workgroups, departmental groups, and cross-disciplinary teams work together to develop and implement strategies at the college.

The last pattern of divergence across cases related to the connected subthemes of leadership at multiple levels and leading change. These subthemes, which are aligned with the main theme of interdependent leadership, ranked higher at Case A and Case B.

Both Case A and Case B relied on a blend of formal leadership structures and informal distributed leadership during guided pathways implementation. At these colleges, formal leadership facilitated pathways efforts, while informal leadership used a combination of influence and expertise to educate, motivate, and persuade stakeholders. Administrative leaders provided foundational support for guided pathways implementation. Case A decided to forgo a dedicated pathways position, while Case B hired faculty coordinators to spearhead the work. At Case A, distributed leadership was established through defined roles and responsibilities for individuals serving on pathways teams. At both colleges, leadership was distributed through the implementation of team members, who supported and carried the guided pathways message to their constituencies. Participants indicated that leaders used the power of relationships to address fears on a human level and inspire stakeholders by appealing to shared goals.

Case C similarly indicated that leadership in guided pathways efforts occurred at multiple levels but to a lesser degree. While administration played a supportive role during implementation, an administrator was also designated as the campus lead for guided pathways. Participants explained that many of the administrators at the college were former faculty members who had previously served in academic senate leadership roles. Therefore, faculty accepted administrative leadership in guided pathways because of the understanding and respect for shared governance and inclusiveness. Faculty leaders often held multiple leadership roles within their department and in shared governance. Informal pathways leaders at Case C came from all areas of the college and rotated based on the nature of the work at hand. Leadership was distributed through guided pathways workgroups that developed and implemented strategies and then

regularly reported on their progress. The initial pathways workgroup was composed of core members of the college's Pathways Project team along with individuals who were strategically selected as pathways ambassadors and champions. The leadership and composition of the pathways workgroup combined with the college culture may explain the differences between Case C and the other cases with respect to these subthemes.

Summary

Chapter IV began with an introduction to the study followed by the purpose statement, research questions, and research methods for data collection and analysis. The researcher then summarized the population and sample, and presented demographic information to further describe the sample population. The next section presented the findings from each of the three cases followed by an analysis of similarities and differences between cases. Four main themes connected to the role of strategic governance in the implementation of guided pathways at scale emerged:

(a) inclusiveness, (b) intentional alignment, (c) interdependent leadership, and (d) internal /external synergy. In addition, 10 subthemes that contributed to these main themes were discernable in the data. These subthemes provided insight into how the strategic imperatives of involvement, efficiency, environment, and leadership interacted during guided pathways implementation.

The researcher discovered areas of agreement and variance between cases with respect to the influence of strategic governance in the implementation of guided pathways. Both inclusiveness and intentional alignment emerged as significant elements during pathways implementation at all colleges. Inclusiveness was most essential for Case B and Case C, while intentional alignment was most critical for Case A.

Interdependent leadership and internal/external synergy also factored into pathways implementation but to a lesser extent overall. The data revealed that Case A and Case B valued leadership at multiple levels, while Case C emphasized external engagement. Across all cases, defining and refining structure was fundamental to the colleges' intentional alignment with the guided pathways framework.

Chapter V explicates these findings and presents implications for action, recommendations for further research, and concluding remarks and reflections.

CHAPTER V: SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

The stagnation of educational attainment and the threat of economic decline have prompted higher education leaders to explore holistic approaches to improving institutional structures and processes (AACC, 2012; Baldwin et al., 2017; Klempin & Karp, 2015). Leaders at California community colleges have adopted guided pathways as an overarching framework for transforming colleges into more effective institutions with higher rates of student success (Foundation for California Community Colleges, 2017b). While the literature is replete with studies on the implementation of small-scale, short-term student success initiatives dedicated to individual institutional components, research on leading guided pathways efforts at California community colleges is sparse (Baldwin Grossman et al., 2015; Bolman & Gallos, 2011). Consequently, this study investigated the role of strategic governance in the implementation of guided pathways at scale at California community colleges. This chapter summarizes the research beginning with a restatement of the purpose statement, research questions, methodology, population, and sample. The researcher then presents the major findings and unexpected findings that emerged from an analysis of the case study data. The next section includes conclusions derived from the key findings followed by implications for actions. The chapter closes with recommendations for future research, and concluding remarks and reflections on the study.

Purpose Statement

The purpose of this multiple case study was to describe the role of strategic governance in the implementation of guided pathways at scale at California community colleges.

Research Questions

1. What role does strategic governance have in the implementation of guided pathways at scale at California community colleges?
 - a. What role does *involvement* have in the implementation of guided pathways at scale at California community colleges?
 - b. What role does *efficiency* have in the implementation of guided pathways at scale at California community colleges?
 - c. What role does *environment* have in the implementation of guided pathways at scale at California community colleges?
 - d. What role does *leadership* have in the implementation of guided pathways at scale at California community colleges?
2. What are the patterns of convergence and divergence in the role of strategic governance in the implementation of guided pathways at scale between California community colleges?

Methodology

The study used a multiple-case, embedded case study design to describe how Schuster et al.'s (1994) strategic governance imperatives of involvement, efficiency, environment, and leadership factored into the implementation of guided pathways at scale at California community colleges. As detailed in Chapter III (Figure 3), each college was

treated as an individual case and each college case included several embedded units of analysis to answer the research questions and test the theoretical framework. A qualitative phenomenological approach was used to collect data from each college case through semistructured interviews, documents, and archival records. Replication logic increased the robustness of the study and enabled a cross-case analysis that resulted in the identification of patterns of convergence and divergence based on the theoretical framework. To ensure consistency, the researcher adhered closely to an interview script developed in alignment with the strategic imperatives defined by the theoretical framework.

The research design, interview questions, and data collection procedures were approved by the Brandman University Institutional Review Board (BUIRB) on April 17, 2018 (Appendix H). An informed consent form and research participant's bill of rights outlined the methods used to ensure the confidentiality and privacy of the case colleges and study participants. The researcher provided these documents to all interview participants and the head of research at each case site as part of the college's institutional research approval process. For in-person interviews, participants signed the consent form in the presence of the researcher prior to answering any questions. For phone and web conference interviews, participants scanned the signed consent form and sent it to the researcher via e-mail. All interviews were audio recorded and sent to a transcription service. Upon receiving the transcripts, the researcher reviewed the content for accuracy and spelling. To protect the identity of the case sites and individual participants, the researcher assigned a unique code to each name and replaced proper names with codes in the transcripts. For triangulation purposes, the researcher collected planning and

governance documents related to the implementation of guided pathways at the college. The researcher retrieved documents and archival records from college websites, and asked interview participants for suggested materials that could contribute to an understanding of guided pathways through a strategic governance lens.

The researcher used Yin's (2014) menu of analytical strategies and techniques to devise an approach for data analysis. As described in Chapter III (Figure 6), the data analysis process involved source and case analysis, pattern matching, framework filtering, cross-case synthesis, and rival explanations. First, the researcher constructed preliminary codes aligned with the theoretical framework based on a review of the notes taken during and shortly after data collection. The researcher then coded data from each college case using the preliminary codes and additional codes that emerged from the data. After the initial coding, a second review of the data resulted in a refined list of 50 codes. The researcher compared the patterns predicted by the theoretical propositions with the patterns actually discovered in the data and synthesized the codes into 10 subthemes. The researcher then filtered the data through the theoretical framework by analyzing the codes associated with each research question. As a result of this process, four major themes emerged, which are detailed in the findings. Following the separate analysis of each individual case, the findings for the series of cases were aggregated into arrays based on the strategic imperatives. The researcher used these tables to conduct a cross-case analysis that compared and contrasted findings across colleges. Chapter IV presented the results of this analysis.

Population and Sample

The population of the study included the 30 community colleges in the United States that were selected to participate in the American Association of Community Colleges (AACC) Pathways Project. The target population was purposively delimited to community colleges in California for the following reasons. First, California Community Colleges is the largest higher education system in the United States with a total of 114 institutions serving 2.1 million students (Community College League of California, 2017). Second, California has the sixth largest economy in the world and is under pressure to supply highly educated, skilled workers to support and grow the economy (California Community Colleges Chancellor's Office, 2015a). Third, California community colleges are located in the same state as the researcher, which facilitated data collection. In alignment with the purpose, research questions, and the established criterion, the target population consisted of three community colleges located in the Southern California region of the state. All of the colleges have a formal governance structure reflected in organizational charts, use a shared governance process, engage in collective bargaining through employee unions, and have inclusive strategic planning processes. The case colleges varied in age and size, as measured by full-time-equivalent students (FTES).

The sample for the study included three case colleges and 15 interview participants. The researcher used a combination of purposive sampling and snowball sampling to select the case colleges and interview participants. The sample included all of the potential cases included in the target population, due to the small number of AACC Pathways Project participants in California and their ability to provide insight on the four

strategic imperatives in the context of guided pathways. The cases in the sample were identified by locating a list of project participants on the AACCC website. Snowball sampling was used to select interview participants from each college case. Upon receiving approval to conduct the study at the case site and interview the college president, the researcher asked the president to identify four other formal or informal leaders involved in guided pathways efforts. These leaders were required to have been employed at the college for a minimum of 2 years and be adults over the age of 18. The final sample included a total of 15 individuals. Several participants held a dual leadership role serving as both a college leader and a pathway leader.

Demographic data collected from participants during the interviews included age, gender, position classification, and the number of years employed in the current position. The sample demonstrated generational diversity; however, two thirds of the participants were 50 years of age or older. Participants were predominantly female, although the sample also included male participants. While the sample consisted of administrators and faculty members, two thirds of the participants held administrative roles. The sample was diverse with respect to the number of years participants had served in their current position at the case sites.

Major Findings

Using Yin's (2014) analytical approach, the researcher reviewed the data from each separate case by matching the patterns predicted by the theoretical framework with the patterns that actually emerged. The researcher then compared and contrasted the findings across cases. The major findings are organized and summarized by research question. The literature review provides context for the discussion of the findings.

Research Question 1

What role does strategic governance have in the implementation of guided pathways at scale at California community colleges?

Finding 1. Inclusiveness is a prerequisite for sustainability in the implementation of guided pathways at scale. Responses from all three of the colleges revealed that inclusiveness was fundamental to creating lasting, transformational change across the institution using a guided pathways approach. Inclusiveness that engages stakeholders campus-wide and creates a broad base of support was highly valued, especially during early stages of implementation. This finding confirmed Schuster et al.'s (1994) view that involving stakeholders in decision-making processes is strategically imperative. Participants repeatedly noted that inefficiency was an inevitable byproduct of an inclusive process. The college presidents indicated that involvement was prioritized over efficiency in order to create a stable foundation for guided pathways implementation. This perspective supports Perlstein's (2013) assertion that effective presidents demonstrate "the ability to create lasting change within the college" (p. 7). The conflict between inclusiveness and efficiency is congruent with strategic governance theory, which states that "the value of involvement, which tends to be cumbersome and time-consuming, militates against the value of crisp, relatively efficient decision making" (Schuster et al., 1994, p. 196).

Finding 2. The guided pathways framework increases colleges' ability to align institutional structures and practices with student success. Participants indicated that the knowledge and experience gained through implementation has increased structural alignment with pathways principles. Colleges are beginning to use the four pillars of

guided pathways—clarity, intake, support, and learning—to structure planning and decision making. Pathways committees, workgroups, and teams are linked to planning and governance groups. In addition, leadership and communication mechanisms have been structured through documented roles and responsibilities. Participants noted that structural alignment has been an evolutionary process that has built efficiency into guided pathways implementation over time. Following Schuster et al.’s (1994) definition of efficiency as the value of “obtaining greater outputs (results) with fewer inputs (resources) and doing so with dispatch” (p. 195), colleges are seeking to optimize human and financial resources. For example, professional development and categorical programs have been restructured to align with guided pathways to support continued implementation at scale.

Finding 3. Multidimensional leadership legitimizes guided pathways implementation. Legitimacy in strategic governance is dependent on the perceptions and interpretations of constituency groups (Birnbaum, 1992; Schuster et al., 1994). According to participants, the diversification of leadership confers credibility not only on pathways leaders but on the implementation process itself. Guided pathways leadership includes representatives from multiple areas and constituencies, which supports genuine engagement in the work. The blend of formal and informal leadership, and the exchange of roles depending on institutional needs during implementation, also adds integrity to the process. Participants indicated that the way that leaders and members of implementation teams are selected has an impact on how pathways plans and strategies are received, especially by faculty. The academic senate legitimizes faculty leads and team members involved in implementation through a nomination or appointment process.

Administration legitimizes pathways leadership through the definition of coordinator or campus lead positions with specific responsibilities. The use of informal leadership structures allows respected representatives of constituency groups to assume leadership roles as a result of influence. Participants noted that some informal leads were formally recognized by the college to support their role and contributions to pathways implementation.

Research Question 1a

What role does involvement have in the implementation of guided pathways at scale at California community colleges?

Finding 1. Colleges leverage inclusive strategic planning and governance systems to cultivate broad involvement. According to Bailey et al.'s (2015a) model, guided pathways is a systemic framework for institutional reform that impacts every facet of the college and, by extension, every stakeholder. In recognizing the scope and magnitude of the change required, participants expressed the need for extensive engagement across all areas of the college. Moreover, college stakeholders believed that inclusiveness was compulsory given the state-mandated shared governance process, and the presence of multiple constituency groups and collective bargaining units on campus. California community colleges' strategic planning and governance systems already formalize engagement and inclusive decision making. For example, the academic senate plays a significant role in involving faculty in pathways efforts by garnering support, nominating representatives to serve on workgroups, and facilitating discussion and communication. Implementation groups and teams established functional connections to planning and governance systems through representative membership. This finding is

consistent with Schuster, et al.'s (1994) recommendation to develop purposeful links between strategic planning and governance through committee composition.

Finding 2. Involvement in guided pathways work is intentionally structured to promote collegiality and sustain trust. Early implementation efforts universally included organized opportunities for stakeholders to develop a shared understanding of the guided pathways framework and codify the work. As implementation progressed, involvement was structured to promote collaboration across disciplines using cross-functional workgroups and teams. Structuring engagement to develop a culture of collegiality helps build momentum during guided pathways implementation. Involvement in systemic change efforts fluctuates as new individuals join the institution and other employees retire or relocate. Given this natural fluctuation in organizational membership, collegiality relies on embedded structures designed to build and sustain trust during pathways efforts. The colleges used a representative structure for composing implementation teams, which encouraged peer-to-peer discussion and supported two-way communication with constituency groups. Furthermore, while initially strategic and selective in determining who would serve on implementation teams, the colleges became more flexible and inclusive over time. This approach to structuring engagement in guided pathways promotes credibility by increasing involvement, supporting debate, and facilitating ownership of the work (Schuster et al., 1994).

Finding 3. Multidirectional leadership inspires engagement in guided pathways implementation. Broad involvement in pathways activities is encouraged through the collective efforts of various leaders across campus. This finding follows Birnbaum's (1992) cognitive frames theory, which views leadership through structural, political,

collegial, and symbolic frames. Participants consistently referred to the college president and the academic senate president as key proponents of inclusivity in guided pathways discussion and decision making. Members of the core pathways team assembled for the national Pathways Project included representatives from multiple areas and constituency groups who reached out to others at the college to share knowledge and invite discourse. Pathways leads, both those who were assigned and those who emerged as thought leaders, were instrumental in actively soliciting participation. As engagement continued to increase and implementation evolved, members of pathways teams and workgroups also became informal leads. These individuals carry information back to their peers thereby stimulating pathways engagement within their own departments and units.

Research Question 1b

What role does efficiency have in the implementation of guided pathways at scale at California community colleges?

Finding 1. Sustainability is valued over efficiency during early stages of guided pathways implementation. The colleges sacrificed efficiency—the ability to achieve results with minimal time, effort, and money—for the sake of inclusiveness during initial pathways efforts. Participants believed that investing in a stable foundation of engagement and support would ultimately result in transformational changes that were persistent and sustainable. This finding supports Bailey et al.’s (2015a) assertion that cross-functional teams, collaborative inquiry, and professional development can result in time savings over the long run, but they require an investment of time and resources in the short term. Inclusivity in pathways implementation was associated with designing calculated strategies that would yield positive outcomes for students. A thoughtful and

inclusive approach to implementation was necessary to ensure that decisions were carefully made and took into account a wide range of opinions. Strategic governance theory recognizes that public colleges and universities require broad participation in decision making that “necessarily requires time, including extensive communication to inform, involve, and convince individuals and groups that the change is necessary or desirable” (Schuster et al., 1994, p. 22). Recursive and iterative discussion surrounding guided pathways appeared to be a vital part of community colleges’ evolutionary process. Participants believed that an inclusive, measured approach to implementing guided pathways was even more essential, because the framework was being applied at scale.

Finding 2. Colleges purposefully develop efficiency with respect to time, effort, and money in guided pathways implementation using a phased approach. Participants across the colleges agreed that efficiency, according to Schuster et al.’s (1994) definition was a low priority during early pathways efforts; however, environmental factors, most notably the California Guided Pathways Program, have recently added a sense of urgency to implementation. Inefficiency was said to be embedded in the initial stages of implementation, which emphasized engaging stakeholders, developing pathways knowledge, and gaining campus-wide support for adoption. Since the AACCC did not provide participants in the national Pathways Project with funding contingent on meeting specific metrics or deadlines, the colleges were not focused on productivity or making progress quickly. Rather, the process of institutionalizing guided pathways through engagement, exploration, and debate organically resulted in structural changes that promote efficiency. The transition into a more mature phase of implementation addresses efficiency by defining and refining structure. This second phase of implementation

integrates guided pathways elements into college processes and establishes connections between implementation teams, and strategic planning and governance bodies.

Participants indicated that the definition of roles and responsibilities for individuals and groups involved in pathways efforts also bolsters efficiency.

Research Question 1c

What role does environment have in the implementation of guided pathways at scale at California community colleges?

Finding 1. Colleges use the guided pathways framework as a lens to make sense of external factors within the context of their unique institutional culture. The guided pathways model has provided institutions with a construct for engaging with environmental elements in a meaningful and productive way. Participants indicated that using a pathways perspective has enabled colleges to understand and integrate outside directives into local structures and practices. As a result of implementation and a sophisticated understanding of the framework, colleges are filtering external requirements through the four pillars of guided pathways. For example, colleges align state policy and initiatives such as the California Guided Pathways Project with pathways implementation through a process of mapping or cross-walking. This practice takes into consideration the institutional culture and reduces confusion, minimizes distraction, and facilitates the operationalization of directives. Using guided pathways as an overarching framework allows colleges to apply a systems perspective when implementing and sustaining change efforts, which promotes overall institutional coherence (Foundation for California Community Colleges, 2017b; Kania, 2017).

Finding 2. Ongoing engagement, exploration, and experimentation with external elements empower colleges to adapt to and influence the environment. This finding supported Schuster et al.'s (1994) imperative of environmental responsiveness. The colleges demonstrated a high level of external engagement through involvement on state-wide committees and organizations, and participation in conferences as both attendees and presenters. Participants also described strong relationships with K-12 and local transfer institutions, which have deepened as a result of collaboration on guided pathways implementation. Community college presidents provide a bridge between the institution and the environment by bringing back information from meetings and inviting outside speakers to college events. The use of institutional data related to completion and equity also facilitates alignment with external forces. Participants noted that an awareness of the environment combined with a commitment to educating students naturally led to the early exploration and implementation of student success strategies. Voluntary participation in the national Pathways Project and the subsequent implementation of the pathways framework demonstrated the colleges' ability to identify and accommodate elements in the environment. In addition, early experimentation provided colleges with an opportunity to get ahead of policy changes before they become requirements, so they could use their experience to inform the direction of programs and legislation.

Research Question 1d

What role does leadership have in the implementation of guided pathways at scale at California community colleges?

Finding 1. A blend of formal and informal leadership moves guided pathways implementation forward using a combination of position and influence. Implementation

relies on a network of leaders representing multiple areas and constituency groups who work together to guide and support pathways efforts. This lack of centralized leadership aligns with Birnbaum's (1992) suggestion that institutions operate according to "a rich mosaic of interaction and influence that goes well beyond the simplistic notion that organizational functioning results from the actions of a single leader" (p. 106). Formal leadership is associated with those individuals at the college with pathways responsibility by virtue of position or assignment. Participants associated formal leadership with the college president, the academic senate president, the pathways lead, and the pathways coordinator. Formal leaders commonly use positional authority to support implementation by framing, facilitating, and motivating efforts. Informal leaders were identified as individuals, often faculty members, who emerged as a result of regular participation in pathways activities. Informal leaders rely primarily on trusted relationships and mutual respect, especially during times of conflict and debate. While frequently associated with informal leadership, influence was also linked to formal leadership. Pathways coordinators, for example, heavily depended on influence when working with peers. Informal leaders also utilized expertise associated with position during implementation. Counselors, for example, used both influence and their professional role when guiding pathways efforts.

Finding 2. College leaders defined and structured distributed leadership to promote efficiency during pathways implementation. Decentralized leadership in change efforts can accelerate progress by facilitating agility, innovation, and motivation; however, without organizing principles and formal structure, distributed leadership is often inefficient and can stall change (Kotter, 2014). Participants indicated that structure,

roles, and responsibilities were clearly defined to enable the effective exchange of formal and informal leadership during pathways efforts. This finding supports Schuster et al.'s (1994) view of leadership as interactive and dependent on the alignment of institutional needs with individual strengths. Moreover, the role of college leaders in defining and structuring leadership relates to Schein's (2010) belief that executive leadership is responsible for managing "functional and dysfunctional elements of the existing culture" during institutional development (p. 22). At the case colleges, pathways workgroups, implementation teams, and informal task forces were connected to formal structures through strategic planning documents. College leaders delineated the roles and responsibilities of these groups as well as the leads and members to promote efficiency through the integration of communication and accountability mechanisms.

Research Question 2

What are the patterns of convergence and divergence in the role of strategic governance in the implementation of guided pathways at scale between California community colleges?

Finding 1. Colleges balance the strategic demands of involvement, efficiency, environment, and leadership when implementing guided pathways at scale. Participants indicated that implementation engages strategic forces across the domains of strategic planning and governance. All of the colleges prioritized widespread involvement, since guided pathways touches every corner of the institution and impacts every stakeholder in some way. Efficiency was a function of the intentional alignment of institutional structures and practices with the guided pathways framework. Defining and refining structures to support implementation was particularly significant to advancing pathways

efforts. Colleges consistently recognized the need to harmonize internal and external environments to retain the focus on pathways efforts, sustain momentum, and maintain efficiency in spite of outside pressures. Finally, a multipronged approach to leadership that incorporates both formal and informal leaders from a variety of disciplines and constituencies supports implementation at scale.

Finding 2. Differences in organizational culture and principles impact how colleges institute strategic governance during guided pathways implementation. A cross-case analysis revealed that the management of strategic imperatives during implementation is tailored to the unique character of the college and its stakeholders. Organizational culture informs institutional structure, practices, roles, and responsibilities. In the context of guided pathways, culture and principles determine the nature and level of interaction with strategic forces. Colleges that placed a high value on inclusiveness in decision making emphasized involvement in guided pathways implementation. Participants indicated that they are institutionalizing guided pathways using the same inclusive process that is applied universally to all change efforts. The strategic governance framework proposed by Schuster et al. (1994) posits conflict between the forces of involvement and efficiency. The responses confirm this premise, as the same colleges that prioritized involvement during implementation tended to deemphasize efficiency.

Organizational culture also influenced the way colleges addressed leadership in pathways efforts. As suggested by Schein (2010), culture in an organization determines who leads, because “culture and leadership are two sides of the same coin” (p. 22). Varying levels of connectedness and trust between faculty and administration resulted in

differences in culture and leadership style. When tension between faculty and administration existed at a college, the college relied more heavily on faculty leadership during implementation. Conversely, when administration was viewed as inclusive and respectful of faculty voice in decision making, the college accepted administrative leadership in pathways. Faculty members in California community colleges play a critical role in decision making due to their instructional expertise and close proximity to students. Institutional culture determines how college leaders enable faculty ownership during guided pathways implementation. Ownership during change efforts allows individuals take a proactive approach to managing their environment (Schein, 2010; Schuster et al., 1994).

Unexpected Findings

The researcher identified two unexpected findings that were not connected to the theoretical propositions of the study. These findings, which emerged through an analysis of data from all cases, relate to the use of internal monitoring and systemic models during guided pathways implementation.

Unexpected Finding 1

Colleges engage in self-assessment and internal scanning to monitor pathways progress and make appropriate adjustments to implementation. Although recent literature has focused on community colleges' use of tools to assess pathways adoption (Community College Research Center, 2017; Jenkins et al., 2017), the extent to which colleges are using these tools to inform pathways implementation was somewhat unexpected. Guided pathways projects have included self-assessments as part of program activities and applications to help stakeholders reflect on college systems and to provide

aggregated information on the status of implementation over time. While completion of these self-assessments is required for project participation, colleges appear to recognize the value of learning about internal practices and culture as part of the implementation process.

Participants at Case B and Case C indicated that developing an awareness of the internal environment has helped colleges determine priorities, develop approaches, increase engagement, and measure progress. Case B conducted a climate survey to determine the degree of engagement in implementation and gauge the level of support for guided pathways. The survey asked, “Have you heard about guided pathways?” and “Would you be able to explain it to a colleague?” (B4). The survey also asked employees to share their feelings about guided pathways. Participants believed that the survey results validated their efforts and demonstrated progress in implementation. The college plans to share the results and administer the survey again to measure progress.

Participants at Case C provided examples of how self-assessment informed priorities and approaches to implementation. Early on, the college conducted an opportunity assessment to determine “several areas where we thought we could make the most progress given the culture and status of the college and the various aspects of the project” (C3). After 2 years of implementation, Case C is now “going back and looking again to see what we missed” (C1) to identify areas that require further development.

Unexpected Finding 2

Colleges are using guided pathways principles to address challenges and make changes in areas outside of the proposed scope of the original framework. The pathways model developed by Bailey et al. (2015a) recommends modifications to institutional

structures, policies, and practices related to programs, support services, and instruction. However, colleges are expanding the use of the pathways framework to address challenges beyond these areas. The broader application of the guided pathways framework to other non-pathways areas demonstrated a level of maturity that was unexpected during early- to midstage implementation.

Consistent with a systems thinking approach, Case A is creatively applying the principles of the four pillars to functions across the college. Participants described how the college was using guided pathways as a lens to view all internal and external decisions. This finding supports Bolman and Gallos's (2011) view that large-scale institutional change necessitates multidimensional thinking to frame complexity. Case C also described how guided pathways served as a model for investigating "non-pathway barriers to student success" (C3). Participants referenced research published by the Institute for College Access & Success (TICAS) on the total cost of attending community college. Case C is using a pathways approach to address financial challenges to educational attainment related to textbook costs, transportation, and living expenses.

Conclusions

The findings support the research on strategic governance in the context of systemic change efforts as presented in the literature review. The imperatives of involvement, efficiency, environment, and leadership, which cross the domains of strategic planning and governance, play a variety of roles in guided pathways implementation. The following conclusions drawn from the findings and the literature review provide deeper insights into the research:

1. Community colleges leverage inclusive and credible strategic planning and governance systems to create a stable foundation for institutional redesign. Strategic decision-making processes at the institution serve as the backbone for guided pathways implementation. Therefore, guided pathways implementation depends on the integrity and efficacy of those processes. As noted in the literature, integrity helps build trust and establish legitimacy during change efforts. Strategic planning and governance systems that are intentionally structured to ensure communication, promote collegiality, and sustain trust facilitate the broad engagement and buy-in necessary to move pathways work forward.
2. A networked system that interfaces informal elements with formal structures promotes and accelerates efficiency during guided pathways implementation. The intentional alignment of college structures and practices demonstrates sophistication in pathway implementation. This alignment ensures that informal mechanisms that foster agility, innovation, and motivation are connected to formal structures with decision-making authority. This conclusion is supported by Kotter (2014) who proposes a blended structure comprised of a traditional hierarchy for managing operations and cross-functional teams for addressing complex strategic issues.
3. A proactive, reflective, student-centered approach to managing internal and external demands helps colleges maintain focus during pathways implementation. Colleges that cultivate self-awareness and motivate external engagement through a shared commitment to student success are able to minimize disruptions. These colleges continuously monitor internal and external environments by (a) conducting self-assessments, (b) participating in professional development opportunities, (c) joining

- outside organizations, and (d) forming partnerships. Literature related to change management and strategic governance supports a proactive, assessment-minded approach that views pressures as opportunities for institutional advancement.
4. Interdependent leadership mechanisms that are culturally compatible and responsive to institutional needs facilitate efficiency and involvement in guided pathways. Leadership at multiple levels inspires engagement and legitimizes the implementation process. Using a combination of positional authority and influence, formal and informal leaders exchange roles as needed to accomplish pathways goals. A distributed leadership model cultivates leaders and shares power across constituency groups. The decentralization of leadership requires structure and clearly defined roles, responsibilities, and charges to ensure communication and accountability. Research on guided pathways and strategic governance dismisses the concept of singular leadership and describes the benefits of multilevel leadership during change efforts.
 5. The guided pathways framework provides colleges with a systemic model for developing overall institutional effectiveness in support of student success. Guided pathways provides a holistic model for framing the complexities of the community college environment. Colleges that are using guided pathways to improve programs, support services, and instruction are applying the same principles to all areas of the institution. A systemic application of the guided pathways framework promotes a staged evolution wherein colleges tune internal structures, policies, and practices with external demands for increased educational attainment. This conclusion coincides

with the literature, which recognizes the integrated nature of higher education and discusses the need for a systems approach to institutional redesign.

Implications for Action

The conclusions of the study inform several practical recommendations for action for formal and informal leaders implementing guided pathways at California community colleges. These implications for action are expressed as suggestions for the improving strategic governance structures, practices, and processes in support of large-scale, holistic change efforts including guided pathways.

1. Community college leaders should use an appreciative inquiry (AI) approach to strengthen engagement and the perceived integrity of strategic planning and governance systems. College leaders representing the various constituency groups on campus should coordinate and lead AI activities that foster inclusiveness and trust in the context of decision-making systems. By focusing on successes and strengths rather than problems and weaknesses, college leaders can develop institutional capacity, generate enthusiasm, and provide a positive foundation for guided pathways implementation. College leaders unfamiliar with AI should receive training prior to conducting activities on campus. The Institutional Effectiveness Partnership Initiative (IEPI) established by the California Community Colleges provides resources and tools through the Vision Resource Center to support the application of AI. College leaders may want to initially hire a knowledgeable facilitator to introduce AI techniques. For more in-depth assistance with improving decision-making systems, colleges can request the support of an IEPI Partnership Resource Team (PRT). Using a peer coaching model, the IEPI PRTs help colleges to address

- self-identified issues and provide grants to support the implementation of improvement plans.
2. Community college leaders should develop, explicitly support, and define the parameters of informal pathways teams and establish logical connections to formal structures. During pathways implementation, leaders can harness the expertise, energy, and creativity of college stakeholders by identifying and structuring informal groups on campus. Informal groups may include cross-functional teams created specifically for pathways implementation or departmental teams working on pathways-related activities independently within silos. Since informal teams coalesce and disperse as needed, clear charges that establish boundaries for activities are necessary. College leaders should also incorporate communication and accountability mechanisms into informal structures. Informal pathways teams should be intentionally linked to formal structures to create a networked system. Leaders should use charts, maps, and diagrams to identify informal pathways teams and to show their relationship to formal structures. Furthermore, colleges should incorporate visual representations of this networked structure into strategic planning documents. Finally, college leaders should model expectations for interacting with informal pathways groups based on these graphics to reinforce the structure.
 3. Community college leaders should embed regular reflective practices into guided pathways implementation and use internal and external data to inform action plans. College leaders engaged in guided pathways implementation should continuously monitor the internal and external environment for changes and trends that may impact pathways plans and activities. Leaders should coordinate with their institutional

research office to periodically administer climate surveys and environmental scans to inform pathways implementation. In addition, leaders should consult with institutional researchers and implementation team members to determine how progress will be measured and communicated. College leaders should schedule opportunities to regularly reflect on the data collected and discuss necessary adjustments to guided pathways implementation. In addition to reviewing the data holistically the results of assessments and scans should be disaggregated by pillar and pathway and distributed to the appropriate groups for discussion. Changes informed by these discussions should be documented in action plans, which are incorporated into college-wide strategic plans. College leaders may want to consider using a technology solution to bring together and organize guided pathways assessment data and action plans. Homegrown or third-party software that allows teams to input and centrally house action plans and progress updates aligned to pillars and pathways will promote communication, collaboration, and accountability.

4. Community college leaders should structure assigned and emergent leadership in guided pathways implementation to promote mutual reliance. College leaders should ensure that leadership mechanisms used to implement guided pathways are compatible with the institution's culture and principles. Leaders should recognize the value of pathways leadership in all forms and at all levels and consider formalizing emergent leadership when appropriate to establish legitimacy. College leaders should encourage coordination between the various leadership mechanisms and promote interdependence by delineating roles and responsibilities based on strengths and expertise. Leaders should ensure that formal, informal, and distributed leadership

share power and exchange authority as needed to advance implementation. College leaders should invest in professional learning and leadership development to cultivate interdependence in support of guided pathways implementation. Colleges should consider sending administrators, faculty, and classified staff pathways leaders to the RP Group's Leading from the Middle (LFM) Academy help them develop transformational leadership skills. In addition, college leaders should encourage participation in 3CSN's BSILI Leadership for Curricular and Institutional Transformation institutes to promote collaborative leadership and planning in support of pathways implementation.

5. Community college leaders should cultivate a systems mindset during pathways implementation that encourages people to step out of positional roles to view the entire student experience. To support pathways efforts, college leaders should introduce stakeholders to ways of thinking that enable them to see the institution as a complex system. Through the use of systems mapping, leaders can identify the various components of the institution and describe how they interrelate. College leaders should encourage individuals to see beyond events to identify patterns, structures and relationships, and the underlying beliefs that motivate behaviors. In addition, leaders should facilitate role-switching activities to allow stakeholders to see institutional structures, policies, and practices through nonexpert eyes. College leaders should support opportunities for cross-divisional collaboration so stakeholders can develop their knowledge of the institution as a whole. Leaders should organize strategic planning events devoted to creating institutional system maps and expanding mental models. The Vision Resource Center (visionresourcecenter.cccco.edu) and

FSG (www.fsg.org) provide resources to develop a systems thinking mindset through specific tools and learning activities.

6. California Community Colleges system leaders should deepen and broaden engagement with community college practitioners to align policy with the pillars of guided pathways. Prior to instituting policy, system leaders should aim to increase coherence across initiatives using guided pathways as an overarching framework for educational reform as suggested in the *Vision for Success*. The guided pathways model encourages institutions to develop their capacity for collaboration, inquiry, and reflection. Intentionally developing system capacity along these same lines will reduce disruption and anxiety at the colleges and ease the roll out of new policy, shortening the time to implementation. To support colleges' ability to remain focused on redesign efforts, system leaders should coordinate with college stakeholders to explicitly connect policy requirements and guidelines to pathways pillars. System leaders should organize and structure workshops and meetings to reflect on data collected from community colleges across California to guide policy improvements. Moreover, system leaders could increase engagement with community colleges through the adoption of a portfolio model in which chancellor's office staff are assigned to a specific set of colleges in the state. A portfolio model will establish consistent and personal relationships between the systems office and community colleges and will provide an additional communication mechanism to inform initiatives and policy.

Recommendations for Further Research

This study suggests that the values of involvement, efficiency, environmental responsiveness, and leadership are imperative to guided pathways implementation at California community colleges. However, research on the decision-making processes of California community colleges in the context of guided pathways implementation is limited. As an increasing number of community colleges in California adopt the guided pathways framework, opportunities to expand the literature on this topic abound. The researcher recommends the following additional avenues of study:

1. This study could be replicated using community colleges involved in the California Guided Pathways Project as opposed to the AACC Pathways Project to explore whether differences in the approach to implementation influence the role of strategic governance. Alternatively, a replicated study of California community colleges implementing the guided pathways framework on their own could add additional insights.
2. A similar case study of community colleges in multiple regions of the state in addition to Southern California could discover whether institutional characteristics associated with location have an impact on how institutions implement guided pathways at scale. One of the limitations of this study was that it included community colleges located in one homogeneous region in Southern California.
3. A case study of one or more of the sample colleges conducted at a future point in time could explore the role of strategic imperatives during advanced stages of implementation. This study focused on community colleges that have been

- implementing guided pathways for at least two years. Participants across cases indicated that change of this magnitude takes a considerable amount of time.
4. A study that focuses on the perceptions of other college constituency groups would add to the literature on decision making during pathways implementation. This study focused on the perceptions of college leaders and pathways leaders involved in implementation. The college president at each case site identified the individuals to be interviewed, which included administrators and faculty members. A number of participants referred to the essential role of other college constituencies, especially classified staff and students, in guided pathways efforts.
 5. A study that explores the impact of financial incentives and penalties on guided pathways implementation could shed further light on the role of environmental responsiveness and efficiency in systemic change. This study was conducted during a time of significant policy developments at the state level. These developments have direct implications for California community colleges exploring or implementing guided pathways. The availability of funds to support guided pathways implementation and the shift to a performance-based funding formula have resulted in additional pressure and greater urgency to increase student success and completion.
 6. A study that examines trust in the context of institutional decision making could provide community college leaders with insights into how to bolster the integrity of strategic planning and governance systems to support pathways implementation. Interview responses frequently referred to the importance of legitimacy during guided pathways efforts. Since pathways implementation is connected to regular decision-

- making processes, the credibility of strategic planning and governance processes is paramount.
7. A study of the interaction between various leadership mechanisms during pathways efforts could be beneficial for community college leaders facilitating large-scale change. One of the findings of this study was that colleges use a blend of formal and informal leadership to accomplish guided pathways goals. Participants indicated that leadership at multiple levels exchange roles during pathways implementation.
 8. Research that seeks to discover connections between strategic governance and organizational performance could uncover which imperatives are most essential to overall institutional effectiveness. An exploration of the relationship between strategic governance in guided pathways implementation and institutional performance was outside of the scope of this study.

Concluding Remarks and Reflections

Community colleges are esteemed as bastions of opportunity, especially for disadvantaged students; yet, low completion rates have resulted in public scrutiny and calls for external accountability. The movement toward accountability in the California Community Colleges system has culminated in policy that connects funding to the achievement of concrete systemwide goals aimed at increasing educational attainment. These goals were developed to address the state's present and future workforce needs and are the basis for a new performance-based funding model. To remain viable in the face of higher expectations for institutional performance, community colleges are increasing their alignment with the external environment and using new approaches to address persistent problems. Many colleges have adopted guided pathways as a model for

decision making that focuses on student success. However, guided pathways is only a framework for institutional redesign that colleges must adapt to suit their unique needs, culture, and values.

This study explored how California community colleges are coordinating and implementing monumental change at scale using the guided pathways framework. The study was motivated by the researcher's belief that a history of addressing student success through segment-specific, small-scale innovations has limited community colleges' capacity for systemic change. Moreover, the study was inspired by a desire to uncover principles for leading pathways implementation that could also be applied to future holistic change efforts. The literature on decision making during guided pathways implementation in California community colleges is limited due to the small number of institutions in the state with extensive experience applying the framework. The data collected through artifacts and interviews at three case sites validated the theoretical propositions and findings in the literature: Colleges must harmonize the domains of strategic planning and governance, and balance the demands of involvement, efficiency, environment, and leadership when implementing guided pathways at scale. While college leaders must develop the institution's capacity to address all of the aforementioned strategic imperatives, building inclusiveness and intentional alignment early on creates a stable foundation for implementation in the long run.

Early adopters of guided pathways perceive the framework as a philosophy and view implementation as a perpetual journey toward institutional improvement. The findings of the study indicate that guided pathways implementation requires community colleges to embrace self-discovery in order to mature. Leadership plays an essential role

in pathways implementation and should to be concerned with not only what decisions are made, but how they are made. Integrating processes to increase and sustain internal engagement while employing strategies to strengthen decision-making systems will help colleges align their actions with intention and facilitate collective movement in support of student success.

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APPENDICES

APPENDIX A

Interview Script

Demographic Questions

For administrators:

Title: _____

How long have you held an administrative role? _____

What areas of the college do you oversee? _____

What committees do you lead or serve on? _____

Age, gender: _____

Highest level of education/field: _____

For faculty:

How many years have you been a faculty member? _____

What disciplines do you teach in? _____

Do you serve in any faculty leadership roles? Please explain. _____

What committees do you serve on? _____

Age, gender: _____

Highest level of education/field: _____

Title: _____

For classified staff:

How many years have you been a classified staff member? _____

What area of the college do you work in? _____

Do you serve in any staff leadership roles? Please explain. _____

What committees do you serve on? _____

Age, gender: _____

Highest level of education/field: _____

Title: _____

Question #3: Efficiency (Research Question 1b)

Describe the role of efficiency – the ability to accomplish a task with a minimum of time, effort, and money – in guided pathways planning and implementation.

Probing questions:

- *Can you provide an example related to guided pathways?*
- *How does efficiency differ between pathways and other college initiatives?*

Question #4: Environment (Research Question 1c)

Tell me how the external environment has impacted guided pathways efforts.

Probing questions:

- *What evidence can you point to that shows a consideration of external pressures?*
- *What external developments related to guided pathways have surprised you?*

Question #5: Environment (Research Question 1c)

How has the college responded to external pressures with respect to guided pathways planning and implementation?

Probing questions:

- *Can you provide an example related to guided pathways?*
- *What was the impact of any adjustments that were made?*

Question #6: Leadership (Research Question 1d)

Tell me about the role of formal leadership in guided pathways reforms.

Probing questions:

- *What was the response to formal leadership?*
- *How does the role of formal leadership in guided pathways differ from other situations?*

Question #7: Leadership (Research Question 1d)

Tell me about the role of informal leadership in guided pathways reforms.

Probing questions:

- *What did informal leadership look like?*
- *What was significant about the role of informal leadership?*

Question #8: Additional Explanation (Conclusion)

What other issues of importance related to guided pathways efforts at your college would you like to share?

APPENDIX B

Alignment of Interview Questions

Interview Question	Intro	Strategic Imperatives				Conclusion
		Involvement	Efficiency	Environment	Leadership	
1	X					
2		X				
3			X			
4				X		
5				X		
6					X	
7					X	
8						X

APPENDIX C

Field-Test Participant Feedback Questions

1. How did you feel about the interview? Do you think you had ample opportunities to describe what you do as a leader when working with your team or staff?
2. Did you feel the amount of time for the interview was ok?
3. Were the questions by and large clear or were there places where you were uncertain what was being asked? If the interview indicates some uncertainty, be sure to find out where in the interview it occurred.
4. Can you recall any words or terms being asked about during the interview that were confusing?
5. And finally, did I appear comfortable during the interview... (I'm pretty new at this)?

APPENDIX D

Interview Feedback Reflection Questions

1. How long did the interview take? _____ Did the time seem to be appropriate?
2. How did you feel during the interview? Comfortable? Nervous?
3. Going into it, did you feel prepared to conduct the interview? Is there something you could have done to be better prepared?
4. What parts of the interview went the most smoothly and why do you think that was the case?
5. What parts of the interview seemed to struggle and why do you think that was the case?
6. If you were to change any part of the interview, what would that part be and how would you change it?
7. What suggestions do you have for improving the overall process?

APPENDIX E

Case Study Protocol

The following protocol outlines the process for collecting and analyzing case study data.

1. Data Collection

Collect the following source items at each case site using the methods described below. Documentation and archival records may be collected prior to interviews.

Source Type	Source Item	Method of Collection
Documentation	<ul style="list-style-type: none">• Strategic plans• Committee/group charges• Organizational structures• Governance documents• Organizational charts• Guided pathways meeting minutes and related documentation	<ul style="list-style-type: none">• Search of college website• Request during interview
Archival records	<ul style="list-style-type: none">• Institutional self-study reports• Institutional self-assessments• Performance data• Performance indicators• Maps and charts	<ul style="list-style-type: none">• Search of college website• Request during interview• Search of Chancellor's Office website• Search of American Association of Community Colleges website
Interviews	<ul style="list-style-type: none">• Interview audio recording with college leaders• Interview audio recording with guided pathways leaders	<ul style="list-style-type: none">• In-person semi-structured interview• Phone semi-structured interview• Web conference semi-structured interview

2. Data Analysis

Analyze and code all artifacts and interview transcripts separately for each individual case referencing the preliminary categories for analysis derived from the theoretical propositions. Add additional codes as identified in reflective notes and discovered through data analysis.

Compare the patterns predicted by the theoretical propositions with the patterns actually discovered in the data and synthesize the codes into subthemes.

Filter the data through the theoretical framework by analyzing the codes associated with each research question. Determine major themes derived from the identified subthemes.

Aggregate and synthesize themes from the series of case and conduct cross-case analysis. Determine patterns of convergence and divergence across cases.

Table E1

Preliminary Categories for Analysis Aligned with Strategic Governance Theory

Category	Theoretical Proposition
Involvement	Including and involving internal and external stakeholders in the strategic decision-making process
Efficiency	Obtaining greater results with fewer resources expeditiously through participatory governance
Environment	Identifying environmental elements and responding to those elements appropriately
Leadership	Having leadership that establishes institutional vision, coordinates action, and deploys resources in service of goals

Note. Adapted from *Strategic governance: How to make big decisions better*, by J. H. Schuster, D. G. Smith, K. A. Corak, & M. M. Yamada, 1994, Phoenix, AZ: Oryx Press, p. 195.

Document the findings from an analysis of each individual case to address Research Question 1. Document the findings from the cross-case analysis to describe Research Question 2.

APPENDIX F

Brandman University Research Participant's Bill of Rights



BRANDMAN UNIVERSITY INSTITUTIONAL REVIEW BOARD

Research Participant's Bill of Rights

Any person who is requested to consent to participate as a subject in an experiment, or who is requested to consent on behalf of another, has the following rights:

1. To be told what the study is attempting to discover.
2. To be told what will happen in the study and whether any of the procedures, drugs or devices are different from what would be used in standard practice.
3. To be told about the risks, side effects or discomforts of the things that may happen to him/her.
4. To be told if he/she can expect any benefit from participating and, if so, what the benefits might be.
5. To be told what other choices he/she has and how they may be better or worse than being in the study.
6. To be allowed to ask any questions concerning the study both before agreeing to be involved and during the course of the study.
7. To be told what sort of medical treatment is available if any complications arise.
8. To refuse to participate at all before or after the study is started without any adverse effects.
9. To receive a copy of the signed and dated consent form.
10. To be free of pressures when considering whether he/she wishes to agree to be in the study.

If at any time you have questions regarding a research study, you should ask the researchers to answer them. You also may contact the Brandman University Institutional Review Board, which is concerned with the protection of volunteers in research projects. The Brandman University Institutional Review Board may be contacted either by telephoning the Office of Academic Affairs at (949) 341-9937 or by writing to the Vice Chancellor of Academic Affairs, Brandman University, 16355 Laguna Canyon Road, Irvine, CA, 92618.

APPENDIX G

Informed Consent Form

CONSENT TO PARTICIPATE IN RESEARCH

BRANDMAN UNIVERSITY
16355 LAGUNA CANYON ROAD
IRVINE, CA 92618

INFORMATION ABOUT: A Case Study of Strategic Governance in the Implementation of Guided Pathways at Scale at California Community Colleges

RESPONSIBLE INVESTIGATOR: Hayley Ashby

PURPOSE OF STUDY: You are being asked to participate in a research study conducted by Hayley Ashby, a doctoral student from the Organizational Leadership program at Brandman University. The purpose of this multiple case study is to describe the role of strategic governance in the implementation of guided pathways at scale at California community colleges. The study will strive to understand why and how college leadership in California community colleges implemented a guided pathways model, and will provide insights based on direct experiences with the pathways framework. This study will contribute information to a burgeoning field of research on how college leadership harmonizes the domains of strategic planning and governance to ensure effective decision-making during guided pathways implementation. The results of this study will provide a clearer understanding of the change and decision-making processes of community colleges engaged in systemic institutional reforms. Colleges may use the findings to gain a greater awareness of how leadership is coordinated across different realms of the institution to enable transformative change. Finally, an understanding of which strategic imperatives are most essential during change efforts, and how they interrelate to collectively effect change, could inform and promote institutional redesign at community colleges statewide.

By participating in this study I agree to participate in an individual interview. The interview will last approximately 45 – 60 minutes and will be conducted in person. Completion of the individual interview will take place February through March, 2017.

I understand that:

a) There are minimal risks associated with participating in this research. I understand that the Investigator will protect my confidentiality by keeping the identifying codes and research materials in a locked file drawer that is available only to the researcher.

b) I understand that the interview will be audio recorded. The recordings will be available only to the researcher and the professional transcriptionist. The audio recordings will be used to capture the interview dialogue and to ensure the accuracy of the information collected during the interview. All information will be identifier-redacted and my confidentiality will be maintained. Upon completion of the study all recordings, transcripts and notes taken by the researcher and transcripts from the interview will be destroyed.

c) The possible benefit of this study to me is that my input may help add to the research on guided pathways and the impact of strategic governance on the implementation of large-scale student success initiatives at community colleges. The findings will be available to me at the conclusion of the study and will provide new insights about the guided pathways experience in which I participated. I understand that I will not be compensated for my participation.

d) If you have any questions or concerns about the research, please feel free to contact Hayley Ashby at hashby@mail.brandman.edu or by phone at 951.836.7718; or Dr. Len Hightower (Advisor) at whightow@brandman.edu.

e) My participation in this research study is voluntary. I may decide to not participate in the study and I can withdraw at any time. I can also decide not to answer particular questions during the interview if I so choose. I understand that I may refuse to

participate or may withdraw from this study at any time without any negative consequences. Also, the Investigator may stop the study at any time.

f) No information that identifies me will be released without my separate consent and that all identifiable information will be protected to the limits allowed by law. If the study design or the use of the data is to be changed, I will be so informed and my consent re-obtained. I understand that if I have any questions, comments, or concerns about the study or the informed consent process, I may write or call the Office of the Vice Chancellor of Academic Affairs, Brandman University, at 16355 Laguna Canyon Road, Irvine, CA 92618, (949) 341-7641.

I acknowledge that I have received a copy of this form and the "Research Participant's Bill of Rights." I have read the above and understand it and hereby consent to the procedure(s) set forth.

Signature of Participant or Responsible Party

Signature of Principal Investigator

Date

APPENDIX H

Brandman University Institutional Review Board Approval



Hayley Ashby <hashby@mail.brandman.edu>

BUIRB Application Approved: Hayley Ashby

Institutional Review Board <my@brandman.edu>

Tue, Apr 17, 2018 at 4:45 PM

To: hashby@mail.brandman.edu

Cc: ddevore@brandman.edu, whightow@brandman.edu, buirb@brandman.edu

Dear Hayley Ashby,

Congratulations! Your IRB application to conduct research has been approved by the Brandman University Institutional Review Board. Please keep this email for your records, as it will need to be included in your research appendix.

If you need to modify your BUIRB application for any reason, please fill out the "Application Modification Form" before proceeding with your research. The Modification form can be found at IRB.Brandman.edu

Best wishes for a successful completion of your study.

Thank You,

BUIRB
Academic Affairs
Brandman University
16355 Laguna Canyon Road
Irvine, CA 92618
buirb@brandman.edu
www.brandman.edu
A Member of the Chapman University System

This email is an automated notification. If you have questions please email us at buirb@brandman.edu.

APPENDIX I

Invitation to Participate Addressed to the Potential Case College President

[Date]

Dear [President Name],

I am writing today to respectfully request your assistance with research being led by a Riverside City College faculty member, Professor Hayley Ashby. Hayley is a doctoral candidate in the Organizational Leadership program at Brandman University. She is conducting a case study on guided pathways and strategic governance in the California Community Colleges for her dissertation. Specifically, Hayley's research focuses on how the values of involvement, efficiency, environmental monitoring, and leadership factor into a college's implementation of the guided pathways framework. As part of this study, Hayley is exploring the perspectives of individuals involved with guided pathways in both formal and informal leadership positions at three different California community colleges. This is a rich and timely topic for our system, and I am writing today to invite Irvine Valley College to participate in the study by serving as one of the three case sites for Hayley's study.

Participation as a case site for the study would involve allowing Hayley to conduct brief in-person or web conference interviews with several of Irvine Valley College's leaders. Hayley would like to interview five (5) individuals, including you, the college president, and three (3) other individuals (identified by IVC) serving in formal or informal leadership roles related to guided pathways implementation.

Following approval by your Institutional Research Board, Hayley would like to interview individuals on campus over the course of one or two days. Interviews would be scheduled at your convenience between March and April, 2018. All of the interviews will be confidential; Hayley's case study protocols involve maintaining the anonymity of both the case colleges and all interview participants involved. Only Hayley, her dissertation chair, and I will know the names of the colleges selected for the study.

I anticipate that this research will help to deepen our understanding of the change and decision-making processes of California community colleges engaged in systemic institutional reforms, such as guided pathways. Colleges may use the findings to gain a greater awareness of how leadership is coordinated across different realms of the institution to enable the transformative change needed to reach the system goals outlined in the State Chancellor's *Vision for Success*. Finally, an understanding of which strategic imperatives are most essential during change efforts, and how they interrelate to

collectively effect change, could inform and promote institutional redesign at community colleges statewide. As a participant in the American Association of Community Colleges Pathways Project 1.0, your experiences and perspectives on guided pathways adoption would enrich the findings of the study, and be of significant benefit.

Hayley's contact information is listed below. I would appreciate it if you could please respond to her directly regarding her research. I am also happy to speak with you should you have any questions about this request.

Thank you for your time and consideration!

Best,

Dr. Wolde-Ab Isaac
Chancellor, Riverside Community College District

Cc: Hayley Ashby
[Email address]
[Phone number]