

A Viability Study of BAS Programs at Bellevue College

A Viability Study of BAS Programs at Bellevue College
Student Outcomes Analysis and Perceptions of Administrators and Faculty



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EXECUTIVE SUMMARY

The Applied Baccalaureate (also called Bachelor of Applied Science or BAS) programs in Washington State have paved the way for a more equitable statewide workforce. By providing these opportunities at community and technical colleges (CTC) throughout the state, BAS programs have facilitated a pathway for underserved and non-traditional learners: students of color, older working adults, place-bound individuals with family responsibilities, part-time students, etc. to receive a baccalaureate-level education and subsequently attain a living-wage job. After going through a series of legislative approval processes, BAS degrees in high-demand workforce programs were launched in Washington State community colleges in 2007 to achieve four primary goals — fulfill the state goals of increasing the total number of baccalaureate degrees, expand the workforce mission of CTCs to meet the demands of local and state employers, increase educational pathways for professional-technical associate graduates who have been limited in their ability to apply credits toward a bachelor’s degree, and improve equity in educational access (SBCTC, 2015). Bellevue College (BC) was one of the first four colleges included in the pilot study of BAS degrees in the state. Since its inception in 2007, these programs have evolved and matured into achievable success pathways for underserved students. The purpose of this capstone project was to do a viability study of BAS programs at Bellevue College by analyzing student outcomes and perceptions of administrators and faculty. The goal was to understand what is working, what is not working, and identify areas of improvement to increase alignment of the programs with the BAS mission. The main research question used to guide the proposed research study is “How have BAS programs and practices evolved at Bellevue College since their inception, and to what extent do they align with the original BAS

mission?” which led to four sub-questions: (1) To what extent have BAS programs impacted student outcomes aligned with the BAS mission: completion, employment, enrollment, and diversity? (2) What are the perceptions of administrators and faculty regarding internal and external factors that have influenced the development and/or sustainability of BAS programs? (3) To what extent have BAS programs undergone evaluation and adjustment to support continuous learning during their life cycle? (4) What lessons have been learned that may inform institutional leaders about the viability of BAS programs?

The sub-questions created a structure to investigate the BAS programs’ strengths and weaknesses through the perspective of both administrators and faculty. The theoretical framework for this study was adapted from the Academic Plan Model, which includes elements of an academic plan developed by Stark and Lattuca (2009). This model focuses on professional programs and examines how internal and external factors within the sociocultural context affect the program’s environment, which in turn can influence the design and outcomes of these programs. Given the purpose of the study, an embedded single case study design approach adapted from Yin (2018) was used for this capstone, which drew evidence from qualitative and quantitative sources, i.e., interviews with administrators and faculty, archival records about student outcomes data (*completion, enrollment, employment, and diversity*), and several document reviews to enhance validity and trustworthiness of the data. Triangulating the data from multiple sources helped develop converging lines of evidence and a credible interpretation of the findings to determine the viability of BAS programs at Bellevue College. Six key findings emerged from this case study research. After corroborating and analyzing the findings from the three data sources, six recommendations were presented to maximize program efficiencies.

Key Findings:

1. **Community, Identity, and Tracking** – a) *BAS programs are serving the needs of the diverse community, b) Mission enhanced, yet incoherent identity, c) Student outcomes vary across programs; better data and tracking mechanisms needed.*
2. **Structure and Resource Constraint; Revise Operating Model** – a) *Appropriate resources and a support framework needed for the growth of BAS programs, b) BAS programs may not be scalable with the current operating model.*
3. **Faculty Engagement and Student Voice** – a) *Invest in faculty and continue faculty engagement, b) Student-voice is critical for BAS improvement.*
4. **Funding Model is Important, but not a Barrier for Sustainability** – a) *Appropriate funding is necessary, b) The current funding model is not a barrier to sustainability.*
5. **Program Review Process Standardization and Optimization** – a) *Reviews are occurring at multiple levels; there is a need for standardization, b) Shorter review cycles for more continuous improvement.*
6. **Senior Leadership Commitment to BAS, a Key for Long Term Sustainability** – a) *More involvement and support from upper-level administration is vital, b) Integrate BAS into the fabric of the college for better viability.*

Recommendations:

1. Strengthen BC institutional identity to reflect the BAS programs as a core part of the College
2. Establish BAS Alumni Association and develop a centralized BAS Employment portal to consistently track BAS graduates and their employment outcomes
3. Revise BAS operating model; Integrate programs into one BAS Institute and establish one governance model
4. Supply adequate funding, resources, and administrative support to grow BAS programs
5. Standardize and optimize program review practices across all BAS programs
6. Establish a centralized baccalaureate leadership and support system to ensure quality and consistency.

CHAPTER I: INTRODUCTION

The rapid growth of technology requires four-year degree programs to meet market needs (Petrosian, 2010). Industries like healthcare, business, engineering, and cyber-security need thousands of skilled workers, and traditional liberal arts and even STEM degree offerings do not meet market demand (Bragg & Soler, 2016). Historically, Washington businesses relied heavily on the ability to import educated workers. However, this practice may not be sustainable or sufficient enough to meet the changing needs of the workforce (Spaulding, 2010). To compound the problem, limited state resources prevent public baccalaureate institutions from developing the capacity needed to meet current and projected employer demand and statewide degree production goals. Thus, Washington State recognized the need to increase the educational attainment of its residents to maintain a globally competitive economy (England-Siegerdt & Andreas, 2012). To support this endeavor, Washington's Higher Education and Coordinating Board (HECB) and State Board for Community and Technical Colleges (SBCTC) identified applied baccalaureate degrees (also called Bachelor of Applied Science or BAS) as a viable option for substantially increasing the number of baccalaureate degrees. BAS is a creative, hybrid degree that is industry-driven, hands-on, accessible, affordable, and enables students to obtain workforce skills to meet current needs (The Aspen Institute, 2018). BAS programs were launched in Washington State community colleges in 2007 to fulfill the state goals of increasing the number of baccalaureate degrees, expand the workforce mission of colleges to better meet the needs of local and state employers, provide an educational pathway for applied associate graduates, and address equity concerns around degree completion (SBCTC, 2015). Since then, 28 (of 34) colleges have been authorized to offer BAS degrees making Washington one of the top two Community College Baccalaureate (CCB) program states in the U.S (SBCTC, 2019).

Statement of the Problem

Bellevue College (BC) is a public college in Bellevue, Washington. It is the largest of the 34 institutions that make up the Washington Community and Technical Colleges System (WCTC). BC launched its first BAS program called “Radiation Imaging Sciences” under the Health Sciences Education domain in 2007, and after a successful pilot, it officially became a four-year college in 2009. Over the last 10 years, the BAS programs at BC have expanded into other domains such as Arts and Humanities, Business and Information Technology, and Sciences, offering a total of 19 programs across multiple concentrations; new programs are being added periodically to meet workforce needs. Since its inception in 2007, there has not been a formal study done to ascertain if these programs are indeed meeting the program mission and serving the needs of the community. Thus, BC institutional leaders are unsure if BAS programs and practices are delivering their intended value and if they are sustainable. This capstone project included a viability study of BAS programs at Bellevue College with a focus on student outcomes and perceptions of administrators and faculty.

Purpose of the Study

The purpose of this single case study was to understand the viability of the BAS programs at Bellevue College through a detailed analysis of student outcomes and perceptions of administrators and faculty. The goal was to ascertain what is working, what is not working, and areas of improvement to increase alignment with the original BAS mission. Some of these programs have been in existence at BC for over a decade, with a periodic influx of new BAS programs to meet workforce demands and occasional mergers of existing programs. This study explored how the BAS programs and practices have evolved at BC since their inception, to what extent they align with the original BAS mission, and whether such programs are sustaining and

improving. Leveraging multiple sources of evidence encompassing both qualitative and quantitative data such as interviews with administrators and faculty, student outcomes, and program documents, this case study triangulated the data gathered to strengthen the findings and assess the viability of BAS programs at Bellevue College. The implications of the findings will be discussed, and recommendations will be presented to assist Bellevue College in improving these programs to achieve better academic outcomes.

CHAPTER II: ORGANIZATION CONTEXT



Bellevue College (BC) is a public college in Bellevue, Washington. It is the largest of the 34 institutions that make up the WCTC system and the third-largest institution of higher education overall in the state (behind the University of Washington and Washington State University). The institution offers transfer associate degree programs that cover the first two years of college education, BAS programs, professional-technical degrees and certificates, a large continuing education program, and pre-college programs. The college also has a variety of distance education and online learning options. BC was founded in 1966 with its original name as “Bellevue Community College” with a student population of 464 and a few vocational courses. Over the last five decades, the college has expanded into other divisions and student enrollment has grown significantly. As a community college, BC serves multiple missions—

from workforce training to remediating students in preparation for higher education, to community enrichment. In 2007, Bellevue College was one of the first four colleges in Washington State authorized by the legislature to offer BAS degrees in an initial pilot study. These degrees were introduced to fulfill important goals for the state such as to increase the total number of baccalaureate degrees awarded per year, address workforce demands, increase educational pathways for graduates with technical associate degrees, and improve equity in educational access. After a successful pilot of BAS programs in 2009, the college officially changed its name from “Bellevue Community College” to “Bellevue College”, to reflect the fact that it offered four-year bachelor's degrees in addition to its traditional offerings of two-year associate degrees and certificates. Since then, BC has been identifying itself as a “*public (state-assisted), open-access, community-based, coeducational, primarily associate degree-granting four-year institution of higher learning*”.

Once the first BAS degrees were successfully operational, BC presidents and faculty leaders continued to monitor the need in the community for future degrees. The proven success of the first BAS degrees allowed them to offer additional degrees. Over the last 10 years, the BAS programs have expanded into other domain areas such as Arts and Humanities, Business and Information Technology, and Sciences, offering a total of 19 programs across multiple concentrations. BAS leaders continue to insist that these future degrees retain their high quality and do not just become trumped-up associate degrees.

CHAPTER III: PROBLEM OF PRACTICE

The BAS programs in Washington State have paved the way for a more equitable statewide workforce. By providing these opportunities at community colleges throughout the state, BAS programs have facilitated a pathway for underserved and non-traditional learners -

students of color, older working adults, place-bound individuals with family responsibilities, part-time students, etc., to receive a baccalaureate-level education and attain a living-wage job. After going through a series of legislative approval processes, BAS degrees in high-demand workforce programs were launched in Washington State community colleges in 2007 to achieve four primary goals – fulfill the state goals of increasing the total number of baccalaureate degrees, expand the workforce mission of CTCs to meet the demands of local and state employers, increase educational pathways for professional-technical associate graduates who have been limited in their ability to apply credits toward a bachelor’s degree, and improve equity in educational access (SBCTC, 2015). In 2007, BC was one of the first four colleges included in the pilot study of BAS degrees in Washington State and since its inception, these degrees have evolved and matured. Over the last 10 years, the BAS programs at BC have expanded into other domain areas such as Arts and Humanities, Business and Information Technology, and Sciences, offering a total of 19 programs across multiple concentrations; new programs are being added periodically to meet workforce needs.

It is important to note that instituting BAS degrees in community colleges is not a small endeavor. It is a revolutionary change that requires additional time, cost, and a plethora of resources to support these programs. Some programs require funding for professional-quality tools, equipment, and facilities, while others need funding for newer technology, library services, and personnel resources. A viability review is often needed to examine programs through a lens of student outcomes, operational efficiency, and fiscal feasibility. Such a review will assure that BC instructional resources are effectively used in response to the identified BAS mission, its educational goals, the needs of the students, and the requirements of the community it serves. Since their launch, BAS programs have undergone different types of reviews - accreditation for a

handful of programs, program reviews, program viability reviews - recently initiated, advisory board reviews by industry experts, and informal reviews within respective programs. While these reviews have provided some level of formative assessment and quality improvement, they have not been enough to gauge BAS programs' overall viability or if they are indeed meeting the mission. Thus, BC institutional leaders are unsure if BAS programs are delivering their intended value and if they are tenable. The goal of this capstone project was to conduct a viability study of BAS programs at Bellevue College by analyzing student outcomes and exploring the perceptions of administrators and faculty. The goal was to examine what is working, what is not working, and identify areas of improvement to increase alignment with the original BAS mission.

CHAPTER IV: LITERATURE REVIEW

To stay competitive in the knowledge-based global economy, businesses in the United States need access to employees with bachelor's degrees. However, there is a growing gap between employers' demand and the supply of baccalaureate graduates from four-year colleges and universities (Petrosian, 2010). A bachelor's degree is widely viewed as the benchmark of quality postsecondary education. While a sizable proportion of the American college-going population continues to enroll in, and receive, bachelor's degrees, the rapid growth of technology and emergence of specialized fields in industries like healthcare, business, engineering, and cyber-security are placing increased demands on the number of such degrees (Bragg & Soler, 2016). Further, some employers require bachelor's degrees for positions that have historically not required them (Walker, 2002). According to the U.S. Bureau of Labor Statistics, receiving a bachelor's degree pays off in that graduates receive higher salaries and have more job prospects than those who do not receive the degree (Crosby & Moncarz, 2006). Current reports show that students who graduate with a bachelor's degree earn an average of \$21,700 more per year than

students who have a high school diploma (AACC, 2019; College Board, 2010). As demand for a bachelor's degree grows, it is likely to become the expected credential for more and more occupations.

The U.S. community college system plays a pivotal role in educating the nation's workforce and is generally accepted as key to providing a pathway to higher education (Cohen & Brawer, 2008; Kintzer, 1996; Laanan, 2001; Townsend & Wilson, 2006). Historically, community colleges have played the role of producing associate degree graduates who continue via a transfer articulation model to complete their baccalaureate degree at a university or other historically four-year institution (Thelin, 2011). However, according to the advocates of the community college baccalaureate movement, it is no longer valid to refer to community colleges as exclusively two-year higher education institutions (Floyd et al., 2005). The purpose of this literature review is to develop a context through which to examine the Applied Baccalaureate degrees (BAS) by highlighting five major areas:

1. Expansion of community colleges' mission towards BAS
2. The need for BAS programs in Washington State
3. BAS research – A historical perspective
4. BAS institutional challenges and controversies
5. Educational influences and impact on academic programs

Expansion of Community Colleges' Mission towards BAS

A mission is a statement about an institution's identity or vision of itself, articulated to provide its members with a sense of institutional goals and shared purpose (Stark & Lattuca, 2009). Mission statements also communicate purpose and values to external audiences (Hartley, 2002; Morphew & Hartley, 2006). Traditionally, the community college mission has included

transfer, vocational, adult, community, and continuing education (Dougherty, 2002), with the associate degree being the highest-level credential awarded by a community college. These missions and programs, however, have evolved, mainly in response to local needs and an increased desire for education and training (Floyd & Skolnik, 2019). The mission of community colleges began to expand to include baccalaureate education as early as the 1970s starting with the Fashion Institute of Technology (FIT), technically a community college at the time, in New York in 1975 (Potter, 2020). The applied baccalaureate degrees started gaining momentum in the 1990s and 2000s when several state legislatures authorized their two-year colleges to offer such degrees as a way to prepare adults for employment in occupational fields (Russell, 2013). Today, about 25 states across the United States have granted permission, often with restrictions, to their colleges to confer applied baccalaureate degrees, although fewer states have institutions that actively award such degrees (Bragg, 2019). BAS has been defined as an applied baccalaureate degree a college confers directly to students without the involvement of a partner university (Russel, 2013). This degree is based on a two-year applied associate degree (AAS), wherein students after completing the AAS can either decide to join the workforce or pursue a BAS program related to their AAS degree. Students who decide to join the workforce right after AAS typically experience a career stagnation after a few years due to the lack of a bachelor's degree. Those graduates often need further education to advance in their careers. Management positions in firefighting, for example, increasingly require a bachelor's degree, and there has been a shift in hospitals across the country towards hiring bachelor's-level nurses (Gadkaree & Zanville, 2018). When these graduates need a bachelor's degree to move to the next rung on the career ladder, unfortunately, our educational system does not fully support their needs; their AAS and AS degrees do not bridge well to most university bachelor's degrees because of the gap in

general education coursework. That means these graduates are often stuck with credits that do not easily transfer – and that adds time and thousands of dollars to the process of getting the next degree. Consequently, policymakers and higher education administrators began to reflect on a renewed commitment to the mission and a deeper understanding of the ways in which a BAS could assist community colleges in furthering their mission (Ames, 2015).

Thus, the rationale for the development of BAS degrees has centered around three national concerns (Petrosian, 2010). The first important concern was the need to expand access to baccalaureate degree attainment for adult students (Floyd & Walker, 2009; Townsend, Bragg, & Ruud, 2008). Second, was the need to address employers' calls for employees with bachelor's degrees (Jacobs & Dougherty, 2006; Jenkins, 2006; Floyd & Walker, 2009). Finally, the national concern regarding the increased cost of higher education, especially at public four-year universities, was an important driving force for the development of BAS degrees (Chen, 2008; Floyd & Walker, 2009). Many states and institutions have stepped up to allow community colleges to award bachelor's degrees to students who transfer with career-focused associate degrees in multiple industries, such as healthcare, business, IT, and other sectors.

The Need for BAS Programs in Washington

Washington State recognized the need to increase the educational attainment of its residents to maintain a globally competitive economy (England-Siegerdt & Andreas, 2012). In spring 2002, the SBCTC began exploring the potential for community and technical colleges to offer and award applied baccalaureate degrees, particularly for technical degree graduates (SBCTC, 2002). One of the challenges facing the higher education system at the time was upper-division capacity (SBCTC, 2004). Capacity was, and still is, an issue for the public baccalaureate institutions in particular. Due to limited state resources, public universities were not able to

develop the capacity needed to meet current and projected employer demand and statewide degree production goals (England-Siegerdt & Andreas, 2012). Washington's Higher Education and Coordinating Board (HECB) and SBCTC identified BAS degrees as a viable option for substantially increasing the number of baccalaureate degrees. After going through a series of legislative approval processes, BAS degrees in high-demand workforce programs were launched in Washington State community colleges in 2007 to achieve the following policy goals (SBCTC, 2015):

- 1) Fulfill the state goals of increasing the number of baccalaureate degrees awarded by public two-year and four-year institutions to 42,400 per year. To do this, the CTC system will need to increase the number of students who transfer to baccalaureate programs by 25% and increase the number of applied baccalaureate graduates to 1,400 by the year 2030.
- 2) Improve equity in educational access and increase diversity for the workforce student population that is composed of a large portion of people of color, older working adults, and people (primarily women) who are place-bound with family responsibilities.
- 3) Increase educational pathways for professional-technical associate graduates who have been limited in their ability to apply credits toward a bachelor's degree.
- 4) Expand the workforce mission of CTCs to better serve the needs of local and state employers. (p.1)

Since then, 28 (of 34) colleges in Washington have been authorized to offer over 102 programs and have conferred over 3,500 BAS degrees (Bragg, Love, McCarthy, & Soler, 2019), making Washington one of the top two Community College Baccalaureate (CCB) states in the U.S. (SBCTC, 2019).

BAS Research - A Historical Perspective

BAS degrees combine associate-level job preparation training with advanced thinking and technical skills. There has been significant BAS research conducted in the last 20 years. Leading researchers like Bragg and Soler (2016) have emphasized the need for high-quality outcomes-based research since BAS degrees call for measures of both education attainment and employment outcomes to determine program effectiveness. While early BAS research focused on BAS models and implementation cases, recently, increased attention has been directed at outcomes-based research as more BAS graduates are awarded their baccalaureate degrees from a community college. The Center on Education and Skills at New America and the Community College Research Initiative (CCRI) at the University of Washington have collaborated to produce significant research work to understand to what extent BAS degrees are meeting employers' needs, helping working learners, and serving as an effective tool for state policymakers. In one such research study, Bragg and Soler (2016) mined the results from two national studies that they conducted using a mixed-methods design across 50 states. Based on the findings from these studies, the authors emphasized the need for BAS researchers to systematically examine outcomes at multiple levels: student, degree program, institution, and employment.

To address a gap in research and practice, they highlighted four criteria for consideration while doing BAS research – inform decision-makers, improve programs, provide stakeholders' perspectives, and evaluate outcomes. They contend that an outcomes-based model encourages researchers to define SMART (specific, measurable, attributable, realistic, targeted) indicators for different outcomes that can show how an outcome was achieved. Consequently, such a model could be used during program evaluation to assess the efficacy of the recommended intervention

or process. Thus, it is not surprising that BAS researchers in the last five years have increasingly focused on specific student outcomes such as employment, enrollment, completion, and diversity areas. For example, there has been significant research on BAS employment outcomes (Blume, 2020; Cominole, 2017; Kaikkonen & Quarles, 2018; SBCTC, 2015;) corroborated by growing evidence that BAS graduates not only earn more than their AAS counterparts, but their earnings are comparable to university graduates in traditional bachelor's programs (Cominole, 2017). A recent study examined the difference in earnings of BAS degree and AAS degree graduates in three programs (health, technology, and social science) at three different community and technical colleges in Washington State, where researchers found that BAS degree graduates had higher earnings than their AAS counterparts in each of the three programs, although the size of earnings differed by the program, field of study, student characteristics, and prior education or work experience (Kaikkonen & Quarles, 2018). They also highlighted evidence of a gender gap in earnings by programs, which they recommend as another area for further study. In another study related to BAS enrollment and completion, it was found that women, students of color, and other underserved groups demonstrated low enrollment in STEM areas (Meza, 2019). In general, BAS degree completion has improved in recent years (from 48.3% in 2011-2012 to 72% in 2013- 2014), possibly reflecting that BAS programs are maturing from the pilot and initial implementation phase, although analysts argue that this could be due to new programs of study that are demonstrating higher completion rates, e.g., dental hygiene (Meza & Bragg, 2020).

While research on BAS student outcomes has been informative to institutional leaders, analyzing stakeholder's perspectives (faculty, administrators, students, employers, etc.) is another area of BAS research that has resulted in policy and practice implications for community colleges. To aid institutional leaders and policymakers in the development of BAS degrees,

Geisinger (2017) conducted an exploratory quantitative study by applying the Academic Plan Model developed by Stark and Lattuca (1997) and gathered administration and faculty perspectives on internal, external, and organizational factors that affect BAS degrees in a midwestern institution. A key finding from this study suggested that workforce demand, academic position, and type of courses taught were significant predictors of administrators and faculty support of offering a BAS at their institution. Another empirical study was conducted by Grothe (2010) to understand the perceptions of employers and graduates regarding BAS degrees when conferred by community colleges in multiple states. The findings suggested that BAS graduates viewed their academic journey as a positive experience and also recognized other benefits of BAS programs such as alternative delivery, smaller classes, quality faculty, and better connection to the industry. From another vantage point, employers contended that graduates are adequately prepared for work after BAS, and colleges offering BAS programs are better connected to the industry by acting as community builders that help prepare local people for local jobs (Grothe, 2010). A BAS study examining administrator and faculty perspectives for three community colleges in Texas highlighted positive correlations amongst student need, workforce need, college relations, and college mission (Petrosian, 2010).

BAS Institutional Challenges and Controversies

Some researchers contend that although the implementation of degrees is not new to higher education, unique degrees like the BAS can create controversy. Skeptics question whether community colleges are moving away from their mission of open access and the caliber of the degrees (Cook, 2000; Manzo, 2001; Pederson, 2001). Wagoner and Ayon (2012) have highlighted three areas of potential challenges concerning BAS degrees - mission, institutional identity, and role of faculty. By examining pieces of evidence connected to mission erosion

through redirection of resources away from the traditional missions of community colleges, and mission creep through the addition of new structures, regulations, and norms, the authors argued that BAS programs bring changing student demographics, increased institutional autonomy, and university-style governance could potentially lead to an institutional identity transformation. They clarified how the role of faculty and increased demands on their qualifications to support BAS programs, such as a greater emphasis on research, could move their focus away from institutional commitments. As a result, the progression of adoption of BAS degrees across the U.S has not been consistent. While wider authorization of BAS programs has occurred in states like Washington and Florida, BAS expansion has been limited in states like California. Other states such as Arizona, and recently Maryland and Illinois have considered, but rejected baccalaureate degree-granting status to any community college (Nardulli, 2014). Researchers have inferred that future adoption of BAS degrees could be influenced by differences in policy design and implementation linked to funding, demographics, workforce needs, higher education conditions, and political pushback, which are specific to each state (Soler, 2019).

Another area of controversy has been around the relationship between colleges and universities. While universities do not offer these same BAS degree programs, community colleges and public state colleges have historically received some level of resistance from public university systems, who feel like the colleges are drifting into their mission (Bragg & Soler, 2016; Tekniepe, 2014). However, a recent study examining the concurrence of colleges and universities offering baccalaureate degrees in Washington State found that the state has incorporated a side-by-side model where colleges and universities each offer their own baccalaureate degrees and this controversy is minimal (Potter, 2020). In consideration of lessons learned from Washington State, several leading researchers suggest that any B.A.S. program

application must be approved by the community and technical college system and shared with university partners (Carroll & Glasper, 2018). Nevertheless, many states are grappling with the challenges around BAS degrees and are still in the process of authorization or have an active movement to introduce legislation. Institutions must approach BAS development with careful research, planning, and consideration of internal and external factors in their decision-making process.

Educational Influences and Impact on Academic programs

Higher education in America has seen many trends throughout its history, including a move towards diversification of institutions. This diversification of institutions in higher education is defining how higher education in America is viewed, shaping the institutions' missions, students, and academic programs (Teichler, 2008). Driven by external and internal influences, the diversification of academic programs is influencing higher education's college curriculum (Stark & Lattuca, 2009). Academic planning is the heart and soul of an institution's overall strategic plan, and as such, academic and institutional plans should be developed concomitantly, informing, and being informed by each other (Sherman & Rowley, 2004). Toward this end, academic planning should begin with a well-defined institutional mission (Middaugh, 2009). Here, "not only must mission and vision set an authentic direction that connects with the narrative of identity, but it must also develop the mechanisms through which the organization can attain its goals" (Morrill, 2010, p. 135).

Stark and Lattuca's (2009) Academic Plan Model alerts us to a variety of influences active in the sociocultural environment for education at any given time and enhances our understanding of how these affect program planning. The impact of different influences on academic plans demonstrates how some components of these plans are open to direct societal

influences, while others are buffered from external forces, but subject to internal influences such as faculty views about programs (Stark & Lattuca, 2009). These influences are not independent of each other and in many instances, act in a give-and-take nature, shaping the program environment and its outcomes. Further, the mix of internal and external forces operating on programs, and the relative strengths of those influences, may be changing as a result of new calls for quality control through assessment and external evaluation. Stark and Lattuca (2009) recognized that, as a society (external) shapes academic plans, higher education (internal) also shapes society. External influences are the outside stakeholders that influence the program, such as accrediting bodies and workforce needs. When examining external influences, one must look at what and how those forces are affecting the current and future state of a program and its overall mission.

As the economic state of society and academic capitalism play an influence on higher education, the internal constituents are the driving force of change to the institution. Internally, academic plans are shaped at the institutional level by the institutional mission, academic and support resources, and governance. At the unit level, there are considerations of discipline norms, faculty expertise, and student characteristics. Needless to say, the academic plan concept acknowledges the complex set of influences that act upon higher education and cause adjustments in the program environment. This concept assumes that all plans are subject to evaluation and adjustment and that iterative improvements are an expected part of the practice. Although the external and internal factors exist individually, both must be considered simultaneously, and the interaction of the factors produces an environment in which program plans are developed, evaluated, and adjusted to foster continuous learning and growth (Stark &

Lattuca, 2009). Such a model provides a comprehensive framework for institutional leaders and decision-makers to assist in viability studies and determine program effectiveness.

Summary

The BAS degree in the U.S. has evolved as an educational innovation to provide greater opportunities for individuals to advance their education to meet national and local needs for a more highly educated workforce. The BAS is revolutionary in that it involves community colleges adding to their repertoire a new academic credential they had not previously awarded, but it is also evolutionary in building upon their history of continuously adapting their programs to meet the emerging needs of the populations and locales they serve (Floyd & Skolnik, 2019).

Academic programs are subject to varied influences, including cultural and social trends, economic conditions, and national and state policies that shape program outcomes and mission (Stark & Lattuca, 2009). It is essential to understand if BAS degrees reflect their mission and if the purposes and outcomes of these degrees are consistent with other institutional efforts (Soler & Bragg, 2016). Stark and Lattuca (2009) emphasized that programs need to continuously adapt and improve by either making minor adjustments or major changes to sustain and grow. Thus, BAS programs need to be examined from a continuous improvement lens. Many researchers have focused on institutional change and capacity building to offer BAS programs. Determining the value of the degree to students, employers, graduate programs, and public policy is the next frontier of research. To address a gap in research and practice, leading researchers such as Soler and Bragg (2016) have highlighted the importance of conducting outcomes-based BAS research to understand the implementation and impact of such degrees, while also gaining a contextualized understanding of BAS programs and their practices from the perspective of administrators, faculty, and other stakeholders (Greene, 2007).

Although a lot of research has been done on stakeholder perspectives of BAS in other states (like Florida, Texas, Arizona, etc.), there is very limited research on such perspectives in Washington State. Also, it is not well known if community colleges are using continuous improvement practices in their program planning to ascertain if BAS programs are sustaining and improving. Since this capstone project sought to understand the viability of BAS programs at Bellevue College and the extent to which they align with the original BAS mission, it was imperative to conduct this study along three dimensions – outcomes and mission, varied influences acting on BAS programs from the perspective of stakeholders, and continuous improvement.

CHAPTER V: THEORETICAL FRAMEWORK

The theoretical framework for this study was adapted from the Academic Plan Model, a framework for the ideal elements of an academic plan developed by Stark and Lattuca (2009). This model describes the influence of sociocultural and historical factors on academic planning in higher education with a focus on research-based educational practices. It concentrates on professional programs and examines how the internal and external factors, within the sociocultural context, affect the program's environment, which in turn influences the design and outcomes of the programs. Further, this framework emphasizes evaluating and adjusting programs that describe how programs need to continuously adapt and improve by either making minor adjustments or major changes that alter perceptions, values, and assumptions. Given the nature of the BAS degrees, its strong ties to the workforce, and its historical criticism from post-secondary institutions, this framework was appropriate for examining the BAS programs at Bellevue College from a theoretical lens.

BAS Theoretical Framework (Adapted from Stark & Lattuca, 2009)

To apply Stark and Lattuca's (2009) Academic Plan Model to this study, it was imperative to examine specific macro and micro influences that not only act in isolation, but also interact with and influence each other, the program design, and the program environment of a BAS degree.

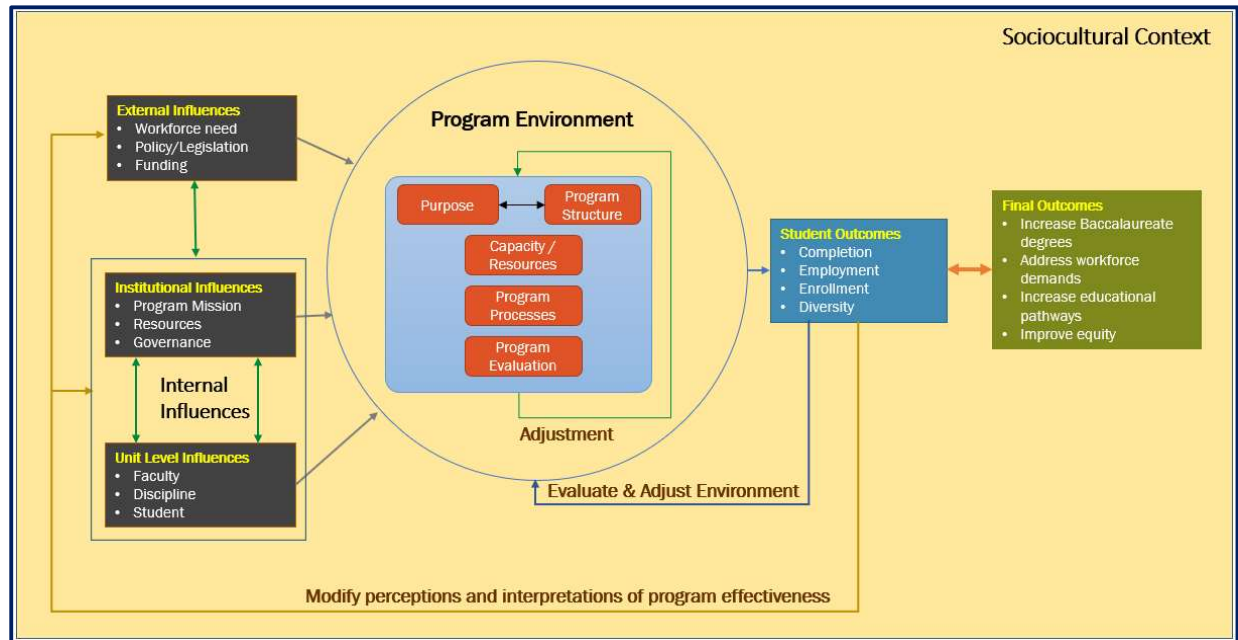


Figure 1: Academic Plan model adapted from Stark and Lattuca (2009)

The key components adapted from the framework included:

A. External Influences

BAS programs are contextually influenced by multiple external forces, some of which include the market, multiple levels of government, accrediting bodies, funding, and disciplinary associations. While this study referenced the impact of policy and legislative processes on the institutionalization of BAS programs, it closely examined workforce needs and funding as the two primary sources of external influencers.

B. Internal Influences

The internal influences on BAS degrees included institutional aspects, such as program mission, resources, and governance structure, as well as unit-level aspects such as faculty education, students, and discipline characteristics.

C. Program Environment

The program environment is created by the confluence of the above two macro influences on professional preparation programs. It serves as a mediating variable between these influences and student outcomes. After reviewing thirty years of research on the effects of college on students, Pascarella and Terenzini (2005) concluded that it is necessary to study the educational environment within a specific academic program to understand student learning outcomes. The program environment constituted the foundation of a BAS program that comprised program purpose, structure, resources, operating model, and evaluation.

D. Student Outcomes

In the context of BAS degrees, evaluating outcomes implies evaluating the ways policies, programs, and practices associated with BAS degrees affect student success and employer satisfaction (Soler & Bragg, 2016). This study examined program-level student outcomes such as completion trends, employment trends, enrollment trends, and student diversity focused on people of color, older working adults, and people (primarily women) who are place-bound with family responsibilities.

E. Final Outcomes

To study the extent to which BAS programs and practices align with the original BAS mission, the main goals of these programs, and why they came into existence is of

paramount importance. The BAS degrees offered in Washington are intended to help the state achieve the policy goals stated by SBCTC to increase the total number of baccalaureate degrees awarded per year, address workforce demands, increase educational pathways for graduates with technical associate degrees, and improve equity in educational access. Therefore, to achieve the final outcomes of the BAS programs, analysis of program-level student outcomes is a key focus area.

F. Evaluation and Adjustment

According to Stark and Lattuca (2009), evaluation and adjustment should be considered at the levels of individual students, courses, and programs. However, for the BAS viability study, the evaluation was considered at the program level. The evaluation and adjustment component of the Academic Plan Model describes how programs need to continuously adapt and improve by either making minor adjustments such as detecting and correcting errors or major changes that alter perceptions, values, and assumptions. Evaluation implies that judgments will be made regarding the overall effectiveness of a program, a vital aspect of a viability study. Program development and change efforts that include appropriate evaluation plans can be used to improve both the plan and the planning process. The “Academic Plan Model” calls attention to this crucial component of the program development. Careful specification of the elements of an academic plan helped identify areas of improvement for this viability study.

CHAPTER VI: QUESTIONS

The research questions for this capstone were formulated to align with the theoretical framework and guide the proposed research study. It comprised one overarching research question and four secondary research questions.

Primary Research Question

How have BAS programs and practices evolved at Bellevue College since their inception and to what extent do they align with the original BAS mission?

Secondary Research Questions

RQ1. To what extent have BAS programs impacted the four student outcomes aligned with the BAS mission: completion, employment, enrollment, and diversity?

RQ2. What are administrator and faculty perceptions of the internal and external factors that have influenced the development and/or sustainability of BAS programs?

RQ3. To what extent have BAS programs undergone evaluation and adjustment to support continuous learning during their life cycle?

RQ4. What lessons have been learned that may inform institutional leaders about the viability of BAS programs?

CHAPTER VII: PROJECT DESIGN

According to Creswell (2003), the selection of a research design is influenced by the research problem. Given the nature of the research questions, the unique aspect of the context, and the utilization of evidence, a single case study design method adapted from Yin (2018) was best suited for this study. In this chapter, the rationale for using the case study method is presented along with justification, as well as the identified protocol/plan/design. The chapter

illustrates the (a) data collection strategies, (b) data analysis and validation strategies, (c) ethical considerations, and (d) data analysis and triangulation.

Rationale for Case Study Method

This capstone project used a single case study method in the tradition of Yin (2018). Case study is defined as an investigation using a variety of data sources into a contemporary phenomenon in its real-world context (Yin, 2018). It is particularly useful when the boundaries between the context and phenomenon are not clear. Case study research is most appropriate to answer “how” or “why” research questions, when the researcher has little control over events, and the focus of the study is contemporary, rather than purely historical (Yin, 2018, p. 2). The case study method varies in terms of design (Yazan, 2015). Yin (2018) claims there are five components to case study design: a study’s questions, its propositions, the units of analysis, the logic linking the data to the propositions, and the criteria for interpreting the findings. Stake (1995) proposes a flexible design allowing researchers to make major changes after data collection. The study should be guided by two or three research questions. Merriam (1998) offers five steps to case study research design: conducting a literature review, constructing a theoretical framework, identifying a research problem, creating research questions, and selecting the sample.

This capstone study was aligned with Yin’s (2018) approach to case study design. According to him, a case study design links the data to be collected (and the conclusions to be drawn) to the initial questions of the study (Yin, 2018). The case study method involves the collection of data from quantitative and qualitative sources and the triangulation of a careful analysis of the data that yields the findings. The reason for triangulating is to provide a confluence of evidence that breeds credibility (Bowen, 2009). Yin presents a case study as a

comprehensive research strategy, incorporating specific data collection and analysis approaches to investigate phenomena in real-life contexts. Case study research is bounded by time and space. It uses inductive methods, rather than deductive, but rather than to create a theory, it is to explain what happened, and in Yin's (2018) approach, to support or refute various propositions. Findings are context-specific and do not prove causality or generalizability.

Justification of the Selected Case Study

Case study research is aligned with the problem of practice in this study and its research questions. Specifically, an embedded single case study approach, adapted from Yin (2018), is ideal for this study. An embedded case study design provides a means of integrating quantitative and qualitative methods into a single research study (Scholz & Tietje, 2002; Yin 2003). This capstone project is an embedded case study because the unit of analysis included BAS programs at Bellevue College and there are subunits of analysis that are implemented within this bounded entity. These subunits of analysis encompass different BAS programs across four divisions: Arts & Humanities (A&H), Health Sciences Education & Wellness Institute (HSEWI), Institute of Business & Information Technology (IBIT), and Sciences.

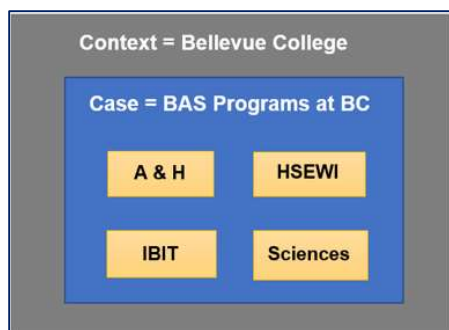


Figure 2: Embedded Single Case Study adapted from Yin (2018)

Further, cases are bounded by time and activity, and researchers collect detailed information using a variety of data collection procedures over a sustained period (Creswell, 2014, p.14). The case study method is best aligned to the study of BAS programs at Bellevue College because of

the nature of the research questions, the unique aspect of the context, and the utilization of evidence. This alignment occurs along three main dimensions:

1. First, the guiding research question for this capstone project is of the “how” variety, specifically, how have BAS programs and practices evolved at Bellevue College since their inception, and to what extent do they align with the original BAS mission? “How” questions are ideally suited to the case study method approach (Yin, 2018).
2. Second, Bellevue College is a public college in the Washington State that has started conferring BAS degrees in 2009 and since then it has been actively adding new BAS degrees. Bellevue College context is a bounded system, a key justification for case study method (Creswell, 2015). It is bounded because BAS programs under consideration of this study are limited to Bellevue College and the evolution period examined is from 2009-2010 through 2020.
3. Third, the evidence needed to answer the research questions exists in multiple forms including student outcomes data, written documents, and interviews.

Data Collection

The case study method involves the collection of data from quantitative and qualitative sources (Yin, 2018). A key strength of case study data collection is the opportunity to use many different sources of evidence. A major rationale for using multiple sources of evidence in case study research is to support an in-depth study of a phenomenon in its real-world context. Yin (2018) recommends both qualitative and quantitative data sources for a case study analysis such as documentation, archival records, interviews, direct observations, participant observation, and physical artifacts. Other proponents of case study research like Stake (1995) and Merriam (1998) exclusively utilize qualitative data such as observations, interviews, and document review, which

are important, but insufficient for this project. Quantitative data about student outcomes such as graduation, enrollment, diversity, and employment are essential to understand the extent to which BAS programs have impacted student outcomes aligned with the BAS mission. In this study, evidence from three sources — documents, archival records, and interviews — was accessed and integrated. Data collected from documents and interviews were qualitative, whereas archival records in the form of student outcomes data were quantitative. While there is no specific order of data collection recommended by Yin (2018), documentary evidences were first collected to understand the evolution of BAS programs at BC, followed by archival records; finally, interviews with faculty and administrators were conducted. The ultimate goal was to corroborate the findings from these three sources and/or generate any new findings.

To maximize the benefits from the three sources of evidence, Yin (2018) suggests maintaining a chain of evidence. Such a principle was helpful in connecting the initial research questions to the interview questions aligned to Stark and Lattuca (2009) model and ultimately to the case study findings which increased the construct validity and reliability of the evidence. Thus, the convergence or triangulation of the data from these three sources, together with maintaining a chain of evidence, helped strengthen the findings and increased the overall quality of the case study.

Data Collection Matrix

The data collection matrix shows the linkage between research questions, the data sources, and the data collection methods.

Research Question	Documents	Archival records	Interviews	Data Collection Methods
RQ1. To what extent have BAS programs impacted student outcomes aligned with the BAS mission: completion, employment, enrollment, and diversity?		✓	✓	1. Student outcomes data from BC dashboard and SBCTC 2. Feedback from administrators and faculty through semi-structured interviews using an interview guide
RQ2. What are administrators and faculty perceptions of the internal and external factors that have influenced the development and/or sustainability of BAS programs?			✓	Feedback from administrators and faculty through semi-structured interviews
RQ3. To what extent have BAS programs undergone evaluation and adjustment to support continuous learning during their life cycle?	✓		✓	1. Analyse program evaluation documents and QI documents 2. Feedback from administrators and faculty through semi-structured interviews using an interview guide
RQ4. What lessons have been learned about BAS programs that may inform institutional leaders about the viability of such programs?	✓		✓	1. Analyse program evaluation documents, QI documents, contracts, dashboards, etc. 2. Feedback from administrators and faculty through semi-structured interviews using an interview guide

Table 1: Data Collection Matrix

Data Sources and Instruments

As highlighted previously, according to Yin (2018), a case study approach draws evidence from six primary sources including documentation, archival records, interviews, direct observations, participant observation, and physical artifacts, with the aim being to strengthen findings through the convergence or triangulation of the data from two or more of the sources. This case study utilized integrated interviews, archival records, and documents.

Interviews

Semi-structured interviews were conducted with faculty and administrators of Bellevue College, who had direct experience with BAS planning and/or implementation within the college. The different roles encompassed program manager, program chair, faculty member, deans, academic coordinator, and director. Initially, the plan was to conduct seventeen interviews with an even distribution between faculty and administrators across the four BAS divisions; however, due to limitations in participant availability, I was able to interview fourteen participants, of which two participants dropped out of the study. Some of the interviewees had pure administrative responsibilities and others had a mix of teaching and administrative responsibilities in the context of BAS programs.

Sampling and Recruitment

Administrators and faculty were selected for interviews based on their experiences and association with BAS programs representing the four BAS divisions comprising: A&H, HSEWI, IBIT, and Sciences. Thus, purposive sampling was used because subjects were selected based on the study purpose with the expectation that each participant would provide unique and rich information of value to the study. I obtained the pool of email addresses of BAS faculty and administrators who fit the study characteristics from The Office of Academic Affairs. Next, I

sent out a recruitment letter (via email) to administrators and faculty members inviting them to participate in this capstone project (see [Appendix A](#)). The email included brief information about the purpose of the study, modalities of the interview process, and my contact information. In this email, I clearly mentioned that participation is voluntary and that participant's responses to interview questions are kept confidential. If participants indicated their interest to participate in this study by responding to the recruitment letter, then I sent out a separate Informed Consent letter via email requesting their informed consent to participate in this study (see [Appendix B](#)). Administrators and faculty that agreed to participate were interviewed using the interview guide. To ensure ethical study practices, all interviews conducted by me for this capstone project used scripts that emphasized complete disclosure to participants of the study and its relationship to Bellevue College. The interviews were semi-structured to allow for elaboration by participants. The interviews were conducted via Zoom and recorded using a Zoom recording feature which was secured through a single, cloud software encrypted for security and confidentiality. Each interview lasted approximately 60 minutes. After the interviews, participants received a "Thank You" email (see [Appendix C](#)).

Snapshot of the Interview Guide

Here is a high-level snapshot of the interview questions from the interview guide that maps to the research questions and the theoretical framework adapted from Stark and Lattuca (2009). — The interview questions are aligned to the six key components from the theoretical framework comprising *external influences*, *internal influences*, *program environment*, *student outcomes*, *final outcomes (mission)* and *evaluation and adjustments*. The 'lessons learned' interview question is aligned to the last research question and encompasses the experiences and learnings of participants along with other components of the framework.

Research Question	Interview Questions **
RQ1. To what extent have BAS programs impacted student outcomes aligned with the BAS mission: completion, employment, enrollment, and diversity?	OUTCOMES AND MISSION 1.1 To what extent do BAS degrees at BC reflect their mission/goals? 1.2 To what extent have BAS programs impacted student outcomes such as completion, employment, enrollment, and diversity?
RQ2. What are administrator and faculty perceptions of the internal and external factors that have influenced the development and/or sustainability of BAS programs?	INSTITUTIONAL INFLUENCES AND PROGRAM ENVIRONMENT 2.1 To what extent do institutional factors influence the development and/or sustainability of BAS programs at BC? (Governance, Resources, Capacity, Program environment) UNIT LEVEL INFLUENCES: 2.2 How do faculty roles influence BAS program development and implementation? 2.3 What are the student experiences/perceptions of graduates of BAS programs at Bellevue College? EXTERNAL INFLUENCES: 2.4 How does funding influence the development/sustainability of BAS programs at BC?
RQ3. To what extent have BAS programs undergone evaluation and adjustment to support continuous learning during their life cycle?	EVALUATION AND ADJUSTMENT 3.1 To what extent have BAS programs undergone evaluation and adjustment to support continuous learning during their life cycle?
RQ4. What lessons have been learned about BAS programs that may inform institutional leaders about the viability of such programs?	INSTITUTIONAL AND UNIT LEVEL CHALLENGES 4.1 What are some of the institutional and unit-level challenges around the development and sustainability of BAS programs at BC? LESSONS LEARNED 4.2 What are the lessons learned as a result of evaluation and adjustment that may inform institutional leaders about the viability of BAS programs?

Table 2: Snapshot of interview guide

** The interview guide is available in [Appendix D](#) which is more comprehensive and includes lower-level probing questions under each component of the theoretical framework.

Archival Records

BAS student outcomes data on enrollment, diversity, employment, and completions from SBCTC Websites and Bellevue College Dashboard, were gathered.

The following data instruments were utilized to gather data for quantitative analysis:

- a. SBCTC Websites

(<https://www.sbctc.edu/colleges-staff/research/data-public/default.aspx>)

- b. Bellevue College Dashboard

(<https://tableau.sbctc.edu/t/BC/views/BASenrollmentSEPT2018/ProgramData?%3AisGuestRedirectFromVizportal=y&%3Aembed=y>)

- c. Other internal BC websites (<https://www.bellevuecollege.edu/ibit/degrees/bachelor/>)

Documentation

Several documents and existing literature were analyzed for this viability study. This included historical documents related to BAS development in Washington State community colleges with a deeper understanding of Bellevue College, and program-specific artifacts from BC, such as program evaluation documents, quality improvement documents, existing contracts, dashboards, and the college websites.

Data Analysis

Data Analysis Strategy

Documentation, archival records, and interviews were utilized as sources of evidence for this capstone study. As part of the documentation, BAS historical documents and program-specific documents such as program evaluation documents, quality improvement documents, existing contracts, dashboards, and college websites were also analyzed. Under archival records (quantitative data), student outcomes data about degree completion, enrollment, employment, and diversity were analyzed. Finally, the interview data containing the perception of faculty and administrators of Bellevue College were analyzed.

Yin's (2002) definition of data analysis "...consists of examining, categorizing, tabulating, testing, or otherwise recombining both quantitative and qualitative evidence to address the initial

propositions of a study” (p. 109). While there is no specific order of data analysis recommended by Yin (2018), documentary evidences were collected and analyzed as a first step to understand the evolution of BAS programs at BC, followed by retrieving and analyzing archival records to perform a quantitative analysis of student outcomes, and finally, interviews were conducted to corroborate the findings from the previous steps as well as generate any new finding. Thus, the convergence or triangulation of the data from these three sources together while maintaining a chain of evidence helped in strengthening the construct validity of the case study.

Yin (2018) proposes four general strategies for case study analysis — relying on theoretical propositions, working your data from the “ground up,” developing a case description, and examining plausible rival explanations. He further specifies that the analysis needs to be linked to the study questions or propositions. Triangulation of results from data analysis is required to draw the study’s conclusions. The second method was useful in this study as the theoretical framework (Stark & Lattuca, 2009) is not predictive and does not in itself offer a single, strong proposition regarding the context of BAS programs at Bellevue College. The “ground-up” strategy relies on an inductive approach. The technique is to code the data collected for the case study and look for a suggested pattern, concept, or abstraction of interest. Repeated review and categorization of the data work “up” towards the case study propositions and research study questions. Further, an inductive strategy offers additional promise when the case study utilizes quantitative data since such data can surprisingly offer clues to the emergence of relevant or innovative concepts. After analyzing the documentary evidence and student outcomes data, the focus was to gather qualitative data through administrative and faculty interviews. The interview data was interpreted and analyzed based on themes and patterns, called coding. The goal was to achieve theoretical saturation through interviews. Theoretical saturation is implied when no new or original themes

are presented in subsequent interviews, but the data informs existing themes that have been identified (Milne & Oberle, 2005; Walker, 2012). The evidence from these multiple sources of data was triangulated to confirm and corroborate the findings. Yin (2018) also recommends this strategy for novice researchers who do not have an established research history with the topic.

Data Analysis Matrix

Research Question	Data Source	Collection Methods	Analysis Procedures
RQ1. To what extent have BAS programs impacted student outcomes aligned with the BAS mission: completion, employment, enrollment, and diversity?	Archival records Interviews	1. Student outcomes data from BC dashboard and SBCTC 2. Feedback from administrators and faculty through semi-structured interviews	1. Extract the student outcomes data from the BC dashboard and SBCTC, load it into excel, and calculate the metrics related to completion, enrollment, employment, and diversity. Corroborate the evidence from other sources. 2. Manually transcribe the interview data. Code, categorize and draw themes. Corroborate the evidence from other sources.
RQ2. What are administrator and faculty perceptions of the internal and external factors that have influenced the development and/or sustainability of BAS programs?	Interviews	1. Feedback from administrators and faculty through semi-structured interviews	1. Manually transcribe the interview data. Code, categorize and draw themes. Corroborate the evidence from other sources.
RQ3. To what extent have BAS programs undergone evaluation and adjustment to support continuous learning during their life cycle?	Documents Interviews	1. Analyse program evaluation documents and QI documents 2. Feedback from administrators and faculty through semi-structured interviews	1. Analyze the historical data and program eval/QI data to make inferences. Use specific details to corroborate information from other sources. 2. Manually transcribe the interview data. Code, categorize and draw themes. Corroborate the evidence from other sources.
RQ4. What lessons have been learned about BAS programs that may inform institutional leaders about the viability of such programs?	Documents Interviews	1. Analyse program evaluation documents, QI documents, contracts, dashboards, etc. 2. Feedback from administrators and faculty through semi-structured interviews	1. Analyze the historical data and program eval/QI data to make inferences. Use specific details to corroborate information from other sources. 2. Manually transcribe the interview data. Code, categorize and draw themes. Corroborate the evidence from other sources.

Table 3: Data Analysis Matrix

Data Validation Strategy

The construct validity is the accuracy with which a case study measure reflects the concepts being studied. Triangulation is determining the convergence of the data collected from different sources of evidence to assess the strength of a case study finding and also to boost the construct validity of measures used in the case study (Yin, 2018; Creswell, 2014). The data sources for this case study included interviews with administrators and faculty, archival records about student outcomes data, and several document reviews. To enhance the construct validity and trustworthiness of the data, multiple sources of evidence were utilized for data collection, the aim being to strengthen findings through the convergence or triangulation of the data from two or more of these sources. Triangulation of results from data analysis was required to draw the study's conclusions.

Participant Confidentiality and Data Security

All participants contacted by email (see [Appendix A](#)) included a brief description of the purpose of the study, modalities of the interview process, and analyst contact information. Participants expressed their consent for an interview by responding to this particular email. The individual's choice to participate or not participate in the study was kept confidential. To ensure ethical study practices, all interviews conducted by the analyst for this capstone project used scripts with complete disclosure to study participants. Interviews were recorded using the Zoom recording feature. All data for this study (including interview data and transcripts) were secured through a single, cloud software encrypted for security and confidentiality. The analysis occurred on the analyst's password-protected computer that only the analyst has access to for additional security. Further, participants' names were not used when reporting the results of the evaluation. Each participant was identified with a number (e.g., P1, P2, etc.). Due to certain apprehension

expressed by the partner organization, findings for this work - specifically quotations from participants – are not included for added security and confidentiality. Zoom recordings will be destroyed within six months of completion of the capstone project.

Data Analysis and Triangulation

This section presents the data analysis from documentation, archival records, and interviews; and explains how the evidence was triangulated to strengthen the findings and increase the quality of the case study.

Documentation

Several documents and existing literature were analyzed for this viability study that included historical documents related to BAS development in Washington State community colleges for a deeper understanding of BC, and program-specific artifacts from BC, such as program evaluation documents, quality improvement documents, existing contracts, dashboards, and college websites. Specific details from the documents were used to corroborate and augment evidence from other sources (Yin, 2018). The below sub-sections present the historical development of BAS programs in Washington State and Bellevue College based on existing literature, memos, and documentation of experiences from initial informal interviews conducted with BC leaders.

Developmental Stages of Creating BAS programs in WA and Bellevue College

America's community colleges enroll almost half of the undergraduates in higher education (Floyd & Walker, 2009). Community colleges are geographically accessible, offer open admissions, and are reasonably affordable institutions. As demands for baccalaureate degrees increased, especially in certain high-demand workforce areas, local community colleges started experiencing increased pressures to respond programmatically to meet these needs. The

impetus for the development of BAS degrees in Washington State was two-fold. First, community and technical college presidents, community leaders, and industry partners identified an urgent need for extended pathways for applied associate degree holders. Second, in many cases, Washington State's existing baccalaureate institutions were not able to meet the demand from industry, especially in high-demand and high-growth sectors (Carroll & Glasper, 2018). In 2005, the Washington legislature authorized community and technical colleges to offer BAS degrees through the passage of House Bill 1794, to improve student access to college (Seppanen, Bloomer, & Thompson, 2005). The State Board developed an application process whereby colleges must show adequate employer demand and a regional skills gap, unmet need by other providers in the region, qualified faculty, a curriculum review by a similar university program, and evidence of a conversation with universities regarding pathway opportunities (Carroll & Glasper, 2018). Bellevue College was one of the first four colleges in Washington State authorized by the legislature to offer BAS degrees in an initial pilot in 2005. Bellevue College received funding to help with initial costs such as hiring new faculty, developing curricula, and purchasing needed library and laboratory resources. The steps BC followed are categorized as developmental stages of a new program and provide a historical perspective of how BAS programs developed at BC during the initial pilot phase and subsequently evolved over the years.

Confirming an Unmet Need. To get a specific BAS program approved by the State Board, BC leaders needed to prove that there will be demand for particular kinds of careers and that demand will provide a "middle-class" salary (not fully defined). Faculty and staff at BC initially conducted extensive research to identify and confirm an unmet need in the local workforce. Gathering the labor market and degree production data to demonstrate a supply-demand gap in key industries was instrumental in justifying the expansion of upper-division capacity. This work

included looking into job sites, ascertaining the kinds of jobs that needed a baccalaureate degree and associated salaries, one-on-one conversations, roundtable group discussions, and formal surveys to quantify the need by local employers. The demand ranged from a specific degree needed in a field such as healthcare to a broader management degree. Additionally, it was imperative that filling the gap with a BAS degree would entail building from a professional, technical AAS degree which typically did not transfer to a university under a traditional bachelor's degree.

Fostering University Partnerships. Concern among four-year universities regarding the competition for baccalaureate students and saturation of local labor markets was an obstacle to BAS implementation. The legislation supported a two-by-two degree, where the second half of a baccalaureate degree offered by a community college must be based on an associate degree because universities did not want community colleges competing in that space. To fulfill this need, the BC leaders and organizers made every attempt to engage with university partners to assuage their concerns regarding competition and overproduction of baccalaureate degrees. Gathering the labor market and degree production data to demonstrate a supply-demand gap in key industries was instrumental in justifying the expansion of upper-division capacity. This data helped both university partners, college boards of trustees, and the state legislature understand that applied baccalaureate degrees would add to, as opposed compete with, existing baccalaureate offerings. It also took convincing the University of Washington (UW) that BC will not risk their enrollment, and after a year of deliberation, UW approved/sanctioned the BS Comp Sci. degree at BC, the only four-year bachelor's program under the umbrella of BAS degrees.

Re-evaluating the Mission. Before assuming that BAS was the right answer, the BC senior leaders re-evaluated the community college mission to assure they were not leading BC away

from its core mission. Through their re-evaluation of the mission, the leaders became convinced that these degrees are a critical tool and an extension of the workforce mission that would help BC meet the increasing skill requirements of employers. In the end, the focus of the mission became less upon the words “2 years,” and more on “comprehensive community college.”

Securing Buy-in from the College System. With a local need identified and a commitment to the college mission reconfirmed, BC leaders worked to secure buy-in from their peers within the state college system. This work resulted in further conversation about the role of the community college mission with other presidents who had not previously considered a bachelor’s degree on their own campuses. As a result of these conversations, the community college system determined the degrees could be part of a comprehensive legislative request package because they fit the needs of some of the colleges across the state.

Gaining Legal Approval. After receiving system support, the BC leaders moved their attention to gaining approval from the legislature and other governing bodies. This approval required extensive communication throughout the state to build the case for the BAS degree. In 2005, the legislature passed House Bill 1794 authorizing BAS degrees at community and technical colleges and granting authority to the State Board to approve the offering of these degrees. As a next step, the State Board was asked by the legislature to convene a task force of representatives from the community and technical college system to develop an objective and rigorous application process. The State Board developed an application process whereby colleges must show adequate employer demand and a regional skills gap, unmet need by other providers in the region, qualified faculty, a curriculum review by a similar university program, and evidence of a conversation with universities regarding pathway opportunities. Throughout the process, BC leaders remained committed to securing the degrees to serve their local communities.

Designing the Degree. With legislative approval in hand, the college faculty and staff were brought into the endeavor by the BC president to conceptualize and design a local BAS. In addition to expanding the scope of their professional experiences, this process also allowed employees to rethink the college mission as it related to their own work and their role in serving the community. According to Stark and Lattuca (2009), college missions are external influences and higher education must make adaptive responses to such external influences. The ease of this conversation on the BC campus and the degree to which it was embraced by employees was remarkable. This effort sparked enthusiasm and support across the college.

Approving the Pilot Program. The initial selection process required colleges to submit an application to SBCTC by January 2006 (SBCTC, 2005). Six colleges submitted applications. SBCTC convened an evaluation committee with representation from community college presidents, instruction, student services, business administration, SBCTC staff, universities offering applied bachelor's degrees; and a workforce representative (SBCTC, 2006). Colleges detailed the logistics of the degree and proved they could create a baccalaureate-level degree without harming other elements of the college. The committee identified four colleges with the strongest proposals and recommended that they be selected for the pilot program: Bellevue Community College, Olympic College, Peninsula College, and South Seattle Community College. These four colleges applied for and received approval from the HECB in July 2006. Once approved, pilot colleges began program development and made applications to the NWCCU for accreditation approval as baccalaureate granting institutions. A similar process followed after the 2008 legislature authorized the selection of three additional pilot programs. The BAS degree in Radiation and Imaging Sciences at Bellevue College was approved on July

26, 2006, and Bachelor of Applied Arts in Interior Design at Bellevue College was approved on July 28, 2009.

Developing the Curriculum. The faculty took the lead in designing baccalaureate-level curriculum for their specific degree. These degrees built upon existing associate degree-level curriculum, and subsequently the faculty conducted extensive work to shape the upper-division courses. Some academic leaders at BC recalled taking steps to assure the curriculum was above reproach in terms of accreditation standards. The faculty infused research, application of knowledge, and high-level critical thinking into the curriculum.

Designing a Student Services Model. BC needed to come up with a viable student services plan that would not be simply a replication of what was already available on campus. They needed to have additional services for BAS and demonstrate that to the State Board. The faculty and student services staff worked collaboratively to design a comprehensive student services model. In the beginning of this process, much of this work was done at BC by the instructional unit of the college. This collaboration required BC employees in the instructional and student services departments to work closely in order to assure students that they were supported throughout, and state and federal policies were followed. It is worthwhile to note that some leaders were unsure if the model currently in place was effectively supporting multiple BAS degrees.

Equipping the Library, Technology, Labs, Equipment. Bellevue College needed to invest funding to procure resources towards technology, library, lab equipment, and additional staff for supporting the newly formed BAS degrees.

Developing Budget and Monitoring Mechanisms. The vice presidents (VPs) of administrative services designed a budget allocation model and monitoring mechanisms to assure these degrees were financially sound. The VPs set up procedures to track the varying tuition levels and pay

rates for faculty. They believed that the BAS should be viewed as a flagship program, requiring foolproof tracking mechanisms. While these initial degrees came with additional funding, the financial model underwent some changes. When BAS programs were launched in BC, they were on a self-support model and tuition was high. Subsequently, due to an organizational change, the interim senior leadership was not happy with the current model and they converted BAS programs from self-support to state-support as they thought it was a better financial model. However, some BAS programs underwent a severe financial hit during the transition from self-support to state support; program leaders did not like this model and preferred to go back to self-support because they could charge more tuition which will enable them to be more creative in recruiting for those programs. It is still unknown if BAS programs are really succeeding under a state support model although the total FTEs across the 19 programs have increased significantly over the years.

Continuing to monitor unmet community needs. Once the first degrees were successfully operational, BC presidents and faculty leaders continued to monitor the need in the community for future degrees. Over the last 10 years, the BAS programs at BC have expanded into other domain areas such as Arts and Humanities, Business and Information Technology, and Sciences, offering a total of 19 BAS degrees across multiple concentrations; new programs are being added periodically to meet workforce needs. BAS leaders continue to insist that these future degrees retain their high quality and do not just become trumped-up associate degrees. The proven success of the first BAS degrees allowed them to offer additional degrees.

While a lot of documentation speaks about the historical development of BAS degrees in Bellevue College and the robust procedures followed from the pre-envisioning stage to program delivery, it is unclear if all the new BAS degrees are meeting the market demands and serving

the needs of the community. The program evaluation documents point to some successes and challenges for different BAS programs; it appears that BAS programs are selectively meeting the program mission and the student outcomes vary by individual programs.

Archival Records

BAS student outcomes data on enrollment, diversity, employment, and completions were gathered from Bellevue College Dashboard and SBCTC Websites. The quantitative data was utilized extensively to answer the first research question:

RQ1. To what extent have BAS programs impacted student outcomes aligned with the BAS mission: completion, employment, enrollment, and diversity?

To answer this question, I gathered completion, enrollment, and diversity data from the Bellevue College internal dashboard, and employment data from the SBCTC website that tracks the after-college outcomes for professional/technical students. To understand the extent to which the BAS programs have impacted student outcomes aligned with the BAS mission, this question was further decomposed into lower-level questions focused on completion, employment, enrollment, and diversity outcomes as below:

Outcomes/ Questions	Completion	Enrollment	Employment	Diversity
	RQ1 a. To what extent have BAS programs met Completion goals?	RQ1 b. To what extent have BAS programs met Enrollment goals?	RQ1 c. To what extent have BAS programs met Employment goals?	RQ1 d. To what extent have BAS programs met Diversity goals?
I	What is the overall Completion Rate for students entering BAS Programs (2010-11 to 2017-18)	What is the enrollment distribution of students across different BAS program at BC in the last three years (2017-18 to 2019-20)?	What are the average earnings of BAS graduates, 1 year and 4 years after graduation by industry sector, and growth in earnings?	What is the student demographic characteristic (race, gender, average age) of BAS program enrollments since inception (2007-08 to 2019-20)?
II	What is the Completion Rate for students entering BAS Programs in most recent three years (2015-16 to 2017-18)	How have BAS program enrollments changed over time in the last five years?	What is the difference in earnings between BAS and AAS graduates by industry sector?	

Table 4: Student outcomes second level questions

Completion

RQ1 a. To what extent have BAS programs met Completion goals?

Tracking completion rates for students in BAS programs is difficult since graduation cycles are different across student demographics. In certain programs, there are more part-time students, working adults, family dependencies, etc. and those students typically take fewer classes per term and longer time to graduate. In other programs, students may enroll in large numbers at the beginning of the program, but that number may decrease as some students may drop out due to their family circumstances, and perhaps restart at a later time. Since many students graduate at part-time rates, and some students progress more quickly, on average we can expect students to graduate between 1-3 years of enrolling into a BAS program, although this number could significantly vary between programs. The completion data was gathered from the Bellevue College BAS dashboard which summarizes the annual new admissions and graduations by academic year. Some of the Healthcare BAS degree concentrations were merged or split to form new degrees over the years. These numbers have been adjusted to reflect the data as accurately as possible.

I. What is the average Completion Rate for students entering BAS Programs (2010-11 to 2017-18)?

Students enrolling into BAS programs in the years ranging from 2010-11 to 2017-18 were considered. Since on average, BAS students are expected to graduate between 1-3 years, the graduation academic years post two years of enrollment until 2019-2020 were used.

A Viability Study of BAS Programs at Bellevue College

Disciplines	Program	Average Completion Rate for Students Entering BAS Programs (2010-11 to 2017-18)			
		Enrolled	Completed	% Completed	% Completed by Discipline
		Enrollment academic year: 2010-11 to 2017-18			
		Completion academic year: 2012-13 to 2019-20			
A & H	Interior Design	335	280	83.6%	83.6%
HSEWI	Health and Wellness	20	16	80.0%	
	Healthcare Informatics +HCTM	109	81	74.3%	
	Healthcare Mgt. Leadership	70	41	58.6%	
	Nursing	120	108	90.0%	
	Radiation Imaging Sciences	159	89	56.0%	
IBIT	Applied Accounting	92	60	65.2%	68.5%
	Data Analytics	103	64	62.1%	
	Digital Marketing	29	20	69.0%	
	Information Systems	217	158	72.8%	
Science	Computer Science	33	33	100.0%	100.0%
	Molecular Biosciences	12	12	100.0%	
	Total	1299	962	74.1%	

Table 5: Average Completion Rate for students between 2012 to 2020

II. What is the Completion Rate for students entering BAS Programs in the most recent three years (2015-16 to 2017-18)?

Students who enrolled in BAS programs in the years ranging from 2015-16 to 2017-18 and completed two years post-enrollment until 2019-2020 were considered.

Disciplines	Program	Average Completion Rate for Students Entering BAS Programs in Most Recent 3 Years (2015-16 to 2017-18)			
		Enrolled	Completed	% Completed	% Completed by Discipline
		Enrollment academic year: 2015-16 to 2017-18			
		Completion academic year: 2017-18 to 2019-20			
A & H	Interior Design	121	113	93.4%	63.2%
HSEWI	Health and Wellness	20	16	80.0%	
	Healthcare Informatics +HCTM	49	31	63.3%	
	Healthcare Mgt. Leadership	70	41	58.6%	
	Nursing	80	73	91.3%	
	Radiation Imaging Sciences	83	30	36.1%	
IBIT	Applied Accounting	92	60	65.2%	68.8%
	Data Analytics	85	48	56.5%	
	Digital Marketing	29	20	69.0%	
	Information Systems	166	128	77.1%	
Science	Computer Science	33	33	100.0%	100.0%
	Molecular Biosciences	12	12	100.0%	
	Total	840	605	72.0%	

Table 6: Average Completion Rate for students between 2017 to 2020

Analysis:

Considering the overall completion data across all BAS programs, we observe that students who enrolled in BAS programs between 2010-11 and 2017-18 academic years have completed their programs on an average at the rate of 84% in Interior Design, 70% in HSEWI, 69% in IBIT, and 100% in Sciences Division, with an overall average completion rate of 74%. This data shows that students in Interior Design, Nursing, Computer Science, and Molecular Biosciences programs are completing at a higher rate compared to other programs. For other programs, an average of 60-70% completion rate is rather consistent with our expectations from BAS programs. BAS programs consist of mostly non-traditional students such as part-time students, full-time working adults, place bound individuals, etc. Some students want to finish quickly while others are on an extended plan and take only one class per quarter; there is a constant inflow and outflow of students. With most students on different graduation cycles due to the flexibilities afforded in BAS programs, an overall completion rate of 74% by program area and discipline is higher than the average completion rate of students in BAS programs across community colleges in Washington State which is ~65% (Soler, 2020). For Interior Design, IBIT, and Sciences, the overall completion rate beginning in 2012 is almost consistent with the completion rate for the most recent three years. These program areas demonstrate a consistent pattern of completion from the beginning to the most recent data collection, with more than two-thirds of students completing BAS degree programs. For the Interior Design program, there is a ~10% difference in the overall completion rate at 83.6% compared to the completion rate of 93.4% for the last three years. The reasons for the positive difference in the completion rate are not clear from the data, but it is speculated that the completion rate may be improving because of investment in various student retention initiatives that have resulted in lesser attrition in the last

five years. For Health Sciences programs, the completion rate in the most recent three years shows a dip compared to the completion rate in the eight years' time period, which may be attributable to several adjustments that these programs have undergone over the years especially in Radiation Imaging Sciences (RAIS). When a separate BAS degree was created in the area of healthcare management starting in 2012, the RAIS program shifted to offering only radiation and imaging specialties and subspecialties. This evolution created a challenging and fragmented dynamic in order to offer the varied coursework and educational goals desired by the community (i.e., courses, certificates, bachelor's degree) at acceptable fill rates in classes for the college to manage budgetary needs. Further, it was difficult to document "completion" rates from the student perspective as many students only needed 1-3 courses to pass a credentialing exam in RAIS. The Academic Plan Model suggests that student outcomes cannot be measured in isolation without considering the program environment in which the academic plan is embedded. Thus, it is important to keep the environmental changes and other qualitative factors in mind while evaluating student outcomes (Stark & Lattuca, 2009). The BAS Computer Science, Molecular Biosciences, and some of the IBIT programs are relatively new, so, there is not much difference between the two sets of data.

Enrollment

RQ1 b. To what extent have BAS programs met Enrollment goals?

The enrollment data was gathered from the Bellevue College BAS dashboard.

- I. What is the enrollment distribution of students across different BAS programs at BC in the last three years (2017-18 to 2019-20)?**

Disciplines	Program	BAS Enrollment rate of students in most recent 3 years Enrollment academic year: 2017-18 to 2019-20		
		# of Enrolled Students	Enrollment % By Program area	Enrollment % By Discipline area
A & H	Interior Design	174	13.9%	13.9%
HSEWI	Health and Wellness	27	2.2%	29.3%
	Healthcare Informatics	43	3.4%	
	Healthcare Mgt. Leadership	99	7.9%	
	Nursing	97	7.7%	
	Radiation Imaging Sciences	101	8.1%	
IBIT	Applied Accounting	128	10.2%	42.8%
	Data Analytics	103	8.2%	
	Digital Marketing	129	10.3%	
	Information Systems	176	14.0%	
Science	Computer Science	127	10.1%	14.0%
	Molecular Biosciences	49	3.9%	

Table 7: Enrollment Distribution for students in most recent 3 years by BAS division

II. How have BAS program enrollments changed over time in the last five years?

Interior Design:

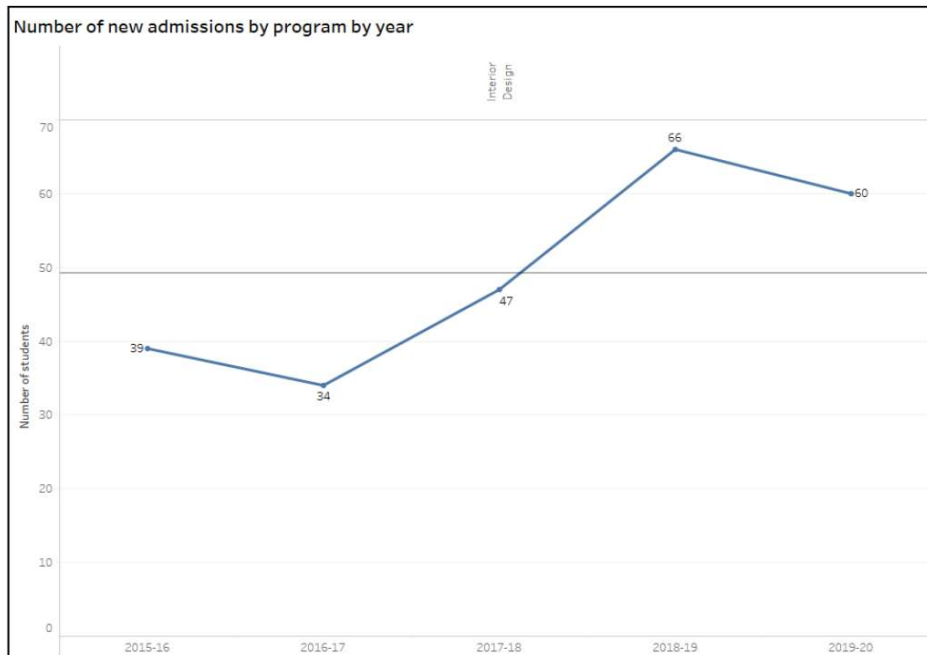


Figure 3: Enrollment distribution for Interior Design in last 5 years

Health Sciences:

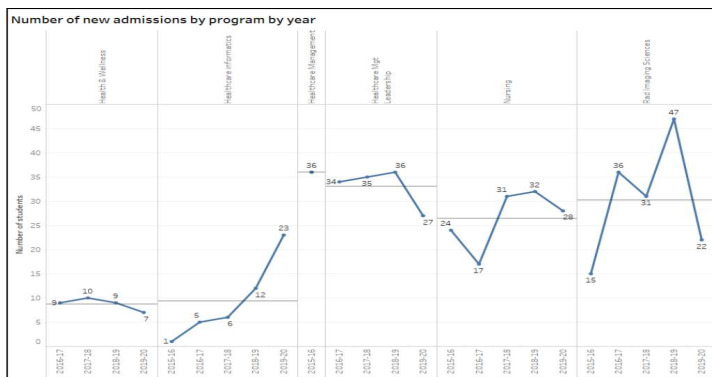


Figure 4: Enrollment distribution for Health Sciences in last 5 years

IBIT:

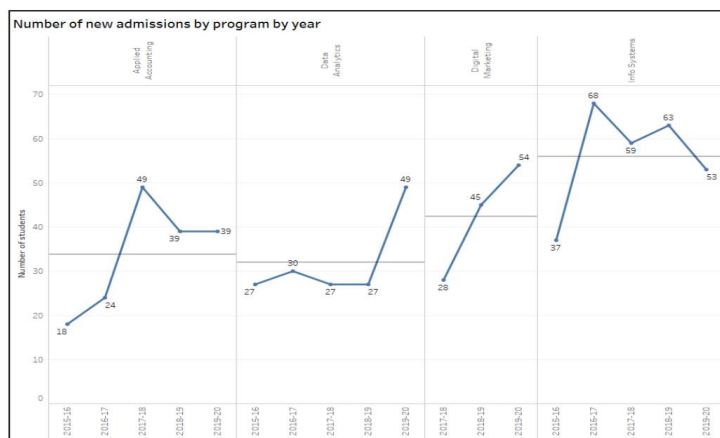


Figure 5: Enrollment distribution for IBIT in last 5 years

Sciences:

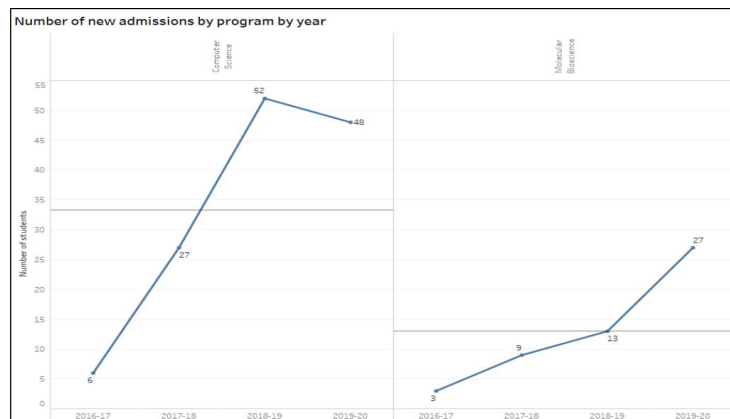


Figure 6: Enrollment distribution for Sciences in last 5 years

Analysis:

Based on a quick analysis of the enrollment distribution of students across different BAS program at BC in the last three years (2017-18 to 2019-20), the following can be inferred:

- IBIT and Health Sciences make up 72% of the total enrollment across all BAS programs. This is not surprising since 9 out of the 12 BAS programs belong to these two domains.
- The BAS programs high in enrollment (>10% of overall enrollment) include Interior Design, most of the IBIT programs, and Computer Science. This is consistent with the notion that Business and Technology programs are critical to communities' growth and have a high market demand. The Interior Design program at Bellevue College is widely recognized as a regional center of excellence in interior design education. The program is perceived to be highly successful and there is evidence of a strong positive impact on employment. Moreover, there are not a lot of Interior Design programs in the Greater Seattle area, especially not affordable ones, therefore the BAA in Interior Design has been one of the most sought-after programs within the Bellevue community and students graduating from the program are filling a niche. Thus, it is not surprising that Interior Design attracts many students.
- The BAS programs low in enrollment (<5% of overall enrollment) include Health and Wellness (H&W), Healthcare Informatics (HCI), and Molecular Biosciences (MBS). This shows that these programs are undergoing some struggles. H&W and MBS are relatively newer programs; there may not be enough marketing of these programs. Further, awareness about these programs amongst students and the parent community may be limited. HCI is a booming high-demand field, however, it hit some barriers during its developmental years when some of the BAS degree concentrations in Healthcare merged

and split to form new degrees. HCI went through extensive changes in curriculum over the first five years of the program and became an independent degree in 2016. It also sustained a severe financial hit in 2017 by the switching of self-support to state-support model. Due to all these barriers, it is imperative that this program probably went through some rough patches in terms of enrollment.

Trend Analysis:

The enrollment trend in the last five years shows a positive trajectory for some of the Health Sciences & IBIT programs, Interior Design and Sciences programs. The low enrolled programs like HCI and Molecular Biosciences are showing an increasing trend in enrollment which suggests that their performance is improving, and they may thrive with marketing support and resources. H&W is struggling with declining enrollment along with very low numbers and needs a hard look. Some of the other strong programs show an increase in enrollment until 2019 and then decreasing in 2020, which could be due to the impact of the COVID-19 pandemic.

Employment

RQ1 c. To what extent have BAS programs met Employment goals?

Bellevue College does not have a consistent way of tracking employment data and each program has established its own processes of tracking graduates through various modalities such a survey, LinkedIn, personal connections, and other informal ways. While a lot of anecdotal evidence exists for students getting placed in esteemed organizations and meeting the employment demands, there is no dashboard available from BC to track the placement or earning numbers. However, through SBCTC, the Baccalaureate Leadership Council (BLC) has created a survey to find out employment outcomes of graduates in all of the BAS programs across the state and Bellevue participated in the survey. The survey results have been used by the Research

component of the SBCTC to publish a couple of papers on after-college outcomes for BAS students, and the indication was that six months out many students were receiving jobs in their fields. This employment data is gathered from the SBCTC that tracks annual wage and employment data for “exiting” professional/technical students. A link to the Education Research and Data Center (ERDC) “Earnings for Graduates” dashboard is also included (<https://erdc.wa.gov/data-dashboards/earnings-for-graduates>) where statewide median earnings by college, major, and industry are available.

- I. What are the average earnings of BAS graduates, one year and four years after graduation by industry sector, and growth in earnings?

Disciplines	Program	Industry	Median earnings 1 year after graduation	Median earnings 4 years after graduation	Growth in earnings
A & H	Interior Design	Visual and Performing Arts	\$ 41,900	\$ 58,600	39.9%
HSEWI	Health and Wellness	Health professions and related programs	\$ 92,700	\$ 104,000	12.2%
	Healthcare Informatics				
	Healthcare Mgt. Leadership				
	Nursing				
	Radiation Imaging Sciences				
IBIT	Applied Accounting	Computer and Information Sciences and Support Services	\$ 57,900	\$ 72,375	25%
	Data Analytics				
	Digital Marketing				
	Information Systems				
Science	Computer Science				
	Molecular Biosciences				

Table 8: Median earnings of BAS graduates 1 year and 4 years after graduation by industry sector

II. What is the difference in earnings between BAS and AAS graduates by industry sector?

Disciplines	Program	Industry sector	AAS	BAS	Difference in earnings
A & H	Interior Design	Visual and Performing Arts	\$ 33,900.0	\$ 41,900.0	\$ 8,000.0
HSEWI	Health and Wellness	Health professions and related programs	\$ 62,700.0	\$ 92,700.0	\$ 30,000.0
	Healthcare Informatics				
	Healthcare Mgt. Leadership				
	Nursing				
	Radiation Imaging Sciences				
IBIT	Applied Accounting	Computer and Information Sciences and Support Services	\$ 45,400.0	\$ 57,900.0	\$ 12,500.0
	Data Analytics				
	Digital Marketing				
	Information Systems				
Science	Computer Science				
	Molecular Biosciences				

Table 9: Difference in earnings between BAS and AAS graduates by industry sector

Analysis:

There have been several studies done by SBCTC and other researchers on employment outcomes for graduates of Washington State’s Applied Baccalaureate degree programs, effect on earnings for BAS degrees (Cominole, 2017; Kaikkonen & Quarles, 2018) as well the post-program earnings differences between the Associate in Applied Science and Applied Baccalaureate degrees (SBCTC, 2015). The key policy goals of the BAS degree in Washington State are to increase educational attainment for students and meet employer demand. The two are linked concepts, in that if students are not able to secure employment at a living wage following degree completion, then the program may not be viable. From the data, it is clear that the students completing BAS degrees are earning higher pay compared to their AAS counterparts, although the amount of earnings varies by degree and program. It appears that Health Sciences are paying higher starting salaries for BAS programs compared to other programs, although

within Health Sciences the salary levels may vary by individual programs. The starting salary in the Computer and Information Sciences and Support services appears low, but this could be because it is a median salary that has combined multiple individuals' programs. For Health Sciences and Interior Design, it is clear that there is a growth in earnings between the initial year of employment and over years, and on average, it is about 25% growth for BAS programs between Year 1 and Year 4, although the individual growth rate may vary across specific programs. The growth rate of 25% for Computer and Information Sciences is an indicative number based on available data from other Washington State community colleges released by SBCTC (Kaikonen, 2017) since these programs are relatively newer in BC, and the employment trajectory of BC graduates and their earnings are not known at this point.

Diversity

RQ1 d. To what extent have BAS programs met Diversity goals (improving equity in educational access and increasing diversity)?

According to SBCTC, student diversity in applied baccalaureate programs across Washington State community colleges continues to increase each year (SBCTC, 2015), and there is a perception that the same trend may exist for BAS programs at Bellevue College, although this can only be confirmed from the data. For this study, the student demographics data is gathered from the Bellevue College BAS dashboard, and the analysis is done on the overall diversity characteristics of students enrolled across BAS programs since inception, and not the demographic trends of graduates of BAS degrees.

I. What is the student demographic characteristic (race, gender, average age) of BAS program enrollments since inception (2007-08 to 2019-20)?

a) Demographic characteristics across all BAS programs

Demographic Characteristic	BAS Students	% distribution by Student
African American	96	4.3%
Asian	537	23.9%
LatinX	182	8.1%
White	1090	48.4%
Multi-racial/Others	345	15.3%
Female	1415	63%
Average age	31.1	

Table 10: Student demographic characteristics across all BAS programs

b) Demographic characteristics by BAS discipline area

Disciplines	Demographics	Student Demographic characteristics (Race, Gender, Average Age) during enrollment Enrollment academic year: 2007-08 to 2019-20	
		BAS Students	Enrollment %
Interior Design	African American	6	1.2%
	Asian	137	26.7%
	LatinX	40	7.8%
	White	278	54.2%
	Multi-racial/Others	52	10.1%
	Female	437	85.2%
	Average age	30.4	
HSEWI	African American	41	5.4%
	Asian	144	19.1%
	LatinX	60	8.0%
	White	384	51.0%
	Multi-racial/Others	124	16.5%
	Female	537	71.3%
IBIT	African American	40	5.0%
	Asian	211	26.4%
	LatinX	70	8.8%
	White	356	44.6%
	Multi-racial/Others	122	15.3%
	Female	368	46.1%
	Average age	29.4	
Science	African American	9	4.9%
	Asian	45	24.3%
	LatinX	12	6.5%
	White	72	38.9%
	Multi-racial/Others	47	25.4%
	Female	73	39.5%
Average age	26.6		

Table 11: Student demographic characteristics by BAS discipline area

Analysis:

BAS programs are designed to provide opportunities and flexibility to students from diverse backgrounds who seek a pathway to a bachelor's degree – women, students of color, place-bound individuals, part-time workers, adult learners, etc. Thus, it is a natural expectation for BAS students to meet the diversity outcomes related to race/ethnicity, gender, and age. According to the Stark and Lattuca (2009), when analyzing the students' influences (unit-level) on academic planning it is important to consider their demographic characteristics such as race, gender, and age. The student demographics data for BAS program enrollments across the board and in specific program areas since inception was analyzed along three dimensions – race/ethnicity, gender, and age.

Race/ethnicity: White and Asian students constitute 72% of the overall student demographics across all BAS programs, which is representative of the Bellevue community. The African American students constitute <5% of the overall student population which is representative of the African American student population in BAS programs across all community colleges in the State (Soler & Bragg, 2016). At a BAS discipline level, the Interior Design program seems to have the highest number of white and Asian students and lowest number of African American students, and thus the least racially diverse. The IBIT and Sciences programs seem to be more racially diverse than other programs with a relatively high percentage of students of color in both the BAS discipline areas. Asian students are significantly more likely to graduate with a BAS degree in a STEM area.

Gender: According to the data, female students represent 63% of the overall BAS student population in Bellevue College which suggests that BAS programs, in general, represent a good

level of gender diversity. Interior Design and Health Sciences are highly gendered and diverse, with women representing 85% of the total students in Interior Design, and 71% of the total students in Health Sciences. The percentage of women in IBIT and Sciences BAS programs is below 50% which is low and confirms the underrepresentation of women in Business and STEM areas across the board in the state. Lack of diversity and specifically, gender diversity, is one of the key problems that both technology companies and academia are facing these days. Moreover, recent studies show that the number of female students enrolled in science, technology, engineering, and mathematics (STEM) related disciplines have been decreasing in the last twenty years (Botella, Rueda, Lopez, & Marzal, 2019). One of the researches on STEM BAS programs conducted by SBCTC in 2020 shows that women complete degrees at nearly the same rate as men but female enrollments lag behind state and national statistics for STEM education. More closely reflecting national trends, the research shows disparities in enrollment and completion trends for students of color compared to white and Asian students, although STEM BAS enrollees are more diverse than STEM enrollees in universities (Meza, 2020). Based on this analysis, the diversity outcomes of BAS programs in BC confirm the general diversity trend observed in similar BAS programs across the state community colleges.

Age Groups: One of the key missions of the BAS programs is to provide opportunities and services that meet the diverse and changing needs of the community it serves. These programs are meant to provide access to a workforce-focused population “comprised of a large portion of people of color, older working adults and people (women) who are place-bound with family responsibilities” (SBCTC, 2018). The average age of students across all BAS programs at BC is 31 years and ~75% of overall students represent age 30 years or above. It is observed, however, that the average age of students in IBIT and Sciences programs is lower (<30 years) compared to

Health Sciences and Interior Design programs. This is consistent with the findings in a BAS research by SBCTC where students enrolling into STEM areas tend to be male, veterans, not African American or Latinx, not parents, and younger than students in the BAS program areas of Business and Healthcare (Meza, 2020). These results suggest a more traditional student profile for STEM BAS programs than other BAS programs of study, and it is important to recognize that continued enrollment growth in STEM may shift the overall demographics of BAS programs in Washington State. In effect, Washington's CTCs may see a decline in the diversity of the overall BAS student population if STEM enrollments continue to grow while other program areas grow more slowly, level off, or decline (Meza, 2020).

Interviews

Interviews are one of the most important sources of case study evidence (Yin, 2018). "Interviews are generally used in conducting qualitative research, in which the researcher is interested in collecting 'facts,' or gaining insights into or understanding of opinions, attitudes, experiences, processes, behaviors, or predictions" (Rowley, 2012, p. 261). Whether the participants know it or not, they have the knowledge, insight, and life experiences necessary to inform this capstone study based on their life experiences. Merriam (2009) zeroes in on the following aspects of interviews: types, asking good questions, questions to avoid, probes, the interview guide, beginning the interview, the interaction between interviewee and respondent, recording and evaluating the interview data. Although one will be pursuing a consistent line of inquiry, the actual stream of questions in a case study interview is likely to be fluid rather than rigid (Rubin & Rubin, 2011). According to Yin (2018) case study interviews could be prolonged taking greater than two hours or more focused, taking about an hour. While the longer interviews may be more conversational, the shorter case study interviews may remain open-ended and

assume a conversational manner, but the researcher is likely to follow a case study protocol to support a semi-structured format (Yin, 2018). While a reasonable approach is to corroborate interview data with information from other sources, it is possible in a case study research that the analyst may be directly interested in an interviewee's personal views (e.g., opinions, attitudes, and meanings), including the interviewee's perspective in explaining behavioral events. As a result, corroborating these views against other sources may not be relevant. However, one might still want to corroborate an interviewee's stated views by asking about them in more than one way and hope to receive a consistent set of responses (Yin, 2018).

In this capstone project, semi-structured interviews lasting about an hour were conducted with faculty and administrators of Bellevue College. The individuals interviewed were selected based on their professional role and involvement with BAS programs at Bellevue College. The profile of these leaders included program managers, program chairs, faculty members, dean, and other senior administrators, etc. who have direct experience with BAS planning and/or implementation in the college. The interview data was interpreted and analyzed based on themes and patterns, called coding. The goal was to achieve theoretical saturation through interviews; theoretical saturation is implied when no new or original themes are presented in subsequent interviews, but the data informs existing themes that have been identified (Milne & Oberle, 2005; Walker, 2012). The original plan was to interview seventeen individuals, but due to various constraints and availability of participants, only fourteen individuals were interviewed, out of which two participants dropped out from the study.

The following background information was collected from interviewees:

Question	Question Type
Please describe your position at Bellevue College (BC). Probe: How long have you been with BC and what is your position? Probe: How long in this position? Probe: Were you in this position before BC offering BAS degrees?	Background

Probe: Were you in this position during the time BC transitioned into a 4-year college?	
Please state your level of involvement with the BAS programs.	Background
Have you worked at other educational institutions, and if so, was it a community college or four-year institution or both?	Background

Table 12: Interview background information framework

The BAS Interview guide was semi-structured to solicit responses for the research questions across four broad categories aligned with the Stark and Lattuca (2009) framework - student outcomes/mission, stakeholder perceptions of internal and external factors that have influenced the BAS programs, evaluation and adjustment, and lessons learned. The high-level interview questions* are specified in the table below and detailed probes can be seen in Appendix D. Interview questions are designed and influenced by the key components of the “Academic Plan Model” by Stark and Lattuca (2009).

Research Questions	Interview Questions *
RQ1. To what extent have BAS programs impacted student outcomes aligned with the BAS mission: completion, employment, enrollment, and diversity?	<p>OUTCOMES AND MISSION</p> <p>I.1 To what extent BAS degrees at BC reflect their mission/goals?</p> <p>I.2 To what extent have BAS programs impacted student outcomes such as completion, employment, enrollment, and diversity?</p>
RQ2. What are administrator and faculty perceptions of the internal and external factors that have influenced the development and/or sustainability of BAS programs?	<p>INSTITUTIONAL INFLUENCES AND PROGRAM ENVIRONMENT</p> <p>2.1 To what extent have institutional factors influenced the development and/or sustainability of BAS programs at BC? (Governance, Resources, Capacity, Program environment)</p> <p>UNIT LEVEL INFLUENCES:</p> <p>2.2 How do faculty roles influence BAS program development and implementation?</p> <p>2.3 What are the student experiences/perception of graduates of BAS programs at Bellevue College?</p> <p>EXTERNAL INFLUENCES:</p> <p>2.4 How does funding influence the development/sustainability of BAS programs at BC?</p>
RQ3. To what extent have BAS programs undergone evaluation and adjustment to support continuous learning during their life cycle?	<p>EVALUATION AND ADJUSTMENT</p> <p>3.1 To what extent have BAS programs undergone evaluation and adjustment to support continuous learning during their life cycle?</p>

RQ4. What lessons have been learned about BAS programs that may inform institutional leaders about the viability of such programs?	INSTITUTIONAL AND UNIT LEVEL CHALLENGES 4.1 What are some of the institutional and unit-level challenges around the development and sustainability of BAS programs at BC? LESSONS LEARNED 4.2 What are the lessons learned as a result of evaluation and adjustment that may inform institutional leaders about the viability of BAS programs?
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Table 13: High level interview questions from interview guide

Coding Process:

A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data (Saldaña, 2009). After interviewing the twelve participants, I manually transcribed the interviews and used a structured coding process to come up with several different themes aligned with the theoretical framework and research questions. To increase the credibility of the process, I listened to each interview twice and then began curating a list of key themes, patterns, and recurrent words which were emergent. I used two rounds of the coding process – in the first-round I generated the preliminary codes and utilized a second-round to further combine some of the preliminary codes to come up with the final list of codes.

According to Saldaña (2009), coding is a cyclical act. Rarely is the first cycle of coding data perfectly attempted. The second cycle (and possibly more cycles) of re-coding further manages, filters, highlights, and focuses the salient features of the qualitative data record for generating categories, themes, and concepts, grasping the meaning, and/or building theory. I created a template for each interviewee that mapped the top-level interview question, concept area, and the raw interview data with preliminary codes and the final codes (Refer to Appendix F for Concept to Codes mapping). A mix of descriptive and structured coding was used because they are more suitable for interview transcripts than other data gathering protocols (Saldaña, 2009). After the coding process, I created a separate concept matrix template that included the research questions, top-level interview questions, concept area, and a consolidation of all the

final codes against the concept area. Three additional columns - categories, sub-themes, and themes were included in the concept matrix. The similarly coded data were organized and grouped into categories because they shared similar characteristics. Finally, I analyzed the different categories from each concept area to identify patterns and attribute meaning to the data.

Themes

A theme is an outcome of coding, categorization, and analytic reflection, not something that is, in itself, coded. It is a phrase or sentence that identifies what a unit of data is about and/or what it means (Saldaña, 2009). Other researchers have defined a “theme” as an abstract entity that brings meaning and identity to a recurrent [patterned] experience and its variant manifestations. As such, a theme captures and unifies the nature or basis of the experience into a meaningful whole (DeSantis & Ugarriza, 2000).

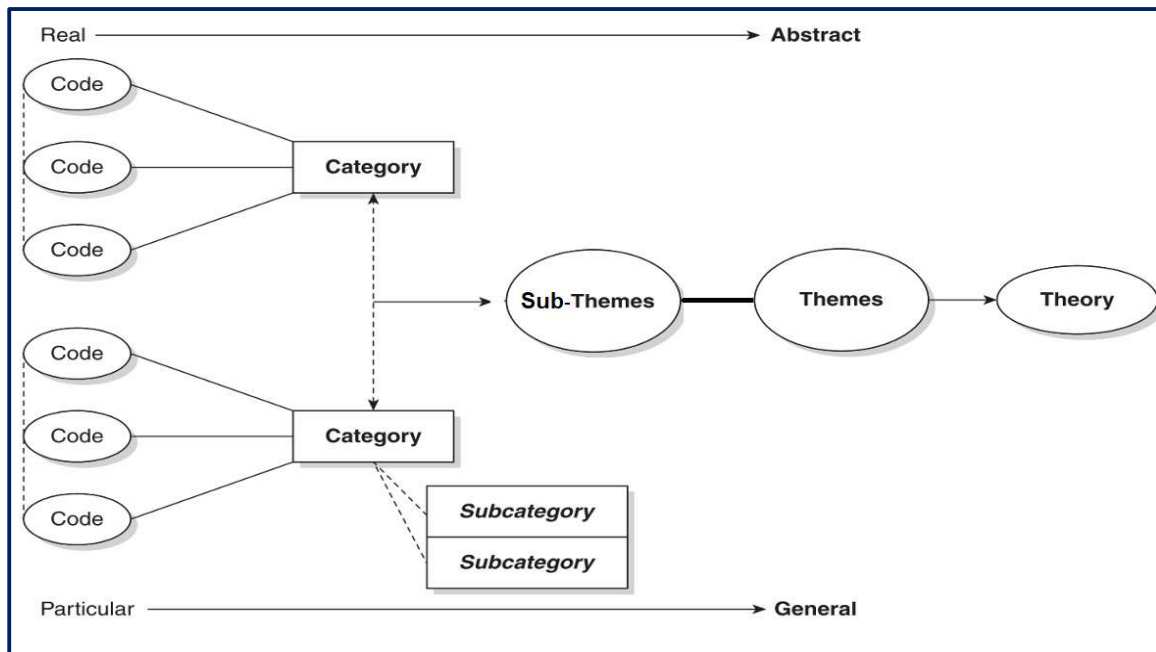


Figure 7: Coding and Theming process adapted from Saldaña (2009)

Case study research techniques generate insight into a contemporary situation revealed through analysis of multiple sources of data. The triangulation of the analytical results is what

provides illumination of the dynamics of the case. Analysis of the interview data and evidence generated several themes relevant to addressing the research questions of this study. This study identified thirteen sub-themes related to the different components of the Stark and Lattuca (2009) model of the theoretical framework, which were consolidated into six major themes aligned to the four research questions - one for RQ1, three for RQ2, one for RQ3, and one for RQ4.

Concept Map:

Research Questions	Top-level Interview Questions connected to Stark and Lattuca (2009) framework	Concepts	Sub Themes	Themes
RQ1. To what extent have BAS programs impacted student outcomes aligned with the BAS mission: completion, employment, enrollment, and diversity?	OUTCOMES AND MISSION 1.1 To what extent BAS degrees at BC reflect their mission/goals?	Achievement Barrier Mission Impact	1. BAS programs are serving the needs of the diverse community 2. Mission enhanced, yet incoherent identity	Community, Identity, and Tracking
	OUTCOMES AND MISSION 1.2 To what extent have BAS programs impacted student outcomes such as completion, employment, enrollment, and diversity?	Completion Employment Enrollment Diversity Data	3. Student outcomes vary across programs; better data and tracking mechanisms needed to assess and support student outcomes	
RQ2. What are administrator and faculty perceptions of the internal and external factors that have influenced the development and/or sustainability of BAS programs?	INSTITUTIONAL INFLUENCES, PROGRAM ENVIRONMENT 2.1 To what extent have institutional factors influenced the development and/or sustainability of BAS programs at BC? (Governance, Resources, Capacity, Program environment)	Operating model Governance Resources/Capacity Sustainability with current resources	4. Appropriate resources and a support framework needed for the growth of BAS programs 5. BAS programs may not be scalable with the current operating model	Structure and Resource Constraint; Revise Operating Model
	UNIT LEVEL INFLUENCES: 2.2 How do faculty roles influence BAS program development and implementation?	Faculty skills, experiences, and support	6. Invest in faculty and continue faculty engagement	
	UNIT LEVEL INFLUENCES: 2.3 What are the student experiences/perceptions of graduates of BAS programs at Bellevue College?	Student experiences Perception of graduates	7. Student-voice is critical for BAS improvement	
	EXTERNAL INFLUENCES 2.4 How does funding influence the development/sustainability of BAS programs at BC?	Funding (program-related) Self-Support State Support Recommendations	8. Appropriate funding is necessary 9. Funding model is not a barrier to sustainability	Funding Model is Important, but not a Barrier to Sustainability

RQ3. To what extent have BAS programs undergone evaluation and adjustment to support continuous learning during their life cycle?	EVALUATION AND ADJUSTMENT 3.1 To what extent have BAS programs undergone evaluation and adjustment to support continuous learning during their life cycle?	Evaluation Adjustment Continuous learning	10. Reviews are occurring at multiple levels: there is a need for standardization 11. Shorter review cycles for more continuous improvement	Program Review Process Standardization and Optimization
RQ4. What lessons have been learned about BAS programs that may inform institutional leaders about the viability of such programs?	INSTITUTIONAL AND UNIT LEVEL CHALLENGES 4.1 What are some of the institutional and unit-level challenges around the development and sustainability of BAS programs at BC?	Institutional and unit-level challenges Program continuation and sustainability	12. More involvement and support from upper-level administration is vital	Senior Leadership Commitment to BAS, a Key for Long Term Sustainability
	LESSONS LEARNED 4.2 What are the lessons learned as a result of evaluation and adjustment that may inform institutional leaders about the viability of BAS programs?	Lessons learned	13. Integrate BAS into the fabric of the college for better viability	

Table 14: Concept Map

RQ1: To what extent have BAS programs impacted student outcomes aligned with the BAS mission: completion, employment, enrollment, and diversity?

Theme 1: Community, Identity, and Tracking

Sub Theme 1: BAS Programs are Serving the needs of the Diverse Community

Overall, the transition of Bellevue College towards offering BAS programs was reported by interviewees as a positive step towards providing a needed service to the community that previously had not existed and this change was well received by communities, businesses, and internal stakeholders of the college. They stated that the college is solidly grounded in the community and firmly believed that the community will always play a role. Most interviewees emphasized the positive impact of BAS programs on the community in terms of filling an unmet

niche market, addressing shortages in key markets, providing opportunities for place-bound and other non-traditional students, and addressing an increasing demand for higher education that traditional four-year colleges and universities could not meet. They felt that bachelor's degrees are essential to keep up with the evolving trends in education and to stay relevant in the 21st century and that BAS programs have been instrumental in providing that pathway for a diverse student population who have been limited in their ability to apply credits toward a bachelor's degree. These programs at BC are catering to the needs of underserved and non-traditional learners – students of color, older working adults, place-bound individuals, women with family responsibilities, part-time students, etc. While participants recognized that not all BAS programs are meeting all the goals to the same extent, they generally acknowledged that these programs have a positive impact on the community because of being accessible, flexible, and having a vocational skills-based mission. BAS degrees have specifically focused on applied skills in which the end results for students would be a job where they could apply their skills immediately in a vocational area. Although it is perceived that none of the programs have graduated enormous amounts of people working in the community, graduates are finding jobs at least six months out after completion. So, they are making some sort of contribution to the economic health of the community, but they are not doing so in huge numbers yet. This perspective corroborates with the employment outcomes data gathered from the SBCTC where some of their published research papers indicate that most BAS students are getting jobs in their fields within six months of graduation.

Sub Theme 2: Mission Enhanced, yet Incoherent Identity

When asked about the extent to which the mission of the former Bellevue Community College has changed since the introduction of BAS programs, most of the interviewees expressed

that it has enhanced the traditional community college mission by providing students access to the baccalaureate, an increased opportunity for diverse student base, and a seamless pathway for a better career, ultimately bridging the gap between the industry demands and students' skills through applied learning. Several participants described the traditional community college values as being open access, student-centered, community-centered, and affordable, and contend that the mission has evolved to the reality of the 21st century where BAS degrees have the potential to dramatically enhance the employment opportunities for thousands of place-bound students for whom traditional baccalaureate programs are either inaccessible or unresponsive to their workforce needs. As a public college that offers baccalaureate degrees, BC still serves the needs of the community and is open access, but now there is a good balance between flexibility and rigor. Most participants felt that the original mission of the college is preserved since the professional/technical associate degrees are still offered as the primary degrees that support the open access and transfer mission. These perspectives support the theme that the mission of the community college is not diluted but enhanced with BAS degrees.

As the interview conversations gravitated towards college identity and how it is perceived since the college officially changed its name from "Bellevue Community College" to "Bellevue College" to reflect the fact that it now offered four-year bachelor's degrees in addition to its traditional offerings of two-year associate degrees and certificates, many participants felt that the identity of the college was somewhat unclear, or BC has perhaps developed an incoherent identity. When community colleges add baccalaureate programs, they have the potential to alter organizational culture and institutional identity. They continue to stay true to the community college values of access and responsiveness, yet standardization and policy require them to behave as a four-year institution. Bellevue College offered its first BAS degree in Radiation and

Imaging Sciences in 2009 when it transitioned from Bellevue Community College to Bellevue College, however, it is still perceived as a community college that offers two-year degrees according to many participants. Unlike many other community colleges in the country that officially became four-year state colleges after adding BAS programs, BC remained part of the 34 Community college consortium with a mission that promotes student success by providing high-quality, flexible, accessible educational programs and services. While the mission seems to be enhanced because of BAS degrees as purported by interviewees, this is not reflected as part of the college mission statement; it is unclear if BC should be perceived as a two-year college that offers four-year degrees or a four-year college.

The general perception is that BAS programs haven't been given adequate focus and attention and have been operating as add-ons. Many people within the community are still not aware that BC offers such four-year degrees that are accessible and meet the industry demands in high-growth sectors; they still view BC as a two-year community college. It appears that BC retained its identity and mission as a two-year institution while fulfilling a rather limited demand for specialized baccalaureate degrees. BAS programs are small and customized without a vision of scaling and there is a lack of adequate marketing for these degrees. It is unclear to what extent BC would grow the BAS degrees or reimagine itself as a four-year institution. Most participants contend that BC needs to do a better job to increase the visibility of the BAS programs both internally and externally. In terms of accessibility, flexibility, convenience, cost, and other parameters, BAS programs are indeed fulfilling the mission and one could argue that they are part of the mission, however, BC has not fully embraced the extended mission. In conclusion, the administrators and faculty perceive the baccalaureate degrees to be enhancing the mission but expressed confusion about the college identity and the future state of the school.

Sub Theme 3: Student outcomes vary across programs; better data and tracking mechanisms needed to assess and support student outcomes

Because of the flexibility afforded BAS programs, students are on different graduation cycle - some students graduate faster while others take longer time to graduate based on their individual circumstances. Due to this, tracking completion data is challenging. The general perception is that there is not enough data or a systematic way of tracking graduates across all BAS programs; every program uses its own tracking mechanisms. They realize how vital it is for tracking placement data and gathering feedback from recent graduates. Often faculty have to rely on anecdotal evidence in the absence of a standardized tracking mechanism. Participants, however, recognized that BAS programs that are accredited seem to have a more organized way of tracking data to meet their accreditation requirements compared to non-accredited programs.

Tracking employment data has been the most difficult aspect of data collection. The BC BAS dashboard only tracks enrollment, completion, and diversity. There are no internal dashboards to track employment data across all BAS programs consistently. Although most programs are using surveys to gather data from both employers and graduates, the responses have been low. Apparently, the research component of SBCTC has been collecting some survey data about BAS graduates across the state and there are some resources out there. Additionally, through panels and conferences arranged by the Baccalaureate Leadership Council (BLC), data was gathered from a few BAS graduates about a couple of years ago. However, to holistically assess the impact of BAS degrees, better tools and tracking mechanisms are needed for data collection.

While some interviewees felt that data collection has improved over the years by migrating to advanced survey tools and making them more accessible (e.g., CRM), but the responses have still been low. BAS programs are relatively small in size and have slow growth; there is a need for collecting more inclusive data for assessing viability.

Completion

Most participants believed that the completion rates varied by program. By and large, students are persisting and completing across all programs, although the completion rates could be different since it depends on the dynamics of the program, the unique modalities, and the student population. The graduation cycles are different across student demographics. In certain programs, there are more part-time students, working adults, etc. and those students typically take fewer classes per term and longer time to graduate. In other programs, students may enroll in large numbers at the beginning of the program, but that number may decrease as some students may drop out due to their family circumstances. This is called the weeding out process and seems to be normal as emphasized by some participants. They shared that this process is often intentional to build the rigor in programs and support early dropout if students are not able to cope up with the rigor of the program requirements. It is also perceived that programs that use a cohort model are more likely to retain students than programs that admit students with a single cohort per year. Thus, it is normal to notice different graduation cycles for BAS students and this could mean that students may not predictably graduate in big numbers every year; some students take 150% of the time to graduate with a BAS degree. It was unanimously expressed that due to the flexibility offered by BAS programs, it is normal to notice erratic patterns of degree completion for BAS students, and this by no means indicates that they aren't persisting. In fact, most participants agreed that tracking completion rates is a challenge due to these varying

patterns of graduation cycles and it might be necessary to conceive innovative ways of tracking and analyzing completion data to ascertain if BAS programs are positively impacting student completion outcomes. It is perceived that certain accredited programs such as Nursing and Interior Design have a much higher rate of completion compared to other programs.

Employment

All BAS programs have the potential to positively impact employment. In general, the participants felt strongly that BAS programs provide students with the opportunity to complete their education while maintaining stable family and employment relationships. It offers upward mobility for those with associate degrees. Recognizing that employers are increasingly seeking degree-level qualifications for new hires, BAS programs are preparing the student in developing the requisite hands-on skills to meet the local employment needs. A coherent theme that emerged from the participants is that BAS programs are filling niche markets and providing opportunities for place-bound students. Some agreed that BAS programs are continuously adapting their curriculums to keep pace with industry trends based on recommendations from the Advisory Board that includes industry partners. Through capstones, field studies, and internships in various organizations, BAS students are getting enormous opportunities to work in a real-world setting; many students get hired into their host organizations. Students who already have jobs are furthering their skills through these BAS degrees and advancing in their careers. These individuals are often working adults living in the local area or those with community or family ties who otherwise are unlikely to pursue further education outside of the region. Needless to say, BAS programs go through a rigorous process of needs assessment and labor market analysis during their conception phase; thus, meeting the workforce needs is a key success factor. In many programs, the faculty members are industry professionals who are contributing back to the

community. BAS program leaders are constantly striving to build employment partnerships through collaboration with Advisory Board members and directly working with organizations for practicum placements. While there is a lot of anecdotal evidence about students getting jobs, tracking program graduates has been challenging given that there is no alumni association. Many program leaders have tried to establish connections with graduates and employers through surveys, but responses have been low. There is no centralized place for employment data; each program collects the data they need, some do so more meticulously than others to meet the accreditation requirements. In many cases, the data has been gathered over informal mediums like emails or word of mouth. Some participants shared anecdotes that employers in the region are supportive of the program and actively hire BAS graduates. Below are perceptions of stakeholders regarding employment outcomes in specific BAS disciplines.

IBIT: In general, the IBIT programs are having a positive impact on employment and are fulfilling a growing need in the workplace. The Advisory Board members periodically review the curriculum and student capstone projects and provide helpful insights about the type of coursework and skills needed in the workplace. Certain programs have a great reputation with local employers because they make sure that all the students are job-ready and do not require any additional training from the company. While IBIT overall has a positive impact on employment, tracking program graduates has been challenging because of the absence of an alumni association. Occasionally the BLC has held workshops to gather feedback from BAS graduates, however, the information seems to be limited. In many cases, the most pertinent feedback received from employers and graduates has occurred in informal settings. It is important to note that individual BAS programs have attempted to send out their own surveys to gather feedback from employers, and although the responses have been low, some employers have responded

positively and expressed satisfaction with the quality of graduates that they have hired out of the program. Stakeholders believe that the reason for such employer satisfaction is because BAS degrees focus on applied learning which is relevant to industry needs. These students are doing real-world projects and learning from industry experts. Mostly, interns have received positive feedback from their host organizations and subsequently absorbed in those organizations. Some of the IBIT programs are going through ongoing adjustments for better alignment with industry needs. While most of the IBIT programs are meeting workforce needs, there are internal challenges that warrant attention. Additionally, business and soft skills could enhance the quality of the capstone projects and increase employability.

HSEWI: Most participants agree that there is a significant market need in the Health Sciences domain area and that hospitals and health care industries are looking for skilled graduates in niche areas. The general perception is that many programs in Health Sciences are thriving and have a positive impact on employment and earnings while a handful of them have undergone struggles and are trying to regain their footing. It is known that students are not employable in certain health care jobs without a baccalaureate degree. Based on some of the available employment data and anecdotal evidence, the technical and management medical fields seem to have a very positive impact on mobility and earnings. Those graduates are highly valued and the perception of their employers is that they are really well prepared to contribute to the workplace by honing skills such as technical writing, healthcare finance, leading an interdisciplinary team, etc. Data provided by Effectiveness and Strategic Planning demonstrate a growing demand for baccalaureate-prepared professionals in specific health care domains in King County and Washington State. King County is showing faster growth than the nation overall for this type of employment, perhaps due to its location as a medical destination for Washington, Alaska,

Hawaii, and beyond. Some faculty members recommend that BAS programs focus on developing solid critical thinking, technical know-how, and problem-solving skills as these are of vital importance for successful employment. These skills are manifested as students start to contribute in real-world settings through capstones and field studies. Such channels have been effective in getting direct feedback from employers, and a lot of students get hired on to their practicum placements when they complete their practicum. There is anecdotal evidence where graduates are contacting the faculty and sharing their career growth stories such as “I completed a large project X for our hospital”. While BAS programs in Health Sciences are having a positive impact on employment, tracking student data in a standardized manner has been a challenge. Survey data is essential to meet state and national accreditation standards and programs that go through special accreditation have been trying to overcome this barrier by improving the survey instruments, gathering data, and tracking graduates to meet the accreditation requirements. There has been an overall improvement in data collection across the board by migrating to advanced survey tools and making them more accessible (e.g., CRM), but the responses have still been low. In some areas like Nursing, students do community health and fieldwork where they engage in a leadership scholarly project and work with mentors who support them with constant guidance and feedback through surveys. Over time, these surveys have improved which has made it easier for students, partners, and mentors to complete the surveys electronically. Although the student response rates are improving, the response rate from mentors and agency partners is still less than optimal.

INTERIOR DESIGN: The Interior Design program at Bellevue College is widely recognized as a regional center of excellence in interior design education. The program is perceived to be highly successful and there is strong evidence of a positive impact on employment. These

programs go through specialized CIDA accreditation, which compels them to gather credible data and demonstrate evidence of employment through a formal report showing alumni engagement and types of jobs students get offered after completing the program. They have used surveys to gather data and have received helpful responses from graduates and employers' perceptions of the program. Further, there is anecdotal evidence of students getting employed in esteemed organizations and being very happy with their jobs. Since there aren't many affordable Interior Design programs in the area, the BAA in Interior Design at BC has been one of the most sought-after programs within the community and students graduating from this program are certainly making an economic impact.

SCIENCES: There is some anecdotal evidence that students graduating from Molecular Biosciences are getting hired into reputed firms and making an economic impact; some students are getting promoted after completing BAS. There is no solid employment data available yet. The program leaders are in the process of designing surveys to gather data. Due to the small size of the program, there is a close faculty-student relationship; faculty have been able to track students after graduation in an informal manner, i.e., through emails and word of mouth. There is a general perception that the computer science program is rigorous and that graduates are getting employed.

Enrollment

Although participants, in general, acknowledged that the cumulative enrollments of BAS programs have increased over their lifetime, they also agreed that enrollment outcomes vary by program and that efficient enrollment management is a key for program viability. Enrollment has grown steadily over the years in some programs, while in others, they have declined. Participants echoed concerns that there have not been enough marketing efforts to attract students into the

new degree programs. For some programs, community members are not aware that a given program exists. Although some level of informal marketing occurs via flyers, word of mouth, or seminars, these steps are not enough. There is a perception that low-enrolled programs don't have enough visibility due to a lack of marketing. Many participants felt that the dynamics of the cohort model also determined the level of enrollment and that the institutional enrollment goals sometimes conflicted with the program goals. For example, some lecture-based programs could technically recruit more students into a cohort but feel restricted due to the class size cap imposed by the institute. Other enrollment barriers are - running only one cohort per year, fulfilling stringent accreditation requirements, clinical needs, meeting pre-requisites such as bridge classes before enrolling in a BAS program, etc. Finally, while the marketing challenge remains real, some programs were pleased with their efforts in raising awareness of the BAS programs and enhancing enrollment through participation in advisory board meetings, partnering with industry, and establishing professional connections through internships and field studies.

Diversity

According to SBCTC, student diversity in applied baccalaureate programs across Washington State community colleges continues to increase each year (SBCTC, 2015). There is a perception that the same trend may exist for BAS programs at Bellevue College. Most participants contend that BAS programs provide a unique pathway for diverse student populations- students of color, adult learners, place-bound students, part-time workers, etc., to pursue a bachelor's degree and obtain a living wage. These programs offer selective admission but are flexible enough to attract non-traditional students, thus exemplifying a subtle balance between accessibility and rigor. These applicants are primarily White and Asian students, a reflection of the Bellevue community as such. This perception is backed by the enrollment

demographics data from the BAS dashboard. While some participants agreed that the BAS programs are meeting the diversity goals because they are accessible and flexible, they also perceive a gap in the performance of the marginalized population in the community college classes compared to the general population in regular state colleges or universities. It is believed that the disparities in performance across these populations are caused by external factors such as student personal circumstances instead of internal college factors. IBIT programs appear to have a higher racial diversity but less gender diversity compared to other programs, which is corroborated by the diversity data from the BAS dashboard.

From another vantage point, the reason for such a diverse student population in the BAS programs is due to fewer barriers to entry for place-bound students who may not be able to afford a university degree. Thus, BAS programs are supporting equitable outcomes, although a lot of onus is on the faculty and administrators. While many participants emphasized that BAS programs are positively impacting diversity outcomes, a few others expressed concern. BC needs to do more in this regard, i.e., channel funds for marketing the programs, and perhaps intelligently consider switching some programs to fully online mode to support international students. The Nursing program has contracted with the LCIU to recruit more students into the BAS Nursing program free of charge. This has profusely helped students of color and other underrepresented groups who can now pursue their dreams of becoming qualified nurses. Through these unique arrangements, BC is advancing its BAS diversity charter forward in a very positive way.

RQ2. What are administrator and faculty perceptions of the internal and external factors that have influenced the development and/or sustainability of BAS programs?

Theme 2: Structure and Resource Constraint; Revise Operating Model

Sub Theme 1: Appropriate resources and a support framework needed for the growth of BAS programs

Governance: When questioned about the existing governance between faculty and administrators for BAS programs, most participants corroborated on a single story. Earlier, there used to be a BAS coordinator who was the liaison between upper-level administration and faculty, and he was instrumental in the development of baccalaureate programs. However, this liaison broke down when this position got subsequently eliminated. The BAS coordinator was the point of contact for new BAS program development and closely collaborated with program chairs, faculty members, and other agencies through all stages of the development process. The absence of such a role has naturally placed more pressure on the individual BAS disciplines, especially during the launch phase of new programs. Instituting a new BAS program is not easy and goes through several layers of approvals and vetting processes. After the development of the degrees, BAS programs were handed off to the individual departments, post which there was only limited support from the administration. As a result, these programs went through a turbulent phase during the initial years with unclear roles and responsibilities, a dearth of resources, faculty overload, and other challenges. They lacked adequate funding to support their plethora of resource needs – technology, library, equipment, labs, student services, and marketing, among many others. The relationship between faculty and the administration became strained over the years, resulting in more ambiguity over the governance of these programs. The absence of a BAS lead during the interim period hurt other roles like Program Chairs (PC) and Program Managers (PM), who had to step up to fill the gap, resulting in significant work

overload. Participants strongly feel that there could be more role definition clarity and possibly more financial resources in the startup years of a new BAS program. Without a scaffold and continued interest from upper administration, BAS programs may not thrive and grow. While most participants agreed that the BAS governance varied by programs, they unequivocally emphasized the importance of having a centralized leader to oversee all BAS programs.

Resources and Capacity: Most interview participants indicated that BC leaders did not anticipate the extent to which support services would be necessary for bachelor's degrees. When BAS programs were launched at BC, nearly every facet of student service was affected. Financial and human capital resources were necessary to support these degrees. Admissions, recruiting, career services, advising, technology, library, and marketing required significant changes to accommodate bachelor's students. Policies needed to be modified or developed to handle new situations which were previously not a part of BC's business practices. Unfortunately, even when these needs were recognized and planned for, the resources to implement them often fell short. The responsibilities typically fell on those already overburdened in a system expected to do much with little. Thus, participants generally believed that BAS programs lacked adequate resources to thrive and succeed in the long term. E.g., many of them echoed that BAS programs did not have sufficient marketing resources and often needed to think of creative ways to manage outreach services from within the program. Processes were not standardized, and many people in the Bellevue community were not aware of such programs. Senior leaders need to closely monitor underperforming programs and provide support and resources for remediation. Having a business plan and demonstrating the capacity to scale could be good indicators for a program to seek attention from senior leadership and garner support for additional investment.

Sustainability with current resources: Participants agreed that the sustainability of BAS programs is a risk due to a shortage of adequate resources, inherent limitations in resource allocation across the board, and a lack of program foresight. From a myopic view, BAS programs with current resources may not be sustainable for the long term; there is an urgent need to assess and fill resource gaps.

Sub Theme 2: BAS programs may not be scalable with the current operating model

There are four academic divisions (A&H, HSEWI, IBIT, and Science) encompassing professional/technical programs across three program categories - Certificates, Associate degrees, and BAS degrees. Each division is headed by the respective dean. The faculty across all program categories report to program chairs who report to the respective dean or associate dean. Similarly, the program managers generally report to the division directors, who report to the dean. Thus, a dean's responsibilities are beyond just managing BAS programs for an academic division. Due to the absence of a centralized BAS leader, BAS programs often operate in silos, have minimal cross-group collaboration, and perhaps lack a common vision. Thus, after new BAS programs are launched and handed off to the respective division, the transition is often not smooth, and programs struggle during their formative years. However, when BAS programs are modified, there is a concerted effort between PMs and PCs to perform requisite activities and make curricular changes. These modifications could stem from program reviews, internal reviews, or feedback from advisory board members. Sometimes, there is ambiguity around the roles and responsibilities of PMs and PCs that can confuse stakeholders. These roles often overlap across different areas of responsibilities, such as advising, marketing, data gathering, scheduling, etc., resulting in significant work overload at times. Oftentimes, the additional burden occurs because not all BAS programs have a dedicated PM and PC. When a PC is shared

across multiple BAS programs/concentrations requiring different subject matter expertise, it can be taxing. There is some level of collaboration across BAS divisions through quarterly PM meetings, however, due to the absence of a common BAS leader, decision-making becomes challenging. Most participants expressed the need to change the current operating model — a dedicated PM/PC for every BAS program and a centralized baccalaureate leadership to unify these programs and bring synergy. Without these operational changes, participants perceive that BAS programs may not be sustainable.

Theme 3: Faculty Engagement and Student Voice

Sub Theme 1: Invest in faculty and continue faculty engagement

Most stakeholders echoed that faculty members are very passionate about BAS programs and heavily invested in the success of the programs; their input is valued, and they do exercise control over the execution of the programs. In general, faculty do a good job of teaching. Participants echoed that the program chairs are talented, data-driven, and have a lot of passion for their job. Further, there is a healthy faculty-PM collaboration in most BAS programs throughout their lifecycle.

Amongst some of the improvement areas, some participants felt that faculty members need to employ more differentiated practices in the classroom to meet diverse student needs. Faculty members within a BAS discipline area have strong collaboration, but cross-functional collaboration is somewhat limited. In some low-enrolled programs, it is a challenge to find qualified instructors from the industry due to the huge pay gap. Further, it is believed that relative to other Prof/Tech programs in the college, BAS programs are expensive because of the need for niche faculty who are costly to hire. The same problem extends to the hiring of talented adjuncts. Some of the stakeholders reported that they have been able to work with companies to

loan employees to teach BAS courses on a part-time basis. Senior leadership must invest funding into hiring qualified faculty members and also provide the necessary resources for them to be successful. Another area of faculty support needed is for administrative tasks such as data collection. Program reviews can entail a lot of work for the faculty and program chairs to ensure the right data is collected and synthesized. Thus, investing in additional personnel resources to support faculty can help free up time for core departmental work. Finally, investing in professional development for upskilling faculty members to incorporate more hands-on learning in the classroom can better prepare BAS students in high-growth sectors.

Sub Theme 2: Student voice is critical for BAS improvement

Most of the participants stated that there isn't a formal process for gathering student feedback about BAS programs at BC. There is an end-of-course evaluation sent out to students which are intended for faculty evaluations. Further, there is no BAS alumni association, hence individual BAS disciplines have created their surveys to gather feedback from graduates. The responses from these surveys are low, although anecdotal evidence shows that students are generally satisfied with the BAS programs. Additionally, through panels and conferences arranged by BLC a couple of years ago, qualitative data was gathered from a group of BAS graduates. These results have been used by the research component of the SBCTC to publish a few papers on after-college outcomes for BAS degrees. Research shows that BAS students are getting employed six months after graduating, and a handful of students are moving on to graduate school. The fact that these programs could articulate with graduate schools was an indication that BAS programs were meeting rigorous requirements.

BAS students are contributing to the field through capstones and internships. They appreciate the opportunity to work on real-world projects with industry partners and getting

mentored by their supervisors. Although there is no formal tracking of BAS graduates, stakeholders feel that student feedback is improving and continues to be a critical success factor for the programs.

Theme 4: Funding Model is Important, but not a Barrier for Sustainability

Sub Theme 1: Appropriate funding is necessary

Most participants reiterated the need for appropriate funding to create sustainable BAS programs. They understand that bachelor's degrees come with a host of expenses - hiring qualified faculty, support services, enhanced library services, lab upgrades, technology, equipment, and accreditation requirements. The new programs require the resources and funding to take off until they are stabilized and self-sustaining. As a part of the planning process, the college should naturally include a financial blueprint of the funds needed to implement and support BAS degrees for the initial three to five years. After the initial phase of degree development, BAS programs are typically handed off to the individual departments, and leadership support becomes limited. Sometimes programs are left to fend for themselves without adequate funding to support their plethora of needs. Some programs experienced a severe financial hit due to the abrupt transition from self-support to state support model in 2017, which disrupted the program operations.

In general, most programs require funding to mobilize resources so that they are adequately equipped to keep pace with continuously evolving technology and industry paradigms. Some programs require funding for professional-quality tools and facilities, while others need funding for newer technology, library services, and equipment. E.g., programs in IBIT have to constantly keep pace with technology changes and need the financial resources to support such upgrades. Some programs are struggling to mobilize funds for additional personnel

resources such as full-time faculty, writing support specialists, lab technician, or an additional PM and/or PC. One of the themes that came up almost unanimously was the shortage of marketing funds. Most programs need funding to increase program awareness through marketing and promotion on a variety of mediums and platforms. These efforts may include running an ad campaign, updating websites and flyers, or even conducting virtual or physical information sessions to deliver the value proposition to prospective BAS students. While a sustainable source of funding is important for newer programs, older programs may also need funds to improve classroom efficiency and better enrollment management to scale. BC must provide a mechanism for programs to have financial autonomy over resources such as the library, equipment, and technology for better sustainability. In general, programs are less viable without adequate funding.

Sub Theme 2: Funding model is not a barrier to sustainability

States have played a prominent role in providing funding to make college more affordable for students, and in the process, improve access to college for students of underrepresented and low-income backgrounds. State-support programs are funded by the state, while self-support programs are funded by student fees. The main vehicle for state support is through direct appropriations to designated public colleges and universities (Toutkoushian & Shafiq, 2010). When BAS programs were launched in BC in 2007, the programs were designed and built on a self-support model. In the absence of additional grants, the cost of developing the new programs needed to be absorbed from within the existing budget relying solely on tuition to recover costs once launched. It is important to note that such a model encouraged BAS programs to operate as individualized academic units, managing their operation with a start-up mindset. In 2017, all BAS programs in BC moved from self-support to a state support model. This

adjustment was made to enable the college to count student enrollment toward state enrollment targets. Below are some of the attributes for each funding model:

Self-Support	State Support
<ul style="list-style-type: none"> ● Higher accountability ● Self-management of financials ● Flexibility and creativity ● Build collaborative partnerships with various constituencies ● Fosters agility ● Allows investment in personnel resources as needed (faculty, PMs, etc.) ● Opportunities to develop innovative programs ● Build student support capabilities ● Support other initiatives – conferences, research projects, technologies, etc. ● Opportunity for mismanagement of financials ● Encouraged BAS programs to operate in silos and stay as an add-on 	<ul style="list-style-type: none"> ● Student enrollment counted towards state enrollment ● Less accountability ● Less autonomy ● Limited flexibility ● Less opportunity for innovation and creativity within programs ● The appearance of “magic money” ● Inability to purchase specialized equipment or other resources as needed ● A pool of funds – More competition for resources ● Support integration of BAS programs

Table 15: Differences between Self-Support and State Support funding models

When participants were asked about the role of the funding model for the development or sustainability of BAS programs at BC, the responses were mixed. While most participants clearly articulated the pros and cons of the two funding models, several participants vehemently opposed the state support model because, in their opinion, such a model discourages entrepreneurial spirit. In 2017, some programs sustained a severe financial hit due to an abrupt switch to the state support model, which disrupted programs' operations causing greater competition for shrinking budgets and faculty lines. There is an opinion that this change contributed to attrition in some programs. The state support model provides significantly less flexibility in money management. Participants cited examples of how they have been limited in their abilities to procure resources for their projects due to the lack of available funds. These resources are critical for the growth and sustainability of their programs and they worry that such a model will not help them sustain for a long time without some level of intervention or

restructuring efforts by leadership. Other participants were either fine with the current state support model or did not indicate a specific preference.

To conclude, the funding model, in general, places no barrier to sustainability. While both funding models have pros and cons, participants expressed the need for a fundamental change in the way BAS programs are structured and operationalized. Some of them hinted that the state support model may encourage the integration of BAS programs into the college core steered by a centralized baccalaureate leadership team.

RQ3. To what extent have BAS programs undergone evaluation and adjustment to support

Theme 5: Program Review Process Standardization and Optimization

According to Stark and Lattuca (2009), evaluation and adjustment should be considered at the levels of individual students, courses, and programs. However, for the BAS viability study, evaluation is considered at the program level. The evaluation and adjustment component of the “Academic Plan Model” describes how programs need to continuously adapt and improve by either making minor adjustments such as detecting and correcting errors or major changes that alter perceptions, values, and assumptions. When asked about the extent to which BAS programs at BC have undergone evaluation and adjustment to support continuous learning during their life cycle, two sub-themes emerged.

Sub Theme 1: Reviews are occurring at multiple levels; there is a need for standardization

BAS program evaluation at BC occurs at multiple levels. The degree and the rigor through which programs undergo evaluation and adjustment may vary across programs.

1. **Accreditation**: Not all BAS programs are accredited, but those that are (Interior Design, Nursing, etc.) have to meet high accreditation standards - a rigorous process involving

stringent data collection and evidence of meeting student outcomes. Accredited programs have to connect with graduates, track their post-college outcomes, and demonstrate evidence of jobs. Accreditation typically occurs every five years, beginning the first year of the program. The Nursing program (RN-BSN) was recently re-accredited by CCNE (The Commission on Collegiate Nursing Education) and received approval for the next ten years, indicating that the program is doing very well. The Interior Design program goes through a six-year CIDA (Council for Interior Design Accreditation) accreditation and recently went through a full assessment process. CIDA identified areas for improvement, particularly the need for institutional support in maintaining contact with alumni and obtaining yearly job placement numbers. The accreditation was approved for another six years, although an interim review is slated for 2022.

2. **Program Reviews**: Program review is a guided process designed to collect and analyze program-related data, facilitate an ongoing dialogue between faculty and administration, and result in systematic improvements of the college's offerings. BAS Program reviews are conducted every five years post-launch for all BAS programs. Five out of the twelve BAS programs went through their first program review in the recent past, and a couple of them completed their second round of program review. The remaining programs are in the pipeline for their first review in the next couple of years. The primary goal of these reviews is for continuous quality improvement.
3. **Program Viability Reviews**: This review process has started recently. It is intended for all BAS programs and will be conducted annually. The goal of the viability review is primarily to assess program viability from a financial and business standpoint.
4. **Advisory Board Reviews**:

This is an internal review process that is highly effective and supports continuous improvement. It is conducted by the Advisory Board, also called the Curriculum Advisory Committee (CAC), involving leading industry professionals. The program chair and other faculty members collaborate with the CAC to identify opportunities for streamlining the curricular materials by aligning them to industry standards and keeping them current. In general, most BAS programs conduct CAC reviews at least twice annually, while some programs do it quarterly.

While participants shared the nuances of the different types of internal and external program reviews, they highlighted the effectiveness of the CAC reviews. CAC reviews enabled programs to continuously improve by making curricular changes in line with the latest technology and industry trends. As far as program reviews are concerned, participants were unsure if the program review process was truly effective or not; most of the BAS programs did not have the first review completed. They echoed that the program reviews are cumbersome and intensive due to the stringent data collection process. Because of a gap of five years between successive program reviews, many programs are compelled to conduct internal reviews and post-mortems to identify areas of improvement. Although most participants agreed on the significance of ongoing evaluation and adjustment, they were concerned that the review processes were not standardized across the board, resulting in inefficiencies in the review process, less agility, and delayed decision-making. They acknowledged that leadership needs to be more engaged in program review processes, and program improvements should be leadership-driven and not PM/PC driven.

Sub Theme 2: Shorter review cycles for more continuous improvement

Most participants agreed that a five-year program review cycle is a drawback and directly conflicts with the philosophy of continuous improvement practices. BAS programs are driven by workforce demands and need to continuously change to keep pace with technology and industry demands. Further, infrastructural changes such as technology upgrades, equipment, and lab updates may also occur frequently. Thus, by the end of a five-year review cycle, the prior review feedback may have become obsolete. They felt that the program review should occur every two years to be meaningful. The whole process involved in conducting the program reviews is a time-consuming task that makes it difficult to mobilize all the data for the 5-year duration. Reducing the frequency of these reviews would make the process more manageable, reduce overhead, and enhance review outcomes. It appears that the new optimized review process has started this year, although the benefits are yet to be seen. The CAC and program-specific internal reviews are occurring frequently, and the participants are generally pleased with those outcomes. However, a more formalized structure for the internal reviews across all BAS programs will increase the overall efficiency of the programs and lead to better predictability of outcomes.

RQ4. What lessons have been learned about BAS programs that may inform institutional leaders about the viability of such programs?

Theme 6: Senior Leadership Commitment to BAS, a Key for Long Term Sustainability

Since the inception of BAS programs at Bellevue College, there have been some challenges at an institutional level and unit level about the development and sustainability of BAS programs. Most interviewees expressed concern over resource limitations, siloed culture, and structural gaps, among many others, and a need for adequate support, focus, and attention from leadership. One of the key themes that pervaded across all the interviews is that BAS

programs need more involvement from senior leadership and should be integrated into the fabric of the college for better viability.

Sub Theme 1: More involvement and support from upper-level administration is vital

Transitioning from "Bellevue Community College" to "Bellevue College" in 2009 to reflect the offering of four-year bachelor's degrees was a transformational change. It necessitated efforts to institute additional services to support BAS programs – financial resources, library holdings, facility needs, technology, labs, advising, marketing, and new faculty. Apart from these services, funding was needed for other supports such as admissions, program management, curriculum development, branding, hiring, and recruitment activities. Students seeking bachelor's degrees expect more support from the institution due to the academic demands of such degrees. Such a flow of funds is needed to support BAS programs for the initial 3-5 years. Due to the structuring of the BAS programs under different academic divisions headed by respective deans, there is no centralized BAS leadership team to provide that kind of exclusive support. After a new BAS program is launched, it is handed over to the specific division, and then it becomes the dean's responsibility to manage the programs along with other responsibilities. The dean would often rely on the division director, program chairs, and respective BAS program managers for administrative governance of these degrees. The below structure represents a typical Prof/Tech division headed by the respective dean and the associated reporting structure. Each Prof/Tech division (A&H, HSEWI, IBIT, or SCIENCES) emulates a similar structure.

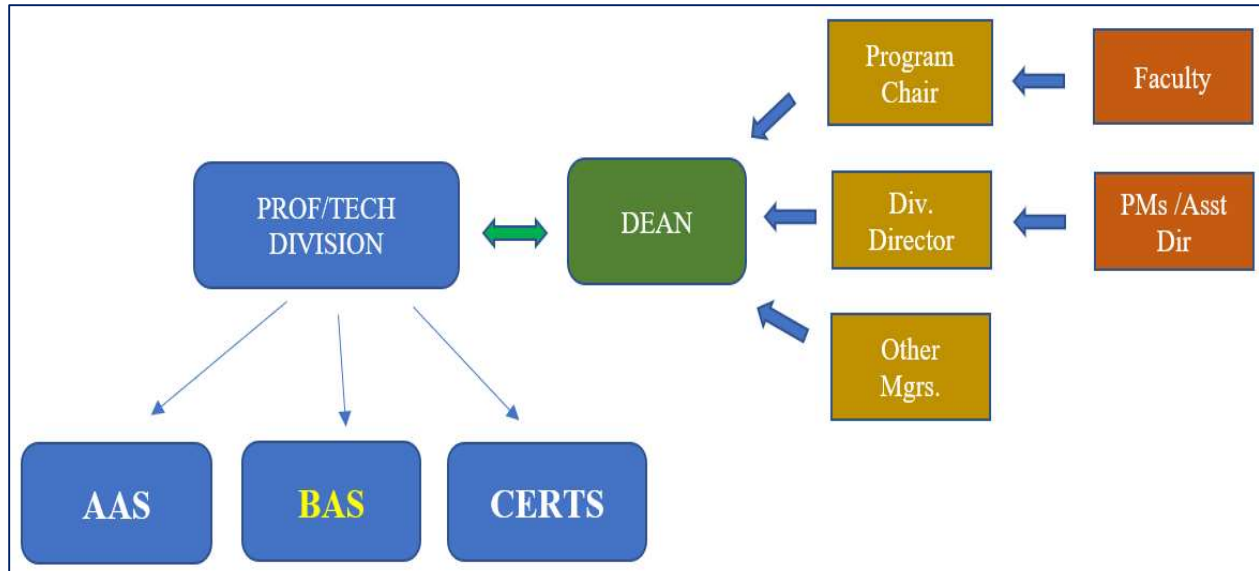


Figure 8: Current operating model at BC; BAS programs reside within the Prof/Tech division

In this model, the individual BAS programs reside under respective Prof/Tech divisions and stay as separate entities from other divisions. They operate in silos, and there is a lack of synergy between the programs. Without consistent support from leadership after launch, many programs flounder even if they have a good PM who could undertake some of the administrative responsibilities. Most participants echoed that BAS programs will be less viable without adequate support from senior leadership (SL). SL needs to be more involved, conduct regular pulse checks, focus on the health of the programs, establish clear communication channels, and provide strategic direction. They need to balance between tactical oversight and a long-term strategic vision for the BAS programs. Some participants are hopeful that with the hiring of the interim president, there will be more accountability and change for the good.

Sub Theme 2: Integrate BAS into the fabric of the college for better viability

When participants were asked about the lessons learned from their experiences with BAS programs, they voiced that BAS programs are operating in silos and should be integrated into the fabric of the college for better viability. Even though the enrollment of students in BAS has

grown over the years, the number of students in these programs is relatively small. Further, there is a small number of faculty who are actively engaged in the management of these programs. They surmise that BC is perceived as a two-year college with some four-year programs instead of being viewed as a four-year college - an identity incoherence.

One of the interviewees expressed that such an identity conflict manifests in many aspects of institutional governance and expectations, e.g., an alumni association. It is well known that the contribution of alumni back to the college as donors and their support in facilitating internships is vital for a four-year institution, and such relationships are cultivated over time. However, for BC such alumni relationships are not established systematically as an institution; each program manages alumni relationships independently, which doesn't serve the institution well.

To integrate BAS programs into the core of BC, several suggestions came up from the participants such as:

- *The administration should proactively communicate about the successes of BAS programs and increase their visibility*
- *BAS programs could be integrated into a single school of BAS, and some of the prof/tech programs could be branded under the umbrella of business and technology. Through such branding, BC could act as a gateway into big tech companies such as Microsoft and Google. Eight such programs could provide a ramp into the exciting HITECH business world. This way BC does not identify itself with twelve different brands of BAS programs but under one campaign and one brand. By rebranding as One BAS, BC would be known*

as the business gateway to the Bellevue area or the state of WA and this will also have a positive impact on student enrollment.

- *BC needs to partner more with the industry and get buy-in from the community. While faculty members are actively partnering with advisory boards and adapting the curriculum to keep pace with industry needs, it is not enough. Such partnerships need to be driven more collaboratively and consistently across all BAS programs. It will help change both the external and internal perception of BAS programs and students' attitudes towards the school and act as a catalyst for the growth of BAS degrees.*
- *Finally, there needs to be a culture change*

CHAPTER VIII: SUMMARY OF FINDINGS

This chapter presents the findings from data analysis of a variety of sources such as interviews with administrators and faculty, archival records pertaining to student outcomes, and several document reviews. Analysis of the case data generated several themes relevant to addressing the research questions of this study. The triangulation of the analytical results illuminated the findings. First, several historical documents were analyzed. Then, student outcomes data from BAS dashboard pertaining to completion, employment, enrollment, and diversity were analyzed; finally, interview data was analyzed using coding and theming process. Triangulation implies the convergence of the data collected from different sources to strengthen the case study findings (Yin, 2018; Creswell, 2014). Based on the case study design approach, triangulation of results from data analysis helped strengthen findings and draw the study's conclusions. Data from archival records and document reviews were triangulated with the interview data to identify areas of confirmation and disconfirmation.

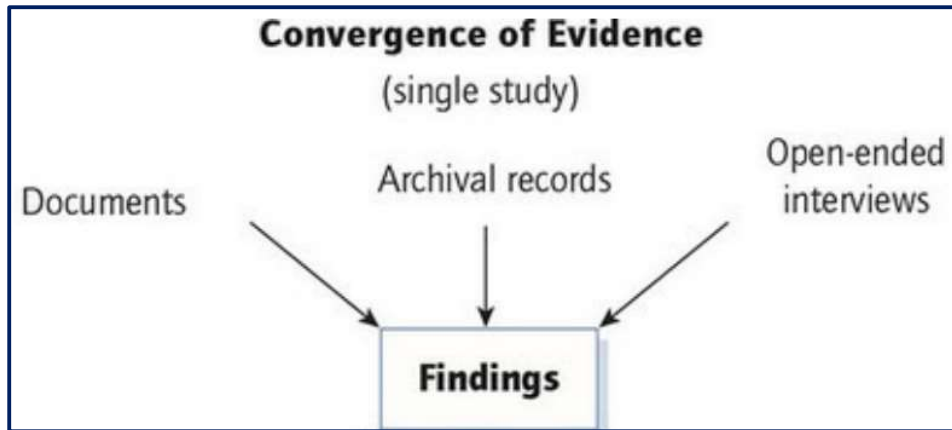


Figure 9: Data Triangulation

The primary research question that guided this case study was: “How have BAS programs and practices evolved at Bellevue College since their inception, and to what extent do they align with the original BAS mission?” To understand the viability of BAS programs at Bellevue College, it was necessary to answer the research sub-questions of this study. The theoretical framework was adapted from the “Academic Plan Model,” developed by Stark and Lattuca (2009). This model focuses on academic programs and examines how the internal and external factors within the sociocultural context affect the program’s environment, which in turn influence the design and outcomes of the programs. Further, this framework emphasizes evaluating and adjusting programs that describe how programs need to continuously improve by either making minor adjustments or major changes that alter perceptions, values, and assumptions.

RQ1. To what extent have BAS programs impacted student outcomes aligned with the BAS mission: completion, employment, enrollment, and diversity?

Finding 1: Community, Identity, and Tracking

- a) *BAS programs are serving the needs of the diverse community*
- b) *Mission enhanced, yet incoherent identity*
- c) *Student outcomes vary across programs; better data and tracking mechanisms needed*

BAS programs are serving the needs of the diverse community

To determine whether BAS programs are positively impacting completion, employment, enrollment, and diversity, student outcomes data were analyzed. During interviews, participants were asked probing questions related to the mission and student outcomes. The interview responses were corroborated with evidence from program evaluation data. All of the three sources of evidence converged around the findings that BAS programs are indeed serving the needs of the diverse community. They are having a positive impact on the community in terms of filling an unmet niche market, providing opportunities for place-bound and other non-traditional students, and addressing demands for specialized education that traditional four-year colleges/universities could not meet. Research shows that the most important reasons for offering the CCB are to serve place-bound and underrepresented students and meet unmet labor needs (Potter, 2020).

Mission enhanced, yet incoherent identity

Another sub-theme that emerged from the qualitative data is that BAS degrees have enhanced the traditional community college mission around open access, transfer, and community-based education while providing students access to the baccalaureate. While the mission is expanded with BAS degrees which are accessible, flexible, cost-effective, employment-focused, and hands-on, the identity of the college seems unclear because of the way the degrees are structured and operationalized. The general perception is that BAS programs are operating as add-ons and have not been holistically integrated into the fabric of the college. The experiences of the participants suggest that BC has perhaps developed an incoherent identity. Levin (2004) argues that adding the baccalaureate degree not only changes the mission of the community college but also has the potential to alter organizational culture and institutional identity due to the influence of various institutional and global forces in the development of

CCB. Global forces typically influence the community college programs to develop a workforce to compete in the global economy; institutional forces influence the community colleges to have a dual identity with two values systems and two subcultures (Levin, 2004). According to Morrill (2010), “not only must mission and vision set an authentic direction that connects with the narrative of identity, but it must also develop the mechanisms through which the organization can attain its goals” (p. 135).

Although BC changed its name from "Bellevue Community College" to "Bellevue College", it is still perceived as a community college. Unlike many other community colleges in the country that officially became four-year state colleges after adding BAS programs, BC remained part of the 34-community college consortium, and its mission statement didn't change to reflect that it offered four-year degrees. It appears that BC did not fully embrace its enhanced mission and new institutional identity as a four-year college.

Whether BC should be perceived as a two-year college that offers four-year degrees or a four-year college is rather debatable. This dual identity has perpetuated two different sub-cultures and value systems. Many people within the Bellevue community are unaware of BAS degrees and their offerings. It is unclear to what extent BC would grow the BAS degrees or reimagine itself as a four-year college to fully realize its institutional potential. This state of institutional “identity diffusion” is confusing stakeholders and external agencies who are unsure of BC’s true identity and future plans for BAS programs.

Student outcomes vary across programs; better data and tracking mechanisms needed

Student outcomes vary across programs. Because of the flexibilities afforded by BAS programs, students are on different graduation cycles; some students graduate faster while others take longer time based on their family circumstances. Due to this reason, there is not a systematic

way of tracking graduates across all BAS programs. Further, The BC BAS dashboard only tracks enrollment, completion, and diversity. There are no internal dashboards to track employment data across all BAS programs consistently. Another theme that emerged from interviews is that there is no alumni portal for BAS programs; BAS programs have formed their own employment tracking mechanisms. However, programs that are accredited seem to have a more organized way of tracking graduates to meet their accreditation requirements compared to non-accredited programs. This is evident from the program evaluation documents of Interior Design and Nursing which outline a systematic way for tracking feedback from BAS graduates.

Many participants further emphasized the difficulties in following the trajectory of students from enrollment to completion because of varying cycles of graduation caused by unique student profiles such as being part-time or full-time working adults. This has a repercussion on tracking students' post-college outcomes because students who start together in a cohort do not complete as a cohort, thus, making it difficult to collect data. Faculty and administrators conceded that most programs are using surveys to gather data from both employers and graduates, but the responses are generally low. It is useful to note that the research component of SBCTC has been collecting some survey data from BAS graduates across the state. Additionally, through panels and conferences arranged by BLC, some level of data was gathered from BAS graduates over the years. While some of these mechanisms provide evidence of post-college outcomes for BAS students, they are not sufficient. Often faculty have to rely on anecdotal evidence in the absence of a standardized tracking mechanism and low survey responses. Below are the findings of student outcomes such as completion, enrollment, employment, and diversity as evident from the BAS dashboard and SBCTC websites, supported by interviews and program evaluation documents.

Completion: As most interview participants indicated, tracking completion rates for BAS students is difficult as graduation cycles are different across student demographics. In certain programs, there are more part-time students and working adults and those students typically take fewer classes per term and longer time to graduate. In other programs, students may enroll in large numbers at the beginning of the program but subsequently taper off. Since many students graduate at part-time rates, there is a general understanding that, on average, we can expect students to graduate between 1-3 years of enrolling into a BAS program. The quantitative data from the BC dashboard suggests that students who enrolled in BAS programs between 2010-11 and 2017-18 academic years have completed their programs on an average at the rate of 84% in Interior Design, 70% in HSEWI, 69% in IBIT, and 100% in Sciences Division, with an overall average completion rate of 74%. Program level analysis shows that students in Interior Design, Nursing, Computer Science, and Molecular Biosciences are graduating at a higher rate compared to other programs. For all other programs — an average of 60-70% completion rate is consistent with our expectations from BAS programs. BAS programs consist of mostly non-traditional students such as students of color, part-time students, full-time working adults, etc., who need to balance their work-life and hence are often on an extended schedule as they are taking fewer classes per semester. With most students on different graduation cycles due to the flexibilities afforded by these programs, an average BAS completion rate of 74% at BC is relatively good considering that it is higher than the average BAS completion rate of students across all community colleges in Washington State which is ~65% (Soler, 2020).

Enrollment: Both quantitative and qualitative evidence suggests that cumulative enrollments of BAS programs have increased over their lifetime although enrollment outcomes are not consistent across all programs. For some programs, enrollment has grown steadily over the years,

while for others, it has declined. The BAS programs that are high in enrollment (>10% of total enrollment) include Interior Design, most of the IBIT programs, and Computer Science. This is consistent with the notion that business and technology programs are critical to communities' growth and in meeting market demands. A recent longitudinal study conducted by SBCTC suggests that Business Programs, followed by Health Sciences Programs account for two-thirds of the total enrollments in Washington BAS degree programs to date. However, as more BAS degree programs are added, enrollments have shifted away from business and healthcare and towards science, technology, engineering, and mathematics (STEM) (Meza, 2019). The BAS programs at BC which are low in enrollment (<5% of total enrollment) include Health and Wellness (H&W), Healthcare Informatics (HCI), and Molecular Biosciences (MBS). These results corroborated with the interview data with an additional context that such programs are undergoing some struggles. Some of the reasons attributing to low enrollment numbers are - new and specialized programs, barriers during developmental years due to lack of adequate financial and marketing resources, extensive mid-cycle curricular changes, and the impact of funding model change. Needless to say, a recent trend analysis report shows that HCI and Molecular Biosciences are showing an increasing trend in enrollment, which suggests that their performance is improving. However, for Health & Wellness program, the enrollments continue to drop which suggests that the demand for this program is low. According to a recent research study, low enrollment levels after three or four years of operation is an indication that student demand for bachelor's degrees in the fields selected is limited. Additionally, colleges operating small programs likely incur higher per-student costs, as the student-to-faculty ratio is a principal driver of costs (Petek, 2019). Another interesting pattern observed for a few programs is the increase in enrollment until 2019, followed by a decrease in 2020, which could be due to the

impact of the COVID-19 pandemic. Some participants indicated other causes of low enrollment such as lack of adequate needs assessment, economic situation, dynamics of the cohort model, and occasional conflict between institutional enrollment goals and program goals.

Employment: The evidence from all three data sources suggests that there is not enough data or a systematic way to track graduates across all BAS programs. The BAS dashboard only tracks enrollment, completion, and diversity outcomes. There are no internal dashboards to track employment data across all BAS programs consistently. A common theme that emerged from interviews is that there is no BAS alumni portal. Each program is tracking graduate feedback and employment data in unique ways. Many program leaders have tried to establish connections with graduates and employers through surveys, but responses have been low.

There is anecdotal evidence about students obtaining jobs. During the interview, some faculty members shared anecdotes about employers' interest in BAS students and their eagerness to support them with internships and field experiences. Others have personally heard success stories from BAS graduates by collecting feedback over informal mediums like LinkedIn, emails, and word of mouth. It was interesting to learn from some of the administrators that the Baccalaureate Leadership Council (BLC) has created a survey to find out employment outcomes for all BAS programs across the state in which Bellevue College was a participant. SBCTC has been tracking the annual wage and BAS employment data, and some of their published research papers indicate that most BAS students are getting jobs within six months of graduation. These programs are filling niche markets and providing opportunities for place-bound students.

Disciplines	Program	Industry sector	AAS Median earnings 1 year after graduation	BAS Median earnings 1 year after graduation	Difference in earnings b/w AAS & BAS	BAS Median earnings 4 years after graduation
A & H	Interior Design	Visual and Performing Arts	\$ 33,900.0	\$ 41,900.0	\$ 8,000.0	\$ 58,600.0
HSEWI	Health and Wellness	Health professions and related programs	\$ 62,700.0	\$ 92,700.0	\$ 30,000.0	\$ 104,000.0
	Healthcare Informatics					
	Healthcare Mgt. Leadership					
	Nursing					
	Radiation Imaging Sciences					
IBIT	Applied Accounting	Computer and Information Sciences and Support Services	\$ 45,400.0	\$ 57,900.0	\$ 12,500.0	\$ 72,375.0
	Data Analytics					
	Digital Marketing					
	Information Systems					
Science	Computer Science					
	Molecular Biosciences					

Table 16: Median earnings of BAS and AAS graduates, and difference in earnings by industry sector

From the data, it is evident that BAS graduates are earning a higher salary than their AAS counterparts, although the level of earnings varies by degree and program. Further, BAS Health Science graduates are paid higher starting salaries compared to other disciplines, while salary levels may vary by individual programs. The starting salary in the Computer and Information Sciences stream appears low, but this could be because it is a median salary comprising many individual programs. For Health Sciences and Interior Design, there is a 25% average growth in earnings between the initial year of employment and four years post-graduation. Since the Science Programs at BC are relatively new, there is no significant employment data available from SBCTC; the growth rate of 25% for Computer and Information Sciences is just an indicative number based on available data from other Washington State Community Colleges released by SBCTC (SBCTC, 2017). These findings suggest that BAS programs are indeed meeting the employment outcomes to a reasonable extent.

Diversity: BAS programs are designed to provide opportunities for non-traditional students who seek a pathway to a bachelor’s degree – students of color, place-bound individuals, part-time

students, and adult learners with family commitments. So, it is a natural expectation for BAS students to meet the diversity outcomes related to race/ethnicity, gender, and age. The student demographics data for BAS program enrollments since inception was analyzed along three dimensions – race/ethnicity, gender, and age.

Demographic Characteristic	BAS Students	% distribution by Student
African American	96	4.3%
Asian	537	23.9%
LatinX	182	8.1%
White	1090	48.4%
Multi-racial/Others	345	15.3%
Female	1415	63%
Average age	31.1	

Table 17: Student demographic characteristics across all BAS programs

Disciplines	Demographics	Student Demographic characteristics (Race, Gender, Average Age) during enrollment Enrollment academic year: 2007-08 to 2019-20	
		BAS Students	Enrollment %
Interior Design	African American	6	1.2%
	Asian	137	26.7%
	LatinX	40	7.8%
	White	278	54.2%
	Multi-racial/Others	52	10.1%
	Female	437	85.2%
	Average age	30.4	
HSEWI	African American	41	5.4%
	Asian	144	19.1%
	LatinX	60	8.0%
	White	384	51.0%
	Multi-racial/Others	124	16.5%
	Female	537	71.3%
	Average age	33.5	
IBIT	African American	40	5.0%
	Asian	211	26.4%
	LatinX	70	8.8%
	White	356	44.6%
	Multi-racial/Others	122	15.3%
	Female	368	46.1%
	Average age	29.4	
Science	African American	9	4.9%
	Asian	45	24.3%
	LatinX	12	6.5%
	White	72	38.9%
	Multi-racial/Others	47	25.4%
	Female	73	39.5%
	Average age	26.6	

Table 18: Student demographic characteristics by BAS discipline area

Race/ethnicity: The findings from race/ethnicity data show that White and Asian students constitute 72% of the overall student demographics across all BAS programs, which is representative of the Bellevue community. The African American students constitute <5% of the overall student population. This is representative of the African American student population in BAS programs across all community colleges in the State (Soler & Bragg, 2016). At a BAS discipline level, the Interior Design program seems to have the highest number of white and Asian students and lowest number of African American students. The IBIT and Sciences programs seem to be more racially diverse than other programs with a relatively high percentage of students of color in both disciplines. Finally, Asian students are significantly more likely to graduate with a BAS degree in a STEM area as evident from the high percentage of Asians in these fields combined.

Gender: According to the data, female students represent 63% of the overall BAS population in Bellevue College which suggests that BAS programs, in general, represent a good level of gender diversity. Interior Design and Health Sciences show higher gender diversity, with women representing 85% of the total students in Interior Design and 71% of the total students in Health Sciences. The percentages of women in IBIT and Sciences are below 50%, which confirms the underrepresentation of women in Business and STEM areas across the board. Lack of diversity, particularly gender diversity, is one of the main challenges faced by technology companies and academia. Recent studies show that the number of female students enrolled in STEM-related disciplines has been steadily decreasing over the last twenty years (Botella, Rueda, Lopez, & Marzal, 2018). One of the studies conducted by SBCTC in 2020 shows that women complete STEM degrees at nearly the same rate as men, but female enrollments lag behind state and national statistics for STEM education (Meza, 2020). More closely reflecting national trends, the

research shows disparities in enrollment and completion of students of color compared to white and Asian students (Meza, 2020). Based on this analysis, the diversity outcomes of BAS programs in BC confirm the general diversity trend observed in similar BAS programs across the state community colleges.

Age Groups: One of the missions of the BAS programs is to provide opportunities and services that meet the diverse and changing needs of the community it serves. These programs are designed to provide access to a workforce-focused population “...comprised of a large portion of people of color, older working adults and people who are place-bound with family responsibilities” (SBCTC, 2018). The average age of students across all BAS programs at BC is 31 years, and ~75% of overall students are 30 years or above. Data shows that the average age of students in IBIT and Sciences is lower (<30 years) compared to Health Sciences and Interior Design programs. It is consistent with the research findings of SBCTC, where students enrolling into STEM BAS areas tend to be male, not African American or Latino, not parents, and younger than students in Business and Healthcare (Meza, 2020). These results suggest a more traditional student profile for STEM BAS programs than other BAS programs of study. It is vital to recognize that continued enrollment growth in STEM may shift the overall demographics of BAS programs in Washington State. In effect, Washington’s CTCs may see a decline in the diversity of the BAS student population if STEM enrollments continue to rise and other program areas grow more slowly, level off, or decline (Meza, 2020).

Findings from the interview data corroborate the above results from the quantitative study. Most participants contend that BAS programs provide a unique pathway for non-traditional students to pursue a bachelor’s degree. These programs are reflective of the Bellevue community, which is primarily a hub for white and Asian students. This is confirmed by the data

that shows a very high percentage of white and Asian students across all BAS programs. While some participants agree that the BAS programs are meeting the diversity goals, they also perceive a gap in the performance of the marginalized population of BC compared to the general population in regular state colleges or universities. It is believed that the disparities in performance across these populations are caused by external factors instead of internal college factors. Data confirms that IBIT programs have a higher racial diversity than other programs. Participants echo that BAS programs have a diverse student population because they offer fewer barriers to entry for non-traditional students, and they are helping to achieve equity in educational outcomes.

RQ2. What are the administrator and faculty perceptions of the internal and external factors that have influenced the development and/or sustainability of BAS programs?

Finding 2: Structure and Resource Constraint; Revise Operating Model

- a) *Appropriate resources and a support framework needed for the growth of BAS programs*
- b) *BAS programs may not be scalable with the current operating model*

The interview data highlighted the extent to which institutional factors such as governance, resources, and operating model have influenced the development and sustainability of BAS programs. This analysis corroborated with evidence from the program evaluation documents. The findings converge around key sub-themes below:

Appropriate resources and a support framework needed for the growth of BAS programs

One of the key findings suggests the necessity of a BAS coordinator role for new programs that helps in increasing accountability and removing hurdles. This role closely collaborates with faculty members through all the stages of program development - proposal submission to the SBCTC, getting the approvals, developing the curriculum, and launching the program. Further, this role could provide continuous support until the programs are self-

sustainable. While such a BAS coordinator role existed initially, it was eliminated later. Since then, some of the BAS programs have been struggling to keep afloat. The process of instituting a new BAS program is intense and goes through several layers of approvals. During the post-development phase, BAS degrees were typically handed off to the individual departments and administrative support was reduced. As a result, these programs went through a turbulent phase during the initial years with unclear roles and responsibilities, resource crunch, faculty overload, and other challenges. They lacked adequate funding for some areas such as technology, library, equipment, labs, marketing, etc. The relationship between the faculty and the administration became strained over the years with greater ambiguity over the governance of these programs. Many interview participants indicated that BC leaders did not anticipate the degree to which support services would be necessary to successfully launch and sustain bachelor's degrees.

When BAS programs were introduced in BC, financial and human capital resources were required to support them. Admissions, recruiting, career services, advising, technology, and marketing required significant changes to accommodate bachelor's students. Policies needed to be modified or developed to handle new situations that were previously not a part of BC's business practices. Additional staff and proper training were required in all sectors of support services. Unfortunately, even when these needs were recognized and planned for, the resources to implement them often fell short. Thus, from a resource standpoint, participants believed that newer BAS programs lacked adequate resources to thrive.

Participants reiterated that some BAS programs did not have access to marketing resources, and they had to creatively manage outreach activities from within the program. Further, there was no standardized process to market all BAS programs. Due to this, many people in the Bellevue community are not aware of such programs. Participants agreed that the

sustainability of BAS programs is a risk when there are deficiencies in resources, inequity in the allocation of resources, and a lack of forethought. With such a myopic lens, BAS programs may not be sustainable for the long term; there is an urgent need to assess and fill resource gaps.

Several researchers have highlighted that an adequate supply of resources is needed by faculty and needs to be continually available to sustain BAS degrees (Ross, 2006; Bemmell, 2008). The student outcomes data also support this view. Some of the programs that do not have enough marketing resources end up with low enrollment and diversity numbers. The program evaluation documents also highlight some of these resource challenges that may lead to program instability, erratic enrollment, and viability issues. Thus, the evidence from all three data sources seems to triangulate and support this finding.

BAS programs may not be scalable with the current operating model

The interview data support the finding that BAS programs may not be scalable with the current operating model. As depicted in the organization chart, and confirmed during interviews, there are four broad academic divisions at BC (A&H, HSEWI, IBIT, and Science) which encompass professional/technical programs across three program categories - Certificates, Associate Degrees, and BAS Degrees. Each division is headed by the respective dean. The faculty across all program categories report to program chairs who report to the dean or associate dean, depending on the division. Similarly, the program managers generally report to the division directors, who report to the dean. Thus, a dean's responsibilities are beyond managing BAS programs for an academic division. Thus, BAS programs are not consolidated under one leader or department but are staggered across multiple divisions. They tend to operate in silos with minimal cross-group collaboration and a lack of synergy between them.

When new BAS programs are launched and handed off to the respective division, the transition is often not smooth, and subsequently, programs struggle during their formative years. When BAS programs are modified, there is a concerted effort between program managers (PM) and Program chairs (PC) to perform needed tasks and make curricular changes. Due to the absence of an overall BAS leader, other roles like PM and PC must often step up to perform activities outside of their assigned job duties to sustain these programs. Many participants expressed that there is ambiguity around the roles and responsibilities of PMs and PCs, which can confuse stakeholders. These roles overlap across different areas of responsibilities such as advising, marketing, program adjustments, scheduling, etc. Further, because not all BAS programs have a dedicated PM and PC, these roles are stretched too thin and overloaded. Both faculty and administrators indicated that some level of collaboration occurs between PMs across BAS divisions every quarter, but due to the absence of a centralized BAS leader, decision-making becomes difficult. Multiple BAS research studies have emphasized mission, needs assessment, solid operating model, and dedicated leadership as critical areas to focus on when instituting BAS programs (Carroll & Glasper, 2018; Hofland, 2011; McKinney & Morris, 2010). Participants expressed the need to change the current operating model - a dedicated PM/PC for every BAS program and a centralized baccalaureate leadership to unify these programs and bring synergy. Without these changes, participants perceive that BAS programs may not be sustainable.

Finding 3: Faculty Engagement and Student Voice

- a) Invest in faculty and continue faculty engagement*
- b) Student voice is critical for BAS improvement*

Invest in faculty and continue faculty engagement

Most stakeholders echoed that faculty members are very passionate about BAS programs and heavily invested in the success of the programs; their input is valued, and they do exercise control over the execution of the programs. In general, faculty do a good job of teaching. Participants echoed that the program chairs are talented, data-driven, and have a lot of passion for their job. Further, there is a healthy faculty-PM collaboration in most BAS programs throughout their lifecycle.

Amongst some of the improvement areas, some participants felt that faculty members need to employ more differentiated practices in the classroom to meet diverse student needs. Faculty members within a BAS discipline area have strong collaboration, but cross-functional collaboration is somewhat limited. In some low-enrolled programs, it is a challenge to find qualified instructors from the industry due to the huge pay gap. Further, it is believed that relative to other Prof/Tech programs in the college, BAS programs are expensive because of the need for niche faculty who are costly to hire. The same problem extends to the hiring of talented adjuncts. Some of the stakeholders reported that they have been able to work with companies to loan employees to teach BAS courses on a part-time basis. Senior leadership must invest funding into hiring qualified faculty members and also provide the necessary resources for them to be successful. Another area of faculty support needed is for administrative tasks such as data collection. Program reviews can entail a lot of work for the faculty and program chairs to ensure the right data is collected and synthesized. Thus, investing in additional personnel resources to support faculty can help free up time for core departmental work. Finally, investing in professional development for upskilling faculty members to incorporate more hands-on learning in the classroom can better prepare BAS students in high-growth sectors.

The relative emphasis institutions, colleges, and departments place on the different elements of faculty work — teaching, research, and service — influences faculty engagement in academic planning at the unit level (Stark & Lattuca, 2009).

Student voice is critical for BAS improvement

Most of the participants stated that there is no formal process for gathering student perception of BAS programs at BC. The end-of-course evaluations are meant to evaluate faculty members. There is no alumni association established for BAS programs at BC, hence individual BAS disciplines have created their own surveys to gather feedback from graduates. The responses from these surveys are low, but there is anecdotal evidence that students are generally satisfied with the BAS programs and getting jobs. Additionally, it was interesting to learn that the Baccalaureate Leadership Council (BLC) has collected some data from BAS graduates through panels and conferences. This data indicates that BAS students are getting jobs within six months of graduation, and a small handful of students are joining the graduate school. This indicates that BAS programs are meeting rigorous requirements.

Some faculty members described how BAS students are contributing to the field through capstones and internships. These students feel accomplished when they have engaged with industry partners on real-world projects while being simultaneously supported by their mentors and supervisors. Feedback from BAS students and graduates helps faculty and administrators to gauge what is working, what is not working, and identify areas of improvement for BAS programs. According to research, student's voice helps in institutional decision making and program improvements. Such perspectives are used in higher education to describe a range of activities from the rather narrow concerns inherent in gathering evaluations and feedback from students to improve courses to broader participatory and inclusive research designed to affect

transformational outcomes (Bennett & Kane, 2014). Even though there may not be a consistent way of tracking BAS graduate data, some stakeholders contend that student voice for BAS programs has been improving over the years.

Finding 4: Funding Model is Important, but not a Barrier for Sustainability

a) Appropriate funding is necessary

b) The current funding model is not a barrier to sustainability

Appropriate funding is necessary

When interviewees were questioned about the impact of external influences such as funding on BAS programs, a key theme that emerged was the need for appropriate funding to support such programs. This finding is also corroborated with the evidence from the program evaluation documents. Community colleges are expected to be adaptive to the needs of stakeholders (Cohen & Brawer, 2008). In multiple works of literature related to community college baccalaureate programs, funding has been identified as a vital component in an institution's ability to acquire and maintain the additional demands of baccalaureate offerings (Essink, 2013; Hofland, 2011).

Bachelor's degrees come with a host of expenses including the hiring of faculty, additional support services, enhanced library services, lab upgrades, technology, equipment, and accreditation requirements. New programs require the resources and funding to take off until they are self-sustaining. Essink (2013) argues that as a part of the planning process, the college should naturally include a financial blueprint of the funds to support bachelor's degrees for the initial three to five years. Since BAS programs offer highly specialized technical degrees, it is imperative to invest in resources to keep pace with technology changes. Some programs require funding for professional-quality tools and facilities, while others need funding for newer technology, library services, and equipment. For example, programs in IBIT have to constantly

keep pace with technology changes and need the financial resources to support such upgrades. Some programs are struggling to mobilize funds for additional personnel resources such as full-time faculty, writing support specialists, lab technicians, PM, and/or PC. One of the themes that came up almost unanimously was the shortage of marketing funds. Most programs require proper marketing efforts to deliver the value proposition to prospective students. They need to constantly increase their program awareness through ad campaigns, website and flyer updates, virtual information sessions, etc. Thus, they require adequate funding to support such marketing efforts.

Research shows that institutions that have lower levels of funding for the administration (of programs), curriculum development, libraries, and instruction technologies have lower rates of persistence. One study suggests that a one percent increase in expenditures led to a quarter of a percent increase in graduation rate (Ryan, 2002). While a sustainable source of funding is vital for newer programs to thrive and succeed, older programs may need to make a concerted effort towards improving classroom efficiency and enrollment management to scale and remain cost-effective. While enrollment does not fully resolve the resource issues, BC must provide a mechanism for BAS programs to have more autonomy and control over resources through effective allocation of funds.

The current funding model is not a barrier to sustainability

States have played an important role in providing funding to make colleges more affordable for students. In the process, they have helped underrepresented students and those with low SES to get access to colleges. State-support programs are funded by the state while self-support programs are funded by student fees. The main vehicle for state support is through direct appropriations to designated public colleges and universities (Toutkoushian & Shafiq,

2010). When BAS programs were first launched in BC in 2007, the programs were designed and built on a self-support model. Because no new additional grant was forthcoming, the cost of developing the new programs needed to be absorbed from within the existing budget, and programs needed to rely solely on tuition to recover costs and remain self-sustainable. It is important to note that such a model encouraged BAS programs to operate in silos, managing their operation with initial start-up and program maintenance funds. In 2017, all BAS programs in BC moved from self-support to a state support model. This adjustment was made to enable the college to count student enrollment toward state enrollment targets.

When participants were asked about the role of the funding model towards the development/sustainability of BAS programs at BC, the responses were mixed. While most participants clearly articulated the pros and cons of the two funding models, several participants vehemently opposed the state support model indicating that it has discouraged their entrepreneurial spirit and has limited their abilities to serve students through advanced technology, equipment, instructional aides/tools, and other resources. The documentary evidence also supports this school of thought. In 2017, some programs sustained a severe financial hit due to an abrupt switch to the state support model, which disrupted programs' operations causing greater competition for shrinking budgets and faculty lines. There is an opinion that this change contributed to attrition in some programs. The state support model provides significantly less flexibility in money management. Interviewees cited examples of how they have been limited in their abilities to procure resources for their projects due to the lack of available funds. These resources are critical for the growth and sustainability of their programs and they worry that such a model will not help them sustain for a long time without some level of intervention or restructuring efforts by leadership. Other participants were either fine with the

current state support model or did not indicate a specific preference. While most participants recognized that both funding models have pros and cons, they expressed that there needs to be a fundamental change in the way BAS programs are structured and operationalized and that the funding model is not a barrier to such changes. Some of them recognized that the state support model may encourage the integration of BAS programs into the college core. This is possible if there is a centralized baccalaureate leadership team that provides an anchor for these programs and supports a platform for program teams to have more autonomy over resources.

RQ3. To what extent have BAS programs undergone evaluation and adjustment to support continuous learning during their life cycle?

Finding 5: Program Review Process Standardization and Optimization

- a) Reviews are occurring at multiple levels; there is a need for standardization*
- b) Shorter review cycles for more continuous improvement*

Based on the program evaluation documents and participants' involvement in the program review process, a key finding is that program reviews are occurring at multiple levels in different capacities, and there is a need for standardization. Additionally, program reviews are occurring every five years which is a long duration; the outcomes of such reviews may become irrelevant in a five-year cycle due to rapid changes in technology.

Reviews are occurring at multiple levels; there is a need for standardization

BAS program evaluation at BC occurs at multiple levels (accreditation, program reviews, viability reviews, and advisory board reviews), although not all programs go through all the different reviews. Further, the extent to which programs undergo evaluation and adjustment may vary across programs. Not all programs have completed their first program review since launch, and some of them are underway. When asked about the effectiveness of the review processes, participants were not sure if the program review process was truly effective or not. They echoed

that the program reviews are a cumbersome process and involve a lot of administrative and documentation work, especially for the program chairs. Since program reviews are spaced out every five years, many programs conduct their own internal reviews and post-mortems to identify areas of improvement on a continuous basis. Although everyone understands the importance of doing ongoing evaluation and adjustments to programs, they agreed that the review processes are not standardized across all BAS programs. They acknowledged that leaders need to be more involved in program review processes, and program improvements should be leadership-driven and not PM/PC-driven. Most participants voiced that the program review process should be optimized by conducting them every two to three years to be more meaningful.

Currently, the whole process of conducting the program reviews is cumbersome and time-consuming. Reducing the frequency of these reviews and optimizing some of the tasks would make the process more manageable and lead to better review outcomes. It appears that a new optimized review process has been launched recently and the benefits are yet to be seen. For other reviews such as the advisory board reviews and program-specific internal reviews, the schedule is more realistic, and participants are generally pleased with those reviews. According to Stark and Lattuca (2009), such advisory boards can be powerful catalysts for program adjustment. A standardized model for the internal reviews across all BAS programs will increase the overall efficiency of the programs and result in better predictability of program outcomes.

Shorter review cycles for more continuous improvement

One of the key findings is that the program reviews occur every five years and this rhythm is perhaps a bottleneck for achieving agility and review efficiency. Five years is a significant time gap to make any meaningful changes to the BAS programs for continuous improvement. BAS programs are driven by workforce needs and must continuously adapt to

keep pace with technology and industry demands. The feedback from the first program review may become irrelevant by the time it is due for the next review. Further, other infrastructural changes such as technology and lab upgrades, replenishing of equipment, and library changes may be needed frequently. In occupational programs where changes in industry practices must be quickly incorporated into degree programs to prepare individuals for career entry or advancement, quicker reviews will result in faster adaptation to the evolving industry needs (Stark & Lattuca, 2009). Most participants felt that the program review should occur every two to three years in order to have a meaningful impact on the programs and continuously improve. Reducing the frequency of these reviews may lead to better review outcomes.

RQ4. What lessons have been learned about BAS programs that may inform institutional leaders about the viability of such programs?

Finding 6: Senior Leadership Commitment to BAS, a Key for Long Term Sustainability -

- a) More involvement and support from upper-level administration is vital*
- b) Integrate BAS into the fabric of the college for increased viability*

This finding is a direct result of the information that participants shared about their experiences with BAS programs. Participants shared perspectives on how BAS programs have been performing over the years including some of the institutional and unit-level challenges around the development and sustainability of these programs. Most interviewees expressed concern over resource limitations, siloed culture, and structural gaps among many others as institutional challenges, and emphasized the need for adequate support, focus, and attention from senior leadership as a vital next step. One of the key themes that pervaded across all of the interviews is that BAS programs need more involvement and support from upper-level administration and that these programs have to be integrated into the fabric of the college for better viability.

More involvement and support from upper-level administration is vital

One of the key findings is that BAS programs need more involvement and support from upper-level administration. The programs need to have adequate and assured funding support for the initial three to five years without which they may become unstable over time. Because of how BAS programs are positioned under respective Prof/Tech division that include other program categories such as AAS and Certificate programs, there is no centralized leadership team that is exclusively dedicated to BAS programs and their unique needs. BAS disciplines are not unified within the system under one umbrella but operate as separate entities with their own unique culture and siloed governance resulting in a lack of synergy across divisions. When a new BAS program is conceived, it goes through a multistage review and approval process requiring the college to provide strong evidence of labor market need for the degree, projected wage data, proof of student demand for the program, evidence of collaboration with university partners, and more; administrators play a key role in these processes. After the initial administrative tasks are over, it is handed off to the respective Prof/Tech division and then it becomes the dean's responsibility to manage the BAS program along with a host of other responsibilities that encompass AAS and Certificate programs. The dean would often rely on the division director, program chairs, and respective BAS program managers for administrative governance of the specific division. The below structure represents a typical Prof/Tech division headed by the respective dean and the associated reporting structure. Each Prof/Tech division (A&H, HSEWI, IBIT, or SCIENCES) emulates a similar structure.

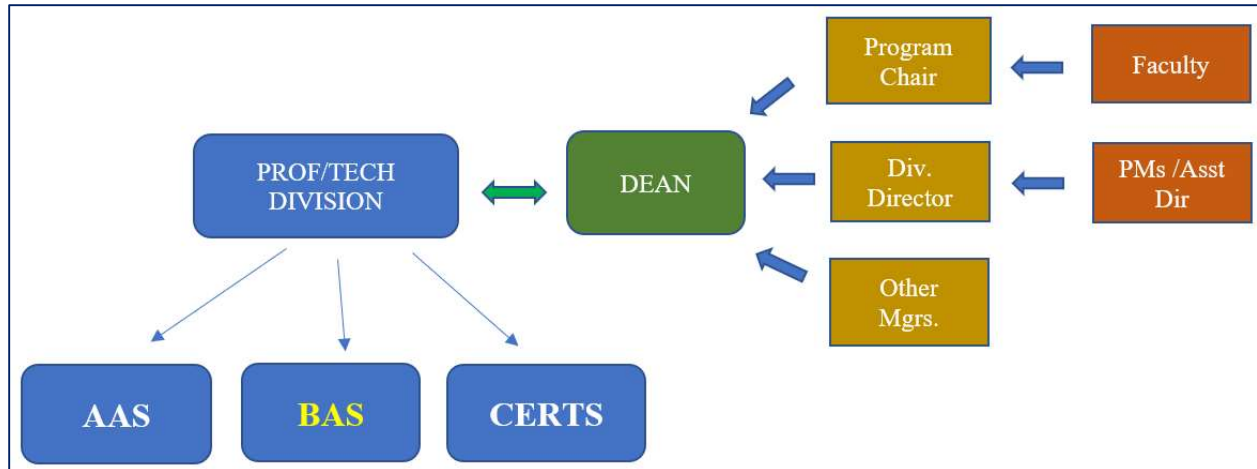


Figure 10: Current operating model at BC; BAS programs reside within the Prof/Tech division

In this model, the individual BAS programs are rolled under respective Prof/Tech divisions and therefore stay as separate entities from other divisions. As expressed by many participants, the transition of new BAS programs from the upper-level administrators to the individual BAS departments within the specific prof/tech division is difficult; once the programs are launched, they do not receive adequate support from senior leadership to fulfill their unique needs around library services, technology, equipment, student services, marketing, etc., because the hope is that BAS programs will become self-sustaining. However, this expectation is far from reality. Even if they have a good PM who can take up some of the administrative work, programs flounder. Based on their experiences, most participants believe that BAS programs will be less viable without adequate support from senior leadership; they may survive in the short-term but will not be sustainable for the long term. They felt that senior leadership accountability is a key improvement area.

Integrate BAS into the fabric of the college for better viability

Participants voiced that BAS programs are operating in silos and need to be integrated into the fabric of the college for better viability. Some of them recognize that despite growth in enrollment over the years, BAS programs are relatively small-sized, and only a small number of

faculty are actively engaged in the management of these programs. Evidence suggests that BC operates under a dual identity of a two-year college that has a few four-year programs, rather than identifying itself as a four-year college. Such an identity clash manifests in unfamiliar ways of institutional governance and expectations, e.g., governance of an alumni association. It is well known that the contribution of alumni back to the college as donors can be profound and their support in facilitating internships is vital in a four-year institution, and such relationships are holistically cultivated over time. However, BAS programs cultivate their alumni relationship individually instead of doing systematically as one BAS institution. This also affects the way programs manage practicums and placements with industry partners which occurs in a siloed manner because BAS is perceived as an add-on instead of being integrated into the very fabric of the college. Participants echoed the thought that BAS programs need to be consolidated into one unit under one leadership to be viable and to positively impact student outcomes coherently and consistently.

CHAPTER IX: RECOMMENDATIONS

BAS programs offer a pathway for AAS graduates to complete a baccalaureate degree who are unable to transfer their credits to Universities (Meza, 2019). The key policy goals of the applied baccalaureate degree in Washington State are to increase educational attainment for students and meet employer demand. The two are linked concepts, in that if students are not able to secure employment at a living wage following degree completion, then the program might not be sustainable. This is a key evaluation consideration for BAS programs for those already in place, but even more importantly for those colleges who are working on establishing new programs. Earnings level is not a factor for program approval but is an important aspect of the student experience. This is particularly germane to the BAS degree, which, by definition, builds

upon an existing workforce-related associate degree, which is designed to put students directly to work. Anderson (2005) suggests that when a higher education institution adopts a learning organizational approach, using systems theory, theories of action, personal mastery, and double-loop learning, they can greatly engage in community outreach and form better relationships within communities. Kezar (2005) labels the adoption of the learning organization “wisdom,” which, in this case, is a benchmark of organizational learning. This wisdom is found when organizations look beyond the empirical data and pay attention to the silent cultural contexts of institutions. Organizational memory, feelings, complaints, and perceptions of all stakeholders including administrators, faculty, staff, and students also play a crucial role in determining organizational needs (Argyris & Schön, 1978).

Considering the purpose and significance of this study, I gathered quantitative and qualitative data from multiple sources such as interviews with administrators and faculty, archival records, and program documents, and analyzed the data using the analytic techniques discussed in the previous sections. By utilizing the “Academic Plan Model” by Stark and Lattuca (2009) as the foundation, I analyzed the administrator and faculty perceptions of BAS programs in terms of what is working, what is not working, and areas of improvement to increase alignment with the BAS mission. Further, I looked at continuous improvement practices and identified lessons learned about BAS programs within the context of the study. Finally, all the data gathered was triangulated to make a credible interpretation of the findings and to determine the viability of BAS programs at Bellevue College. In this section, I will suggest recommendations informed by the findings to help Bellevue College improve its BAS strategy.

Recommendation 1: Strengthen BC institutional identity to reflect the BAS programs as a core part of the college

Bellevue College has not fully embraced BAS as a core part of its mission. We know that the addition of BAS programs has enhanced the traditional community college mission while providing opportunity to diverse student populations to pursue a baccalaureate degree. However, the BAS programs have not been holistically integrated into the fabric of the college; many people within the community are still not aware that BC offers such four-year degrees that are accessible, flexible, cost-effective, and workforce driven; they still view BC as a two-year community college. Most participants think that BC has retained its identity as a two-year institution while fulfilling a rather limited demand for specialized baccalaureate degrees. To grow BAS programs, BC must invest in marketing these programs and increase awareness. It must strengthen its institutional identity to reflect BAS programs as a core part of the mission. Administrators must increase the visibility of these programs both internally and externally. They may need to update the college mission statement to reflect these degrees and their purpose, include them in key communications and newsletters, recognize and reward the programs at a college level, and present the value of these programs to external stakeholders. A mission is a statement about an institution's identity or vision of itself, articulated to provide its members with a sense of institutional goals and shared purpose (Stark & Lattuca, 2009). Mission statements also communicate purpose and values to external audiences (Hartley, 2002). BC may reimagine itself as a four-year college and clear the confusion caused to stakeholders due to an incoherent identity.

Many community colleges have changed their mission and identity as four-year institutions after introducing BAS programs. Some community colleges have the baccalaureate as a steppingstone to becoming a state college. They no longer consider themselves a community college. Dixie State College in Utah and Bismarck State College in North Dakota are examples.

After they began offering the baccalaureate degree, they changed their mission and institutional identity to a four-year college (Dixie State College Website & Bismarck State College Website). Another example is Great Basin College in Nevada which introduced BAS programs to develop a workforce to compete in the global economy but did not create a dual identity with two values systems and two subcultures. It blended the transfer mission with access to the baccalaureate. It remained true to the community college values of access and responsiveness, yet standardization and policy required it to behave as a four-year institution with the increase in the number of faculty with doctorates, increased standardization, and formal policies. In fact, Great Basin College's mission statement reflects baccalaureate degrees as a core part of the college. BC must come out of the identity crisis and strengthen its institutional identity by incorporating BAS programs into its core mission. This will help in elevating the community's perception of BC, and people will start looking at BC more as a college of the first choice.

Recommendation 2: Establish BAS Alumni Association and develop a centralized BAS Employment portal to consistently track BAS graduates and their employment outcomes

Most participants voiced that BC does not have a BAS alumni association and a centralized BAS employment portal; and that there is no systematic way to track BAS graduates and their employment outcomes. Each BAS program has devised its ways of connecting with BAS graduates and tracking their post-college outcomes. To bring uniformity to this process, BC must establish a BAS alumni association and develop a centralized BAS employment portal that can be utilized by every BAS program to track graduates similar to how traditional colleges and universities do. Building a baccalaureate alumni association will bring in consistency and coherence of data gathering through standardized alumni surveys and provide a lot of benefits to the alumni and the college. Research shows that well-formed alumni associations are not just

charitable organizations, but they also offer former students a wealth of opportunities - networking, career-building tools, benefits and perks, mentorship, and giving back to the university (Carlton, 2021). Due to the decrease in public funding, community colleges are in a position where they need to generate private gifts. Alumni represent the largest untapped pool of prospective donors, and the success of alumni giving at four-year institutions illustrates the potential that exists for community colleges in terms of cultivating alumni as donors, supporting current students with placements, and fundraising opportunities (Skari, 2014).

Recommendation 3: Revise BAS operating model; Integrate programs into one BAS Institute and establish one governance model

In complex projects and programs, the choice of operating model (structure, processes, and tools) is a key driver of success and execution efficiency (Poureaux et al., 2016). The interview data supplemented with documentary evidence support the finding that BAS programs may not be scalable with the current operating model and that there is a need to revise the operating model. Within the overall framework of the college, BAS programs operate as small, customized programs without a vision of scaling. These programs are embedded within the respective Prof/Tech divisions that also house associate degrees and certificates. Thus, BAS programs function as independent units with minimal cross-group collaboration. Some of the repercussions of the current model is a siloed culture, less synergy between BAS programs across divisions, overlapping roles and responsibilities across PMs and PCs, less involvement from senior leadership, impediments to scaling, and losing profitability. In speaking to administrators and faculty, there is a consistent theme about a possible flaw in the model, and a need to reassess and amend the BAS operating model. (See [Appendix E](#) for a visualization of the proposed model).

Below is a list of recommendations:

- *Remove BAS programs from the individual Prof/Tech divisions and integrate them into one BAS Institute with an overall BAS leader. Within the BAS institute, the current BAS programs could be housed, preferably in one building. This could be labeled as “School of Applied Baccalaureate Studies”.*
- *Reassess the current BAS programs and concentrations within the programs. Look for an opportunity to optimize the concentrations and adjust/remove as needed.*
- *Allocate a dedicated PM for each BAS program. This will minimize juggling across too many programs and increase the efficiency of PM tasks. Standardize roles and responsibilities for all BAS PMs.*
- *Allocate a dedicated PC for each BAS program. This is a necessity since PCs are subject matter experts and should not be expected to hone expertise across multiple domains which may impact their overall productivity. Such a change will increase the efficiency of PC tasks and minimize work overload. Standardize roles and responsibilities of all BAS PCs.*
- *Minimize role overlap between PMs and PCs.*
- *Every BAS program must have a business plan and demonstrate the capacity to scale. Gauge resource needs for each program in terms of library, technology, labs, equipment, marketing, etc., and have a centralized BAS leadership team to cater to these resource needs, leverage common assets, and take advantage of economies of scale. Provide more autonomy and control over resources.*

- *Clearly demarcate student services tasks between student support functions, PMs, and PCs.*
- *Establish one governance model for all BAS programs in terms of procedures, processes, tools, and communication. Support cross-pollination between programs through common governance and sharing of best practices.*

With this model, BAS programs will become more cost-effective as they can capitalize resources within the BAS Institute, mobilize staff as needed and achieve economies of scale. Research on economic theories and principles suggests that economies of scale can be achieved by streamlining processes and increasing productivity, resulting in lower average unit costs. For example, different departments may share space in the same corporate headquarters; divisions may share a common product design group; all departments can share in the costs of designing and implementing an accounting system. Shared assets may also be intangible, such as a valuable brand name, corporate culture, or particularly effective leadership (Gibbs & Lazear, 2014).

Recommendation 4: Supply adequate funding, resources, and administrative support to grow BAS programs

It was clearly articulated by the participants that the allocation of funding and resources should be increased to grow BAS programs. BC must allocate more funding for support staff, qualified faculty, library resources, technology, labs, equipment, and marketing. BC must also review the current student services framework and look for an opportunity to expand those services. Offering four-year degrees has amplified not only the expectations but also the focus on student advising. Advising, an integral part of BAS programs needs to be structured and program-oriented instead of course-focused. The student profiles have changed because of BAS

degrees; they are mostly working adults or part-time students who need special supports while navigating their unique educational pathway. This puts a lot of pressure on PCs and PMs trying to provide such a support. Research shows that additional capacity for student services specifically aligned to BAS degrees would help offload some of the burdens on existing faculty and staff and shift the focus away from individual courses to actual programming (Hofland, 2011). Administrators and faculty have shared success stories of students and reiterated that industries like technology and healthcare are seeking more BAS students in certain subject areas. With adequate funding, resources, and administrative support, BAS programs at BC could grow significantly and continue to meet the demands of the ever-changing industry.

Recommendation 5: Standardize and optimize program review practices across all BAS programs

According to Stark and Lattuca (2009), evaluation is the process of examining an enterprise and making judgments, either formative or summative, about its effectiveness. Thus, evaluation subsumes more specific processes such as assessment of student outcomes, self-study, and external program review. Based on the participants' involvement in the review process and the evidence from program evaluation documents, a key finding is that program reviews are occurring at multiple levels in different capacities, and there is a need for standardization. Additionally, program reviews are occurring every five years which is a long duration; the feedback from such reviews may become irrelevant after five years due to rapid changes in technology. In occupational programs where changes in industry practices must be quickly incorporated into degree programs to prepare individuals for career entry or advancement, periodic reviews will result in faster adaptation to the evolving industry needs (Stark & Lattuca, 2009). Based on this assessment, my recommendation regarding the different reviews is:

- **Program reviews:** Program reviews are considered internal to Bellevue College and are typically conducted every five years by the program leadership team. These reviews are critical for quality improvement. Typical quality improvement cycles in all industries are every one to two years. My recommendation would be to reduce the frequency of program reviews to every two years to continuously monitor progress; this will help gauge whether programs are performing well at their merit and what actions should be taken to remedy discrepancies from “ideal” merit and worth. Institutionally mandated program reviews are sometimes unpopular among faculty because colleagues from other departments can be harsh critics and may be unfamiliar with the norms of the academic field under review. Periodic reviews that are done regularly, rather than during times of crisis, are less threatening and more productive (Stark & Lattuca, 2009).
- **Program viability review:** A viability review is often needed to examine programs from the lens of student outcomes, operational efficiency, and fiscal feasibility. Currently, this review is based on an annual cycle and that should continue. Stark and Lattuca (2009) categorize such reviews as summative evaluations that can lead to judgments about the course and program quality and ultimately to decisions regarding staffing, budget support, and program continuance.
- **Advisory Board reviews:** This is an internal activity and is perceived to be the most effective review process that results in tangible changes and continuous improvement. Advisory Board reviews must continue as per the current rhythm in respective BAS programs because they foster connection with industry experts and help programs stay on the cutting edge by constantly adapting their curriculum to evolving industry demands. According to Stark and Lattuca (2009), such advisory boards can be powerful catalysts

for program adjustment. BAS programs have been benefited profusely through such reviews in the past.

- **Informal Assessment:** BAS programs must continue informal assessment that enhances faculty members' ability to get direct feedback and adjust quickly (Stark & Lattuca, 2009).

Currently, the review processes are not standardized, and most programs are doing the reviews using their own siloed processes. As a result, it is difficult to track and measure the efficiency of the review processes across all BAS programs; the visibility and comparability of programs are insufficient. It is difficult to see when a program is heading towards a crisis, and mitigating actions are initiated late. Further, the administration of reviews is challenging and results in work overload for PCs and PMs. Standardizing the review process across BAS programs has significant potential for improving review efficiency, increasing agility, and simplifying management processes. This will also help free up resources from many routine tasks and provide more flexibilities. Research shows that standardizing review processes will increase scalability, comparability (benchmarking between programs), organizational robustness, and decision-making agility (Kates & Galbraith, 2007). Additionally, leadership needs to be more involved in a thoughtful review process, assist in data collection and interpretation, and appraise the system holistically.

Recommendation 6: Establish a centralized baccalaureate leadership and support system to ensure quality and consistency.

To revise the BAS operating model, this study has recommended removing BAS programs from the individual Prof/Tech division and integrating them into one BAS Institute headed by an overall BAS leader. The college needs a strong, centralized, and cohesive

baccalaureate leadership system to focus on standardizing and streamlining program assessments, admissions, recruiting, graduation, alumni engagement, and/or fundraising efforts to strengthen financial support for specialized program needs. Such a centralized office could help mobilize resources and sharing of common assets across programs, increase accountability, leverage shared governance, and achieve economies of scale. A Bachelor of Applied Science alumni outreach specialization team could be created to track BAS graduates, gather career placement data, and support program initiatives and other outreach projects. BAS program chairs could meet regularly to share best practices and identify strategic goals for baccalaureate success. By having a dedicated centralized baccalaureate leadership, BAS programs would get the needed focus, attention, and support to sustain long-term growth. This leadership team could then come up with a BAS vision and a five-to-seven-year program roadmap to communicate strategic objectives, milestones, resources, and planned timeline to achieve them.

CHAPTER X: CONCLUSION

Overview of the Study and Key Findings

The BAS programs in Washington State have paved the way for a more equitable statewide workforce. By providing these opportunities at community colleges throughout the state, BAS programs have facilitated a pathway for underserved and non-traditional learners to receive a baccalaureate-level education and attain living-wage employment. After going through a series of legislative approval processes, BAS degrees in high-demand workforce programs were launched in WA community colleges in 2007 to achieve four primary goals – to fulfill the state goals of increasing the number of baccalaureate degrees, expand the workforce mission of colleges to better meet the needs of local and state employers, provide an educational pathway

for applied associate graduates, and improve equity in educational access (SBCTC, 2015).

Bellevue College was one of the first four colleges to be approved for the pilot program in Washington State, and since its inception, these programs have evolved and matured.

Given the purpose of the study, an embedded single case study design approach adapted from Yin (2018) was used for this study, which drew evidence from three primary data sources: documentation, archival records, and interviews. The data for this study were collected from student outcomes data, program evaluation documents, quality improvement documents, existing contracts, dashboards, college websites, and lived experiences of BAS faculty and administrators captured through semi-structured interviews. Several findings emerged from the data analysis and interpretation. First, BAS programs are serving the needs of the diverse community; although the community college mission is enhanced, its identity remains incoherent. Also, student outcomes vary across BAS programs and there is a need for better data and tracking mechanisms. Second, there are structural limitations of BAS programs and resource constraints. There is a growing concern amongst faculty and administrators that BAS programs may not be scalable and sustainable with the current operating model. They purport that the current model needs to be revised, adequate resources need to be allocated and a solid support framework should be established for the growth of these programs. Third, faculty support for BAS programs is critical for program success; senior leadership must invest funding into hiring qualified faculty members and provide the necessary resources for faculty to be successful, such as technology, library, equipment, and/or personnel resources. Another suggested area of investment is in professional development where BAS faculty members could further enhance their skills to incorporate more hands-on learning in the classroom to better prepare BAS students and stay relevant with current trends in the industry. Also, student's voice is critical for BAS programs

and their feedback must be factored towards institutional decision making and program improvements. Fourth, the funding model is important even though it is not a barrier to sustainability; BAS programs need adequate funding especially during the initial years to grow and succeed. Fifth, there is a need to standardize and optimize the program reviews across BAS programs for more continuous improvement. Finally, a strong commitment to BAS programs from senior leadership is key for the long-term sustainability of these programs. Their involvement and support for BAS programs are vital for the success and longevity of these programs; BAS programs should be integrated into the fabric of the college for better viability.

In general, the BAS programs at BC are perceived as an extension of the community college mission towards responding to the community's needs. The interviewees predicted that BC would remain in tune with the needs of the communities in which it resides, and it will continue to evolve as the community demands, however, leadership and technology will play a key role in strengthening its identity. To summarize, although adding BAS degrees at BC is important, the administrators and faculty emphasize periodic needs assessment, strong governance, availability of financial resources, and leadership support as significant factors, among others, to sustain these programs. By establishing a "School of Applied Baccalaureate Studies," a centralized baccalaureate leadership team, and an enhanced college mission statement, BC could move closer towards assimilating BAS programs into the fabric of the institution.

Limitations

This study includes some of the typical limitations that case studies pose. These limitations include the following:

1. This capstone project is limited to one case study. Findings may not be generalized to different institutions.
2. A case study by nature is bounded, therefore, if the study were duplicated at a different time, the results may differ. This study considered the timeline from 2007-08 to 2019-2020.
3. The number of interview participants was originally planned for seventeen, however, the final set of interview participants was fourteen, out of which two participants dropped from the study. Due to the sensitivity of a viability study, some of the BC stakeholders who had earlier consented to participate became apprehensive and withdrew from the study. Another reason for low faculty participation is the effect of the COVID-19 pandemic. Faculty members were too busy adjusting their instruction to adapt to online learning and could not make a commitment. It is recommended that qualitative studies require a minimum sample size of at least twelve to reach data saturation (Clarke & Braun, 2013; Fugard & Potts, 2015; Guest, Bunce, & Johnson, 2006). Thus, considering the scale of this study, a sample of twelve participants was deemed sufficient for the qualitative analysis.
4. Although the program chairs are esteemed faculty members and shared valuable inputs for this study, nonetheless, the interviews were more administrator heavy.
5. The information provided by the participants was based upon their disparate views and perceptions and may have been subject to bias. Besides, the participant's interpretation of the questions may have impacted the quality of responses.
6. The quantitative data gathered from the BC dashboard has some limitations. It currently houses completion, enrollment, and diversity data but there is no employment data. Most

of the BAS programs at BC gather employment data through informal channels, and lack of quality employment data is a known issue. The study gathered limited BAS employment data from the SBCTC website to understand the employment outcomes and extrapolated it for Bellevue College. Such data may not be sufficient for a full-blown employment outcomes analysis but sufficed for the scope of the current study.

Conclusions

Technology is changing the landscape of higher education. Today, traditional colleges and universities face reduced funding, changing student demographics, and increased competition. Their success requires a transformative change to stay on the cutting edge by constantly adapting their curriculum to evolving industry demands. When developing BAS degrees, educational leaders must first examine the institution's mission, and work with faculty to understand the impact of internal and external factors on their viability. The institution's mission serves as a foundation for the vision, strategic plan, and relationship between the institution and the broader public it serves. Institutional leaders must recognize the type of institution and the constituency it serves before initiating unique degrees or programs such as BAS. This study found that specific administrators and faculty of BC believe it is critical that implementation of the BAS degrees fits within the mission of the institution. Simply changing the college name from "Bellevue Community College" to "Bellevue College" is not enough; its mission statement also needs to be examined and revised to reflect the presence of BAS degrees as a core part of the college.

Stark and Lattuca's (2009) Academic Plan Model alerts us to a variety of influences within the sociocultural context and how these affect program planning. The impact of different influences on academic plans demonstrates how some components of these plans are open to

direct societal influences, while others are buffered from external forces, but subject to internal influences such as faculty and student views about programs (Stark & Lattuca, 2009). These influences are not independent of each other and in many instances, act in a give-and-take nature, shaping the program environment and its outcomes.

Stark and Lattuca (2009) recognized that, as a society (external) shapes academic plans, higher education (internal) also shapes society. External influences are the outside stakeholders that influence the program, such as accrediting bodies and workforce needs. As the economic state of society and academic capitalism play an influence on higher education, the internal constituents such as the institutional mission, resources, and governance are the driving force of change to the institution. Although the external and internal factors exist individually, both must be considered simultaneously to support evaluation and adjustment for continuous learning (Stark & Lattuca, 2009). The academic plan model provides a comprehensive framework for institutional leaders and decision-makers to assist in viability studies and determine program effectiveness.

Bellevue College is one of the first few colleges in Washington State to institute BAS programs; it should be proud to be both an advocate for BAS programs and a resource for other states planning to initiate the implementation process. Community colleges are ever changing institutions and the BAS degrees may be the natural evolution of their role, mission, and responsibilities to the communities in which they reside. This change is both challenging and rewarding. Research needs to continue to determine the viability and effectiveness of the community college baccalaureate.

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APPENDICES

Appendix A

Email – College Administrators and Faculty

Dear Administrator/Faculty (Name Here):

As a doctoral student in the Leadership and Learning in Organizations (LLO) program at Vanderbilt University, I am inviting you to participate in a study to explore the viability of BAS programs at Bellevue College. The title of my capstone project is: A Viability Study of BAS Programs at Bellevue College - Student Outcomes Analysis and Perceptions of Administrators and Faculty. You have been identified as a potential candidate for this study because you work at Bellevue College or have been associated with BAS programs in some capacity. Data from this interview will contribute to a deeper understanding of the BAS programs at Bellevue College.

Your participation in this study is very important to me and will be helpful and informative to Bellevue College. Should you agree to participate, I will contact you to set up a Zoom interview, or if you prefer, a socially distanced, face-to-face interview on Bellevue College campus, at a time of your convenience.

The interview should take approximately 60 minutes and will be recorded. Participation is voluntary and your response will be kept confidential. You will have the option to not respond to any question that you choose. Participation or nonparticipation will not be shared with anyone at Bellevue College.

If you have any questions about the study, please contact the Principal Investigator, Binda Satpathy, via email at binda.satpathy@vanderbilt.edu or my faculty advisor, Dr. Tracey Armstrong at tracey.m.armstrong@vanderbilt.edu. If you have any questions regarding your rights as a study subject, contact the Vanderbilt Institutional Review Board (IRB) at (615) 322-2918.

Please print or save a copy of this page for your records.

I look forward to hearing from you.

Sincerely,

Binda Satpathy

Appendix B

Informed Consent Letter

Principal Investigator: Binda Satpathy

Study Title: A Viability Study of BAS programs at Bellevue College - Student Outcomes Analysis and Perceptions of Administrators and Faculty

This informed consent document applies to adults who are 18 years old or older.

Name of participant: _____

The following information is provided to inform you about the interview and your participation in it. Please read this form carefully and feel free to ask any questions you may have about this study and the information given below. You will be given an opportunity to ask questions, and your questions will be answered. Also, you will be given a copy of this consent form.

Your participation in this interview is voluntary. You are also free to stop the interview at any time.

1. Purpose:

This capstone project is being conducted by Binda Satpathy, a doctoral student at the Peabody College of Vanderbilt University, and she is seeking information that will be useful in the field of education. No one from Bellevue College is an investigator on this project. The study aims to understand the viability of Bachelor of Applied Science (BAS) programs at Bellevue College with a focus on student outcomes and perceptions of administrators and faculty. Bellevue College (BC) launched its first BAS program called Radiation Imaging Sciences under the Health Sciences Education domain in 2007. Over the last 10 years, BAS programs have expanded into other domain areas such as Arts and Humanities, Business and Information Technology, and Sciences, offering a total of 19 programs across multiple tracks; new programs are being added periodically to meet the workforce demands. Since its inception in 2007, there has not been a formal assessment done to ascertain if these programs are indeed meeting the program mission and serving the needs of the community. Thus, BC institutional leaders are unsure if BAS programs and practices are delivering their intended value and if they are sustainable or not. This doctoral capstone intends to do a viability study of BAS programs at Bellevue College and understand the administrator and faculty perceptions in terms of what is working, what is not working, and areas of improvement to foster better alignment with the BAS goals.

2. Procedures to be followed and approximate duration:

The analyst will obtain the pool of email addresses of BAS faculty and administrators from the office of Academic Affairs. Before conducting interviews, the analyst will send out a recruitment letter (via email) to administrators and faculty members inviting them to participate in this capstone project. The email will include brief information about the purpose of the study, modalities of the interview process, and analyst contact information. In the recruitment email it will be clearly mentioned that participation is voluntary and that participant's response to interview questions will be kept confidential. No one from Bellevue College will be informed of who has chosen or declined to participate in this study. If you decide to participate in this study, you will be asked to do the following:

(a) interested participants who meet the selection criteria will send this signed consent form to the analyst,

- (b) the analyst will schedule (face-to-face or zoom) interviews with the participants,
- (c) the interviews should last approximately 60 minutes.

Please note that your responses to the interview questions will be recorded and are completely confidential.

3. Description of the discomforts, inconveniences, and/or risks that can be reasonably expected as a result of participation in this interview:

A minimal risk may be inherent due to the framing of certain interview questions around program sustainability which may pose some discomfort to you; however, this risk is avoidable since you have the option to not respond to a given question that you choose. Your consent to be a study participant is strictly voluntary and should you decline to participate, or should you choose to drop out at any time during the interview, there will be no adverse effects on your employment. As a participant, information you provide will be held in confidence to the extent permitted by law, and no names will be used in the study. Your signed consent will be kept separate from the data. Additionally, all data for this study (including interview data) will be secured through a single, cloud software encrypted for security and confidentiality. Further, analyses will occur on the analyst's password-protected computer that only the analyst has access to for additional security.

4. Anticipated Risks/Benefits:

- a) A minimal risk may be inherent due to the framing of certain interview questions around program sustainability which may pose some discomfort to participants; however, this risk is avoidable since participants have the option to not respond to a given question that they choose.
- b) The potential benefits from your participation will be improvement to BAS programs at Bellevue College. Data from this interview will contribute to a deeper understanding of the BAS programs at Bellevue College.
- c) There are no direct benefits to you for participating.

5. What happens if you choose to withdraw from the study?

If you withdraw from the study, I will erase the audio recording and will not use any of it in the Capstone report.

6. Contact Information.

If you have any questions about this interview, please contact the Principal Investigator, Binda Satpathy, via email at binda.satpathy@vanderbilt.edu or my faculty advisor, Dr. Tracey Armstrong at tracey.m.armstrong@vanderbilt.edu. If you have any questions regarding your rights as a study subject, contact the Vanderbilt Institutional Review Board (IRB) at (615) 322-2918.

7. Confidentiality.

I will have a record of your name on this form. No one from Bellevue College will be informed of your choice to participate in this study. I will not link your name with the information on the background questionnaire or with the transcripts of the interviews. As a participant, information you provide will be held in confidence to the extent permitted by law, and no names will be used in the study. Your signed consent will be kept separate from the data. Additionally, all data for this study

(including interview data) will be secured through a single, cloud software encrypted for security and confidentiality. Further, analysis will occur on the analyst's password-protected computer that only the analyst has access to for additional security. I will identify each participant with a number (e.g., participant 1, participant 2). When I report the results of this work, I may include quotations from participants. I will never give the name or any other identifying information of the person I am quoting. In fact, I may not even know the name of the person I am quoting.

STATEMENT BY PERSON AGREEING TO PARTICIPATE IN THIS FOCUS

I have read this informed consent document and the material contained in it has been explained to me verbally. All my questions have been answered, and I freely and voluntarily choose to participate.

Date

Signature of participant

Date

Signature of Analyst

Appendix C

Thank You Email to Participants

Date

Dear (Title)

Thank you for participating in my capstone study on the Bachelor of Applied Science programs at Bellevue College. Your voluntary contributions to this study are invaluable.

I am so very grateful and appreciative.

Please contact me at 425-894-6323 or binda.satpathy@vanderbilt.edu if you have any questions.

Sincerely,

Binda Satpathy

Appendix D

Interview Guide: Administrators & Faculty

Name of Interviewer: Binda Satpathy

Name of Interviewee: _____

Location of Interview: _____

Date: _____ **Start Time:** _____ **End Time:** _____

Introduction: Thank you for volunteering for this interview. The purpose of my capstone project is to do a viability study of BAS programs at Bellevue College with a focus on student outcomes and perceptions of administrators and faculty. This interview should last about an hour. Before we begin, I just want to take a moment to acknowledge your consent for participating in this interview. Please know you may stop this interview at any time or choose not to answer any question. Your name will not be used when reporting this study. I would like to accurately capture our conversation today. I will send you the transcript of this interview to ensure you are comfortable with your responses. Do you have any questions before we begin?

Question	Question Type
Please describe your position at Bellevue College (BC). Probe: How long have you been with BC and what is your position? Probe: How long in this position? Probe: Were you in this position prior to BC offering BAS degrees? Probe: Were you in this position during the time BC transitioned into a 4-year college?	Background
Please state your level of involvement with the BAS programs.	Background
Have you worked at other educational institutions, and if so, was it a community college or four-year institution or both?	Background

Main Research Question: How have BAS programs and practices evolved at Bellevue College since their inception, and to what extent do they align with the original BAS mission?

Research Questions	Interview Questions **
RQ1. To what extent have BAS programs impacted student outcomes aligned with the BAS mission:	1.1 To what extent BAS degrees at BC reflect their mission/goals? <u>Probe:</u> What drivers/enablers have facilitated the achievement of the BAS mission/goals?

<p>completion, employment, enrollment, and diversity?</p>	<p><u>Probe:</u> What barriers have inhibited, or impeded, the achievement of the BAS mission/goals?</p> <p><u>Probe:</u> To what extent has the former Bellevue Community College mission undergone a change (mission erosion/creep) because of the introduction of BAS programs?</p> <p>1.2 To what extent have BAS programs impacted student outcomes such as completion, employment, enrollment, and diversity?</p> <p><u>Probe:</u> To what extent are students persisting and completing their BAS degrees on time?</p> <p><u>Probe:</u> In which BAS disciplines (A&H, HSEWI, IBIT, Sciences) are students more likely to graduate on time? In which BAS disciplines are students least likely to graduate on time? Why?</p> <p><u>Probe:</u> What is the perception of graduates after completing the BAS programs at BC? Share specific examples, if possible.</p> <p><u>Probe:</u> To what extent are the BAS programs meeting workforce needs and making an economic impact?</p> <p><u>Probe:</u> What kind of partnerships exist between BAS disciplines and employers? If they exist, how have such partnerships helped BAS degree graduates to transition to the workplace?</p> <p><u>Probe:</u> Have there been any employer satisfaction surveys conducted by BC for graduates across BAS disciplines? If yes, how often are such surveys conducted, and when was the last BAS employer survey conducted by BC?</p> <p><u>Probe:</u> Which BAS disciplines/programs are positively impacting employment outcomes (e.g. placement, earnings, etc.) for students? Which ones are not effectively impacting employment outcomes? Explain.</p> <p><u>Probe:</u> What factors influence student decisions to enroll and persist in BAS programs?</p> <p><u>Probe:</u> To what extent have BAS programs addressed the equity concerns around degree completion for underserved and non-traditional learners (e.g. people of color, working adults, women, etc.)?</p> <p><u>Probe:</u> Do you feel that the right data is being collected from BAS programs to assess the impact/outcomes of BAS degrees?</p>
<p>RQ2. What are the administrator and faculty perceptions of the internal and external factors that have influenced the development and/or sustainability of BAS programs?</p>	<p>Internal factors (Institutional):</p> <p>2.1 To what extent have institutional factors influenced the development and/or sustainability of BAS programs at BC?</p> <p><u>Probe:</u> What is the impact of shifting institutional mission (2 yr. to 4 yr. college) on the development and sustainability of BAS programs?</p> <p><u>Probe:</u> What kind of governance exists between faculty and administrators to operationalize new BAS programs or modify existing programs?</p> <p><u>Probe:</u> What sort of additional resources and capacity are needed to implement or expand BAS programs at BC?</p> <p><u>Probe:</u> Does BC have the instructional resources (including library resources) for imparting highly specialized BAS degrees? If yes, how are those resources mobilized?</p> <p><u>Probe:</u> With the current level of resources and capacity, are BAS programs sustainable (in the absence of additional state support in terms of funding or otherwise)?</p> <p>Internal factors (Unit-level):</p>

2.2 How do faculty roles influence BAS program development and implementation?

Probe: How have faculty roles transformed to support the addition/expansion of BAS programs?

Probe: What impact does faculty support of BAS offerings have on the BAS program environment?

Probe: How do faculty experience and prior qualification influence their engagement in the curriculum development at the BAS program level?

Probe: How do faculty members engage in cross-unit collaboration within the same BAS discipline (e.g. across BAS programs in IBIT)?

2.3 How do student characteristics (e.g. demographic, academic preparation, student goals, attitudes, and personal traits) influence the academic planning of BAS programs?

Probe: Do BAS programs conduct end-of-course evaluations, surveys, or exit interviews with students to collect information on student perceptions of their educational experience and satisfaction levels?

Probe: If the answer to the above probe is yes, what is the general perception of students about their experiences of BAS programs? If no, then please share any anecdotal examples.

2.4 What are some of the institutional and unit-level challenges around the development and sustainability of BAS programs at BC?

Probe: If there are one or more BAS discipline areas/programs that should continue, which ones are they? If there are one or more BAS discipline areas/programs that should stop, which ones are they? If there are one or more BAS discipline areas/programs that should be modified, which ones are they? Explain.

External factors:

2.5 Are there external barriers in terms of policy/legislation or otherwise when deciding to offer new BAS programs, expanding or ramping down existing programs?

2.6 How does workforce needs influence the academic planning of BAS programs?

Probe: Should BAS programs at BC be expanded to other workforce-specific subject areas or industries?

Probe: Are there any specific BAS programs that should be removed as it does not have enough market demand?

2.7 How does funding influence the development of BAS programs at BC?

Probe: What kind of challenges are faced to secure funding for implementation of new BAS programs or expansion of existing programs?

Probe: How does BC handle the ongoing costs of sustaining BAS programs, as well as allowing for experimentation and enhancement of existing programs in response to market needs?

Probe: Are there specific BAS programs where you anticipate a budget cut in the near future?

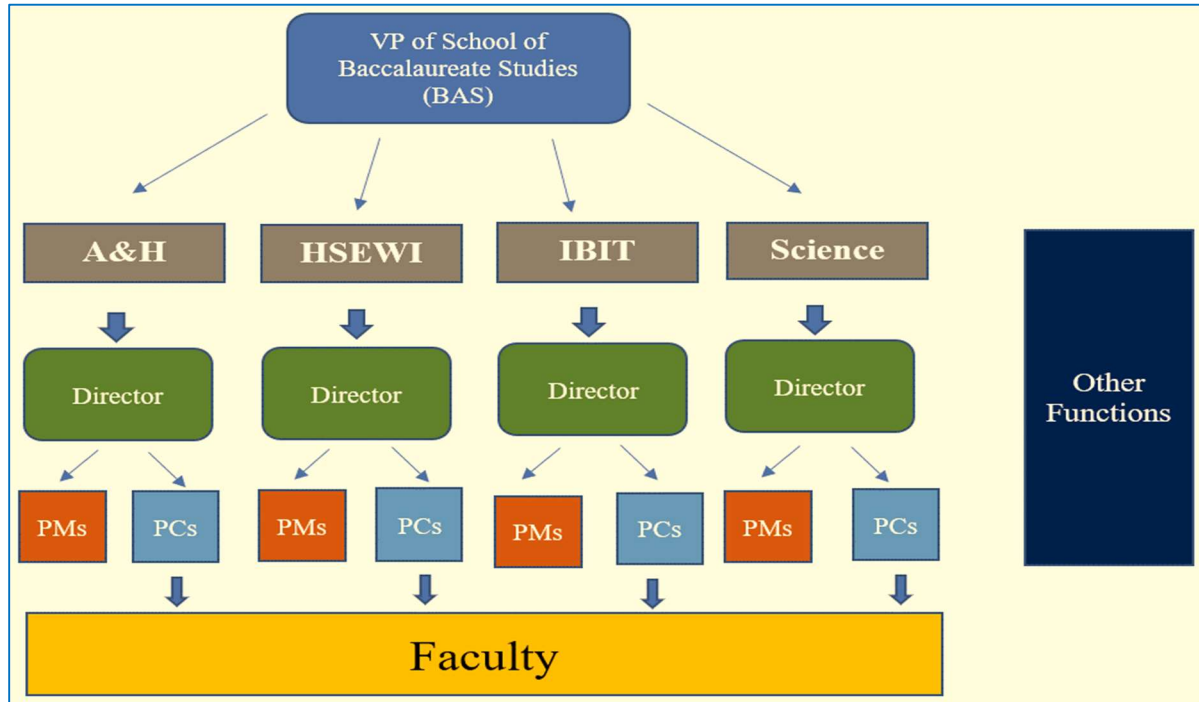
A Viability Study of BAS Programs at Bellevue College

<p>RQ3. To what extent have BAS programs undergone evaluation and adjustment to support continuous learning during their life cycle?</p>	<p>3.1 What adjustments have been made to the BAS program(s) since its/their inception? Give examples of programs that are adapting and improving by making minor adjustments and/or major changes?</p> <p>3.2 To what extent have the adjustments impacted the process, practice, student outcomes, etc.?</p> <p>3.3 Has there been continuous improvement as connected to the four goals of the mission?</p> <p>3.4 What type of evaluation procedures exist for BAS programs to determine program effectiveness and sustainability?</p>
<p>RQ4. What lessons have been learned that may inform institutional leaders about the viability of BAS programs?</p>	<p>4.1 What are the lessons learned as a result of evaluation and adjustment that may inform institutional leaders about the viability of BAS programs?</p> <p>We are approaching the end of the interview. Is there anything else you would like to share that we haven't discussed?</p>

** Interview questions are designed and referenced based on the key components of the Academic Plan Model by Stark and Lattuca (2009)

Appendix E

Proposed BAS Operating Model



- 1 Remove BAS programs from the individual Prof/Tech division
- 2 Integrate BAS programs into one BAS Institute with an overall BAS leader
- 3 Optimize BAS concentrations within individual programs
- 4 Allocate a dedicated PM for each BAS program
- 5 Allocate a dedicated PC for each BAS program
- 6 Minimize role overlap between PMs and PCs.
- 7 Create a business plan for each BAS program and demonstrate the capacity to scale

Appendix F

Concept to Codes Mapping

Concepts	Codes
Achievements	HIGH DEMAND, PLACE BOUND, GETTING JOBS, APPLIED, ACCESSIBILITY, A NECESSITY, HIGH IMPACT, VERY SUCCESSFUL, MEETING DEMAND, STRONG LABOR MARKET ANALYSIS, INTERNSHIP AND JOB OPPORTUNITIES, INCLUSIVE, MIXED BAG, PATHWAY, UNIQUE, ACHIEVING MISSION, DIVERSE STUDENTS, HIGH QUALITY, STUDENT INTEREST, VARIES BY PROGRAM, NON-TRADITIONAL, ACCREDITATION, LOWER COST, FLEXIBILITY, MISSION BASED, PROGRAM JUSTIFICATION, VOCATION, SALARY, BIG 3
Barriers	PERCEPTION, CONFUSING IDENTITY, NOT ENOUGH MARKETING, INTERNAL BRANDING, STUDENT SERVICES, BAS - ADD ON, BAS VS BS, SCHOOL SUPPORT, FUNDING, TRACKING GRAD, SCALING, VOLUME, TRANSFER VS BAS CONFLICT, POOR UNDERSTANDING, TRADITIONAL MINDSET, EMP DATA, NARROW FOCUS, ATTRACTING STUDENTS, CROSS DIVISION COLLABORATION, STRUCTURAL SUPPORT, DIVIDE, APPLIED LEARNING, REINVENTING THE WHEEL, REFILLING POS, TIME, EMP PARTNERSHIP, STANDARDIZATION, ECONOMIC DRAIN
Mission impact	MISSION ENHANCED, UNCLEAR IDENTITY, EXCLUSIVITY, OPEN ACCESS, RIGOR, ACCESSIBILITY, OPPORTUNITY, VOCATION, BETTER CAREERS, ELEVATE VALUE, FLEXIBILITY, AFFORDABLE, CONVENIENCE, PATHWAY, GETTING DEGREE, MEETING DEMAND, BRIDGING THE GAP, MIXED BAG, SERVING THE COMMUNITY, DIVERSITY, BALANCE, MINIMALLY ENHANCED, BOUTIQUE, EQUITY, SELECTIVE BUT ACCESSIBLE, WORKFORCE, INTEGRATION, HANDS ON, SURVIVE OR THRIVE, INNOVATION, NEED JOBS, FAC BIAS, RELEVANCE, REALITY, LOW BAR
Completion	VARIES BY PROGRAM, HIGH RETENTION, FLEXIBILITY, PERSISTING, COMPLETING, OCCASIONAL BREAKS, STUDENT SUPPORT, CLASS OVERLAP, NEED IMPROVEMENT, BALANCING WORK-LIFE, PART TIME VS FULL TIME, WORKING ADULTS, SUPPORTING FAMILIES, FLEXIBILITY, COHORT BASED, BOUTIQUE, INDIVIDUAL ATTENTION, NON TRADITIONAL, DIFFERENT GRAD CYCLES, IMPROVE WITH CHANGES, LONGER TIME, LIFE HAPPENS, DROP OUT, HIGH NOT EXCEPTIONAL, LOW RATES, ENROLLMENT TREND, WEEDING OUT PROCESS, BALANCE, TRACKING ISSUE, RIGOR, HANDSON, WITHIN A RANGE, ACCR, STUDET CIRCUMSTANCES
Employment	Employment: ALL BAS PROGRAMS: POTENTIAL TO POSITIVELY IMPACT EMPLOYMENT MARKET NEED, ADVISORY BOARD, ADAPTING TO TECH CHANGES, SMALL & MID SIZE, BIG 3, BRAND, ECONOMIC IMPACT, CAREER ADVANCEMENT, SKILLED GRADS, HIGHLY REGARDED, ANECDOTAL EVIDENCE, PROMOTION, MARKET RESEARCH, GAUGE WORKFORCE DEMAND, BRING VALUE, BUSINESS VS NON-BUSINESS, MIDDLE TIER VS TOP TIER FIRMS, POSITIVE OUTCOMES, CHALLENGES DUE TO COVID, SURVEY RESPONSE: GOT A JOB, GOT A PROMOTION REC: NEED TO TRACK ALL PROGRAMS

A Viability Study of BAS Programs at Bellevue College

	Employer partnership & satisfaction: INFORMAL, INTERNSHIP, ADVISORY BOARD, CONVERSION, ACNW, CAC FEEDBACK, BIG 3, DIFFICULTIES, COMPETITIVE, PRACTICUM, CAPSTONE, TRACKING GRAD, TRACKING S/W, OPPORTUNITIES (CRM), RELIABLE DATA ISSUE, SURVEY, LOW RESPONSE, CLINICALS, POSITIVE FEEDBACK, ACCR, USE OF RESOURCES, EVIDENCE, EMPLOYER DEMAND FOR PROJECTS, NEED QUAL DATA
Employment Impact - IBIT	<p>IBIT: PROVIDING JOBS, WORK, AND OUTCOMES, LARGELY BUSINESS, ONGOING ADJUSTMENTS. BAS GRADS NEED BUSINESS AND SOFT SKILLS TOO</p> <p>DIG. MARKETING: JOB AND SKILLS, HANDS ON LEARNING, POSITIVE IMPACT</p> <p>IST: ADD ARTIFICIAL INTELLIGENCE, PAID LESS</p> <p>ACCOUNTING: POSITIVE IMPACT ON EMPLOYMENT, CHANGES BEING IDENTIFIED TO MAKE THEM EMPLOYER READY, PAID LESS</p> <p>DA: POSITIVE IMPACT ON EMPLOYMENT, HIGHEST LEVEL SKILLS, GETTING JOBS BUT PAID LESS</p>
Employment Impact - HSEWI	<p>HSEWI: HIRED THROUGH PRACTICUMS</p> <p>HCM&L: BUSINESS OF HEALTHCARE, BUSINESS UMBRELLA, COMMON LINK FOR HIGH COMMUNITY NEEDS, POSTIVE IMPACT ON EARNINGS</p> <p>RAD: LOW ENROLLED BUT PRETTY GOOD PROGRAM, SMALL # OF GRADS BUT HIGH SALARY, POSTIVE IMPACT ON EARNINGS</p> <p>DOSIMETRY: HIGHLY PAID</p> <p>NURSING: HIGH DEMAND, VERY SUCCESSFUL, FAC ON TOP OF IT, GREAT PLACEMENT, CHOICE OF ROLES BUT MAY NOT BE A HIGH JUMP IN SALARY</p> <p>HCI: THRIVED WELL UNDER A CHAMP FAC, POSTIVE IMPACT ON EARNINGS, STRUGGLING</p> <p>H&W: STRUGGLING, QUESTIONABLE PROSPECTS, NEWER PROGRAM, SMALLER SIZE, NOT AS HIGHLY PAID AS OTHERS</p>
Employment Impact - Interior Design	<p>INTERIOR DES: OVERWHELMING WITH ENROLLMENTS, EXCEPTIONALLY WELL RUN, DEDICATED FAC, EVIDENCE OF JOBS, VERY SUCCESSFUL FAIRLY LONG-TERM PROGRAM, PROBABLY DOES NOT HAVE A STRATEGIC VALUE IN THE PUGET SOUND AREA</p> <p>POSITIVE IMPACT ON EARNINGS BUT NOT AS HIGH</p>
Employment Impact - Sciences	<p>SCIENCES:</p> <p>COMP SC: PROVIDING JOBS, WORK, AND OUTCOMES, FURTHERING THEM IN THE BUS. WORLD, POSITIVE, RIGOROUS. MORE INTEGRATION NEEDED WITH IBIT</p> <p>MBS NOT TOO SURE BUT EXPECTED TO DO WELL, GOOD PROGRAM, STRUGGLE WITH ENROLLMENT</p> <p>MBS SIGNIFICANT INVESTMENT</p> <p>MBS HIGH TECH AND EQUIP NEEDS</p> <p>MBS NEEDS MARKETING</p> <p>MBS: SMALL SIZE, THREE CLASSES GRADUATED, UNSURE</p>
Enrollment	<p>VARIABLES BY PROGRAM, NOT ENOUGH MARKETING, ENROLL ISSUES, INST. GOAL VS PROGRAM GOAL, PART TIME, FEWER CLASSES, BALANCING WORK LIFE, COHORT DYNAMICS, GROWTH, PRE-REQ, BRIDGE CLASSES, CLASS SIZE CAP, STABLE, DROP OUT, COVID IMPACT, OVER-ENROLL,</p>

A Viability Study of BAS Programs at Bellevue College

Diversity	VARIES BY PROGRAM, VERY DIVERSE, NEEDS IMPROVEMENT, ACCESSIBILITY, GENDER, NON-TRADITIONAL STUDENTS, LOW ENTRY BAR, ACCESSIBILITY, PATHWAY, FLEXIBILITY, BALANCE, MARKETING ISSUE, WORKFORCE NEEDS, GETTING JOBS, REFLECTIVE OF BELLEVUE COMMUNITY, ASIAN AND WHITE, PLACE BOUND, PERF. GAP, DROP OUT, MARGINALIZED, SPOT ON, UNIV. LIMITATION, CAPSTONES, FEW BARRIERS, LESS EXPENSIVE, ONGOING EFFORT, TRUE EQUITY, BY DESIGN, HANDS ON LEARNING, EXPOSURE, FAC ATTITUDES, IMMIGRANTS, FIRST-GEN, LANGUAGE, OPPORTUNITIES, SMALL PROGRAMS, UNION CONTRACT
Data	NOT ENOUGH DATA, TRACKING ALUMS ISSUE, INCONSISTENT TRACKING, OPPORTUNITY (CRM), IMPROVED, NEED MORE INCLUSIVE DATA, ENROLLMENT DRIVEN, EXPENSIVE, ACCR PROGRAMS-GOOD DATA, MICRO-VISION, NO QUAL DATA, SMALL SAMPLE SIZE, VARIES BY PROGRAM, SURVEY
Operating model	OPERATE IN SILOS, LACK OF FOCUS & ATTENTION, INEFFECTIVE BAS MANAGEMENT, MINIMAL COLLOABORATION BETWEEN PROGRAMS, INDEPENDENT DECISION MAKING, NEED RESTRUCTURING, LACK OF SYNERGY AND UNIFORMITY ACROSS DIVISIONS, ROLE OVERLAP BETWEEN PM/PC, UNCLEAR ROLES & RESPONSIBILITIES, BAS AS A SIDE (NOT CORE), NEED UNIFICATION UNDER ONE LEADER, OPTIMIZE FAC, INTEGRATE BUSINESS AND MGMT INTO A BAS SCHOOL, HAVE IMPEDIMENTS TO BE PROFITABLE, SCALING PROBLEMS, COHORT SIZE, NEED BUSINESS PLAN, CLASS SIZE, SUPPORT FUNCTION, ECONOMY OF SCALE, FLAW IN THE MODEL, NEW PROGRAMS - DEAN/PM COLLABORATION, TOO MUCH LOCAL CONTROL, NEED SHARED LEADERSHIP, NEED COLLEGE FOCUS, NEED MORE COMMUNICATION, CROSS-POLLINATION, MORE COLLABORATION TO UNIFY CULTURE, MARGINALIZED RESOURCES, INTEGRATE BAS, ACCOUNTABILITY, RISK-REWARD APPROACH, BUSINESS MENTALITY, PM WORK OVERLOAD, STUDENT ADVISOR ROLE OVERLAP ACROSS AAS AND BAS
Governance	VARIES BY PROGRAM, BAS LEADERSHIP GAP, ONGOING BAS CHANGES, NOONE IN CHARGE, CAC REVIEW FOR BAS CHANGES, ADJUNCT MINIMAL INVOLVEMENT, PM/PC COLLABORATION, EXTERNAL VS INTERNAL INFLUENCE, SELF-GOVERNED, PM/PC ROLE OVERLAP, UNCLEAR ROLES & RESP, FEEDBACK, QTRLY PROGRAM MEETING, INADEQUATE PM FOR RECRUITMENT, OUTREACH, AND MARKETING, LIMITED ADMIN INVOLVEMENT POST HANDOFF, CAC FEEDBACK FOR PROGRAM MODIFICATION, FAC COUNCIL, BAS NEW VS MODIFICATION GOVERNANCE, CURRENT ENVIRONMENT, ECONOMIC SITUATION, COVID, PEOPLE CONFLICT, CHAOTIC SUPPORT, FAC AND ADMIN RELATIONSHIP FOR NEW PROGRAMS, DIFFICULT TRANSITION, STRONG FAC LEADERSHIP, INADEQUATE ADVERTISING, ADMIN ACCOUNTABILITY, ISSUE IDENTIFICATION & RESOLUTION, FAC BACKGROUND, STUDENT ADVISING, NEED 1 PC AND 1 PM PER BAS PPROGRAM
Resources Capacity	LIMITED FINANCIAL, LIBRARY, AND TECH RESOURCES, FACULTY COMPENSATION, PM OVERLOAD, PM/PC COLLABORATION, FAC AND RESOURCE LIMITATION FOR ADDL. COHORTS, BC IMPOSED ENROLLMENT GOALS, UPPER ADMIN INTEREST & SUPPORT, MARKETING, ONE BRAND, MODEL FOR SCALING, CAMPUS INVESTMENT, UNDERPERFORMING PROGRAMS, FINAID, MULTICULTURAL SERVICES

A Viability Study of BAS Programs at Bellevue College

<p>Sustainability with current resources</p>	<p>VARIABLES BY PROGRAM, SURVIVING WITH LIMITED FINANCIAL RESOURCES, LIMITED TECH & LIBRARY RESOURCES, LIMITED STUDENT ADVISING, DATA TRACKING ISSUE, NOT SUSTAINABLE FOR LONG TERM, FAC HIRING, LENGTHY PROCESS, SPACE ISSUE, EQUIPMENT RENEWALS, PUTTING BANDAIDS, PROGRAM GROWTH A CHALLENGE, SMALL SIZE, COSTLY, FTE FAC EXPENSIVE, BUILT ON A MODEL OF SELF-SUPPORT, CANNOT RELY SOLELY ON ENROLLMENTS, PARTLY SUSTAINABLE, DEEPER THAN MARKETING, SCHOOL OF BAS, UNIQUE PATHWAY, PROVIDE INFRA RESOURCES, OPTIMIZE FAC, MARGIN, FINANCIALLY NOT WELL MANAGED, PROFITABILITY, CLASSROOM EFFICIENCY, ENROLLMENT MANAGEMENT, FINANCIAL PERFORMANCE, SCALING, SUSTAINABLE WITH SUPPORT AND MARKETING, INCREASE MARKETING BUDGET, TARGETED FOCUS, GENERATE INTEREST, RESOURCE DISTRIBUTION, PM & PC WORK OVERLOAD, STATE FUNDING NOT ENOUGH, SUSTAINABLE WITH FAC EFFORT, RELYING ON HEROICS OF A FEW, FAC COMPENSATION ISSUE, IDENTITY ISSUE, EXTERNAL AND BRAND ISSUE, INCREASE PM RESOURCES, ACCR WORK OVERWHELMING, FULL TIME RESOURCE FOR DATA COLLECTION DURING ACCR</p>
<p>Faculty skills, experiences and support</p>	<p>REALLY INVESTED, UNDERSTANDING, STRONG PM-FAC COLLABORATION, STRONG FAC:SKILLSET, STRONG CONTROL OVER PROGRAMS, RECRUITMENT CHALLENGES, PASSIONATE, DESIRE TO SEE DATA AND IMPROVE, NEED TO ADAPT AND MAKE INSTRUCTIONAL CHANGES, DIFFERENTIATION, INCREASE AWARENESS OF STUDENT POP, SOME ARE INDUSTRY PROF, SEEM SILOED, NOT TRAINED WELL, DIVIDE, NOT THINKING OF PEDAGOGY, GAP IN UNDERSTANDING DIFF. BETWEEN BS AND BAS, HANDS ON LEARNING, HEALTHY COLLAB WITHIN A DISCIPLINE, LESS ACROSS DISCIPLINES, BAS IMPLEMENTATION FAC DRIVEN, FAC ROLES ENHANCED, ACCESS TO OPPORTUNITIES, CONNECTION BETWEEN ACADEMIA AND WORKPLACE, FOSTER EMPLOYER PARTNERSHIP</p>
<p>Funding (Program related)</p>	<p>IBIT: LIMITED FINANCIAL RESOURCES, LIMITED TECH FUNDING SELF SUPPORT: NO PROBLEM STATE SUPPORT: LESS CONTROL IST: NEED ITS SUPPORT FOR MOVING TO CLOUD, NEED FUNDING FOR PROGRAMS TO TAKE OFF AND GROW, PUTTING BANDAIDS INSTEAD OF THINKING LONG TERM STATE SUPPORT: CANT INCREASE TUITION, LESS AUTONOMY, POOL OF FUNDS FUNDING MODEL NOT WORKING WELL, SELF-SUPPORT TO STATE SUPPORT TOO QUICK TRANSITION, BAD ACCOUNTING HABITS HSEWI: RAD: NO FULL TIME FAC EXCEPT PC DECLINED ASKS: WRITING SUPPORT SPECIALIST, ADDL PMS, STAFF TO GET CLASSES BUILT LACK OF FUNDING CAUSE OF LIMITED RESOURCES SELF OR STATE MAKES NO DIFFERENCE W.R.T TO MAKING ADJUSTMENTS AND CHANGE SINCE THESE ARE CREDIT BEARING PROGRAMS STATE SUPPORT: BETTER IN CURRENT STATE. THE FUNDING MODEL PLACES NO BARRIER ON HOW WE NEED TO CHANGE NURSING: SELF OR STATE SUPPORT DOESN'T MAKE A DIFFERENCE. STATE SUPPORT IS BETTER, EXPENSIVE: CLINICAL RATIO 1:8 STUDENTS IN ADN, STATE SUPPORT MODEL CAN HELP OFFSET COST IN ADN</p>

A Viability Study of BAS Programs at Bellevue College

	<p>INTERIOR DESIGN: STATE FUNDING NOT ENOUGH SELF SUPPORT WILL BE HELPFUL, ALLOWS INVESTMENT IN FAC, PM AS NEEDED FUNDING IS IMPORTANT BUT NOT EVERYTHING. INTERIOR DES: NOT A FOCUS OF LEADERSHIP, ISOLATED REC: INTERIOR DES NEEDS MORE FOCUS FROM LEADERSHIP SCIENCES: SELF OR STATE SUPPORT WON'T MAKE A DIFFERENCE WITH CURRENT RESOURCES WE CAN SUSTAIN AT THE PRESENT, USE STAGGERED APPROACH TO IMPLEMENT NEW IDEAS IN FUTURE</p>
<p>Self-Support</p>	<p>MORE ACCOUNTABILITY SELF SUPPORT ALLOWS LARGER LEVEL OF POOR MANAGEMENT SELF SUPPORT NEEDS MORE ATTENTION TO MANAGING THE MONEY WELL SELF SUPPORT: OWN BUDGET MANAGEMENT, FLEXIBILITY, CREATIVITY SELF SUPPORT FOSTERS AGILITY SELF SUPPORT: ENCOURAGED BAS TO STAY AS ADD-ON SELF SUPPORT WILL BE HELPFUL, ALLOWS INVESTMENT IN FAC, PM AS NEEDED</p>
<p>State-Support</p>	<p>LIMITED FLEXIBILITY, LIMITED BUDGET FOR PURCHASE OF TECH, LIBRARY FUNDING, RELY ON INDIVIDUAL PROGRAMS, CANNOT INCREASE TUITION, LESS ACCOUNTABILITY FROM PROGRAMS, MAGIC MONEY, LESS AUTONOMY, POOL OF FUNDS</p> <p>STATE SUPPORT: CHANGES NEED TO BE BARGAINED WITH FAC UNION. TRANSFER FAC HAVE IMPLICIT AND EXPLICIT BIAS AGAINST BAS STATE SUPPORT: SHOULD HELP INTEGRATE BAS PROGRAMS IN THEORY, ALTHOUGH THE MODEL ALLOWS LESS AUTONOMY STATE SUPPORT: WITH ENOUGH ENROLLMENT IN BAS PROGRAMS, THERE IS A POSSIBILITY TO OFFSET COSTS IN ASSOCIATE DEGREE AND OTHER PROGRAMS (E.G. NURSING)</p>
<p>Recommendations</p>	<p>BAS: ADD ON, AFTERTHOUGHT NEED ECONOMY OF SCALE COME OUT OF BOUTIQUE MINDSET LESS VIABLE WITHOUT ADEQUATE FUNDING THE FUNDING MODEL PLACES NO BARRIER ON HOW WE NEED TO CHANGE. IT DOESN'T MATTER. FUNDING IS IMPORTANT BUT NOT EVERYTHING SELF OR STATE SUPPORT WON'T MAKE A DIFFERENCE. BOTH MODELS HAVE PROS AND CONS SELF OR STATE SUPPORT DOESN'T MAKE A DIFFERENCE ISSUE: BAS STILL A SIDE AND NOT INTEGRATED INTO THE FABRIC OF BC. STATE SUPPORT SHOULD HELP INTEGRATE BAS PROGRAMS IN THEORY, ALTHOUGH THE MODEL ALLOWS LESS AUTONOMY PROGRAM GOAL: ADD 3-4 CENTS FOR EVERY DOLLAR GIVEN REC: RESTRUCTURING OF FUNDING MODEL REC: FUNDING STUDENT SUPPORT SERVICES FOR BAS REC: A DEDICATED TEAM TO SUPPORT ALL BAS PROGRAMS AND FUND THAT TEAM</p>

	<p>REC: EVERY PROGRAM LOOK INTO THEIR BUSINESS AND IMPROVE ROCK BOTTOM PROGRAMS: NEED TO TAKE BIGGER STEPS; SUBSIDIZING IS DIFFICULT. SMALLER PROGRAMS ARE HARDER TO RUN WITH A MARGIN OTHER MEASURES: 4% BUDGET CUT, RISK REWARD DECISION MAKING, SUBSIDY COMMENSURATE WITH EFFICIENCY FIRST YEAR DEVELOPED DATA, TRAINED DEANS AND PCS, SHARED DATA REC: MARKETING REALLY IMPORTANT FOR BRAND NEW PROGRAMS REC: PROVIDE MORE AUTONOMY AND CONTROL OVER RESOURCES SUCH AS EQUIPMENT, LIBRARY AND TECH FOR BETTER SUSTAINABILITY. ENROLLMENT DOESNT SOLVE THE RESOURCE ISSUE REC: MANAGED GROWTH, STRATEGIC DECISIONS, LOOK AT SYNERGIES BETWEEN PROGRAMS REC: INVEST FUNDING INTO GOOD DATA COLLECTION. WHAT IS THE RESEARCH QUESTION WE ARE TRYING TO ANSWER? REC: LOOK AT ENROLLMENT AND IF IT IS TOO LOW, THEN DO SOMETHING DIFFERENTLY. IF STILL DOESNT IMPROVE THEN THE PROGRAM IS NOT VIABLE, TOO EXPENSIVE TO RUN</p>
<p>Evaluation Adjustment Continuous learning</p>	<p>PROGRAM REVIEW: 5 YEARS FOR CONTINUOUS QUALITY IMPROVEMENT PERIODIC CURRICULUM CHANGES, FACULTY DRIVEN, REVIEW AND VIAB SPLIT, POSITIVE, ACCOUNTABLE, CHANGES TRACKED DATA ANALYSIS TOOLS, PROGRAM LEVEL NORMS, FLEXIBLE STRUCTURE, EVIDENCE BASED PROGRAM VIABILITY REVIEW: ALL BC PROGRAMS, ANNUALLY, POSSIBLE NEGATIVE CONSEQUENCES CONTINUOUS IMP: NEED TO BE MORE CONTINUOUS, FACULTY DRIVEN (PC), VARIES BY PROGRAM, ACCR SUPPORTS CONTINUOUS IMP</p> <p>ISSUE: 5 YEARS PR TOO LONG, REVIEW FEEDBACK FIZZLES OUT, NO IMPROVEMENT FOR MAJORITY OF PROGRAMS PROGRAM IMPROVEMENTS ARE PM DRIVEN NOT LEADERSHIP DRIVEN, SILOED, PM LEVEL PUSH LEADS TO CONTINUOUS IMPROVEMENT; DOESNT HAPPEN THE SAME ACROSS THE BOARD, 5 YRS IS AN EPIC, PROGRAM REVIEW NOT MEANINGFUL BC IS TRANSFER FOCUSED, ONE SIZE FITS ALL, BAS: ON THE SIDE, ADMINISTRATION OF REVIEWS CHALLENGING, LOT OF WORK FOR PCS, A LOT MORE ASSESSMENT AND EVALUATION NEEDED</p> <p>CAC REVIEW: USUALLY ONCE A QTR (SOMETIMES TWICE A YR), INTERNAL REVIEW WITH CAC (INDUSTRY MEMBERS), ADJUSTMENTS BASED ON CAC REVIEW, STAY AHEAD, MAKE CURRICULUM/COURSE CHANGES BASED ON CAC FEEDBACK, STREAMLINING, SOLIDIFY CURRICULUM, CONTINUOUS CHANGES IBIT: CAC REVIEWS: AT LEAST TWICE A YEAR, PERIODIC ONLINE TEAMS COMMUNICATION WITH CAC, NEED, BIGGER CAC FOR BETTER REPRESENTATION, CAC REPRESENTATION IN SMALL AND MID SIZE ORGANIZATIONS IS HELPFUL TOO. DEAN: INVITING INDUSTRY PROF TO JOIN CAC HSEWI: CONTINUOUS ADJUSTMENTS, EXTERNAL ACCR INTERIOR DES: EXTERNAL ACCR RAD: ADJUSTMENT BASED ON FEEDBACK, CONTINUOUSLY IMPROVING SCIENCES: FIRST PROGRAM REVIEW UNDERWAY, INTERNAL REVIEW: FACULTY MEETS BIWEEKLY AND PC/PM MEET ONCE MONTHLY, MBS: SMALL, MORE STUDENTS NEEDED FOR MAKING BIGGER CHANGES NURSING: EXTERNAL ACCR, PR (2020), PROGRAM EVAL COMMITTEE, SEND SURVEY QTRLY. ADVISORY BOARD MEETINGS: EXAMINE DATA,</p>

CURRICULUM THRICE A YEAR (DEC, MAR, JUNE), ALL DAY CURRICULUM WORKSHOP, CONTINUOUS IMP, STUDENT FEEDBACK IN CURR. MEETINGS

OTHER INTERNAL REVIEW:

ONGOING EVAL AND REFLECTION, MORE FREQUENT INTERNAL REVIEWS IN MOST PROGRAMS TO GAUGE: WHAT'S WORKING, WHAT'S NOT WORKING, AND WHAT CAN BE IMPROVED, CONTINUOUS IMPROVEMENTS

REC: REVIEWED AS A GROUP UNDER ONE LEADER, MORE STANDARDIZED, YEARLY OR 2-3 YRS OR EVERY 3 YRS, IDENTIFY AREAS OF SUPPORT, NEW PROCESS FOR PROGRAM REVIEW (EVERY 3 YRS): LESS CUMBERSOME, MASS ADVISORY COMMITTEE EVENT, COLLEGE TO ASSIST IN DATA USAGE, INTERPRETATION AND INSIGHTS, DATA AND UNDERLYING STORY, RAISE AWARENESS, MORE THOUGHTFUL REVIEW

REC: ADMIN SHOULD DO THE FOLLOWING: 1. MORE INVOLVEMENT IN PROGRAM REVIEW, 2. SHOULD VISIT CLASSES, 3. LOOK AT NUMBERS MORE REGULARLY, 4. REGULAR PULSE CHECK, 5. GIVE STRATEGIC DIRECTION, 6. MORE ACCOUNTABILITY, 7. ESTABLISH CLEAR COMMUNICATION CHANNEL

<p>Institutional and Unit level challenges</p>	<p>THRIVE WITH SUPPORT, LESS VIABLE WITHOUT ADEQUATE FUNDING, LESS VIABLE WITHOUT SL INVESTMENT AND SUPPORT, SCHOOL OF BAC, ONE BANNER, NEEDS ASSESSMENT, CHECKPOINT ANALYSIS, DRIVE FROM WITHIN, INVOLVE FACULTY, ECONOMIC VIABILITY, PROFITABILITY, FINANCIAL MANAGEMENT, LOSING MONEY, CLASS SIZE, ENROLLMENT MANAGEMENT, SUPPORT FUNCTION, BRANDING, SILOED CULTURE, RESOURCE, BAS MODEL, MARKETING, COHORT SIZE, LOW ENROLLMENT, BAS AS ADD ON, INTEGRATION, ONE SIZE FITS ALL, SMALL SIZE, NO ALUM ASSOC, SURVIVAL MODE, THINK AND TALK LIKE 2 YR COLLEGE, FACULTY PAY, BAS SEEN AS SEPARATE ENTITY, LACK OF ADMIN SPONSORSHIP, FUTURE STATE, INDUSTRY PARTNERSHIP, STRUCTURAL GAP, LEARNINGS ARE NOT TRANSFERRED, NO STEP BY STEP PROCESS FOR INSTITUTING NEW BAS PROGRAMS, PERSONNEL RESOURCES, BC PRIORITY - ENROLLMENT VS MEETING BAS MISSION, TRANSFER FOCUSED PM: VARIED SKILL LEVELS, NO CONSISTENCY IN PROGRAM MANAGEMENT FUNCTION ACROSS BAS DISCIPLINES</p>
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<p>Program continuation and sustainability</p> <p>GENERAL</p>	<p>GENERAL:LIMITED STUDENT SUPPORT, LIBRARY RESOURCES, ONLINE TUTORING, LOOK AT BAS PROGRAMS WITH ENROLLMENT ISSUE AND SUPPORT, MARKETING, EVENING STUDENT SERVICES NOT MATURED, EXPANSION: NOT REALISTIC NOR FEASIBLE WITH CURRENT RESOURCES, PC ROLE OVERWHELMING, FAC CREATE DEGREES BASED ON THEIR TEACHING INTEREST THAN INDUSTRY NEEDS</p> <p>CONTINUE: THRIVE WITH SUPPORT LESS VIABLE WITHOUT ADEQUATE FUNDING, LESS VIABLE WITHOUT SL INVESTMENT, MODIFY: CREATE SCHOOL OF BAC, ONE BANNER, NEEDS ASSESSMENT, CHECK-POINT ANALYSIS, INVOLVE FACULTY, DRIVE FROM WITHIN, PRUNE PROGRAMS THAT CANT SCALE DOUBLE DOWN ON PROGRAMS THAT CAN SCALE. TECHNICAL ONES DIFFICULT TO SCALE, LEADERSHIP ONES NOT DIFFICULT TO SCALE.</p> <ol style="list-style-type: none">1. FINANCIAL PLAN2. SCALE UP - 100 STUDENTS IN 5 YRS, ELSE SUNSET3. CLOSELY LOOK AT PROGRAMS THAT ARE LOSING MONEY4. CHECK PROFITABILITY (3-5 YR PERIOD) ELSE SUNSET <p>BAS OVERSIGHT NEEDED MORE TRANSPARENCY NEEDED FROM UPPER ADMIN REC: COMMITTEE OF BAS CHAIRS, A TASKFORCE REC: MORE CAREFUL SCRUTINY OF INDUSTRY NEEDS AND DEMAND FOR GRADS IN A GIVEN BAS AREA PROGRAM SUSTAINABILITY: NEEDS ASSESSMENT PROGRAM SUSTAINABILITY:RE-EVALUATION OF JOB DATA</p>
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<p>IBIT</p>	<p>CONTINUE HIGH DEGREE OF SPECIALIZATION ONGOING ADJUSTMENTS TO REFLECT NEW TECH EXPAND TO OTHER WORKFORCE AREAS (E.G. BUSINESS BAS). INVESTIGATE BAS DEG PATHWAY FOR PROF TECH AT BC. IF ENROLL DECLINE, THEN MAKE HARD DECISIONS PROGRAMS GROWING, RUNNING ADDITIONAL COHORTS TECHNOLOGY UP TO DATE, FREQUENTLY MEET WITH CAC, FAC: ACTIVE NETWORKS IN INDUSTRY, ADJUNCT WORKING INDUSTRY PROFESSIONALS, PIVOT QUICKLY BASED ON FAC INPUT, REVIEW WITH CAC AND MAKE CHANGES. PROGRAMS GROWING, RUNNING ADDITIONAL COHORTS MODIFY. ADJUSTMENTS OCCURING INTERNALLY TO STREAMLINE THE DIFFERENT PROGRAMS CONSANTLY ADAPT TO TECH CHANGES KEEPS US SUSTAINABLE DIG MARK: CONTINUE. OUTPERFORMNG OTHERS ACCOUNTING: NEED REORGANIZATION. NEW PC JOINED IST: RESTRUCTURING NEEDED, PROGAMS TOO CLUSTERED, SPLIT PROGRAMS TO GET THE NEEDED ATTENTION IT DESERVES, PC KNOWELDGE ACROSS MULTIPLE CONCENTRATIONS IS A CHALLENGE, SEPARATE OUT CONCENTRATIONS INTO DEDICATED DEGREES WITH ITS OWN DEDICATED PC. NEED REORGANIZATION. NEW PC JOINED MODIFY. 3 CONC IS TOO MUCH, NEEDS STREAMLINING CYBER: NEEDS OWN DEG AND DEDICATED PC</p>
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<p>HSEWI</p>	<p>LOW ENROLLMENT IN SOME PROGRAMS DUE TO LIMIT ON CLINICALS GOVERNED BY ACCREDITATION GREAT REPUTATION, AROUND LONGER PULL THE NON-TECH PROGRAMS FROM HSEWI AND PLACE WITH OTHER BUSINESS PROGRAMS AND MANAGE; THEY WILL GROW SUSTAINABLE WITH: MORE SUPPORT, PERSONNEL RESOURCES, PM FOR EACH PROGRAM HM&L: CONTINUE. HAVE NO IMPEDIMENTS, NO CLINICALS, NO HIGH TECH NEEDS, NOT LIMITED BY ACCR TO RUN SMALL COHORTS. THEY SHOULD RUN BIGGER COHORTS H&W: MODIFY. HAVE NO IMPEDIMENTS, NO CLINICALS, NO HIGH TECH NEEDS, NOT LIMITED BY ACCR TO RUN SMALL COHORTS. THEY SHOULD RUN BIGGER COHORTS. THEY SHOULD HAVE A BUSINESS PLAN. PAUSE AND CHECK. IF NO GROWTH IN 3 YRS, MAYBE SUNSET SUNSET HCI: MODIFY. HAVE NO IMPEDIMENTS, NO CLINICALS, NO HIGH TECH NEEDS, NOT LIMITED BY ACCR TO RUN SMALL COHORTS. THEY SHOULD RUN BIGGER COHORTS. THEY SHOULD HAVE A BUSINESS PLAN. CONTINUE. DIP WAS DUE TO ABSENCE OF PC, SPLIT OF MGMT COMPONENT SUNSET. OR PERHAPS, HCI AS A TRACK UNDER DA OR BI RAD: RADICAL CHANGE. (LOW GRAD RATE, 55%, 7 YEARS). NEED IMPROVEMENT. CHALLENGING COURSEWORK, WORKING PROF, DEMANDING SCHEDULES, PART TIME, OFF AND ON. NOT COMPLETING, TOO COMPLEX, SPREAD TOO THIN, PASSION PROJECT, OLD, VERY EXPENSIVE, CERT AND DEG OVERLAP. ENROLL CHALLENGES - INSTITUTIONAL GOALS VS PROGRAM GOALS MODIFY. MAYBE ADMIT ON A DIFFERENT CYCLE. ALL CONC. MAY NOT HAVE VALUE. CLOSE SOME OF THE CONC NUCLEAR MED: SUNSET SONOGRAPHY: ALT YEAR COHORT, NOT MANAGED WELL, NOT PROFITABLE TECH + DOSIMETRY: COMBINE REMOVE CERT OR STOP CONTINUING GEN ED CLASSES NURSING: CONTINUE. GREAT PROGRAM, SOME LEADERHIP CHALLENGES. THEY HAVE IMPEDIMENTS TO BE PROFITABLE - THEY NEED CLINICALS AND TECHNOLOGY, SCALING IS A CHALLENGE. THEY ARE CAPPED BECAUSE WE CAN'T PLACE ALL STUDENTS IN CLINICALS. CAN'T GROW. 12 IS THE CAP, HIGH DEMAND, STUDENTS GET JOBS BUT EXPENSIVE TO RUN CHALLENGES - CLINICALS, EQUIPMENT</p>
<p>INT. DESIGN</p>	<p>VERY GOOD STUDENT BODY, GOOD FEEDER FROM AA ACCREDITATION ENSURES COVERAGE OF SPECIALIZED SKILLS HARD LOOK: ASSESS ADMIN SUPPORT AND RESOURCES CONTINUE. THERE IS A DESIRE FOR THE PROGRAM; AFFORDABLE AND FILLING A NICHE.</p>

A Viability Study of BAS Programs at Bellevue College

<p>SCIENCES</p>	<p>MBS: LOSING MONEY, DIFFICULT TO SCALE (ONLY 5 STUDENTS). NEED A BUSINESS PLAN. MODIFY. NEEDS MORE MARKETING CS: CONTINUE. BROAD AND VIABLE. CONTINUE. OUTPERFORMNG OTHERS</p>
<p>Lessons learned</p>	<p>BAS IS POSTIVELY IMPACTING STUDENTS - HOURLY TO LIVING WAGE, SUPPORTING STUDENT FAMILIES, DECENT HOUSING, NOT COMPETING WITH 4 YEAR UNIV ISSUE: LOW COURSE EVAL RESPONSES REC: STUDENT VOICE INTO PROGRAM REVIEWS (MORE PROGRAMMATICALLY) REC: ADMIN COULD PROACTIVELY COMMUNICATE ABOUT THE SUCCESSES OF BAS PROGRAMS, INCREASE THEIR VISIBILITY REC: BAS NEEDS TO BE INTEGRATED INTO THE FABRIC OF BC REC: NEED CORPORATE CULTURE CHANGE, GUIDED PATHWAYS REC: A DECISION ABOUT FUTURE STATE OF THE SCHOOL IS NEEDED BC VISION OF NEXT 5 TO 10 YRS KEEP LIGHTS ON OR REALLY TAKE IT TO NEXT LEVEL? MORE INVESTMENT FROM ADMIN NEEDED REC: A FINANCIAL PLAN FOR EVERY PROGRAM; MODEL FOR SCALING REC: PROGRAM REVIEW TO INCLUDE QUAL DATA AND STUDENT IMPACT SURVEYS REC: NO MORE NEW BAS PROGRAMS BECAUSE WE CANT SUPPORT THEM REC: SCALE BACK SMALLER PROGRAMS - PAUSE AND REASSESS, MAYBE RESTRUCTURE, RAD AND H&W: REASSESS, RESTRUCTURE REC: REVIEW FUNDING MODEL, FUND STUDENT SERVICES FOR BAS REC: ROLE CLARITY FOR PMS, DUTIES TO BE CONSISTENT ACROSS ALL PROGRAMS, OVERALL PM LEADER NEEDED (LIKE A PMO) REC: OVERALL BAS LEADER ISSUE: PM ROLE: TOO BROAD, BC IDENTITY CRISIS: STILL RUN AS COMMUNITY COLLEGE; BAS ON THE SIDE REC: BAS SHOULD BE PART OF THE BC IDENTITY (CORE), NOT ON THE SIDE INTERIM PRESIDENT BAS FOCUSED, DIVERSITY MINDED, SOCIAL JUSTICE FOCUSED REC: WORK WITH TRANSFER DIVISION LEADERS TRANSFER AND BAS ARE NOT COMPETING, THEY SERVE DIFFERENT STUDENT BASE BAS: PERCEPTION OF THREAT TO ACADEMIA REC: CHANGE MINDSET FROM ACADEMIA TO APPLICATION REC: ENSURE WORKFORCE NEED IS ONGOING, PERIODIC NEEDS ASSESSMENT, NURSING, COMP.SC ALWAYS NEEDED, BAS DEGREE IS JUSTIFIABLE REC: KEEP LOOKING AT THE DATA, TRACK THE STUDENTS EFFECTIVELY REC: A CULTURE CHANGE IN MANAGEMENT IS NEEDED TOWARDS MORE PERSONAL INVOLVEMENT</p>