



The Community College Baccalaureate: Supporting Regional Economic Development

Constance M. Carroll and Rufus Glasper, Editors

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The League for Innovation in the Community College (League) is an international nonprofit organization with a mission to cultivate innovation in the community college environment. The League hosts conferences and institutes, develops print and digital resources, and leads projects and initiatives with almost 500 member colleges, 100 corporate partners, and a host of other government and nonprofit agencies in a continuing effort to advance the community college field and make a positive difference for students and communities. Information about the League and its activities is available at www.league.org.

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Publications

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Printed in the United States of America

ISBN 978-1-931300-74-2

This publication is available in digital form in the League's iStream at www.league.org/istream.

Please use the following format when citing this monograph:

Carroll, C. M., & Glasper, R. (2018). *The Community College Baccalaureate: Supporting Regional Economic Development*. Chandler, AZ: League for Innovation in the Community College.

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Preface

Since the nation's first community college—Joliet Community College, Illinois—opened its doors in 1901, the mission of community colleges has undergone gradual change in order to address pressing issues of concern within national, state, and local contexts. The associate degree structure has changed, with the addition of options for applied associate degrees. Certificates have changed, not only in subject matter, but also in configuration, such as the development of mini-certificates of fewer credit hours that address specific skills or functions. In other words, the ability to change in flexible ways has been at the heart of community colleges' agility in serving their communities.

The newest change that has already been implemented in half of the nation's states and is under consideration by others is the community college baccalaureate, sometimes called the community college applied baccalaureate. This development is often misunderstood as a departure from the community college mission. In actuality, it is an attempt to advance the community college mission of workforce education and training by addressing the fact that many employers who used to accept the associate degree in workforce fields as the minimum job qualification now either require or express a preference for the bachelor's degree in these same fields.

At the same time, most universities, especially public universities, do not provide bachelor's programs in these disciplines, creating an enormous dilemma for students who would either need to leave their states in order to find suitable programs or enroll in high-cost for-profit or nonprofit universities. Since community college students are generally place-bound and not affluent, neither solution is practical or desirable.

The states and the community colleges that have pursued the baccalaureate option have often faced challenges and obstacles of many types, from university opposition to legislative difficulties to community college concerns regarding funding, faculty bargaining contracts, and even fears of culture change within their institutions. In order for community college baccalaureate authorization to be granted, community colleges have had to seek compromises and adopt strategies that both promote approval and ensure the maintenance of high quality.

This League for Innovation publication presents the case for the community college baccalaureate, told by community colleges that have risen to this challenge. The intent of the publication is to provide definitions and frameworks, strategies, and lessons learned for the benefit of those community college leaders who are considering this new direction and those who are seeking to improve their existing baccalaureate programs.

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Introduction

Early History of the Conferring of Baccalaureate Degrees by Community Colleges

By Beth Hagan

“How many states have baccalaureate degrees in their community colleges?” is a question that those affiliated with the Community College Baccalaureate Association have been asked hundreds of times. The answer seems simple but has never before been more complicated to answer accurately.

The Conferring Process

The path to allowing even one community college to offer a four-year degree has not been easy. Leaders in several states have worked for years to convince their legislators that this option is part of the natural evolution of the community college system, a system that was developed to meet the ever-changing needs of local communities.

In 2005, Arizona came close to winning approval when the House passed a bill that would have allowed 10 community colleges to confer degrees in teacher education, health professions, and other workforce-related disciplines. The bill was defeated in the Senate appropriations committee. Also in 2005, after years of debate, the Illinois Board of Higher Education rejected a proposal to pilot a four-year degree program. In 2009, Illinois adopted an alternative approach of collaboration with universities, but in 2017 the discussion in Illinois continues.

Counting States With Community Colleges That Confer Baccalaureate Degrees

The challenge of answering the question of how many states allow four-year degrees in their community colleges is in the determination of exactly what to count. Does the degree need to be active to be counted? Does a state that has approved a degree but never developed one qualify? What happens when the higher education system changes and the college is no longer a “community college”?

Westark Community College, approved to offer four-year degrees in 1998, became the University of Arkansas-Fort Smith in 2002 and is now offering primarily baccalaureate degrees. How does one count Arkansas or states like it that once conferred

baccalaureate degrees in a community college but no longer do because of reorganization?

Should New Mexico be included? Northern New Mexico Community College was renamed Northern New Mexico College (NNMC) and is approved to offer four-year degrees in all subjects. While still associate-degree dominant, NNMC is considered to be a four-year college. Should New Mexico be counted?

How does one count a state like Idaho that has had the statutory authority to confer since the authorization of their community college system but has never developed a baccalaureate program? How does one count a state like Minnesota that sought and gained the authority to confer but has never developed a degree? Does a state that has only a few students in one program in one college really count? Where do technical colleges like Delaware Technical Community College, which has a Bachelor of Science in Nursing (BSN) program, fit in?

New York’s Fashion Institute of Technology is technically a community college but is no longer associate-degree dominant. It has had bachelor’s programs since 1975 and master’s programs since 1979, and now offers doctoral degrees. Does it count? The answer to the question, “How many states have community college bachelor’s degrees?” is not simple.

Counting States That Have Approved Baccalaureate Degrees

The answer to the question, “How many states have approved at least one bachelor’s program in one community college?” is easily answerable. Twenty-three states¹ have granted the authority at some point in time. This tally includes the states that have approval but never developed degrees and colleges or systems that have changed their structure (Arkansas, Georgia, Idaho, Minnesota, and Utah).

¹ Unless otherwise specified, statistics provided in this chapter were obtained from internal CCBA documents and reports.

If one counts New York's Fashion Institute, it can be said that at least one community college has had the authority to confer bachelor's degrees since the mid-1970s but it was not until 1989, when the community college component of the West Virginia University at Parkersburg (formerly Parkersburg Community College) approved the conferring of baccalaureate degrees, that real activity became evident.

Community college administrators began to recognize the growing need for applied baccalaureate degrees in their communities during the 1990s. Programs were developed during that decade in Arkansas, Georgia, Nevada, Utah, and Vermont. Additional degrees were approved from 2000 until

Bachelor of Science in Nursing

Debates in the early years of the baccalaureate movement in community colleges focused on issues of mission; affordability; and impact upon college faculty, resources, and campus culture. Debates today are more specific to areas of study, especially in health care and, most visibly, in nursing.

Today, the debate in states that currently permit conferring and those that do not focus some of their attention on a countrywide need for nurses with bachelor's degrees, the Bachelor of Science in Nursing. This is the result of the Institute of Medicine's 2010 report on the future of nursing. This report made a strong recommendation that 80 percent of the nursing workforce have a BSN by 2020. At the time of the report's release, only 50 percent of the nursing workforce had a BSN. Now, it is estimated that 55 percent to 60 percent of nurses have such a degree.

Community colleges educate more than half of the entry-level nurses in the United States. It is during these first two years of training that clinical experiences are coordinated and supervised and when expensive equipment is needed for instruction and practice. It has been said that the costs of educating nurses are borne by the institutions in the first two years, but the second two years can be delivered online at far less expense.

There are currently 10 states conferring the BSN in their community colleges. These baccalaureate degrees are usually for Registered Nurses (RNs) who have an associate degree and are employed. There are no four-year degree programs in community colleges.

2010 in Colorado, Florida, Hawaii, Indiana, Louisiana, Minnesota, New Mexico, North Dakota, Oklahoma, Texas, and Washington. Since 2010, four states—California, Delaware, Michigan, and Wisconsin—have approved a variety of degrees.

Early Demand

The demand for early baccalaureate programs was evident in particular geographic areas and in the high-demand fields of health care, education, and technology. By 2005, 44 degree programs were being offered in 13 colleges in 7 states. Of the 44 degrees, 18 were in education, 14 were technology oriented, and 8 were health care related.

The reasons for the development of these degrees in community colleges, especially in the early years, fall primarily into three categories. Some two-year institutions saw this as an opportunity to satisfy the responsibility of community colleges to provide access to baccalaureate education in areas where it was not previously available, especially in regions that were geographically remote. Some viewed the degrees as a cost-effective way to increase baccalaureate access versus the more expensive university option. Some saw community college programs as an opportunity to provide targeted programming that produced graduates in labor-shortage areas such as nursing and elementary education, or to meet the specific needs of local employers. Liberal arts degrees have never been part of the mix.

In 2017, there were approximately 90 community colleges with more than 700 active baccalaureate degree programs in 19 states. There are now hundreds of degrees that can be characterized as applied, workforce-related degrees in disciplines and subjects that are as diverse as the community colleges that offer them.

The Demand Niche

The diversity of community college baccalaureate degree programs makes it difficult to categorize them neatly. The early needs for teacher education, technology, and health care are still apparent, but offerings have widened and deepened. More recent degrees focus on the workforce, with degree designations that represent local needs in what might be considered niches of specific demand for that district or state. The following list provides eight examples:

- B.A.S. in Health Promotion Management – Washington
- B.S. in Respiratory Care – California
- B.S. in Land Surveying/Geomatics – Nevada

- B.A.S. in Multimedia Video Production – Florida
- B.S. in Forest Resource Management – Washington
- B.A.T. in Medical and Health Services Management – Texas
- B.S. in Equine Studies – Vermont
- B.T. in Emergency Responder Administration – Oklahoma

Today's degrees are primarily applied baccalaureates that incorporate applied associate courses and degrees that were once considered as terminal. The second two years provide students with advanced technical knowledge and skills such as higher-order thinking. They build on the learning of the first two years and are not simply the addition of 60 credit hours.

Myths and Realities

The early years of this movement generated a number of popular myths about what conferring baccalaureate degrees would mean for the future of community colleges as we know them. The myths became so common that the Community College Baccalaureate Association Board of Directors commissioned a publication in 2002 titled "Baccalaureate Degrees in Community Colleges: Myth and Reality." It is useful in understanding the early history of this movement to review a few of the myths that were prevalent fifteen years ago.

Myth: Conferring baccalaureate degrees in community colleges will cause community colleges to try to become full-fledged four-year institutions.

Reality fifteen years later: Although some statewide systems have changed, their reorganizations have not been the result of community colleges desiring to become four-year colleges. One exception is Northern New Mexico College, which is authorized to offer four-year degrees in all subjects because of geographic remoteness.

Myth: A community college must have the word "community" in its name if it is to be recognized as a true community college.

Reality fifteen years later: Many community colleges, including those that do not confer four-year degrees, have changed their

names for a variety of reasons. They still consider themselves to be community colleges. In Florida, where virtually all the community colleges confer baccalaureate degrees, maintaining the community college mission is a component of the authorizing legislation.

Myth: Community colleges that are conferring their own baccalaureate degrees are trying to take away the college's main focus on core community mission. The campus culture will change.

Reality fifteen years later: Most of the degrees offered are serving a small number of students in specific fields. With one exception, the number of students in most states does not exceed two to four percent of the total enrollment. Florida, which has a well-established bachelor's degree program throughout its community college system, had 4.6 percent of enrollees participating in bachelor's degree programs in 2015.

Myth: Community colleges are only two-year colleges and do not offer post-associate educational programs.

Reality fifteen years later: Community colleges have been offering post-associate degree training almost from their very beginning. These programs include teacher certification, allied health, legal studies, technology training, and fire studies. Workforce and applied baccalaureates are now necessary and valid credentials to prepare students for the workforce and to retrain workers for employment in high-demand fields, a core community college mission.

Accurately answering the question, "How many community colleges have baccalaureate degrees?" is still a challenge. What we do know is that many more colleges in additional states will choose this path to meet the needs of their communities.

Beth Hagan is Executive Director of the Community College Baccalaureate Association.

An Idea Whose Time Has Come

By Linda M. Thor

Throughout the history of community colleges, ideas first viewed as disruptive have grown organically as college after college embraces the new approach. The once controversial becomes commonplace. Aiding in the growth and acceptance of new frameworks are often organizations like the League for Innovation in the Community College and monographs such as this one. The community college baccalaureate, once viewed as heretical, is reaching critical mass. This monograph shares the experiences and lessons learned from colleges that have developed and implemented these degrees in order to accelerate growth at the local level. Additionally, case studies of statewide and provincewide initiatives are presented to expedite the expansion of the movement on a larger scale.

My personal involvement in the community college baccalaureate movement spans two decades. I first became committed to this new model of higher education in 1996 when, as President of Rio Salado College in Tempe, Arizona, I was approached by leaders in the law enforcement community who said, "We like your associate degree in law enforcement technology so much that we would like for you to offer a companion baccalaureate degree." I said, "We would like to do that, but we have one problem. The legislation that authorizes community colleges in Arizona limits us to programs of study of up to two years." "Well," they replied, "let's just change the legislation." That optimistic suggestion led to legislation in 1997 that, if passed, would have made Arizona one of the early pioneers of the community college baccalaureate. Unfortunately, the turf wars that followed that year and several years thereafter left Arizona today as one of the few western states not to grant their community colleges even limited authority to offer baccalaureate degrees.

However, it is comforting to me to know that nearly two dozen states, including all those bordering Arizona, have authorized community colleges to confer workforce-related baccalaureate degrees. Arguably, this is an idea whose time has come.

Those committed to the community college baccalaureate movement share the core belief that every person should have an opportunity to pursue the baccalaureate degree at a place that is convenient, accessible, and affordable.

Clearly there are multiple pathways for a community college student to obtain a bachelor's degree. The most common is the traditional articulation agreement, in which a college reaches an agreement with a university about course equivalencies that ease transfer. More advanced are 2+2 programs in which the first two years of a community college education are accepted as a block, assuring the student of junior-level status when entering the university. Some community colleges have established university centers on their campuses, inviting universities to offer baccalaureate completion programs that don't require students to leave the community college campus. More recently, universities that enroll students nationwide through online baccalaureate completion programs have entered into partnerships with community colleges, often offering reduced tuition along with guarantees of credit transfer.

However, this monograph specifically addresses the baccalaureate degree awarded solely by the community college. The community college baccalaureate is a growing movement; more than 80 community colleges nationally confer over 700 degrees. While 23 states have authorized the degree, a few have not moved forward for a variety of reasons. The Fashion Institute of New York was the first two-year college to begin offering a baccalaureate degree. That was in 1970, more than 45 years ago. However, most state authorization has occurred since 2001, with 15 states being added to the roster.

So why have so many states authorized the community college baccalaureate degree or are considering doing so? A number of doctoral dissertations have been written on the broad topic of the community college baccalaureate. Leaders at early adopter community colleges often indicate that the reasons they pursued offering the baccalaureate included:

- Meeting a local workforce need or addressing shortages in high-demand areas;
- Filling an unmet niche market;
- Addressing demand that four-year institutions could not or would not meet; and
- Providing opportunities for place-bound students, particularly in rural areas, or those tied to family and jobs, making relocation unrealistic.

Proponents of the degree would add that community colleges are logical candidates for expanding baccalaureate degree production because workforce preparation is an important part of their mission and the colleges already have expertise in applied and technical degrees at the associate degree level. Because a community college campus is located within easy commuting distance of most Americans, these institutions can contribute significantly to the national goal of increasing the number of baccalaureate degree holders. Community college baccalaureate programs can reduce overcrowding at many four-year colleges, reduce cost to the taxpayer and the student, and provide an alternative to costly for-profit institutions. Finally, community colleges are experienced at supporting underrepresented students who are often more comfortable staying at their local community college to complete their bachelor's degree.

The community college baccalaureate is a workforce degree; it is not intended to duplicate what the universities typically offer. You will not see a community college offering a baccalaureate degree in history or English. So, what workforce needs are community college baccalaureate degrees addressing? Most common are degrees that address:

- An employment demand concentrated in a geographic area because of a major employer, industry cluster, or natural resource (e.g., forest resource management, diversified agriculture, equine studies, maritime deck officer);
- Teacher shortages and the demand for teachers with specific specialties such as middle grades science or mathematics;

- The health care crisis and the preference of some professional associations and hospitals for baccalaureate-prepared health care practitioners;
- Requirements for professional credentialing or certifications such as substance abuse counseling, paralegal studies, and supervision and management of human resources;
- The technological revolution leading to increasing demand for technicians and technical support (e.g., data analytics and cybersecurity); and
- Public safety such as homeland security and emergency responder administration.

The pace by which states are authorizing community colleges to offer limited baccalaureate degrees is increasing. What has changed from 1997 when I first got involved in the fledging movement to today that allows for this broader acceptance? A number of forces have come together to make a compelling case. Organizations such as the Lumina Foundation and the Bill & Melinda Gates Foundation have raised awareness of the gap between the number of jobs requiring baccalaureate degrees and the percentage of the adult population earning these degrees. The fact that total student loan debt has surpassed total credit card debt cries out for lower cost baccalaureate degree options. The Obama White House elevated the status of community colleges and the importance of career-technical education and a highly skilled workforce. Regional accrediting commissions have embraced more nontraditional and alternative approaches. Finally, declining state support for higher education challenges the ability of many universities to serve the students already on their campuses.

Clearly there is a compelling need and a compelling case for the community college baccalaureate. Our students, our employers, and our communities are waiting.

Linda M. Thor is a member of the Governing Board, Maricopa County Community College District, Arizona; Chancellor Emeritus, Foothill-De Anza Community College District, California; and President Emeritus, Rio Salado College, Arizona.

The Big Picture

Bachelor's Degrees in Florida's Community Colleges: History of Development and Current Policy Challenges

By Sandy Shugart

Among more than a score of states experimenting with offering bachelor's degrees through their community colleges, Florida has arguably been the most aggressive. From experimentation and pilots in the early 2000s to bachelor-level offerings at nearly all 28 colleges in the system currently, the story of this development has had a fascinating legislative history, an even more interesting backstory of intrigue and political challenge, and a solid and evident policy focus on addressing specific challenges in the state's educational ecosystem.

Early Development

In the late 1990s, as policy interest in higher education began to shift from volume to value, or from enrollment and growth to outcomes and impact, Florida and other states began to frame their education challenges around the composite educational attainment of the workforce, noting that the percentage of the working-age population with a bachelor's degree was well below the national average. This measure became a touchstone in policy discussions for the university system, including discussions of expansion of the number of institutions through either additions or divisions of existing universities into more than one. It also became a significant topic of discussion for the community college system, including means to improve what was already one of the better transfer systems in the country and the notion of considering offering limited types of bachelor's degrees within the community colleges. Florida's Postsecondary Planning Commission recommended in 2000 to the Senate Higher Education Committee that they should consider legislation to make this possible.

In 2001, the legislature authorized St. Petersburg Junior College to offer bachelor's degrees in information technology and nursing, both fields with a considerable skilled labor shortage. The college, following guidelines of the Southern Association of Colleges and Schools, changed its name to St. Petersburg College and began to offer the degrees over rather vocal objections of the Independent Colleges and Universities of

Florida (ICUF) and more modest concerns from their local state university.

In 2004, four additional colleges (Chipola, Edison, Miami-Dade, and Okaloosa-Walton) were authorized to offer degrees primarily in education and nursing. Senate Bill 2388 began then to establish a framework for offering these degrees throughout the system in Florida. It charged the State Board of Education with creating a degree approval process, limited degree proposals to areas of critical workforce need, secured the core mission of the colleges and required maintenance of effort in remedial and associate degrees, established funding for baccalaureate-level education at no more than 85 percent of state university upper-division instructional funding, placed limits on tuition to be charged, extended associate-level faculty workloads to baccalaureate faculty teaching in these colleges, and provided for advance review of and comment on degree proposals by other institutions in the region.

While the State University System (SUS) began to modify its concerns, reasoning that it could hardly use insufficient numbers of bachelor's degrees in the workforce to block a relatively inexpensive model, both the number of degrees and opposition from independent colleges continued to grow. But their opposition was not well received in the legislature. A particularly powerful senator and sponsor of the legislation responded to opposition from one independent college president with a blunt and definitive argument on the merits of access, but not without reminding him of the much larger appropriation that came to the independent colleges in the Florida Resident Assistance Grant. In the 2004-2005 academic year, total baccalaureate enrollment in the system comprised some 1,894 students, the majority still at St. Petersburg College. Only 19 percent were under the age of 24, a very different profile from the 122,000 upper-division students in the state universities. Just over half of the programs offered were in teacher education.

Over the next few years, with the efforts of a task force studying the Bachelor of Applied Science degree, momentum grew for adding new degrees with this credential in areas such as supervision and management, information technology and software development, public safety, and paralegal studies. In addition, many small niche programs were growing in areas such as dental hygiene and sustainability management, and enrollment in Bachelor of Science programs in nursing began to grow significantly. Meanwhile, Daytona Beach Community College joined the ranks of baccalaureate colleges.

In 2008, Senate Bill 1716 continued the movement, changing the names of Daytona Beach, Broward, Indian River, Polk, and Santa Fe Community Colleges to a variant of either "state college" or just "college," as each preferred. This particular bill, though benign in its final form, was the public and heavily revised version of a proposal that would have created a whole new system of state colleges, separate in governance, funding, and authority, and with a statewide service area. This legislation created considerable turmoil in the system and was later part of a larger pattern of legislative subterfuge that led to the resignation of the Speaker of the House and a college president, with indictments to follow. Nevertheless, the final bill passed, kept the system together under the State Board of Education, and created a task force of institutional leaders to continue to plan and propose the way forward for the system.

In 2009, Senate Bill 2682 continued the evolution, adding Florida State College at Jacksonville and the State College of Florida, Manatee-Sarasota. Some were beginning to wonder if the naming conventions should have been drawn a bit tighter. Other parts of the legislation continued to tune the approval process and clarify such matters as the requirement of an earned associate's degree as the primary vehicle for access to the upper division. The bill also changed the old Division of Community Colleges in the Department of Education into the Division of Florida Colleges. It also affirmed that the State Board of Education would have final authority to approve new degrees in the system.

In 2010, House Bill 5201, sponsored by the venerable president of an independent college serving in the legislature, continued to tune approval criteria. It also, most notably, combined the funding for baccalaureate programs into the regular program funding model, removing the awkward issues of categorical funding. Also in that year, Senate Bill 436 adjusted the names of four more new colleges offering baccalaureate degrees.

In 2011, the pattern continued, with four additional colleges. Notably, a bill was introduced that would reassign any community college whose baccalaureate enrollment reached a particular threshold to the State University System. This provision was deleted from the bill, but indicates the continuing questions a decade into the movement.

In subsequent years, additional legislation has expanded the colleges offering bachelor's degrees. In addition, with the Governor's interest, policies were adopted allowing colleges tuition flexibility designed to offer a \$10,000 bachelor's degree. Most of the colleges have at least one; in fact, the State Board of Education's application form practically requires it. It is useful to note, though, that the policy focuses on the price of the degree rather than the cost, and that nearly all of the degrees listed in this category include some credit for prior learning—usually dual enrollment—as a discount to the price.

In 2014 and 2015, hostility to the offering of these degrees became evident among certain leaders in the Senate. Threatened legislation led to a voluntary moratorium on new bachelor's degrees until a review had been performed and presented to the Senate. This was done by the author and proved ineffective with the leadership, but useful to many other members of the Senate and House who have subsequently worked effectively behind the scenes to soften the opposition.

The State of Baccalaureate Education in the System Today

As of 2016, all but three of the 28 institutions in the Florida College System are offering one or more bachelor's degrees, for a total approaching 180 degrees. The vast majority of these are in teacher education, nursing, and business and management. Total enrollment is approaching 15,000. While enrollment in these programs continues to grow, even in recent years when a number of the colleges suffered declines in other credit enrollments, only one college in the system—St. Petersburg—exceeds 10 percent of its total FTE enrollment in upper division.

Employers and other partners have become ardent supporters of the movement, especially in areas of significant shortage such as health care and education, and often bring funding to the table when a new degree is considered.

Somewhat remarkably, state universities have become thoughtful advocates for the right bachelor's degree offerings at their local colleges. In Orlando, the first several degrees offered at Valencia College were all suggested by the University of Central Florida, which wanted to decommission programs that no longer fit the university's aspirations but had significant community

need. This has occurred in a number of cases around the state. Several of the early objections to offering bachelor's degrees in the community colleges have now, sixteen years into the movement, been well tested. For instance, some argued that this would lead to duplication of programs and cost with the universities. A study presented to the legislature in 2015 found that only 20 of the 175 authorized programs represented any form of regional duplication, and all of these had had the written endorsement of the local university. Further, while 73 percent of SUS upper-division enrollment was age 18-24, only 25 percent of the college upper-division enrollment was under the age of 25. Similarly, in the SUS, 78 percent of these students are enrolled full-time, while in the colleges only 13 percent are. And while 33 percent of the SUS students are financially independent, 84 percent of college upper-division students are.

A careful analysis of the potential impact of new bachelor's degrees on the enrollments at state universities, including the highest enrolled fields, indicated no impact. Both total university upper-division enrollments and enrollments in Exceptional Student Education and Elementary Education continued to grow robustly even during the period of highest growth in these same programs in the colleges. Further, no impact has been found on associate degree offerings or enrollments. Of course, the impact on the developmental mission can't be determined given the seismic changes in that entire field and its near elimination in policy in Florida—oddly, under the leadership of the same senator who opposed college-based bachelor's degrees most strenuously.

In short, the bachelor's degree programs offered in the Florida College System enroll a different student than either the state universities or independent colleges. They are more diverse; more likely to be working full-time; more likely to attend at night or on weekends; and more likely to be financially independent, older, and pursuing a very specific career goal in a workforce program. In fact, graduates from the colleges earn higher salaries after graduation. This is in part a reflection of their age and seniority in the workplace, but also reflects the fields in which degrees are offered. It seems fair to assert that the system is working as designed, moving members of the active workforce toward higher levels of education in relevant fields.

Policy Insights: What Others Can Learn From the Florida Experience

Context is everything. What has made the baccalaureate movement effective and important in Florida, though at times

controversial, has much to do with the unusual history and geography of the state.

The interior of Florida was settled rather late and the pattern of settlement was into a few large urban areas—almost city-states—and large rural areas with very small towns scattered around the lakes and railroad stops. The state missed the great expansion of independent education experienced in the late eighteenth and nineteenth centuries in the Northeast and Midwest. Thus, the state has a relatively small number of institutions of higher education. For example, Massachusetts is home to 114 colleges and universities, including nine research institutions, 21 master's level universities, and many other types. North Carolina hosts 113 not-for-profit colleges and universities. Florida, however, has only twelve public universities, thirty independent colleges, and twenty-eight public colleges (formerly community colleges). Yet, Florida's population is more than twice that of North Carolina and three times that of Massachusetts. As a result, Florida's educational institutions are very large and located almost exclusively in large major cities—Miami, Ft. Lauderdale, Tampa-St. Petersburg, and Orlando. The University of Florida and Florida State University are exceptions, founded before the metropolitan areas grew large, yet offering no expanded access as mature institutions with stable levels of admission.

All of these metropolitan universities grew very rapidly with the population of Florida and as rather high-access institutions. As they have matured, they have moderated their rates of undergraduate growth through much tougher admission requirements in order to focus more on graduate and professional students and research. But the metropolitan regions they serve have continued to grow at a torrid pace. How is the state to assure educational access? It certainly isn't going to build a second university in the same city. Instead, the turn to community colleges to offer an affordable—both to the state and the student—baccalaureate alternative was a natural solution.

In rural areas, access issues take on a different challenge, but for the same reason. The small college towns around Florida are often a very long distance from a university that will serve them aggressively. Once, state universities had a significant presence on the campuses of rural panhandle colleges, for example. But as budgets and priorities changed, these outposts were downsized to irrelevance, leaving place-bound associate degree completers at the rural colleges with few options.

The aggressive and early advocates for community college bachelor's degrees were predominantly from these circumstances, though it would be hard to deny both personal and institutional

ego played a role at times. The point is that in states with a superabundance of institutions located to provide a high access to degree completers in transfer, the case for community college bachelor's degrees may be less compelling. Also relevant is the interest and hospitality of the senior institution toward transfers, and this varies greatly from state to state.

Another important consideration is the match of degree production to workforce needs. Both teacher education and nursing supply vivid examples, though there are others. During the period of development of community college bachelor's degrees in Florida, the state was (and still is) experiencing an almost insurmountable shortage of teachers. Florida needed to hire some 32,000 K-12 teachers annually, while all of the state universities and independent colleges combined were graduating only 3,200. In the case of the independent colleges, the economic value proposition to major in education at a high-tuition college no longer made sense to families. At the state universities, interest in undergraduate programs of teacher education was supplanted by the growing graduate and research agendas of the schools of education and their professors. Someone had to fill the gap.

Similarly, the long-term and deep shortage of nursing staff had already been the subject of a great community college success story, with the associate degree registered nurse becoming the dominant player among new hires. But as health care systems have raised their aspirations to employ as much as 80 percent of their nursing staff at the baccalaureate level, the universities simply couldn't assign the necessary bandwidth to meet this need. Again, community colleges stepped up, creating enormous new opportunity for students and their families and helping the health care industry save tens of millions of dollars in overtime and traveler pay.

Ongoing Policy Issues

Assuming that after nearly twenty years, the legitimacy of the community college baccalaureate in Florida is well enough established to endure without further serious challenge, other challenges remain. Below is a short, annotated list of some of these.

Impact on the Percent of Bachelor's Degrees in the Population

This is still an important policy matter, meaning the importance of growing a deeply educated talent pool for every role in society. However, more meaningful metrics and language will be needed shortly as this proxy is misplaced. Percentages have as much to do with denominators as numerators and those

states with high in-migration rates—Arizona, Texas, California, and Florida—will find it difficult to move the needle enough on the numerator to outrun the denominator. The only states that win this race are the ones that are depopulating. The more important question isn't the population number, but the rates of completion and whether the employable talent pool in necessary industries is growing fast enough.

Career Focus in Community College Baccalaureates

It would seem unnecessary to reaffirm this principle, but it is inevitable once degrees in anything are authorized that many creative ideas will come out of the woodwork. Creative writing, psychology, anthropology, basic sciences—all of these and more have been proposed by faculty and institutions in Florida. The discipline to focus on areas of critical workforce need is essential. Without it, the policy loses its legitimacy, duplication immediately ensues, and we have a new compelling mechanism to further segregate the poor and marginalized into certain kinds of institutions while the privileged enjoy others.

The Discipline of 2+2 Pathways

In Florida, all community college baccalaureates are designed as 2+2 pathways (i.e., one must earn the associate's degree first and then enter the upper division). This design principle is vital, but often challenged. It is vital both to preserve the legitimacy of the associate's degree and to create genuinely flexible pathways for students that work. But there is constant pressure to reopen the question of native baccalaureates. Down that pathway lurks selective admissions, unreasonably long curricula, marginalization of associate degree faculty within the institution, and more duplication of effort.

Outcomes

The performance issues attending all of our programs are highlighted in the baccalaureate programs. Why should the state invest in an expansion of mission if there is so little actually produced? Serious attention to the design of programs will be constantly required, or student incompleteness will be designed in from the start. Further, developing clear performance measures that make sense for these programs, at both the institutional and state level, will strengthen the value proposition to the state and to the students.

Funding

Early in Florida's experience, the offering of one or more bachelor's degrees was used as leverage to further unbalance

an already deeply inequitable funding situation. Specious arguments were made out of one side of the mouth (“The faculty, the labs, the library, everything is more expensive.”) while promises were made to the legislature out of the other (“We can do this cheaper than the universities.”) A rational funding model that neither incents the bachelor’s degrees, nor disincent the associate’s and other missions of the college, should be developed and refined over time. And this requires an honest broker in the funding discussion—someone whose interest is equity, mission impact, and outcomes, not relative advantage.

Accreditation

This remains a fairly serious challenge in Florida. Two consistent challenges should be addressed and may exist in other regional accrediting jurisdictions. The first is simply an overwhelming workload. The move from a Level 1 (associate’s) to a Level 2 (bachelor’s) institution is a trigger, as it should be, for a substantive change—a rigorous self-study process to ensure that the institution has the capacity to provide the new level of education to a standard. But the triggering of such studies by new locations, new curriculum pathways for, say, dual enrollment students in an existing program, more online access to an existing degree, and even new degree areas within disciplines already taught at the college, has created more than a cottage industry in accreditation. Those moving down this path need to do so with eyes open.

More specific to the baccalaureate mission is the fact that this change is an all-or-nothing move. Surely, in a peer-driven organization and process, it should be obvious that a community college offering a bachelor’s degree option to a tiny fraction of its students has much more in common with its associate degree peers than the mature Level 2 liberal arts colleges. Just putting together a reasonably competent visiting team can be a great challenge. Perhaps we need a new level (1½?) for open-door associate’s colleges offering bachelor’s degrees to fewer than 15 percent of their students, to which we could adapt the peer review process.

The Future of Bachelor’s Degrees in the Florida College System

The evidence indicates that the contribution of applied bachelor’s degrees in the Florida College System is already very valuable to working students and their families, to key employers, and to the natural development of the institutions with degrees of extended length, but within the parameters of their core mission. One would hope that this would eliminate

the occasional reassertion of questions and doubts already addressed at scale in the system. But this will depend on helping thought leaders, legislators, state board members, governors’ staffs, and others shift their thinking out of old categories. It will take some effort and discipline to educate them with the facts and to avoid invoking the old ways of thinking with, for example, shallow marketing that tries to build brand on old ideas.

But these challenges aside, there are reasons to expect the movement to grow in Florida within the disciplined process of all degree programs—define a need, show a demand, demonstrate capacity to deliver, assure no unjustifiable duplication, and grow. Similar discipline in evaluating existing programs; sun-setting those that are not performing or have outlived their usefulness; and demonstrating outcomes in completion, in the labor market, in equity, and in career advancement will assure the long-term health of the systems.

It is likely, with a disciplined approach, that in the near term, these new bachelor’s degrees will provide the majority of baccalaureate-prepared nurses. In the medium term, this may also be true of teachers and a number of other occupations whose professional preparation does not fit the longer-term aspirations of the universities that traditionally trained them. Just as important will be fields where the standard of competence for entry into the field is shifting toward more education. This is already evident in many allied health professions—advanced imaging, cardiopulmonary, and dental hygiene, just to name a few. A variety of IT occupations are moving in the same direction, with engineering technologies as a model. Perhaps the biggest questions about programming loom around education for business professionals, where the university model continues to trend toward education for the top of the market, or those who will go on to earn advanced degrees. That curriculum tends to leave those preparing for the middle of the market (e.g., sales, retail management, logistics management, production level accounting) cold and unprepared for immediate employment upon graduation.

On top of this, consider the yet to be understood impacts rapid shifts to artificial intelligence, advanced robotics, expert systems, and numerical science might have on many existing occupations. It is probably not possible to create future-proof graduates, but those with more understanding, more applied education, are clearly likely to do better.

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Taking Up the Challenge: The Evolution of College and Polytechnic Baccalaureate Degree Granting in Alberta and SAIT (Part 1)

By David Ross, Elka Walsh, and Jacqueline Lambert

Degree granting at colleges and polytechnics in Alberta, Canada, is a relatively new initiative. While significant discussion and debate occurred on the topic for several decades, the final decision and implementation began in 2003 with the change of legislation regarding higher education. This chapter (Parts 1 and 2) is one of the first efforts to bring together both a historical analysis of the policy framework that led to the decision to permit degree granting in two of the province's colleges and the two polytechnics, and a case study of one institution's response to these changes and the evolving needs of their students. The research relied heavily on semi-structured interviews with key leaders and deployed a snowball method to identify individuals who had expert knowledge about the development of degree granting both within the case study institution and at the policy level. The list of interviewees was not exhaustive as some individuals have since retired or left the higher education system and declined interview.

This story is organized in three key sections. The first (Part 1) traces the historical evolution of the policy framework and advocacy efforts that led to the decision to enable degree granting at colleges and polytechnics in the province of Alberta. This section is important because it provides a significant underpinning to the desired policy outcomes for access to degrees at colleges and polytechnics. The second section (see Part 2¹) explores the experience of one institution, the Southern Alberta Institute of Technology (SAIT), as it adapted to the opportunity to offer access to degrees for students. This section is important as it outlines the main hurdles, risks, opportunities, and adaptations faced by a long-standing, successful higher education institution that has built its success on two-year, technology-intensive diploma programming and trades training. The final section (see Part 2) reflects on the significant lessons

learned and provides insights for other institutions planning to offer degrees or to evolve their own systems.

The Evolving Policy Environment: Getting to Degree Granting

The evolution of college degree granting in Alberta has a long history of policy discussion. Initial discussions in the province can be traced back to the early 1980s when one of the province's colleges, Mount Royal College, met with the minister responsible for postsecondary education and asked how the government might respond to a proposal to move toward degree granting. In 1984, Minister Dick Johnston responded,

There is no reason why some public colleges might not move toward degree granting status in the years ahead, and ... Mount Royal has the facilities, staff, programs and resources to contemplate a move in that direction. The question needs to be 'tested' by an actual request. (Baker, 2011, p. 205)

In 1988, another Advanced Education Minister, David Russell, said that "allowing Alberta's community colleges to grant degrees could be the wave of the future" (Baker, 2011, p. 205).

In addition to one institution's particular desire to offer degrees, professional associations in the early 1980s were beginning to change entry-to-practice requirements, stating that a degree rather than a diploma would be required. For example, nurse associations had changed entry-to-practice requirements, stating that by 2000 a degree would be the minimum requirement for entry to practice (Canadian Nurses Association, 2008, p. 104). And in 1998, Canadian accountancy associations began to require a degree rather than a college diploma for entry-to-practice (Chartered Professional Accountants Canada, 2017). This meant diploma programs that had hitherto been the appropriate pathway to entry-to-practice would no longer be accepted, requiring colleges and polytechnics to partner with

¹ See Part 2 on page 52 for information about the implementation of the baccalaureate degree at Southern Alberta Institute of Technology.

universities that would provide the degree with practical training occurring at the colleges, vacate the subject area altogether, or accept on behalf of their students that the diploma credential would be a pathway to a degree offered elsewhere.

Pressure also came from other jurisdictions that were changing their credential frameworks and were permitting colleges and polytechnics to offer degrees. In the neighbouring province of British Columbia, colleges were also seeking degree granting capacity, but with more success than their Alberta counterparts, which added to the need for discussions in Alberta. In the early 1990s, university colleges offering certificates, diplomas, and degrees had been approved in British Columbia. By the late 1990s, Canada's largest province—Ontario—was also preparing to permit colleges and polytechnics to offer four-year degrees.

By 1994, the Government of Alberta had developed more interest in colleges offering degrees, largely thanks to the advocacy efforts of Mount Royal College, which continued to push for a change to its institutional mandate. While Mount Royal College was advocating for itself, the government continued to search for a more systems-based solution. The government released a white paper, *New Directions for Adult Learning in Alberta*, which proposed the introduction of applied degrees to be delivered by all colleges and technical institutes (Alberta Advanced Education and Career Development, 2004). No other province in Canada offered such a credential. The applied degree was viewed as an opportunity to continue the government's policy of system coordination rather than agreeing to one institution's request for degree granting status (Baker, 2011, p. 219).

The applied degree credential was officially launched across the province in 1995 (Northern Labour Market Information Clearinghouse, 2001). These programs are more extensive than two-year diplomas, but structured differently than a traditional four-year baccalaureate degree. They typically combine six semesters of formal instruction with one to two semesters of credited, and sometimes paid, work experience (Northern Labour Market Information Clearinghouse, 2001, p. 1). While some applied degree programs were designed as a first credential for learners with no prior postsecondary credential, most of Alberta's applied degrees were typically structured as a two-plus-two model with entrants holding a two-year diploma in a related field. Applied degrees were designed primarily to prepare graduates to enter the labour market.

Alberta's oil-based economy means that it is often subjected to significant economic fluctuations and boom-bust cycles. And

in the 1990s, during a particularly long down cycle, government debt continued to mount, which made looking for less expensive options for students to complete degrees increasingly important. It also became clear that a coordinated, systems approach to policy development and implementation was preferred and that this coordinated system would be characterized by institutional differentiation with cooperation. In 1997, the government decided to bring government-run institutions known as the Alberta Vocational Colleges—with mandates to offer Academic Foundations, English as a Second Language, and career entry programs of one year or less in the health, business, and service industries—under the Colleges Act and enabled Board governance (Baker, 2011, p. 212). By 1999, the Government of Alberta introduced a new policy direction for postsecondary education and declared that lifelong learning would be a formal government goal (Baker, 2011, p. 250). The formal policy objective was that Campus Alberta would provide Albertans “access to adult learning, where institutions collaborate to deliver quality lifelong learning where and when Albertans need it” (as cited in Baker, 2011, p. 250). It is important to understand, however, that this policy framework was established at a time when the Official Opposition party and student associations continued to raise concerns about the affordability of postsecondary education, while the government was more focused on improving both access and efficiency.

By the early 2000s, problems began to arise with the acceptability of applied degrees. By this point, applied degree credentials had been introduced in Alberta, British Columbia, and Ontario, enrolling thousands of students. But in 2003, Queen's University in Ontario gave expression to the concern among universities across the country with graduates from applied degree programs applying for further study. Queen's was the first university to take the formal position that it would not recognize degrees from Canadian institutions that did not hold membership in the Association of Universities and Colleges of Canada (AUCC) (Baker, 2011, p. 220). This association (now called Universities Canada) was the official association for all universities and degree-granting university colleges—or degree-granting institutions affiliated with a university—in the country, and since there was not an official national quality assurance or accreditation body, membership in the association was being used by universities as a proxy for accreditation. Their position was further made possible because a national qualifications framework did not exist, nor did provincial frameworks that could be used to define qualifications.

The universities' position hindered student mobility and learning pathways while calling into question the viability of applied degrees as they were increasingly seen as dead ends, limiting students' ability to use them as prerequisites for graduate study. The Government of Alberta became increasingly concerned that participation rates in higher education may be further hindered. This was particularly important since the province's population aged 18-24 participating in postsecondary education had traditionally been at least five percentage points below the national average—in 2000 the average was 28.8 percent for the province while the national average sat at 34.4 percent (Baker, 2011, p. 212). This meant that the government needed another way to ensure access to degree programs that would be economically viable.

In this environment, Mount Royal College, as it was then named, continued to advocate for university status along with full baccalaureate degree granting status. In addition to their advocacy efforts, technical institutes, soon to be formally called polytechnics, called for the authority to grant full baccalaureate degrees. The opportunity for institutions that were not universities to offer baccalaureate degrees finally came in 2003 when legislation was introduced and passed by the Government of Alberta. The introduction of Alberta's Post-secondary Learning Act (PSLA) consolidated four separate acts that were used to govern the province's 26 publicly funded postsecondary institutions—the Universities Act, the Colleges Act, the Technical Institutes Act, and the Banff Centre Act—into a single piece of legislation (Alberta Advanced Education, 2017).

The PSLA introduced a new integrated differentiation model to Alberta's publicly funded institutions, called Campus Alberta (Province of Alberta, 2003, p. 7). This formalized in legislation the government's policy direction that there was to be a coordinated systems approach rather than one-off solutions that would benefit only one institution. In the Campus Alberta framework, the province's postsecondary institutions were categorized into six sectors to provide more clarity to their role in developing human capital. The PSLA, as well as 2007's Roles and Mandates Policy Framework, outlined the roles of each of these sectors. It was through these legislative and policy declarations that the colleges and polytechnics finally received the authority to grant baccalaureate degrees in addition to permission to conduct applied and scholarly research in support of baccalaureate programming (Province of Alberta, 2003, pp. 66-67). As a point of interest, Mount Royal College and MacEwan College transitioned to become universities but with a stronger teaching mandate than the larger established universities, and a

restriction to initially provide only baccalaureate degrees. While this development allowed for an expansion of baccalaureate degree granting powers, the government's preference for system collaboration and coordination among degree-granting institutions was still underscored.

The Government of Alberta's policy direction was not without caveats. To avoid the issue of nonrecognition by the long-standing universities, the government created a quality assurance regime and in Alberta this was extended to include reviews and approvals for all new degree programs, including those at the universities, except for degrees in divinity. In Alberta, the Private Colleges Accreditation Board (PCAB)—a long-standing quality assurance board for private degree granting institutions—was morphed to create the Campus Alberta Quality Council (CAQC), providing an initial framework for quality reviews of degree programs at publicly funded institutions. The CAQC began operation in late 2004 (Campus Alberta Quality Council, 2005, p. 1).

Alberta's CAQC was modelled on Alberta's PCAB, Ontario's Postsecondary Education Quality Assessment Board (PEQAB) that had been created in 2000, and British Columbia's Degree Quality Assessment Board (DQAB) that was established in 2003. These similarly mandated provincial agencies soon established informal learning networks amongst each other. In particular, CAQC was in contact with AUCC, PEQAB, and DQAB to ensure that Alberta's work on degree approval would be recognized outside the province (Campus Alberta Quality Council, 2017, p. 3). To develop its assessment standards and guidelines, CAQC worked extensively with officials from Alberta's publicly supported postsecondary institutions, and, where appropriate, with professional regulatory bodies. As part of their wider stakeholder engagement efforts, CAQC also met with student association representatives, faculty associations, and representatives from Human Resources and Skills Development Canada. Working at that time to create capacity for CAQC, Alberta and its PCAB accepted an invitation to join a meeting of the country's quality assurance agencies by PEQAB in the fall of 2004. At that time, PEQAB was under the leadership of Donald N. Baker, former president of Mount Royal College. This meeting included the most senior civil servants from the three provinces. The three deputy ministers from each province, together with their quality agency leadership, agreed that a national degree qualifications framework would facilitate greater recognition of baccalaureate degrees among institutions to support learning pathways. As a result of this meeting, the national discussion group for ministers of postsecondary education from each of

the provinces, known as the Council of Ministers of Education (CMEC), agreed to create a working group chaired by Alberta to develop degree quality standards and processes and a national qualifications framework (Baker, 2011). The Ministerial Statement on Quality Assurance of Degree Education in Canada, which was endorsed by all Canadian provinces and territories, was announced in 2007 at the International Network for Quality Assurance Agencies of Higher Education hosted in Ontario, Canada (Campus Alberta Quality Council, 2017, p. 3). Degree transitioning institutions had to fill in the detail in the absence of specific guidelines.

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Washington State B.A.S. Degrees: A Roadmap to Successful Implementation

By Malcolm Grothe, Anna Baldwin, and Shouan Pan

Washington State is home to 34 community and technical colleges. The majority of these institutions are clustered in and around the Seattle metropolitan area, with the remainder strategically located in more rural and sparsely populated areas of the state. Within these 34 colleges, roughly 380,000 students are enrolled (headcount), with an FTE count of roughly 181,000. Of students enrolled in higher education in Washington State, nearly 60 percent attend community and technical colleges. The credential types available to these students include short-term certificates, certificates, Associate of Applied Science (A.A.S.), Associate of Applied Science-Transfer (A.A.S.-T), Associate in Arts (A.A.), Associate of Science-Transfer (A.S.-T), Associate in Business (A.B.), and Bachelor of Applied Science (B.A.S.) degrees.

The impetus for the development of B.A.S. 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. Many employers expressed interest in promoting their existing technicians into managerial positions, but without necessitating that their technicians “start over” in order to earn a baccalaureate degree. In addition to managerial roles, employers identified a need for increasingly skilled workers at the technician level, a niche that B.A.S. degrees could fill effectively (Seppanen, 2010).

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. In the years leading up to B.A.S. degree development, existing baccalaureate institutions were not able to meet the needs of the booming tech industry, for example, despite large investments by the state over time to increase capacity. Companies began to hire workers from out of the state, leaving Washington residents without access to jobs, or the education required to attain those jobs, in important statewide industries. This de-emphasis on “homegrown” talent disproportionately affected low-income communities

and communities of color—two primary constituencies of the community and technical college system. Without an extended pathway, Washington put a ceiling on opportunities for advancement among certain populations within the state. Additionally, the influx of out-of-state workers created a large tax burden for residents as the state’s infrastructure needs—roads, schools, transit, and the like—expanded to accommodate the increased population. Community and technical college leaders resolved to meet industry needs while ensuring Washington students had the training and skill pathways necessary for living-wage careers.

Washington State’s Applied Baccalaureate Story

A small group of community and technical college presidents, who had learned of B.A.S. degree development in Florida, recognized it as an opportunity for Washington State to expand upper-division capacity and provide an extended pathway for applied associate graduates. The group approached the State Board for Community and Technical Colleges (State Board), the board of directors overseeing the state’s 34 community and technical colleges. Concurrently, the group met with other presidents in the system to discuss and gauge interest in the concept.

In early 2004, the community and technical college system conducted a study to examine the impact B.A.S. programs might have on production of baccalaureate-level workers to supply the labor market. At the same time, the State Board and public universities undertook a study to gauge the need for additional capacity and enrollment growth at the upper-division level (Seppanen, 2010). The results of both studies provided the impetus to the college system and State Board to move forward with a bill in the upcoming legislative session.

The community and technical college system worked closely with the State Board legislative committee in the months leading up to and during the 2004 legislative session. The college system was fortunate to have several key advocates for B.A.S. programs,

both among college presidents and within the legislature. A strategic decision was made to approach B.A.S. degree development as one strategy within a larger push for expanded upper-division capacity and enrollment growth. Together with B.A.S. degree development, expanded space at universities and increasing university centers on college campuses were chosen as additional strategies to meet this goal.

In 2004, the legislature passed House Bill 1974 authorizing B.A.S. 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 conversation with universities regarding pathway opportunities.

The legislature authorized four colleges to offer B.A.S. degrees in an initial pilot in 2005: South Seattle College, Olympic College, Peninsula College, and Bellevue College. The state provided a year of start-up funding prior to the first teaching year, on the advice of other states. Each of the pilot colleges received \$260,000 to help with initial costs such as hiring new faculty, developing curricula, and purchasing needed library and laboratory resources. Pilot colleges were funded for 17 to 22 FTEs per program for junior year classes in the first teaching year, and 35 to 40 annual FTEs per program in subsequent years (Seppanen, 2010).

Due to the success of the initial pilots, approval for three additional pilots was granted by the legislature in 2007. Pilot status was removed a few years later following the success of the second group of pilot programs. Since the initial launch, several program trends have emerged, including applied management, information technology, dental hygiene, funeral science, health informatics, cybersecurity, teacher education, and natural resource conservation. All colleges offering B.A.S. degrees are accredited at the four-year level through the Northwest Commission for Colleges and Universities, the same accrediting body that accredits Washington State's universities.

Challenges

Initially, many presidents, legislators, and community members across the state were concerned that introducing B.A.S. degrees would lead to mission creep, detracting from our open-access

values and using precious resources to do so. Other concerns included a lack of capacity and hidden costs.

To address these concerns, the task force authorized by the state legislature established a set of guiding principles and commitments, to which the state's community and technical colleges have adhered:

- The programs are to serve local students who are not otherwise being served.
- Programs are regarded as an extension of the workforce mission, in response to increasing skill requirements of employers.
- Colleges selected to offer these degrees must have the capacity to develop and sustain new programs.
- [Community and technical colleges] offering some applied baccalaureate degrees will remain predominately lower division institutions.
- Colleges are to maintain the "open door" philosophy as they add applied baccalaureate programs. (Seppanen, 2010, p. 8)

The guiding principles also direct colleges to consider degree pathways only when employer demand is large enough to employ 15 to 25 graduates per year and where the workforce faculty is already among the strongest and thus poised to develop rigorous upper-division coursework (Seppanen, 2010).

Concern among four-year universities regarding competition for baccalaureate students and saturation of local labor markets was another obstacle to B.A.S. implementation. Many four-year universities initially lobbied legislators to oppose the bill. The State Board and community and technical colleges made every effort to work closely with university partners to address this concern, emphasizing the importance of higher education capacity building in Washington to meet the needs of both industry and resident students. This focus was a significant factor in garnering buy-in from university and legislative partners.

To further assuage concerns, any B.A.S. program application must be approved by the community and technical college system and shared with university partners. The universities also played a role in the approval process until 2012, at which time the Washington Student Achievement Council was created to develop statewide goals for baccalaureate attainment. This process ensures that data on regional skills gaps and evidence of need currently unmet by alternative training providers is available for review; training providers may express concern as they see fit. Additionally, B.A.S. applicants must show evidence

of efforts to communicate, and partner as appropriate, with regional universities, providing another opportunity for collaboration as opposed to competition.

Tuition for B.A.S. programs provides yet another assurance against competition, particularly price-based competition, with regional universities. Community and technical colleges charge students comparable tuition in upper-division B.A.S. courses as students would pay in similar upper-division courses at Washington State regional universities.

Finally, start-up costs associated with B.A.S. degree implementation were another challenge. Although the legislature provided funds to cover many of these expenses during the pilot phase of implementation, ultimately, a higher tuition rate helped immensely to support smaller class sizes, increased library resources and instruction, and faculty time (Seppanen, 2010).

Successes and Milestones

Community and technical colleges across Washington State have enjoyed many successes with B.A.S. degree programs in the years since implementation. Over the past several years, the number of colleges offering B.A.S. degrees has increased dramatically; nearly all colleges in the state (27 out of 34) now offer at least one B.A.S. degree. In conjunction with this increase in programs, B.A.S. directors and workforce deans around the state have increasingly collaborated to develop statewide efficiencies, and share best practices and lessons learned. This group has grown as B.A.S. programs have increased, with B.A.S. leaders at each college meeting quarterly at rotating locations around the state. Recently, the group worked with the statewide Instruction Commission and the State Board to achieve status as one of the state's official councils—the Baccalaureate Leadership Council. This puts the group on par with other statewide councils, such as the Workforce Education Council and Council for Basic Skills, with authority to develop and impact statewide policy related to B.A.S. degrees.

This collaborative approach led to another of the state's significant successes: an annual B.A.S. conference, held each fall quarter at South Seattle College. The conference brings together a broad cross-section of attendees connected with B.A.S. degrees, including program deans and directors; faculty members; students; and financial aid, library, and other staff. The conference is designed to include sessions relevant to each group and to any college, whether new to B.A.S. development or maintaining more seasoned programs. Highlights of the conference each year are the student panels.

Current and former B.A.S. students are invited to sit on panels to discuss the value of their B.A.S. experience, any suggestions for improvement, and—for graduates of the programs—how they are faring in the labor market. The student panels are an important opportunity for qualitative feedback in an informal focus group setting.

The conference, which began in 2013, has grown substantially over the past several years, with representation now from nearly every college in the state. The organizing committee has additionally received requests from states outside Washington interested in attending. California, in particular, has expressed interest as they develop and pilot their first B.A.S. degrees.

Recently, a program to help dislocated and vulnerable workers receive tuition assistance for retraining—the Worker Retraining program—was expanded to B.A.S. programs. In years past, Worker Retraining funds were available only for students in career-training certificate and associate degree programs. This expansion has helped to ensure a baccalaureate pathway is available for vulnerable members of our workforce—those who have been laid off; are transitioning out of the military; are recently divorced, widowed, or separated; or who need skill upgrades in order to keep their current jobs. As the Director of Workforce Education at Green River College put it: “With the cost of college tuition continuing to skyrocket, being able to use Worker Retraining funding to obtain a BAS is a win-win for students, the college, and the Washington state workforce” (Orr, 2016, para. 4).

Lastly, a major success that is inherent within B.A.S. degree implementation is the opportunity to better serve working and place-bound adults. B.A.S. programs in Washington have paved the way for a more equitable statewide workforce. By providing these opportunities at community and technical colleges throughout the state, in communities often not served by existing baccalaureate institutions, we ensure students are not precluded from receiving a baccalaureate-level education and attaining a living-wage job by virtue of being low-income, having family responsibilities or work obligations, or otherwise being place-bound.

Review, Evaluation, and Lessons Learned

Current Status of B.A.S. Degrees

When the legislature approved applied baccalaureate degrees in Washington State, several policy goals were also explicated. The first aim was to increase educational pathways for professional-technical associate graduates who have historically been limited

in their ability to apply credits toward a bachelor's degree. This policy goal has and will continue to be met with great result. Since the first pilots, B.A.S. degrees have grown significantly, providing an education and career ladder for thousands of students. Currently, 27 of the state's 34 community and technical colleges offer a total of 86 Bachelor of Applied Science degree programs. From the first year of official B.A.S. degree implementation, in 2008, to the present day, B.A.S. programs have achieved a headcount of 2,167 students and 1,633 FTEs (Grothe & Hammer, 2017).

In addition, B.A.S. degrees must help meet state goals for baccalaureate degree production. Specifically, the total number of baccalaureate degrees awarded by public two-year and four-year institutions must increase to 42,400 per year. To do this, the community and technical college system must increase the number of students who transfer to baccalaureate programs by 25 percent and increase the number of applied baccalaureate graduates to 1,400 by the year 2030 (Kaikkonen, 2015). Presently, an average of 40-50 students are enrolled in each B.A.S. program per year. Programs have achieved strong fall-to-spring retention or completion rates, averaging 87 percent across the state (Kaikkonen, 2017). Between 2008 and 2016, 503 students completed a B.A.S. program statewide, putting the state well on track to meet its goal.

Finally, B.A.S. approval is intended to expand the workforce capabilities of community and technical colleges to better serve the needs of local and state employers. To that end, industry representatives are key partners in B.A.S. degree development, identifying areas of program need, assisting with outlining program structure and curriculum, serving on technical advisory committees, and providing internships and job opportunities for graduates upon completion. This ensures that community and technical colleges remain relevant to our statewide industries and are regarded as primary training providers for emerging workforce needs.

Graduates of B.A.S. programs in Washington State also fare well in the labor market, earning significantly more than their associate degree counterparts in the first year following program completion. An analysis of Washington State employment records matched to graduate data found that B.A.S. graduates out-earned their applied associate degree counterparts (who had not received a B.A.S. degree) by anywhere from \$3,700 to \$27,000 annually, depending on the program, with percentage increases averaging 30 percent. Additionally, many graduates have gone on for further study. Graduates have transferred to over 40 universities, including the University of Washington,

Western Governor's University, Seattle University, Western Washington University, and Gonzaga University (Kaikkonen, 2015).

The Future of B.A.S. Programs in Washington State

Washington State now has 86 programs approved at 27 colleges, with 17 new programs scheduled to begin in fall quarter of 2017 at this writing. An additional nine programs are currently in the development and review process with the State Board for Community and Technical Colleges. The Baccalaureate Leadership Council is considering development of a statewide strategic plan to map the development of B.A.S. degrees over the next several years.

Lessons Learned

To obtain buy-in from key decision makers and attain approvals to pilot and eventually implement B.A.S. degrees, Washington State is able to share several key lessons learned. The initial group of college 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 to compete with, existing baccalaureate offerings.

As mentioned above, university partners were not alone in their initial wariness of applied baccalaureate degrees. Many among the community and technical college system were fearful that expanding our offerings in this way would lead to mission creep, and would damage our reputation among prospective students and community partners as an open-access institution. The task force authorized by the state legislature was able to address these concerns by identifying a set of guiding principles for themselves and for B.A.S. program development more broadly. The principles stated that community and technical colleges would remain primarily lower-division institutions, with an unwavering commitment to the open-access mission, regardless of B.A.S. implementation. In addition, the Washington State Board for Community and Technical Colleges commissioned a study to examine mission creep issues. Findings noted that B.A.S. degrees enhanced all other areas on the community college campus. These actions helped ensure

that colleges remained true to their missions and alleviated the concerns of college staff and partners alike.

Upholding a high standard of rigor for the B.A.S. program approval process is another lesson learned for Washington B.A.S. degrees. Applications for new programs go through a multistage review and approval process, requiring the colleges 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. In addition, two external experts from a university-level institution must review any programs in development. The reviewers must each provide a report summarizing their recommended modifications, to which the program developers must respond in writing. This rigorous process is another mechanism to ensure that B.A.S. programs are relevant to both students and industry, the curriculum and program model are consistent with that of other baccalaureate institutions, and that graduates of the program will add to the state's production of baccalaureate-level workers.

It is clear that the implementation of applied baccalaureate degrees has been greatly advantageous to the State of Washington. Local labor markets benefit from increased baccalaureate production, and students and incumbent workers have access to extended education and career pathways. Also of critical importance, B.A.S. degree programs enable the state to respond to workforce needs and expand economic development through the growth of homegrown talent. By anticipating and addressing all concerns proactively throughout the development process, Washington State is able to ameliorate and avoid most, if not all, negative consequences. Today, Washington State is proud to be both an advocate for B.A.S. programs at community and technical colleges and a resource for other states planning to initiate the implementation process.

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Pushing the Envelope: California's Baccalaureate Pilot Program

By Constance M. Carroll

Working Under and in Spite of the Master Plan for Higher Education

California Community Colleges is the largest system of higher education in the nation, with an unduplicated student headcount of 2,127,444 students in 2016-2017. During the same year, the twenty-three campuses of California State University (CSU) enrolled 474,571 students and University of California (UC) enrolled 210,170 students. Private universities and colleges accounted for another 210,407 enrollments. California's community colleges, therefore, enroll more students than its public and private universities combined, making them a critical component of any large-scale, meaningful change in educational service to the residents of the state.

To understand California public higher education, it is important to know its history and context, which have largely been determined by the state legislature and the governor through individual acts of legislation and through one extremely critical item of omnibus legislation. Enacted in 1960, omnibus legislation was passed to provide structure and support, as well as to prohibit change, for the mission of higher education in California. Known as the Master Plan for Higher Education, this sweeping, ambitious piece of legislation was intended to organize, systematize, and make sense of what had been loose configurations of universities, normal schools, and some community colleges that had begun to emerge from their K-12 host organizations.

The Master Plan established the official names, academic purposes, and boundaries for all public higher education institutions in California. While all three major segments were assigned some level of responsibility for undergraduate education, albeit for students at different levels of accomplishment and need, each segment was assigned a different, specified role. University of California was to be the research arm, including law and medicine, and with sole responsibility for the award of doctoral degrees. California State

University was assigned the role of offering degrees at the bachelor's and master's levels, preferably in applied fields.

As open-access institutions, California Community Colleges were assigned responsibility for the first two years of undergraduate education for associate degrees, as well as occupational and technical certificates, leading to university transfer, to the workforce, and to various other goals. The Master Plan has supported transfer between the community colleges and the public universities. In 2016-2017, 52 percent of all CSU graduates and 31 percent of UC graduates began their studies at a community college. While providing a clear and stable structure for higher education, the Master Plan also prohibited innovation and change in many important cases. Indeed, the Master Plan has not been changed in all these years, although two significant breakthroughs have occurred due to independent legislation.

In 2005, through Senate Bill (SB) 724, the first major breakthrough occurred, when, after decades of effort, CSU won the right to offer stand-alone doctoral degrees in Education, with other designated fields following later. In 2014, through SB 850, the second breakthrough occurred, when, after a hard-fought effort, California community colleges received legislative authorization to conduct a pilot program consisting of a total of fifteen community college baccalaureate programs to be developed and offered at fifteen college districts throughout the state. This article explores that journey and takes a look at what lies ahead.

Workforce Changes and Legislative Responses

While the national community college baccalaureate movement began as early as 1970 and spread to over 20 states during the 1990s and early 2000s, a number of California leaders, both educators and legislators, were cognizant of the three major conditions that gave rise to this new level of degree for what were formerly two-year colleges. The first issue was the fact that the job market itself had changed dramatically, requiring changes in

former commitments to declining workforce fields and placing demands on institutions to provide workforce education in new fields.

For example, although California is responsible for about 11 percent of the nation's manufacturing production, the state has accounted for only 1.8 percent of investment in new or expanded manufacturing across the country since 2001. The largest declines have been in labor-intensive fields such as automobile manufacturing and textiles and apparel.

The fastest growing sectors of manufacturing in California tend to be in the higher-skilled advanced-technology realm. These advanced manufacturing fields include high-end computer and electronics, medical equipment manufacturing, and pharmaceuticals. This evolution from predominantly manual labor to automated processes in manufacturing has changed the demand for the type of knowledge and skills needed. Most manufacturers now primarily recruit engineers and technical specialists, normally at the baccalaureate level. For example, in the life sciences field, 63 percent of available positions require a bachelor's degree, as opposed to 7 percent that require an associate degree.

A 2006 survey of members of the California Manufacturing and Technology Association revealed that the single most important business challenge they reported facing was "sustaining and/or acquiring a skilled workforce," more so than any cost factors. The health care industry also faces shortages in a wide range of occupations, including nursing, laboratory technicians, and respiratory and physical therapists, with an emphasis on baccalaureate preparation over associate degree preparation.

In an economy as large and diverse as that of California's, regional workforce and economic development strategies are key. Regional workforce needs vary dramatically throughout the state. Community colleges have long been in the position to address these challenges, as they already work closely with regional Workforce Investment Boards, employer associations, and community-based organizations to provide the workforce training necessary to meet the needs of their local economies.

The second issue was that while California's changing job market abounded in employment opportunities, the new reality was, and is, that these new fields, as well as a number of traditional fields, now either required or gave preference to applicants with bachelor's degrees. Fields like dental hygiene, respiratory therapy, automotive technology, health information management, mortuary science, and many forms of advanced manufacturing and biomanufacturing set the entry bar at

the bachelor's level. Nursing was even more problematic, since the standard for registered nurse positions—historically the associate degree in California—was now moving to the bachelor's degree. This shift posed a major problem since, although CSU offered a score of bachelor's degree nursing programs, these did not and could not offer the capacity for meeting the actual baccalaureate need.

A third concern was that California's public universities were not offering or planning to offer degree programs in these workforce preparation fields, necessitating that students either leave the state or enroll in expensive for-profit or other independent universities. Rural communities faced even harsher challenges since the closest public universities were often hundreds of miles away and online access was not appropriate for some types of programs and classes. Given that community college students are often place-bound and that many for-profit and private institutions have extremely high costs, local students' options for baccalaureate-level workforce preparation were very limited.

A number of legislative bills were put forth as attempts to address these issues. In 2004, California Assemblyman Bill Maze proposed Assembly Bill (AB) 1932 to establish an advisory committee to recommend a framework for Porterville College in the Kern Community College District and College of Sequoias in the Sequoias Community College District to offer bachelor's degrees on a pilot basis; the bill was held in committee and did not proceed. In 2005, Assemblyman Maze had success, this time through AB 1280, which authorized two state grants to establish "university centers" through which bachelor's degrees would be offered on two community college campuses—College of the Canyons in the Santa Clarita Community College District and Cañada College in the San Mateo County Community College District. These centers are still in existence.

Assemblyman Jerry Hill proposed AB 1455 in 2009 which would have authorized a baccalaureate program to be developed and implemented in the San Mateo County Community College District, but the legislation was not approved. A similar measure was proposed in 2010 by Assemblyman Marty Block, AB 2400, to authorize the San Diego, Grossmont-Cuyamaca, and San Mateo districts to establish baccalaureate pilot programs, but the measure failed. Assemblyman Block made a subsequent effort, AB 661, in 2011, for the Grossmont-Cuyamaca and San Mateo districts to offer a baccalaureate pilot on each of their campuses, but this measure also failed.

The Time Was Right

A confluence of events and conditions produced an improved climate for the review of the community college baccalaureate option. First, the state endured a five-year recession of the greatest economic severity in its history, with record-high unemployment figures and communities ravaged by these conditions. Second, studies showed that in order for California to regain its economic viability, by 2025 the state would need to generate a million more bachelor's degrees than it was currently producing—roughly 60,000 degrees above its annual average. Finally, as a result of public praise by President Barack Obama and other national leaders, community colleges were now seen in a much brighter light as the true economic engines of their states, especially in workforce preparation, and it was becoming clear that their own success was hampered by a lack of flexibility to offer the degree programs required for the upward socioeconomic mobility of their largely place-bound populations.

Open discussions began to take place at many levels of the state. It was clear that Marty Block, now a senator, had continued his sharp interest in and passionate support for the community college baccalaureate. Senator Block, a former President of the San Diego Community College District Board of Trustees, was in regular discussions with Chancellor Constance Carroll and others in the San Diego CCD, as well as other educational and legislative leaders throughout the state, regarding the desirability of and prognosis for making another effort to win this authorization for community colleges. These discussions ultimately led to a decision by the California Community Colleges Chancellor's Office, under the leadership of Chancellor Brice Harris, to establish a committee to study this issue in an inclusive manner.

Accordingly, in 2013, the California Community Colleges Baccalaureate Degree Study Group was established, with a membership that included community college CEOs, trustees, Academic Senate members, chief instructional officers, chief student services officers, chief business officers, Student Senate members, and the Research and Planning Group. Also included were representatives of the University of California and California State University systems. After meetings, study, and debate, the Study Group presented its final report to the California Community Colleges Board of Governors on March 4, 2014, with its conclusion:

“After much discussion and feedback, the Study Group believes that the offering of baccalaureates by the

California community colleges merits serious review and discussion by the Chancellor and the Board of Governors.”

Although this conclusion was generally positive and hopeful, it was not dispositive and it certainly did not offer a path for proceeding with the development and implementation of actual programs. Therefore, Senator Block decided, with support from the educators and legislators with whom he had been working, that he would go forward with another bill.

SB 850 Passes and Launches the Baccalaureate Effort

In the 2014 legislative session, Senator Marty Block proposed SB 850, “Public postsecondary education: community college districts; baccalaureate degree pilot program.” From inception, this bill recognized that the best approach to the uncertainties of California's processes was to move forward in the form of a pilot program, which would give statewide leaders a sure opportunity to evaluate the new program while enabling community colleges to address the workforce preparation needs of their local communities. SB 850 was a formidable bill for four reasons: It had a true champion in Senator Marty Block; it had a defined statewide advocacy structure that was co-chaired by Chancellor Constance Carroll of the San Diego CCD and Chancellor Linda Thor of the Foothill-De Anza CCD; it had grassroots support that was broad and deep, including chambers of commerce, veterans associations, local news organizations, and students throughout the state; and it was flexible and adjustable when compromises were necessary.

As the bill proceeded, compromises were indeed required, especially, and most regrettably, in the area in which the community college baccalaureate was most urgently needed—nursing. However, nursing programs were offered by CSU, though inadequate in capacity, and CSU was therefore opposed to any duplication of effort in this field. The California Nurses Association (CNA) was also strenuously opposed for reasons unique to that union. As a result, early in the legislative process, a non-duplication provision was adopted, which resulted in the elimination of opposition by these two groups. The future of SB 850 was strengthened while one of its greatest areas of need was lost, along with some other compromises in scale.

With strong coordination and involvement by the statewide advocacy team, SB 850 sailed smoothly through the Senate Education Committee, the Senate Committee on Appropriations, the floor of the Senate, the Assembly Higher Education Committee, the Assembly Committee on Appropriations, the floor of the Assembly, and, once again, the floor of the Senate.

The bill was signed into law by Governor Jerry Brown on September 28, 2014. In its final version, the bill:

- Enabled 15 districts to propose and implement one bachelor’s degree;
- Required the California Community Colleges Chancellor’s Office and Board of Governors to select the pilot districts based upon their resources to fund the programs, as well as based on local and regional needs;
- Required coordination with state universities;
- Required avoidance of duplication of public university programs;
- Required the legislature to set the student fees and state compensation;
- Permitted local boards to determine program governance, administration, standards, and formats; and
- Required an evaluation and report be made by the Legislative Analyst’s Office (LAO) to the legislature, California

Community Colleges Board of Governors, and Chancellor’s Office prior to the pilot sunset date of 2023, at which time the future of the pilot will also be determined.

Two program approval processes were required following the passage of SB 850. The first was accreditation by an accreditor empowered to approve and authorize four-year programs. The Western Association of Schools and Colleges (WASC) Accrediting Commission for Community and Junior Colleges (ACCJC) was and is authorized to approve a bachelor’s degree through the substantive change process. Essentially, the program must meet the minimum 120 semester credits; the minimum general education requirement of 36 semester credits; and all other requirements relative to faculty credentials, library resources, etc., including special requirements of the professional accreditor for the discipline.

The second process was approval by the California Community Colleges, which established an application process

Table 1: Approved Community College Bacalaureate Programs

College/District (multi-college districts noted)	Program	Launch Year
Antelope Valley College	Airframe Manufacturing Technology	2016
Bakersfield College (Kern CCD)	Industrial Automation	2016
Cypress College (North Orange CCCD)	Mortuary Science	2017
Feather River College	Equine Industry	2016
Foothill College (Foothill-De Anza CCD)	Dental Hygiene	2016
MiraCosta College	Biomanufacturing	2017
Modesto Junior College (Yosemite CCD)	Respiratory Care	2017
Rio Hondo College	Automotive Technology	2016
San Diego Mesa College (San Diego CCD)	Health Information Management	2016
Santa Ana College (Rancho Santiago CCD)	Occupational Studies	2017
Santa Monica College	Interaction Design	2016
Shasta College	Health Information Management	2016
Skyline College (San Mateo CCCD)	Respiratory Care	2016
Solano College	Biotechnology	2017
West Los Angeles College (Los Angeles CCD)	Dental Hygiene	2016

that drew over 30 applicants for the 15 degree opportunities. After review, institutions and bachelor's programs were approved as shown in Table 1.

These community college baccalaureates demonstrate the varied needs and workforce configurations of California. As the state moves toward the 40 million population mark, it is composed of urban communities whose industrial components have dramatically changed, suburban communities that find themselves serving as hubs for new industries, and rural communities where the community colleges offer the only option for workforce training at all levels.

The advocacy team also developed a financial format, with which the California Community Colleges Chancellor's Office concurred, based upon the legislature's clear wish not to expend additional state money for these programs, as well as upon the governor's interest in a \$10,000 bachelor's degree. Already operating at the lowest student cost in the nation, the existing rate of \$46 per unit was retained as the fee for all four years of the community college baccalaureate program. However, a tuition surcharge of \$84 per unit was authorized for the junior and senior years of the program, the income of which is retained by the institution. The total enrollment cost to students of all four years is \$10,560, which is a true bargain by any stretch of the imagination. Students at all levels are eligible for financial aid. By contrast, the average cost of a CSU baccalaureate program is \$27,036 and private institutions span costs as high as \$60,000 to \$100,000.

Up and Running: The Programs and Their Students

The first of the programs to be fully implemented was San Diego Mesa College's Health Information Management program and, as of fall 2017, the college has its first junior class in place. Like the other programs, this program addresses specific workforce needs related to the digitization of health records and prepares students for jobs with a beginning salary in the range of \$80,000 to \$140,000, clearly a pathway to the middle class. Moreover, no public university in California offers this degree; one private university offers the program, but at a very high cost to students. Employers in the region are supportive of the program and are forthcoming with assurances that the graduates will be employed. Other programs in the state have similar stories to tell.

In preparation for the LAO evaluation and report in 2018, California's community college baccalaureate programs have been keeping and reporting data both to the California Community Colleges Chancellor's Office and to the California

State University, Fullerton, College of Education's Center for Research on Educational Access and Leadership, which is studying the new community college baccalaureate in California. The Fullerton research finds that:

1. Fifteen colleges launched programs as of fall 2017 (See Table 1).
2. Colleges have invested heavily in building relationships with business and industry partners to support the programs, including the expectation that the graduates will be well prepared and highly qualified. Because these programs were designed with actual community and regional workforce needs and training in mind, their students' future placements are assured.
3. Initial data on student enrollment is promising, aligning with the state's goals of student success and equity. There are a total of 206 students enrolled in California's community college baccalaureate programs, with disaggregated data as shown in Table 2. The diversity of this entering class is impressive, with 72 percent being women and almost 60 percent being students of color.
4. Because a number of colleges already had in place associate degree programs in the new baccalaureate fields, they reported that finding qualified faculty and appropriately

Table 2: California Community College Baccalaureate Program Students, 2016

Characteristic		Number
Gender	Female	148
	Male	58
Race	African American	12
	Asian	41
	Caucasian/White	80
	Hispanic/Latino	50
	Mixed	12
	Other	11
Age	30 and Under	125
	31-50	66
	Over 50	15

sophisticated classroom facilities and equipment were not problems. Also, necessary changes in local collective bargaining agreements pertaining to faculty load were easy to resolve. Later funding was appropriated for these programs, \$6 million identified by Senator Block, but they were able to implement the programs within their budgets without the direct need for this support.

5. The greatest challenge these programs have encountered is the sunset provision that is included in SB 850, which has already begun to have an impact on recruitment efforts with local high schools, as well as current and prospective students. If the sunset provision remains, colleges will not be able to recruit past the spring semester of 2018. Students who begin programs in the fall of 2018 will graduate in the spring of 2022, and any interruption would push them past the sunset date. Efforts are currently under way with new legislation designed to extend or eliminate the sunset provision.

Objections Raised and Lessons Learned

Although the community college baccalaureate is now decades old, and 23 states have authorized over 80 community colleges to offer over 500 bachelor's degrees, half of the U.S. states still do not have this option. Among some groups it remains controversial, indicating that there is still a need to educate people about community college baccalaureate programs.

The main objection we have encountered in California is mission creep. This objection presupposes that the community college mission is finite and permanently defined. Those who make this objection define mission narrowly. While the California Master Plan for Higher Education outlines the various missions of the University of California, the California State University, and the California Community Colleges, it should not limit the methods by which those basic missions are implemented. For example, the California Community Colleges cannot carry out their existing workforce education mission without a change in method, since employers now require more than an associate degree in many traditional community college disciplines and since public universities are not meeting and do not plan to meet this need. That is the central objection at the heart of the issue of misunderstanding, and it needs to be countered directly.

During the campaign for SB 850, we also learned seven other lessons and have recommendations to make as a result.

1. **Opposition Is Inevitable.** One should plan for opposition as soon as one plans to go forward with a bachelor's degree

proposal. Universities fear competition, and that fear should be allayed by a clear identification of the difference in the workforce degrees being proposed and the students being served so it can be shown that there will not be competition for students or resources. Community colleges themselves often have ideological and emotional concerns related to mission, and also related to concerns about bringing *elite* programs and faculty into the organizational structure. As with the universities, these concerns can be addressed, including through the collective bargaining process. Because of the inevitability of opposition, it is recommended that a two-year development/ramp-up time be allotted.

2. **Identify a Legislative Champion.** It is critical to have a legislator who is committed to the community college baccalaureate to serve as a champion, to lend his/her name to the project, and to exert influence with his/her colleagues to build support.
3. **Organize a Coalition.** It is also critical to have a strong grassroots organization to support the baccalaureate effort. The organization should include college CEOs, trustees, faculty, staff, students, community members, business and industry partners, and others who can be counted on to write letters of support, write op eds and articles, and attend and testify at legislative hearings.
4. **Evidence and Data.** Success will often be determined by the extent and quality of data. Community college bachelor's degrees are all about workforce preparation. Therefore, there should be extensive data about the workforce needs and workforce preparation needs of the local community, the region, and specific employers. Being able to address how these degrees will improve the economy is of key importance.
5. **Details and Planning.** All details of the plan should be in place before its launch, especially with regard to accreditation, which assures quality, legitimacy, and cost effectiveness, both to students and to the institution. If collective bargaining is necessary because of changes in faculty workload, that should also be worked out in the early stages of the plan. Similarly, objections from local universities and agencies should be addressed early in the process.
6. **Endorsements.** As in building a coalition, obtaining formal endorsements is extremely important, especially from chambers of commerce, professional organizations, employers and agencies (e.g., hospitals in the case of health

fields), veterans groups, students, community groups, and others.

7. **Educating the Public.** The notion of community colleges offering bachelor's degrees is still relatively new, controversial, and provocative. It is of the highest importance to educate the public thoroughly and repeatedly, especially about the fact that these are workforce degrees that will add to the present mission of the community college, not detract from it. All forms of media should be engaged, including print, electronic, and social media.

A Continuing Effort

As California continues to enjoy the many successes of its community college baccalaureate pilot, the coalition of supporters is already gearing up for a second effort. Although Senator Block has retired from the Senate, Senator Jerry Hill stepped forward with new legislation, SB 769, designed to extend/eliminate the SB 850 sunset provision of, and to add

more programs to, the pilot, thereby enabling more community colleges to participate and providing some flexibility for modest duplication with CSU programs beyond a 100-mile radius. Although this new legislation failed, a legislative study of the pilot will commence in fall 2017, along with the prospect of another legislative effort in spring 2018.

The bottom line is that the California community college baccalaureate is a movement and must be addressed that way so that constant progress can be made in finding ways to serve the workforce preparation needs of students and to serve the economy. The community college baccalaureate pilot in California demonstrates community colleges' devotion to their mission as workforce educators. It also demonstrates that such programs can be implemented in a manner that assures high quality, access, and affordability.

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Coalition Is Key: Achieving Community College Baccalaureate Degrees in Texas

By Richard M. Rhodes and Joe May

Texas community colleges serve as the primary workforce training engine for the state, enrolling 732,281 students, according to the 2017 Texas Higher Education Coordinating Board (THECB) Almanac. The state's community colleges are divided into 50 unique geographic service districts, allowing them to effectively and efficiently meet the needs of their local areas and to avoid competition with one another for resources and students.

Over the past several decades, the state's economy has grown and diversified well beyond its original bases of agriculture and resource extraction. In fact, the Texas economy has transformed, becoming a nationally recognized hub for information technology, health care innovation, finance, engineering, renewable energy, and other 21st century industries. This transformation has not only caused the state's population to explode from 17 million in 1990 to 27.8 million in 2016, it has also forced education institutions to be both nimble and thoughtful as they develop programs to meet the workforce demands of one of the top 10 fastest-growing states over the past six years (U.S. Census Bureau, 2016).

To meet these needs, community colleges throughout the state began looking into the prospect of offering baccalaureate degree education, not in competition with four-year institutions, but specifically to meet critical workforce needs in their service areas.

This effort began in 2003 when the state approved limited baccalaureate degree programs at three community colleges as a pilot project, subject to approval from the THECB and accreditation by the Southern Association of Colleges and Schools Commission on Colleges (SACS). These three schools—Brazosport College, Midland College, and South Texas College—began offering programs in 2005 in a variety of fields related to organizational management, health care management, and information technology.

In 2009, the THECB commissioned a follow-up assessment to review the effectiveness and quality of these programs.¹

The assessment found that the pilot colleges had maintained a commitment to the quality of their baccalaureate programs and that employers were pleased with the graduates coming out of these programs. This study did, however, find concerns about the startup and ongoing costs of developing a baccalaureate degree program at a community college.

Following the implementation of these programs—coupled with continuing population and economic growth throughout the state—other colleges began exploring the prospect of offering baccalaureate degree education in fields where critical workforce needs existed in their service areas. In order to accomplish this, new legislation would be necessary.

This framework provides the context in which the current effort to expand community college baccalaureate degree programs began. This chapter recounts the broad and collaborative successful public policy initiative, explores the challenges community colleges faced throughout this process, and provides helpful tools for community colleges that may wish to offer baccalaureate degrees in other states.

The Community College Baccalaureate Story

After several years of effort and failed legislative attempts, community colleges in Texas won the right to offer baccalaureate degrees during the 85th General Session of the Texas Legislature, which ended in May 2017.

Although the implementation and accreditation process for such programs in Texas has just begun, important lessons can be derived based on the overall experience of winning approval from a legislature that initially was skeptical about allowing community colleges to offer baccalaureate degrees. As of this writing, the coalition of community colleges working on this issue anticipates launching the first baccalaureate programs under this new law as early as the fall of 2018. As the colleges

¹ http://www.theccb.state.tx.us/generalpubs/agenda/AG2010_07/VIO/VIOSR.pdf

learn from ongoing accreditation and implementation processes, they are carefully documenting these lessons for the benefit of schools seeking to follow this path. For the purpose of this chapter, the focus specifically will be on the public policy process and lessons learned as the colleges worked to expand access to baccalaureate programs for students in Texas.

History

The ability for community colleges to offer baccalaureate degree education is a major shift in state higher education policy. The story of success encompasses overcoming decades of long-held biases in a state in which community colleges are still referred to as “Junior Colleges” in statute.

The successful 2017 initiative grew out of failed legislative efforts during the 2013 and 2015 sessions. Several Texas community colleges worked separately for years supporting various pieces of legislation that would allow community colleges to offer baccalaureate degrees. These early disparate and uncoordinated attempts were stymied by a number of factors, including:

1. Colleges seeking to offer baccalaureate degrees across a broad spectrum of disciplines.
2. Colleges concentrating efforts on local legislators instead of attempting to make the issue a statewide priority.
3. Initial opposition by other education stakeholders, such as the THECB and four-year institutions, concerned about the issues of rigor and scope creep.
4. Long-held opposition in the Legislature among members who also expressed concerns about scope creep and rigor. Additionally, legislators expressed concern about potential state costs of expansion. Legislative resistance was a particularly high hurdle to overcome because it was concentrated in the leadership of the Senate Higher Education Committee, which is the initial committee that receives referrals for any bill on this issue.

Although no bills authorizing community colleges to offer baccalaureate degrees passed during the 2013 and 2015 legislative sessions, the Legislature did authorize the THECB to study the issue and to return with recommendations following the 2013 session. As a result, the THECB commissioned a research project conducted by the RAND Corporation to review the issue and make recommendations.

As a result of this 2014 RAND study, Texas community colleges and policy makers had a concrete, data-based view

of the state’s workforce needs and the potential role that community colleges could play to help the state meet those needs.

Specifically, the RAND study found that Texas had workforce shortages or looming workforce shortages in the following areas: nursing, computer science and IT, management of production/operations technicians, and health IT. It found that community colleges offered a viable pathway to help the state meet some of those needs. However, the report also advised that the state should proceed cautiously, ensuring such programs had the necessary resources, and recommending that the number of baccalaureate programs at each community college be limited and focused on workforce needs (Daugherty, Goldman, Butterfield, & Miller, 2014). The results of the RAND study were important because:

1. They showed that Texas needed to expand the educational pipeline in order to meet the state’s growing workforce needs, specifically in the areas of nursing and technology.
2. They helped allay concerns about the rigor of community college programs, arguing that community colleges could be counted on to fill the gaps and provide an affordable pathway to baccalaureate degrees in fields where a defined workforce need existed.
3. They moved the THECB to shift its position from one of opposition to one of support for community college baccalaureate degrees as long as these programs addressed areas of critical workforce need.

Such findings, although they represented an incredible boost to community colleges, were not enough to secure victory in the 2015 session. Legislators continued to harbor reservations about scope creep, programmatic rigor, and added state costs for expanding baccalaureate education to community colleges. These stumbling blocks, coupled with the lack of a unified message or an organized coalition, resulted in another failed legislative effort in 2015.

2017 Effort

Using the positive findings of the RAND study and lessons learned from 2013 and 2015, several community colleges, including Austin Community College District (ACC) and Dallas County Community College District (DCCCD), started a community college coalition for baccalaureate degree education that ultimately would grow to 10 member colleges representing nearly 50 percent of the state’s total community college

enrollment. This group was a broad, geographically diverse coalition which included both large and small colleges.

Given expected cost-related concerns expressed previously by the Legislature, membership in this coalition was contingent upon these colleges pledging to implement baccalaureate degrees without requesting additional state funding to create those programs. Coalition membership included:

- Alamo Colleges (San Antonio area)
- Austin Community College District (Central Texas)
- Collin College (North Texas)
- Dallas County Community College District (Dallas region)
- Galveston College (Gulf Coast)
- Grayson College (North Texas)
- Lone Star College System (Houston area)
- Odessa College (West Texas)
- San Jacinto College (Houston area)
- South Texas College (Rio Grande Valley)

The creation of a unified coalition was crucial in the effort to secure ultimate passage of baccalaureate degree legislation by:

1. Allowing colleges to share information, divide labor, and take quick action as the legislative session unfolded and new information was revealed.
2. Allowing colleges to develop a unified message and strategy.
3. Broadening the issue and making it a statewide priority because the coalition's colleges covered more than half (94 members) of the Legislature's 181 total members.
4. Allowing colleges to pool necessary resources to engage professional consultation services with strong ties to the administration and legislative leadership, including leaders of the Senate Higher Education Committee, which historically had been a major barrier to passage.

Armed with the RAND study and a strong coalition, the 2017 strategy began long before the session started and was focused on dispelling past arguments against allowing community college baccalaureate degrees.

First, member colleges worked to negate potential opposition from four-year institutions by meeting and briefing university leaders on what the community colleges were proposing.

For example, in its service area, ACC communicated its plans to implement an RN-to-BSN degree for these reasons: (a) it is a

critical workforce need in the area; (b) expanded capacity in the field was necessary based on a National Institutes of Health best practices which calls for 80 percent of nurses to have a BSN by 2020; and (c) existing local RN-to-BSN programs could not make a dent in workforce needs without additional capacity. ACC also clearly stated in meetings, through electronic communications, and on fact sheets that its aim was not to compete with four-year schools; instead, it planned to focus on the more than 7,500 working licensed nurses in the college's service area who needed a BSN credential and likely would prefer a local, affordable, high-quality pathway.² This message was effective in reducing—but not eliminating—opposition from four-year schools.

DCCCD initially resisted pursuing a baccalaureate degree in early childhood education until an alliance of area school superintendents, business and civic leaders, chambers of commerce, early childhood advocacy groups, and, ultimately, the Mayor of Dallas, highlighted the need within North Texas. Moreover, the need was staggering. Roughly, 80 percent of four-year-olds in North Texas attend public pre-k education but only 55 percent subsequently are judged kindergarten-ready one year later, which indicates that the area has a significant pre-k quality gap. In Dallas County, 39,000 eligible three- and four-year-old children currently are not enrolled in public pre-k. More than 4,300 early childhood educators are needed to close this gap.

DCCCD, along with many members of this alliance, met and briefed area university leaders as legislation was developed. The initial early childhood baccalaureate bill which was filed allowed universities an opportunity to solve the need, with strict timelines, before DCCCD would be authorized to step in. This approach helped to blunt resistance from most universities.

Second, member colleges challenged the quality and rigor arguments head-on. In ACC's case, the college stressed the quality of its nursing programs, highlighting the fact that ACC's five-year average nursing licensure passage rate was 95.13 percent, 15 percentage points above the THECB-recommended 80 percent passage rate. It was also higher than both the state (85.58 percent) and national (85.65 percent) passage rates. In fact, the blended coalition's licensure passage rate in nursing was 87.46 percent, still higher than the statewide average. These data points were incredibly powerful because the licensure exam taken by community college graduates is the same as the test taken by students in a traditional four-year setting.

² <http://www.austincc.edu/offices/community-engagement-and-public-affairs/rn-to-bsn-advocacy>

DCCCD faced less direct resistance about quality. The gap in early childhood teachers is so great, it was obvious to everyone that universities would not be able to close it alone. While certainly there were whispers behind the scenes about quality, those voices never reached a critical mass.

Third, ever-mindful of both the four-year schools' and legislators' concerns about scope creep and cost, the coalition sought to reassure individuals who were skeptical about the intentions of community colleges by drafting a bill modeled on earlier versions championed by legislators. This new bill allowed for the creation of community college baccalaureates but also limited their scope to three narrow areas: nursing, applied technology, and early childhood education. This legislation was proposed to put critics at ease and to ensure them that the colleges seeking to offer such degrees were focused on meeting local workforce needs and were not seeking to compete with four-year institutions. In addition, the bill was drafted with an emphasis on the fact that the colleges would not ask for additional state money to implement baccalaureate programs, thereby reducing opposition from budget hawks in the Legislature.³

Other factors that enhanced the coalition's efforts as it sought passage included:

1. A pledge to offer these expanded degrees at an affordable cost for students, and to not increase tuition for this specialized pathway. For nursing, the coalition estimated that the community college RN-to-BSN pathway would be approximately 59 percent less expensive than the same program at a four-year school.
2. Information on past successes of previously approved Texas community college baccalaureate pilot programs and other states that have allowed community college baccalaureate programs. This information underscored how the concept was not new and has been successful in other places.
3. Broadening the coalition beyond colleges and their administrators to include supportive statewide and local businesses and large employers, potential students with compelling stories, and other stakeholders who could be called upon during legislative hearings to tell their stories and speak out to support the bill.
4. A demonstration of the statewide groundswell of support for this issue by having friendly legislators file baccalaureate

degree bills on behalf of their local colleges. Ultimately, more than 23 bills were filed by legislators who represented the 10-college coalition on this issue. These local bills, referred to in Texas as bracketed bills, would allow colleges to offer baccalaureate degrees at the local level and not on a statewide basis. The sheer number of bills bubbling up from many corners of the state demonstrated a groundswell of support that proved impossible to ignore.

Engaging Key State-Level Advocates

Institutional actors such as community colleges often forget or overlook the personal aspects of public policy formation, especially at the legislative level where personality dynamics often spell the difference between success or failure. The Texas community college coalition for baccalaureate education approached the 2017 session very differently from the uncoordinated efforts of prior sessions.

A premium was placed on identifying the proper legislative champion with the passion and power to carry the statewide bill through the session. Possibly the most important meeting during the entire effort was a November 2016 meeting between coalition presidents and the Texas Lieutenant Governor to solicit his support. During that November meeting, the Lieutenant Governor not only signaled his general support for the concept, he also offered strategic counsel for the coalition as it moved through the process. His advice included engaging directly with the leadership of the Senate Higher Education Committee and its Chair, who had been an opponent of community college baccalaureate degree programs in the past.

Following that meeting, the coalition identified strong House and Senate sponsors for the statewide bill. However, with an unresponsive Senate Higher Education Committee Chair, the coalition was facing another failure.

Recognizing the challenge, the coalition used its legislative champions to actively engage with the Senate Higher Education Committee Chair. This sustained personal engagement—beginning before the session and continuing into 2017—coupled with community college coalition members who reached out to brief the Chair, supportive signals from the Lieutenant Governor, momentum provided by the RAND study, and the now-apparent statewide groundswell of support for this issue, all worked together to shift the Chair's position on the issue.

Early in the session, the Senate Higher Education Chair signaled that he wished to be primary author on the community college baccalaureate degree bill, much to the surprise of the

³ <http://www.capitol.state.tx.us/BillLookup/History.aspx?LegSess=85R&Bill=SB2118>

coalition. This change of heart increased momentum for the bill and laid the groundwork for its ultimate passage.

Evaluation and Lessons Learned

Securing passage of this bill after a multi-year public policy effort is just the first step to successful implementation.

Member schools are now engaged with the THECB and SACS to implement these baccalaureate degree programs.

Although the path forward is a long one, lessons learned from efforts to get the bill passed will be helpful as community colleges move forward beyond the legislative process and into the accreditation and implementation phase. These lessons include:

1. **Work collaboratively with peer institutions.** Success was derived largely from the ability of member colleges to come together, unify their message and strategy, and share information in service to a common goal.
2. **Engage opponents in dialogue.** In this case, the process created new allies and softened opposition. By meeting with university leaders, the opposition and concern related to issues of scope creep and rigor were softened. Even more importantly, by engaging with the Senate Higher Education Committee Chair directly, a longtime opponent was transformed into a critical ally and champion.
3. **Broaden the coalition beyond inside players.** Community college leaders and administrators are great assets, but they pale in comparison to the testimony of an employer who speaks to critical workforce needs or a working nurse and single mother who tells policy makers how earning a BSN degree will change her life and benefit her family.
4. **Employ the assets the college has at hand: trustees, deans, faculty, and students.** When a college makes a public policy effort an institutional priority, that goal should be communicated widely among the school's internal stakeholders to achieve buy-in and support. A committee room filled with nursing students in scrubs makes an incredible statement that goes far beyond the words of dry, written testimony.

5. **Engage professional consultation services.** Managing such a large and diverse coalition required a high level of coordination and outside expertise that involved people who could arrange meetings, steer strategy, coordinate messaging, and serve as a neutral third-party arbiter when coalition colleges had differences.
6. **Build a case based on hard data.** The RAND study, although completed in 2014, was useful in winning over important institutional support from the THECB and set the stage for future success.
7. **Know what you can and can't do.** By limiting the coalition to schools that pledged to develop these programs without additional state funding and without raising tuition for students, the coalition was able to include a core collection of colleges that clearly knew they were capable of implementing this law. However, all colleges now have the opportunity to enjoy the benefits of this new law, should they choose that path.

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Case Studies

Humber College Institute of Technology and Advanced Learning: A Baccalaureate Journey

By Chris Whitaker and Gina M. Antonacci

Humber College Institute of Technology and Advanced Learning, located in Toronto, Canada, is one of 24 colleges of applied arts and technology in the province of Ontario. Humber is the largest college in the Ontario public college system with three campuses and a full-time student population of 30,000 (fall 2016).

The opportunity to confer baccalaureate degrees was given to Ontario colleges as a result of the passing of the Ontario Post-secondary Education Choice and Excellence (PESCE) Act in 2000. Recognizing that employers were increasingly seeking degree-level qualifications for new hires, the Ministry of Training, Colleges and Universities concluded that colleges were “well-positioned” to offer credentials beyond diplomas (MTCU, 2000, p. 8). Humber was in a solid position to prepare and deliver degrees and keen to pursue this new opportunity. By 2001, Humber had worked with two Canadian university partners—the University of New Brunswick and the University of Guelph—to design joint degree programs for delivery at its north campus. The experience gained from developing these collaborative four-year degree programs resulted in essential institutional changes, giving Humber the degree backdrop it needed to initiate the development of its own independent degree programs. Currently, between the north and lakeshore campuses, Humber offers 26 honours baccalaureate degree programs with an enrolment of 4,289 full-time students (fall 2016).

In accordance with the provincial degree requirements, each degree offered at Humber consists of eight semesters of academic study plus a minimum 14-week work placement (or equivalent) related to the field of study. All degrees include a blend of discipline-specific courses and a number of open-breadth electives. Where possible, related degrees are designed to include common courses in the first year, or more, of study. This provides opportunities for students to change specializations without academic penalty (e.g., Bachelor of Commerce degrees). A list of Humber’s degree programs is provided in Figure 1.

Figure 1

- Bachelor of Applied Arts (Paralegal Studies)
- Bachelor of Behavioural Science
- Bachelor of Child and Youth Care
- Bachelor of Commerce (Accounting)
- Bachelor of Commerce (Digital Business Management)
- Bachelor of Commerce (Fashion Management)
- Bachelor of Commerce (Finance)
- Bachelor of Commerce (Healthcare Management)
- Bachelor of Commerce (Hospitality and Tourism Management)
- Bachelor of Commerce (Human Resources Management)
- Bachelor of Commerce (International Business)
- Bachelor of Commerce (Management Studies)
- Bachelor of Commerce (Marketing)
- Bachelor of Commerce (Supply Chain Management)
- Bachelor of Community Development
- Bachelor of Creative Advertising
- Bachelor of Digital Communications
- Bachelor of Film and Media Production
- Bachelor of Health Sciences (Workplace Health and Wellness)
- Bachelor of Industrial Design
- Bachelor of Interior Design
- Bachelor of International Development
- Bachelor of Journalism
- Bachelor of Music
- Bachelor of Public Relations
- Bachelor of Social Science (Criminal Justice)

History of Program Development at Humber

From a program development perspective, Humber was well positioned to develop degree proposals. Prior to offering degree

programs, Humber maintained a modest program development office with consultants who worked with representatives from the academic schools to prepare new program proposals and program modifications for government approval. In addition, Humber had an established internal program approval process for its new programs that became the basis for the process to be used for the baccalaureate degree programs.

As mentioned in the introduction, when the PESCE Act was passed, Humber was actively working on collaborative degree programs with its two Canadian university partners. With the University of New Brunswick (UNB), Humber built a joint nursing degree (launched in 2001) and with the University of Guelph (U of G), Humber developed blended diploma and baccalaureate degree programs. The joint programs with the U of G (launched in 2002) are distinct in that after four years of study, students receive both a non-degree credential from Humber and an honours baccalaureate degree from U of G. In fall 2016, 4,328 full-time students were registered in the joint programs offered by the University of Guelph-Humber and 474 nursing students were registered in the joint University of New Brunswick-Humber nursing degree program.

An emphasis on applied learning was central to the program development model for all of the joint degrees, which carried over to the approach used in the development of the Humber degrees. Furthermore, as a result of its university partnerships, Humber had made considerable progress at creating, adapting, and aligning many of its policies and procedures to offer degree-level study with those of its partners. The partnership with the University of Guelph, in particular, resulted in the formation of joint teams and committees to build facilities, systems, and resources to support the delivery of the programs at the Humber north campus. Committee members came from many areas/ departments such as those relating to capital development, registration, program development, IT services, finance, human resources, library services, and student services.

In order to offer a baccalaureate degree in the college system, applications for ministerial consent must be made to the provincial Minister of Advanced Education and Skills Development. A separate application is required for each degree

program and, given that ministerial consents are only granted for specific periods of time, colleges must also make applications for consent renewal. Quality assurance for the degree programs is managed by an arms-length agency, established under the PESCE Act, called the Postsecondary Education Quality Assessment Board (PEQAB). This is the body that receives the application following a review completed under the minister. The degree requirements set for consent—and consent renewal—affected Humber’s program development processes significantly over the years.

Figure 2 shows the stages for the development, submission, and approval of new degree programs at Humber. The degree development process normally includes a minimum of a full calendar year to complete the application. Once the application has been submitted to the minister, program approval can take six months to well over a year.

Concept Development

At this stage, the new program idea is evaluated against the strategic priorities of the college and the academic plan. A formal document is prepared which identifies many features of the program, such as the goals of the program and an “image of the graduate”; estimates of required resources needed; comparator programs in Toronto and beyond; potential program pathways and transfer possibilities; and trends in the field and related fields of study. In addition, the concept proposal includes the identification of experts who will be needed to help create the program framework and content, acknowledgement of any ministry program requirements, any related associations or professional and accreditation bodies to be consulted in the development process, and preliminary research relating to degree nomenclature.

A consultant from the Program Planning, Development and Renewal office prepares the concept document in collaboration with representatives from the academic department(s), including administrators and faculty members. The consultant manages all phases and activities in the development process. There may also be input from external stakeholders such as known academics, experts in the field found on existing

Figure 2: Degree Development and Approval Process and Stages



program advisory committees, and/or representatives from other professional boards or committees related to the proposed field of study. Humber's Core Strategic Enrolment Management (SEM) committee reviews the concept proposal and the outcome of that review determines whether or not the program proposal moves to the next stage.

Preliminary Program Development

At this stage, greater detail is added to the proposal, including the refinement of the program idea; detailed labour market research; and a more in-depth exploration of potential student demand, comparator programs, and partnership opportunities. An ad hoc program advisory committee is formed consisting of academics; potential employers; and members of related associations, professional bodies, and accreditation bodies, where appropriate. The curriculum framework is established which includes program themes, study streams, course sequencing, common platform courses shared with other degrees, and common discipline electives and placeholders for open breadth electives. This stage also includes the identification of faculty or external subject matter experts and consultants, and any postings for external experts needed for curriculum development are completed. A project plan is created which includes a critical path with tasks, responsibilities, a proposed submission date, review times, and a start date for the program. Working closely with the academic dean and other academic staff responsible for the program, the consultant determines if any major changes in direction need to occur and be reported. A program development team is established with the appropriate blend of administrators, faculty members, and external consultants. As required, updates on the development of the program may be provided directly to senior administrators, the core SEM committee, or to other councils or committees in the college.

Program Development

During this stage, the program consultant continues to shepherd the development process and the work of the curriculum developers to establish program outcomes, finalize the program of study, and prepare all of the course outlines. PEQAB requires that every course outline include details such as credits, hours, course objectives, course descriptions, content details, required reading lists, additional resources, and all student evaluation methods. Following the development of the outlines, a library audit of all resources required for the courses is prepared. Final nomenclature decisions are made at this phase and external requests for formal letters of support for the program

are obtained. Credential recognition from graduate schools, professional bodies, and regulatory and accrediting bodies is sought and documented for the submission. The ad hoc program advisory meets as required throughout this phase and a final formal endorsement is required before the final application can be made. An external academic expert in the field is contracted to complete a review of the program. This person is chosen to reflect the credentials and qualities of a PEQAB assessor.¹ Recommendations from the reviewer are carefully considered in any final amendments to the program proposal and the review contents are included in the final submission.

Throughout this stage, the program development consultant also prepares sections of the proposal relating to areas such as institutional policies, economic need, and credential recognition. To complete these sections, the consultant works with representatives from admissions, strategic planning and institutional research, finance, human resources, student services, and the library. Final program budgets are also finalized which include estimates of operational costs for several years of delivery and enrolment targets for domestic and international students.

Submission Preparation and Approval

When the application is near completion, executive summaries are prepared for various Humber internal committees and Humber's Board of Governors. The internal committees at Humber include administrative and faculty groups such as Core SEM, Deans' Council, and College Council. There may also be the need to present the program to other committees relating to capital expenses, facilities, and services. Once the internal committees have reviewed the proposal, the final executive summary is taken for approval to Humber's Board of Governors.

External Approval

Following approval by the Board of Governors, all of the necessary ministry documentation for the program is finalized and accompanies the final degree application sent to the minister. Any subsequent requests from the ministry and PEQAB are managed through the Program Planning, Development and Renewal office. Normally, the program consultant responsible for the application is the first point of contact but there may also

¹ These include advanced academic credentials, appropriate academic experience and scholarship, and other professional qualities. For a full list of the qualifications see the PEQAB website (<http://www.peqab.ca/QualityAssessors.html>).

be a need for a variety of consultations across the organization. This can be an iterative process as the application is reviewed by ministry staff and makes its way through the PEQAB quality assurance review. A site visit is mandatory with the PEQAB expert assessors who prepare a report with their findings. The team responsible for the program proposal prepares a written response to the assessors' report. Once that response is submitted back to the Board, the applicant waits for the final recommendations from PEQAB and the minister.

Areas of Significant Impact

Humber's ambitious agenda to develop and offer many degrees over a relatively short period of time impacted the college in a number of ways and resulted in some key changes.

Changes Relating to Program Development and Program Renewal Processes

To develop degrees at a quick pace, the institution added three new full-time program development consultants/managers to the unit responsible for preparing the applications for consent and consent renewal. It also added one full-time consultant/manager to assist with program review and program accreditation, as well as a manager responsible for transfer agreements with external postsecondary institutions.

Degree development also led to modifications to the program development and program renewal processes as Humber refined its processes to tightly align with PEQAB degree requirements. While no two submissions for consent or consent renewal are the identical, common frameworks for design and review have been established.

The annual budgets for program development were expanded to cover the costs for the hiring of external curriculum content experts, curriculum reviewers, and research organizations to help with labour market surveys and the analysis of program economic need. In addition, the budget covers standard application fees for degree submissions and the costs associated with the PEQAB assessment.

Other institutional changes were made to support development as well. For example, standing committees and councils were struck to bring representatives from across the institution together to address common degree needs, concerns, and questions. Examples of areas that have been addressed include admissions standards, work placement challenges, academic regulations, college policies, and the data requirements for submissions for consent and consent renewal.

Changes to Address Degree Recognition Concerns

Many Ontario university baccalaureate degrees are based on 120 credits—or equivalent—in which courses with less than three credits—or less than 42 hours per semester—are typically out of the norm. In the early days of degree development, Humber's programs did not always follow this standard. Once the difficulty of getting Ontario universities to recognize the degrees—or portions thereof—held by students wishing to transfer was understood, Humber changed its design standard. This helped to some extent with degree recognition, but other changes were needed.

The initial nomenclature for degrees issued by the colleges were required to include the word "applied" in the title (e.g., Bachelor of Applied Business). However, many of these degree titles did not exist elsewhere in Canada and it took a systemwide consultation to bring about the change to allow the colleges greater choice in the degree titles and to use more conventional titles. Humber was the first college, subsequently, to offer a Bachelor of Commerce degree.

Furthermore, despite the fact that the colleges prepared programs against a degree-level standard for an honours baccalaureate, they were not allowed, until recently, to include "honours" in the credential title.

Changes to Faculty Requirements and the Addition of an Applied Research Office

Unlike in non-degree programs, for each degree program there are specific requirements for the number of faculty in the program who must possess a terminal academic credential, normally a Ph.D. Typically, PEQAB points to the faculty credentials found in the Ontario university system as the benchmark for determining the number of Ph.D.-qualified faculty required at the college. With each application for consent, the applicant must make a case for the number of faculty members it will hire with the terminal credentials, ensuring that all faculty must have a minimum of one credential higher than a baccalaureate degree. At the time of consent renewal, applicants must report on how successful their efforts were at hiring the required faculty complement.

In some subject/degree areas, finding faculty with the appropriate credentials has been very straightforward; whereas, in other applied subjects of study it has been, and continues to be, difficult. The search for the best faculty to teach in applied programs also means that the academic department is keen to find individuals who not only possess the required academic credential but also have professional credentials and experience.

There have been many petitions at Humber made to hire an individual with master's degrees and experience instead of someone with a doctorate and no practical experience.

Furthermore, the original faculty hiring expectations of PEQAB inadvertently added the expectation that the faculty members would be conducting research in addition to their teaching loads. However, unlike their Ontario university counterparts, faculty members teaching at the degree level in the college system are not under the same level of obligation to complete research activities. Yet in some of the early reviews, many PEQAB assessors used only research projects and publications as evidence of faculty scholarly activity. In 2014, PEQAB issued a clarification to include applied research, amongst other activities, in its definition of allowable scholarly activity, thus taking some of the pressure off the colleges (PEQAB, 2016, p. 2). That said, the PEQAB reviews of Humber's early degree submissions made the college recognize that it needed to include some applied research opportunities for its faculty members. It was also recognized that the institution needed to arrange for degree students to engage in research activities with its faculty members. To address these needs, Humber's Applied Research and Innovation office was established in 2009. The mandate of the office is to help faculty and student research teams collaborate with industry or community partners to work on applied problems relating to a range of products, services, and other joint initiatives. The office is not only for degree-related projects; the projects also help many students gain applied experience and complete capstone projects. Research activities also offer faculty members opportunities to contribute to their fields.

Over the past year, Humber engaged in 267 applied research projects with 226 external partners; more than 302 faculty and staff members as well as 1,687 students participated in these activities. Support for research comes from institutional contributions, partners, and external grants. The total investment for the past year was \$3,244,868.

For the immediate future, Humber is working on a strategic applied research plan that will include centres of innovation in three areas: health and wellness, technology, and creative business. These centres will provide more opportunities for multidisciplinary collaborations for industry partners, faculty, and students.

Changes to Student Recruitment and Admissions Processes

New recruitment initiatives needed to be developed and added. These included degree-specific promotional materials, the

formation of a central region recruitment initiative with other colleges, promotional events such as a degree breakfast for high school guidance counselors, degree fairs for on-campus students, and internal classroom visits to non-degree students to promote degree completion opportunities.

The proliferation of degree programs at Humber, combined with a strategic and provincewide priority to increase transfer opportunities for students, necessitated the creation of the transfer services department in the Office of the Registrar. This added a manager and two full-time, plus one part-time, student mobility advisors. The recently added staff members are also responsible for new websites for admissions and transfer options, including an external provincial student transfer site that must be kept current. Providing transfer opportunities resulted in a significant impact on the workload in the registrar's office. Many of the processes to admit transfer-in students are not automated and result in the manual management of the application.

Sometimes changes to the PEQAB benchmarks and standards can result in significant changes to the degree programs which, in turn, result in formal requests for a change to the degree consents. The changes to the transfer-in/degree completion requirements are a good example. The initial PEQAB model for minimum and maximum credit transfer was rigid, resulting in transfer student complaints about program duplication between some of the diploma and degree programs. PEQAB changed its model in July 2013, resulting in submissions for new transfer arrangements for students in related non-degree programs both from Humber and across the college system. The analysis work required to complete the applications for these new transfer models is substantial.

Additional Student Financial Assistance

The addition of degrees to the Humber credential mix resulted in the addition of degree scholarships. Humber awards degree scholarships automatically to graduating high school students based on academic achievement. Depending on the grade point average, these can range from \$1,500 one time to \$4,000 renewable. For 2015-2016, Humber awarded 1,229 degree entrance scholarships in the amount of \$1,403,500.

In the fall of 2016, 541 Humber degree students also qualified for on-campus work-study programs. These are paid positions within Humber that allow for both domestic and international students to work while studying, thus gaining valuable work experience.

Impact and Lessons Learned

The Ontario Ministry of Training, Colleges and Universities contracted R. A. Malatest and Associates Ltd. to conduct a systemwide evaluation of the degrees offered by Ontario colleges and Institutes of Technology and Advanced Learning (ITALs). The report, released in December 2010, provides evidence of the positive impact of the degrees offered in the Ontario system (R. A. Malatest & Associates Ltd., 2010). At the time of the review, Humber was offering 15 degrees and actively participated in the study. While the report offers many detailed findings, it includes the following key observations related to student and employer satisfaction:

- Student survey respondents (n=1,056) indicated a high level of satisfaction (average 86%) with their degree experience (academic preparations, opportunities for employment, knowledge and skills gained and prospects for increased income). Also, (69.4%) of the respondents were employed in full time positions and another 11% in part-time positions (R. A. Malatest & Associates Ltd., 2010, p. 46).
- The majority (91%) of employers (n=378) surveyed indicated that they were very satisfied or satisfied with the students who completed work placements with them as part of their studies. Furthermore, 70% of employers who hired graduates felt that their new hires: possessed job ready skills (70%); worked well in team settings (84%); and possessed a blend of theoretical and practical knowledge (83%) (R. A. Malatest & Associates Ltd., 2010, pp. 56-57).

In accordance with Ontario government requirements, all colleges must collect and report annually on program performance data. For degree programs as a whole, the most recent Humber data show a 70 percent graduate satisfaction rate and an 85 percent employment rate (Humber SPIA, 2017).

Over the years, ongoing annual reviews of the programs at Humber have resulted in a variety of program-specific improvement measures. In addition, on a cyclical basis, each degree program is formally reviewed as part of the required application for consent renewal. Consequently, a number of lessons have been learned related to degree design and delivery. For example, student dissatisfaction with the limited range and variety of breadth courses resulted in a new model that allows students greater choice. When students and faculty members both identified the difficulties finding full-time, paid student work placements, the regulations were changed to allow for the

use of unpaid placements as well as the part-time accumulation of placement hours.

This work placement challenge required systemwide collaboration to bring about changes to the provincial degree requirements. Consultations like these also resulted in improvements to degree nomenclature, better credit transfer recognition for non-degree students, and the opportunity to recognize the college four-year degrees as “honours” baccalaureate degrees.

When Humber received its designation as an Institute of Technology and Advanced Learning (ITAL) in 2003, it also saw an increase in the number of degrees that it could offer from 5 percent to 15 percent of all program offerings. At present, Humber is close to reaching the 15 percent target and looks forward to continuing to develop innovative and high-quality baccalaureate programs.

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From Conception to Community Impact: The Seattle Colleges B.A.S. Degree Journey

By Malcolm Grothe, Anna Baldwin, and Shouan Pan

The Seattle College District (SCD) is a three-college district serving nearly 50,000 students—approximately 13,500 FTEs—per year among three main campuses: North Seattle College, located five miles north of downtown Seattle; Seattle Central College, located just east of downtown; and South Seattle College, located in the West Seattle neighborhood. The Seattle College District also operates six specialized centers: Seattle Vocational Institute, Seattle Maritime Academy, the Health Education Center, and the Wood Technology Center, affiliated with Seattle Central College; and the Georgetown Campus and New Holly Learning Center, affiliated with South Seattle College. Together, the Seattle Colleges’ service area includes the whole of the City of Seattle and, to a lesser extent, surrounding areas such as Shoreline, Renton, and Bellevue.

Seattle Colleges embarked on development of Bachelor of Applied Science (B.A.S.) degrees in an effort to fill a service gap and to extend pathways for the diverse student population long served in Associate of Applied Science and Associate of Applied Science-Transfer degrees. B.A.S. degrees provide a next logical step in the academic and training tenures of Seattle Colleges students. It became increasingly clear that in Seattle, without obtaining a B.A.S. degree many students would be limited in their skill development, career advancement, and, subsequently, their earning power. In addition, B.A.S. programs served many regional industry partners who increasingly identified needs for employees with baccalaureate-level knowledge and skills. Often these labor market gaps were left unfilled by existing baccalaureate options in the region and state. (See B.A.S. programs offered at Seattle Colleges on page 49.)

Seattle Colleges’ Story of Program Development

Seattle Colleges’ first B.A.S. degree—Hospitality Management—was developed in 2007. Representatives from the regional hospitality industry had approached South Seattle College seeking training options to develop a baccalaureate-level workforce. The nearest hospitality program for such training

was nearly 300 miles away at Washington State University, and industry representatives were hungry for a closer training partner to meet their regional needs.

Led by the Executive Dean for Workforce, a core group of staff traveled to British Columbia, Nevada, and Florida to identify best practices and conduct research on the implementation plans at institutions offering applied baccalaureate degrees. Following this period of research and data collection on best practices, the core team recruited members to a large, cross-district implementation team. The team consisted of internal and external stakeholders, including workforce deans, vice presidents for instruction and student services, advisors, library staff, financial aid staff, facilities staff, and the campus president. An additional group of industry representatives, community partners, and Washington State University staff was convened to provide input and guidance. Together, the teams identified the values and principles guiding the B.A.S. development process, such as a commitment to serving diverse students, industry partnerships, and work-based learning experiences. The implementation team worked closely with hotel, restaurant, cruise ship, and other industry representatives to map the required skills and desired program outcomes.

Meeting the particular needs and addressing the challenges of adult learning and incumbent workers was a central focus of the B.A.S. program development process. The B.A.S. implementation team directed particular attention to addressing the academic, logistical, and social supports important to this student population. With these considerations in mind, the implementation team developed a B.A.S. program in Hospitality Management as well as a recommended template for future B.A.S. development. Some of the elements of this template include:

- B.A.S. Program Managers, acting as one-stop centers for their programs and students;
- Built-in advising and practicum experiences;

- A cohort model; and
- Working-adult friendly modalities such as evening, weekend, online, and hybrid.

This model of development expanded across SCD and eventually to all 12 baccalaureate programs.

The implementation team then worked closely with the State Board for Community and Technical Colleges to carry out the program application process. A statement of need was written outlining the labor market justification for a hospitality management program, mapping how the program would build on existing associate degree offerings, and demonstrating sufficient student demand within the region. The implementation team then completed a program proposal with detailed information about the baccalaureate-level academic rigor of the program, a student services plan, and expert evaluations.

Areas of Significant Impact

Accountability and Outcomes Assessment

As part of the process to begin offering B.A.S. degrees, South Seattle College underwent a Substantive Change review by the Northwest Commission on Colleges and Universities. This required that the college provide information to the accrediting body about how the change would impact the college's mission; submit evidence of the need for such a change; and describe implications for student services, facilities, faculty, and budgets. Upon approval by the Northwest Commission, South Seattle College received a commendation for the planning work completed as part of the B.A.S. development process.

Partnerships

Implementation of B.A.S. programs has led to new and strengthened relationships with industry, government, and community-based partners. Through these strengthened partnerships, the Seattle Colleges have been able to address some of the region's largest training issues that previously would not have been possible. For example, development of the Hospitality Management program came as a direct request from the industry for bachelor's-level professionals. As mentioned, the nearest program training employees at this level was nearly 300 miles away and was not meeting the needs of regional employers. Through development of the program, Seattle Colleges was able to engage new, higher-level partners, such as CEOs of local hotel chains and well-known Seattle chefs. These new partners have stayed engaged with Seattle Colleges

over the years, providing support and assistance with Technical Advisory Committees, internship opportunities, and direct sponsorship of students.

The Early Childhood Education program at North Seattle College provides another example of the new tier of partnership opportunities available following B.A.S. program implementation. In 2014, Seattle voters passed an initiative to fund free preschool for all. The initiative funded the expansion of lead teaching positions in early childhood classrooms throughout the city. There were, however, a shortage of bachelor's-level teachers to fill these positions, and early childhood centers could not meet the demand created by the initiative. In anticipation of this labor market shortfall, North Seattle College partnered with the City of Seattle to develop its Early Childhood Education B.A.S. program. This partnership has helped to ensure the city has the requisite number of teaching professionals, and that students in North Seattle College's program have a promising career outlook upon graduation.

A key consideration in development of Seattle Colleges' B.A.S. programs is attention to the scheduling needs of working adults. As many students are working full- or part-time during their program, B.A.S. development teams pay special attention to course modalities that are flexible and worker friendly. Most Seattle Colleges B.A.S. programs are hybrid models, with several options entirely online. Weekend and evening options are available as well. Development teams have also been careful to select the appropriate timing and modality, not just to meet students' needs, but to meet the needs of the relevant partner industry as well. For example, most B.A.S. programs have some weekend and evening coursework. The implementation team recognized that this modality would not work for the Hospitality Management program, however, as peak hours in the hospitality industry are evenings and weekends. Thus, the program was designed to avoid those hours. This demonstrates, among other ways, that close involvement of industry partners during the development phase leads to better program design.

Student Success

From the beginning, the design team of Seattle Colleges was deliberate in keeping student success at the forefront of program design and implementation. For example, the team grappled with how best to communicate the differences in enrollment processes, financial aid, tuition, and more between B.A.S. programs and Seattle Colleges' existing associate and certificate offerings. Staff members were concerned that B.A.S.

B.A.S. Programs at Seattle Colleges

Allied Health Sciences at Seattle Central College

The B.A.S. in Allied Health Sciences is designed for students who have completed allied health occupational certificates, health-related professional licenses, and allied health associate degree programs. Graduates help meet the growing demand for baccalaureate-level allied health practitioners in the Seattle-King County area. Students select one of four allied health tracks: (1) Community Health and Education, (2) Dental Hygiene, (3) Health Care Services Management, and (4) Respiratory Care.

Application Development at North Seattle College

The B.A.S. in Application Development prepares graduates for entry-level positions in software development. Instruction focuses on current industry trends and the skills needed by software developers and programmers who create and modify general computer application software, mobile applications, or specialized utility programs. A strong emphasis on industry-based projects throughout the program will prepare graduates to meet current and future industry needs and emerging software trends.

Applied Behavioral Science at Seattle Central College

The B.A.S. in Applied Behavioral Science is a substantive human services degree for direct service practitioners. This program is designed for students with a two-year degree in social and human services, child and family studies, interpreting services, or a related field.

Early Childhood Education at North Seattle College

The Early Childhood Education B.A.S. degree provides professional development training for early care and education professionals, allowing them to keep pace with the increasing professionalization of the field. The curriculum is designed to align with accreditation standards established by the National Association for the Education of Young Children and the Council for Accreditation of Educator Preparation.

Hospitality Management at South Seattle College

The B.A.S. in Hospitality Management gives students a broad set of competencies in the hospitality industry. Students take classes that explore various positions in the hospitality field,

including tourism, hotel operations, restaurant management, catering, cruise ship operations, casino operations, and travel.

Information Technology - Networking at Seattle Central College

The B.A.S. in Information Technology - Networking prepares students for high-demand occupations, including computer and network administrators, cloud solutions specialists, and security analysts. The degree includes advanced certifications and skills such as Cisco Certified Network Professionals, programming skills, mobile application security, and cloud-based hybrid environments.

International Business at North Seattle College

The B.A.S. in International Business leverages existing business and accounting coursework and adds a combination of upper-division courses in international business and hands-on learning experiences to prepare graduates to work in the international business industry. Students complete a practicum as well as an internship, giving them important real-world experience and cultural awareness.

Professional Technical Education and Instructional Design at South Seattle College

The B.A.S. in Professional Technical Education and Instructional Design prepares students for professional teaching positions at community and technical colleges. The program emphasizes upper-division coursework on the complexities of adult learning, the role of community colleges in society, and issues of equity. Students learn how to move from teaching solely for content mastery to student-centered learning and leadership.

Sustainable Building Science Technology at South Seattle College

The B.A.S. in Sustainable Building Science Technology prepares students to manage high-tech building operations. Classes focus on building functions and project finance with the goal of making facilities more durable, sustainable, efficient, and economical. Graduates are well prepared to work in operations maintenance, capital programs and project management, strategic planning and portfolio management, and/or corporate real estate finance.

students might initially struggle to find the correct information as there existed many touch points throughout the enrollment, registration, and first-quarter experience. Additionally, because college staff now had a new program type to accommodate, mistakes would sometimes cause slowdowns in the registration and enrollment processes. To address this, Seattle Colleges introduced a one-stop Program Manager position into the B.A.S. model. The Program Manager for the B.A.S. in International Business, for example, is responsible for helping students apply to the program, understand the prerequisite courses, apply for financial aid, establish an education plan, and, ultimately, enroll students in the program and required courses. Program Managers also assist students in their retention efforts, providing advising support throughout the program and assisting students with applications for graduation and job search. This one-stop model has proven very effective in providing students a streamlined and supportive experience throughout their program.

The adoption of a cohort model for B.A.S. programs has been another important student success initiative. A cohort model helps build a strong learning community and support network for students who may later become one another's colleagues and members of their industry network. These relationships then enable better trust and dialogue in and outside the classroom, enhancing learning. The cohort model also provides much needed clarity—students know exactly what the program entails from quarter to quarter—and continuity as students learn and grow together.

Over time, the implementation team recognized that many students would come to a B.A.S. program at Seattle Colleges with prior experience relevant to the coursework. A practicum experience is now built into the majority of B.A.S. programs as a way to acknowledge and provide credit for these prior work and training experiences. The practicum experience has been a powerful driver of student success and was subsequently adopted into the recommended B.A.S. program template throughout the Seattle Colleges. For students with no prior relevant experience, a work-based practicum experience is established with the help of faculty and program staff.

Several elements of the B.A.S. program structure mentioned above—including the cohort model, practicum experience, one-stop Program Managers, and worker-friendly modality—are designed to reduce the logistical and cognitive load on B.A.S. students. This intentionality has proven to help increase student success, completion, and, ultimately, job attainment or promotion. Seattle Colleges' B.A.S. fall to spring retention or

completion rates, for example, averaged 86 percent across all programs in 2015-2016 (Kaikkonen, 2017).

Leadership

As a three-college district with multiple satellite campuses, new initiatives at Seattle Colleges can often happen organically as one college develops a successful initiative that the other colleges then adopt. This was the case with B.A.S. degree development, beginning with the Hospitality Management program at South Seattle College and expanding to Seattle Central College and North Seattle College. However, much of the development and success of B.A.S. programs throughout the college district is a result of a districtwide position created by the Seattle Colleges Chancellor several years ago. This Associate Vice Chancellor position has provided consistent leadership and support to all three colleges in their development of B.A.S. programs—helping to establish work teams, conduct curriculum mapping workshops, and facilitate the internal and external program approval processes. The B.A.S. program template was incubated out of the Associate Vice Chancellor's office; in some cases, grant funds are secured out of the office and allocated to the colleges to assist with B.A.S. program development costs.

Impact and Lessons Learned

Although many faculty, staff, and administrators at Seattle Colleges were supportive of B.A.S. program development, others were concerned the move would bring about a subsequent change of mission. This concern was exacerbated when the colleges underwent a name change several years following the implementation of the first B.A.S. degree, from Seattle Community Colleges to Seattle Colleges. Many were concerned that the new program offerings and name change would either inhibit, or give the impression of inhibiting, the colleges' open-access mission. It was thought that the changes would discourage the colleges' traditional student population from attending. To address the concern, the B.A.S. program design team and advocates worked hard to assure both internal and external stakeholders that offering B.A.S. degree programs allows Seattle Colleges to better meet the institutional mission of "providing excellent, accessible educational opportunities to prepare our students for a challenging future." B.A.S. degrees offer an extended pathway for the student population the colleges already served—low-income students, students of color, first-generation college students, and other traditionally underserved students. A decade after implementation of the first program, the outcome unequivocally supports the original

hypothesis as diversity within B.A.S. programs is proportional to that of other Seattle Colleges programs, with even higher completion rates.

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Taking Up the Challenge: The Evolution of College and Polytechnic Baccalaureate Degree Granting in Alberta and SAIT (Part 2)

By David Ross, Elka Walsh, and Jacqueline Lambert

Southern Alberta Institute of Technology (SAIT) is a polytechnic institution located in Calgary, Alberta, Canada. Established in 1916, it is Canada's oldest polytechnic, and with approximately 16,000 full-load equivalents¹ enrolled in 2016, SAIT is the third-largest postsecondary institution in the province (Southern Alberta Institute of Technology, 2016a). SAIT offers 114 programs at six campuses—one main and five small, program-specific locations—in Calgary and provides international workforce development programs at a number of off-shore locations throughout the world. The majority of SAIT's programming leads to certificates and diplomas, but it also offers apprenticeship training, continuing education, and baccalaureate degrees—the Bachelor of Business Administration (BBA) and the Bachelor of Science in Construction Project Management (CPM), both of which admitted their first classes in fall 2011. SAIT has also provided four applied degrees, the first being introduced in 1995. All combined, almost 50,000 students attend SAIT every year.

SAIT's journey to offer degrees was borne from a desire to offer more access to degree completion opportunities for its students. Graduates of SAIT's programs had historically found pathways to degrees by leaving the province, often even the country, to complete them. The applied degree graduates were generally restricted from studying further in Canada although good pathways to major universities in the U.S.A., such as the University of Wyoming and Montana Tech, were available. Rather than support students leaving the province, SAIT saw opportunity in the government's change in direction to provide more local pathways to degree completion through its own

degrees without having to rely on local university partnership, which had hitherto been difficult to negotiate.

A success story was a strong partnership with the Certified General Accountants for graduates of the applied degree in accounting. SAIT's program was accepted as a fast track to professional accounting certification resulting in SAIT being one of the largest accounting schools in the province, and licensing the program to other organizations in Ontario.

One of the first development activities regarding baccalaureate degrees at SAIT was an implementation plan presented to SAIT's then-Vice President Academic in 2003, in anticipation of the province's extension of degree-granting powers to SAIT (Hoover, 2003). This implementation plan recommended that SAIT develop Bachelor of Technology (BTech) degrees offered through an e-learning model. The recommended BTech program would build upon SAIT's existing two-year diploma programs, with entry into the third year of study in a 2+2 model. This model was initially perceived as a method to build off the technology-intensive programming already offered at the institution, maintaining alignment to the institution's mandate. Upon further research, however, it became clear that the pursuit of BTech programs would not position graduates for success as these credentials were viewed as terminal. BTech graduates would be prevented from attending graduate studies, which was the same issue as with the existing applied degrees.

SAIT's pursuit of baccalaureate degree development was not only about fulfilling their new government-endorsed mandate, but was also aimed at expanding access; providing a differentiated baccalaureate degree experience centered on delivering labour market-relevant, skill-oriented education (SAIT Polytechnic Degree Steering Committee, 2006); and ensuring that the formal academic credential was acceptable for graduate studies. While degree granting was not spelled out as a strategic priority for the institution, the 2006-2016 Strategic Plan included a Strategic Priority—1.4 Credentials, Accreditation,

¹ Full-load equivalent is an enrolment measure used in Alberta rather than the commonly used full-time equivalent. One full-load equivalent student reflects one student completing the full load for one year of study in their approved program or several students combining to complete the equivalent of a normal full load. Unlike full-time equivalent calculations, it is not directly based on student full-time/part-time status or contact hours.

and Articulation—calling for “credentials that ensure learner advancement and are valued by employers” (SAIT Polytechnic, 2006, p. 24).

Addressing this priority necessitated the review of SAIT’s full spectrum of program offerings. Ultimately, it was felt that the priority could not be met without the introduction of baccalaureate degrees. In part, this move was a response to the potential risks associated with not moving toward offering baccalaureate degrees: the negative effects of credential creep, the perception of being a junior college, and a halo effect impacting the image of SAIT’s programming (L. Haldeman, personal communication, May 3, 2017). Building baccalaureate program development into SAIT’s day-to-day activity was a process that would continue over the next decade, and learning to create a culture that includes degree education models continues to evolve.

Market research was an important component of SAIT’s baccalaureate program development. SAIT retained the services of PricewaterhouseCoopers to investigate degree program options as well as conduct studies with students, alumni, and area employers to assess demand for new baccalaureate programs in internetworking, petroleum production engineering, accounting, and construction project management. SAIT began with development of these four degrees, each degree leveraging its strength in that field (J. Segato & D. Ower, personal communication, May 9, 2017).

Developing a credential framework was SAIT’s next major step toward the development of baccalaureate programs. Without a credential framework set by the provincial government and with the national framework only considering degree education, the structure of SAIT’s credentials and how they could be stacked together lacked consistency across programs. For baccalaureate degree development, this led to difficulties in articulation with and recognition by other institutions and credentialing bodies (Southern Alberta Institute of Technology, 2008, p. 89). Despite the presence of a provincial coordinating body for postsecondary articulation and transfer, it was found that there were few consistent standards within the university sector that were clearly followed; exceptions were the rule between and within institutions. The Ministry and the AUCC also did not have any effective guidelines at the time. Approved by its Deans’ Council in 2006, the credential framework stipulated the following:

- One course would equal three credits (or a multiple of three), and may be classroom-, laboratory-, or practicum-based.
- A full load semester would be defined as a minimum of 15 credits or five courses.
- A semester would be 15 weeks.
- A baccalaureate degree would consist of a minimum of 120 credits, with a minimum of 24 credits in liberal studies.
- Applied degrees would consist of a 60-credit diploma (or equivalent) plus 30 additional credits of classroom and lab work, and another 30 credits for a work experience element.

SAIT’s academic policies, including those related to grading and academic progression, were also changed to support the goals of the credential framework (Southern Alberta Institute of Technology, 2008, p. 89).

Initially, SAIT established a Degree Steering Committee consisting of stakeholders involved in the first degree proposals. The expectation was that degree development could simply be added to the workloads of the deans, academic chairs, and others required to carry out the research, development, and proposal writing. This is, however, a huge task and progress was slow. In 2006, a formal Degree Initiative Group (DIG), reporting to the Associate Vice President Academic Development, was formed consisting of a full-time Associate Dean, writer/editor, graphic designer, instructional designer, and assistant. In addition, Academic Chairs were hired or fully released to work on each degree. Faculty were also released to support program and course learning design development. These new resources accelerated the pace of development.

One of the early issues faced by the Degree Initiative Group was the choice of which baccalaureate credential to award for which program. In addition to Bachelor of Arts, Bachelor of Science, and Bachelor of Business Administration degrees, a wide variety of other four-year credentials are awarded at Canadian institutions, including the following:

- BEng (Bachelor of Engineering) and BAsC (Bachelor of Applied Science) are the standard credentials awarded to students graduating from an entry-to-practice engineering program. These degrees are required for licensure as a Professional Engineer (P.Eng) in most Canadian jurisdictions and are nationally accredited.
- BSc (Bachelor of Science) is an undergraduate degree with a specific major often related to natural or applied sciences.

- BTech (Bachelor of Technology) is a credential offered by some Canadian community colleges and polytechnics including the Northern Alberta Institute of Technology, typically after the completion of a four-year program in technical fields.
- Bachelor of Business Administration (BBA) and Bachelor of Commerce (BComm) are the normal nomenclature of undergraduate business degrees.

Credential choice, which may seem minor, held significant implications for SAIT's programming as a technical institute where degree programs were intended to lead to professional certification while also enabling pathways to graduate studies. Learning from other jurisdictions with similar programming was part of the degree development process for SAIT's team. In 2007, members of the DIG met with faculty and academic administrators at the British Columbia Institute of Technology (BCIT), a similar polytechnic institution which had recently developed BEng degrees in Civil Engineering and Mechanical Engineering, as well as a BTech degree in Construction Management. BCIT had offered four-year BTech programs since the mid-1990s, but it had recently introduced BEng and BSN (Nursing) degrees. During this trip, DIG team members learned from the experiences of those involved in the development of those three degree programs so that their own experience might be made more efficient.

BCIT's BEng program was structured as a four-year program with a diploma exit option after two years. While the BEng program gained approval through DQAB (British Columbia's CAQC equivalent), professional accreditation of BEng graduates by the Canadian Engineering Accreditation Board (CEAB) was a contentious issue, in large part because CEAB was not particularly comfortable with 2+2 degree models. Graduates needed to write two or three exams for APEGGA (BC's professional engineering association) and the P.Eng designation before CEAB would accredit the program; however, CEAB does not accredit programs until a program has graduated students (SAIT Polytechnic, 2007).

Credential choice was also an issue. BCIT's BTech degree was originally intended to be a part-time completion degree for students with a two-year diploma. Recognition of the BTech degree in industry and academia introduced challenges, with the degree not recognized as a first professional degree by AUCC (SAIT Polytechnic, 2007). With the BTech degree potentially being a dead-end credential similar to the applied degree, SAIT ultimately chose to offer the Bachelor of Science degree instead.

SAIT ultimately put forward proposals for four baccalaureate degree programs in 2008-2009 (Hoffman, 2009):

- A Bachelor of Business Administration in Accounting
- A Bachelor of Science in Internetworking
- A Bachelor of Science in Construction Project Management
- A Bachelor of Science in Petroleum Production Engineering

However, offering a baccalaureate degree program was contingent not only on a specific program of study being approved, but also upon an institutionwide assessment of SAIT's readiness to begin offering baccalaureate degrees. The first submission of a degree proposal automatically activated the requirement for an institutional review. In 2008, SAIT submitted an Institutional Self Study (ISS) to the Campus Alberta Quality Council to evaluate its readiness to offer its first baccalaureate program. The ISS is a comprehensive document describing the institution's governance and leadership, strategic plan and accountability processes, human resources, and learner services. This was an important opportunity for the institution to critically self-reflect on its readiness to offer quality degree programming and to seek external feedback.

Most importantly, the ISS included a gap analysis of SAIT's opportunities to improve its degree readiness. These findings enabled the institution to take early action to prepare staff and faculty for the realities of degree education. Important findings included:

- **Gaps in SAIT's financial planning process.** An effort to improve and streamline SAIT's budgeting processes was offered as a solution (Southern Alberta Institute of Technology, 2008, p. 139). This was particularly important to close the gap in communication between budget planning and project implementation, which found expression in investments needed for the library (G. Michaud, personal communication, May 5, 2017).
- **Leadership and governance.** A Degree Initiative Group, supported by funds allocated from the Academic Division Special Projects and Curriculum Funds, was created with a formal membership and off-load time for members to focus on their degree development duties. An internal communication strategy led by the DIG as well as SAIT's Corporate Communications department was developed. In terms of governance, SAIT also needed to draft new academic policies aligned with the expectations of Campus Alberta Quality Council. The new policies were expected

to speak to SAIT's polytechnic context, which introduced different challenges from a research university (Southern Alberta Institute of Technology, 2008, p. 141).

- **Information and analysis gaps.** These gaps resulted in a culture internally thought to be data rich but information poor. SAIT had recently developed an Institutional Planning and Analysis department in response to the need for better data-driven decision support, as well as the development of an Institutional Research Network to bring together data analysis from across SAIT (Southern Alberta Institute of Technology, 2008, p. 142).
- **Strategic planning process gaps.** At the time, SAIT's strategic planning processes were not fully implemented across divisions, schools, and departments and better coordination was needed (Southern Alberta Institute of Technology, 2008, p. 143).
- **Human resources gaps.** Accommodating the needs of faculty teaching in degree programs without changes to SAIT's contractual bargaining agreements posed a challenge. There was an anticipation of significant changes to organizational culture as the institution began to hire faculty with PhDs and academic research credentials rather than expertise in industry. Finding a way to offer automatic off-loads to faculty engaged in scholarly activity outside the classroom would have to be introduced at a teaching offload of 25 percent (for first and second year courses) and 30 percent (for senior courses) to allow time for scholarly activity not previously required (Southern Alberta Institute of Technology, 2008, p. 144).
- **Tracking program outcomes.** Outcomes assessment at SAIT had been largely focused on the short-term success—namely employability—of its students and graduates. One of the ways that the ISS proposed to support long-term success for students was to include stipulations on the amount of liberal studies coursework included in baccalaureate degree programs. A 20 percent liberal studies component (24 credits, or eight courses) was proposed for each program, in the areas of humanities, social sciences, and sciences, exceeding the minimum of six courses stipulated by CAQC (Southern Alberta Institute of Technology, 2008, p. 145).
- **Library operations.** One of the largest gaps found in the ISS process was the state of SAIT's campus library. In 2006-2007, before SAIT granted baccalaureate degrees, funding for SAIT's library was equivalent to slightly less than 1 percent of the institution's annual budget—lower than budget

allotments at Alberta's predominantly baccalaureate-granting institutions. The depth and breadth of library holdings was also seen as an issue; while SAIT's students had access to the same digital resources as students at universities through the province's digital library initiatives, SAIT's physical library holdings were relatively limited (Southern Alberta Institute of Technology, 2008, pp. 146-147).

SAIT's ISS was well-received by the Campus Alberta Quality Council, and this report was followed up by an Organizational Evaluation site visit in November 2008 (Hoffman, 2009). As the organizational review was successful, CAQC moved SAIT's application to the program evaluation stage, a step forward in SAIT's pursuit of baccalaureate degree granting. CAQC subsequently recommended that the minister approve the Bachelor of Business Administration (Accounting), which SAIT had proposed in early 2008 (see below). A Bachelor of Science degree in Internetworking was proposed to Alberta Advanced Education in 2007 in advance of the ISS and received a positive review from CAQC (Hoffman, 2009). This program was designed to build upon the successes of SAIT's Network Engineering Technology program and leverage the strengths of the institution's internetworking specialist instructional staff. Five faculty members were also supported in attaining a master's degree in Internetworking from the University of Alberta. However, due to fiscal challenges facing the province, additional grant support from the Government of Alberta was not forthcoming and the economic model of the program meant that the SAIT could not offer the program on a cost-recovery model. As a result, the program was never approved. (Hoffman, 2009).

The proposal for SAIT's Bachelor of Business Administration in Accounting (BBA) was submitted to Alberta Advanced Education and Technology in early June 2008 (Hoffman, 2009). This program was designed to build upon SAIT's successes in its Business Administration diploma and applied degree programs. The BBA program would also take advantage of classroom-based e-learning. Approval of the program was delayed in 2009 due to the effects of the economic downturn. However, the Ministry of Advanced Education and Technology ultimately approved the program for its fall 2011 launch. In 2015, the BBA program was expanded with an additional five major options: financial services, human resource management, management, marketing, and supply chain management.

A Bachelor of Science in Construction Project Management was also proposed in November 2008, with a Part B proposal

submitted to CAQC in July 2009 (Hoffman, 2009). The first of its kind in western Canada, this program was designed to help alleviate the shortage of highly trained construction management professionals. After a successful review and site visit by CAQC's review team, the program was approved by the Minister of Advanced Education and Technology and admitted its first students in fall 2011.

SAIT also submitted a proposal for a Bachelor of Science in Petroleum Production Engineering in December 2008 (Hoffman, 2009). This program proposal was particularly significant in that it was expected to be SAIT's first foray into preparing students for professional engineering, rather than engineering technologist occupations. Unlike SAIT's other baccalaureate degree proposals, the proposal for this program drew significant opposition from Alberta's two major research universities. Industry support for the program was exceptional with senior business leaders approaching the government to approve the program. The Ministry of Advanced Education and Technology referred the program back to SAIT to work with the two universities on a resolution. Although a series of meetings were held, no common outcome was attained at the time. The Ministry in the end did not refer the proposal to the CAQC and indicated in a letter to SAIT that engineering degrees were not included in the allowable degrees for polytechnics. (L. Haldeman, personal communication, May 3, 2017). Following advice from the Ministry, SAIT ultimately discontinued development of this program.

In 2014, SAIT collaborated with the University of Calgary on the development of an Energy Engineering degree. This degree was successfully launched at the university in 2015 and provides a pathway for engineering technology diploma graduates from four SAIT programs to attain an engineering degree in Alberta. This collaboration provides increased access to baccalaureate-level studies for SAIT's students, while taking into consideration the policy principle of system coordination, which is a significant element of the Campus Alberta strategy.

Lessons Learned

The evolution of degree offering at SAIT has resulted in several lessons that have changed the institution for the better and provided insights into the value sets brought to bear on student success in an applied education environment. Not all lessons were positively attained, but all have been valuable. Ultimately, institutions entering into degree granting need to be prepared that degrees are not a simple add-on to existing offerings and care must be taken to prepare the institution to put in place the necessary operational processes, policies, and people to

make degree learning successful. Cultural change will inevitably happen and ideally should be planned. Leadership capacity and ability must be available to enable these changes.

Lesson 1: Curriculum Development

One of the challenges faced by SAIT in its development of baccalaureate degrees was how to structure curriculum for degrees compared to diplomas. SAIT's two-year diplomas are designed to build foundations and employability skills for learners entering an occupation, usually emphasizing the acquisition of technical skills over theoretical understanding. No successful four-year degree models built upon a 2+2 model existed in Alberta and simply adding two additional years of coursework to a diploma would not create curriculum required of a quality academic degree. At the very least, there are always some types of transitional courses that need to be taken to progress effectively from outstanding two-year programs to comprehensive four-year programs (L. Haldeman, personal communication, May 3, 2017).

One of the areas that differentiates baccalaureate degrees from diploma and applied degree counterparts is liberal studies education. Universities in Alberta typically devoted about 40 percent of their programming to liberal studies courses. However, with its more technically focused mandate, SAIT opted to restrict its liberal studies curriculum to 20 percent of its baccalaureate programming (L. Haldeman, personal communication, May 3, 2017) with the agreement of CAQC. This would still provide the breadth programming required of a full baccalaureate degree, but would also mean that SAIT graduates would have the very strong technical background that is a trademark of SAIT graduates.

Discipline-specific curriculum development was one of the most labour-intensive parts of the degree development process. The Degree Initiative Group worked to build a cross-disciplinary knowledge base on the design of degree programs, which meant coordinating a large group of stakeholders to quickly develop curriculum for a number of programs. Roughly 138 course outlines, 103 learning designs, and six course developments involving close to 80 subject matter experts were undertaken in 2008-2009 (Hoffman, 2009). To effectively and efficiently develop curriculum, full-time Academic Chairs were hired for specific proposals with the expectation that they would implement the new degree once approved. One critical lesson was that these Academic Chairs needed to be both content experts as well as collaborators to bring together input from across the school.

Lesson 2: Degree Development

One challenge was funding for the development of SAIT's new degree programs. Alberta's postsecondary funding formula was based mainly on a block grant model rather than enrolment-based funding as used in some other jurisdictions, although from time to time the government provided some enrolment funding for new programs or program expansions. In order to provide strategic funding, a complete change in the Academic Division budgetary process took place in the 2006-2007 cycle, ensuring transparency and peer review of all school budgets. This process freed up substantial funds for academic strategic initiatives, including the degree initiative (L. Haldeman, personal communication, May 3, 2017).

Alberta's funding model also had negative implications for the cost of operating a degree program once it was approved. 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 be self-sustainable, relying solely on tuition to recover costs once launched. The Bachelor of Business Administration degree in Accounting had its launch delayed for a year, and the BSc in Internetworking delayed indefinitely due to a lack of funding and a cost structure that could not be supported through tuition alone (Hoffman, 2009).

Lesson 3: Faculty Development

When SAIT began developing its degree programs, the majority of its instructors did not have graduate-level credentials (L. Haldeman, personal communication, May 3, 2017). However, instructors teaching courses in degree programs required a credential at least one level above the baccalaureate level—at minimum, a master's degree (e.g., an MBA for business instructors). As well, faculty with a doctoral degree or terminal degree in an appropriate field needed to be hired as part of the degree implementation. Upskilling SAIT's existing instructors in a short amount of time was a considerable challenge. The concept of supporting faculty and staff in earning required credentials started with the support of five instructors in attaining master's degrees in preparation for a launch of one of the degree programs. This initiative led to the establishment of SAIT's Professional Credential Enhancement Program to fund academic upgrading available to all faculty and staff (L. Haldeman, personal communication, May 3, 2017).

Attracting new instructors with graduate-level credentials meant changing hiring practices, including interview questions and communication strategies (A. Zahavich, personal

communication, May 8, 2017). There were concerns too that these new doctoral faculty would change the culture of the organization and so a strategy to promote the positive evolution of the institution's culture was needed over the long term.

Lesson 4: Scholarly Activity

Along with the change in SAIT's mandate, scholarly activity became a component of faculty responsibilities. With the majority of SAIT's instructors not having a typical academic research background, scholarly activity was not traditionally an element of faculty life. This shift led to struggles with the technical and transactional aspects of scholarly activity (A. Zahavich, personal communication, May 8, 2017).

Defining what scholarly activity entails for a polytechnic posed some challenges. SAIT and the province's other polytechnic—Northern Alberta Institute of Technology (NAIT)—worked collaboratively to develop a definition relevant to polytechnics (A. Zahavich, personal communication, May 8, 2017). With traditional definitions of scholarly activity centered upon published, peer-reviewed research, other activities more relevant in a polytechnic context were difficult to quantify. The NAIT/SAIT proposal in 2014 to CAQC on scholarly activity identified the measurement of inputs, activities, and outputs as appropriate, rather than the single output of a simple tally of published papers.

Scholarly activity was understood to account for about 40 percent of faculty workload at universities, however it ultimately accounted for about 20 percent of SAIT faculty workload. Faculty teaching courses in degree programs are assigned a scholarly activity load, which they are expected to use to undertake scholarly activity projects. Faculty may also be assigned other time loads for carrying out service work (Southern Alberta Institute of Technology, 2016b, pp. 156-157).

SAIT worked toward developing infrastructure and governance to support scholarly activity. Applied Research and Innovation Services (ARIS) was ultimately set up to provide innovation and commercialization services in applied research (Southern Alberta Institute of Technology, 2016b, p. 38). More infrastructure related to scholarly activity was established in the coming years; SAIT developed a research ethics board and attained eligibility to receive funding from the National Science and Engineering Research Council (NSERC) in 2005 (A. Zahavich, personal communication, May 8, 2017).

Governance of scholarly activity underwent considerable development in response to degree granting. With no government-stipulated research mandate before 2003, SAIT had

relatively little scholarly research activity and thus little need for formal policies and procedures regarding academic freedom. In order to help guide industrial research activities, SAIT developed an intellectual property policy in 2003, but an academic freedom policy did not exist before 2008. Between 2008 and 2015 SAIT developed and significantly revised its academic freedom policy, which gives the SAIT community the freedom to examine, question, and express its views on academic issues (Southern Alberta Institute of Technology, 2016b, p. 35). According to Brad Donaldson, Vice President Academic, SAIT,

Scholarly activity opportunities for our faculty across the full range of credentials has been real value-added. For example, a millwright instructor developing cut-away engines to support teaching and learning would not have happened without this culture of scholarly activity. There remains an opportunity to collect the knowledge that is created, develop it and share it more broadly. This will emerge over time. (personal communication, June 28, 2017)

Lesson 5: Student Experience and Student Services

Transitioning students from diplomas to degrees meant keeping them on campus for an additional two years, increasing demands on student services. Finding ways to encourage student engagement was an important change that came with degree development. More campus clubs, extracurricular opportunities, speaker experiences, fourth-year practicums, and industry events were all key in aiding student engagement.

The role of student advisors also evolved as SAIT developed degrees. Student advisors now played a greater role before student admissions, during the admissions cycle, and throughout the students' SAIT career as they navigated course choices.

Students in degree programs also expected a different experience on campus, so a new School of Business Speaker Series sponsored thought leaders to come on campus. The School of Business found the need to address campus life issues to be a critical aspect of increasing student engagement.

Lesson 6: Impact of CAQC's Role

The development of the Campus Alberta Quality Council also triggered an overarching cultural shift within institutions like SAIT. Ultimately, the quality assurance culture established in degree program development began to influence progress and quality control at other credential levels.

In the early stages of its development, CAQC was expected to have both a system coordination and quality assurance

role in Alberta's postsecondary education. However, results from focus groups with system stakeholders showed that the combination of these roles was generally seen as a problematic approach, with coordination thought to be a political process at odds with objective quality assurance (M. Patton, personal communication, May 17, 2017). Ultimately, CAQC's role was restricted to arms-length quality assurance, with the Ministry of Advanced Education and Technology retaining its role in system coordination (M. Patton, personal communication, May 17, 2017).

The CAQC's role introduced external peer review in the development of new degree programs, as well as cyclical external program reviews, both of which were new elements at colleges and technical institutions. Programs in some preprofessional fields such as health professions and engineering technology were already subject to accreditation reviews by practitioners. However, these reviews were shorter in length than CAQC's (two days versus four), led by practitioners rather than academics, and focused on finding evidence of excellence in professional practice rather than academic quality assurance (M. Patton, personal communication, May 17, 2017). CAQC also brought a wide variety of stakeholders—including faculty, students, and their representative unions and associations—into the quality assurance process, helping to socialize an accountability culture within colleges and institutes now offering degrees (M. Patton, personal communication, May 17, 2017).

CAQC's requirements of degree-program faculty also placed new demands on nurturing faculty culture. With higher educational requirements and differentiated workload requirements for instructors teaching in degree programs, avoiding a two-tiered system with a perception of privilege toward degree programs and the faculty was an emerging challenge for new degree-granting institutions (M. Patton, personal communication, May 17, 2017).

The CAQC's development also led to the introduction of codified depth and breadth expectations for new programs. Institutions could make an appropriate range of course offerings available to students through partnerships with other postsecondary institutions, or develop and deliver curriculum on their own. In particular, the introduction of Bachelor of Science degrees placed new demands on breadth and depth requirements beyond what would typically be included in a BTech program. These requirements forced institutions like SAIT to consider the value of breadth in curriculum, and gave them the opportunity to be creative in how they provided those options to students (M. Patton, personal communication, May 17, 2017).

The growing importance of depth and breadth helped to clarify the objectives of baccalaureate education. In addition to the mostly occupational focus of diploma programs, baccalaureate education is also intended to prepare students for further education and civic engagement. The educational model and philosophy that drive baccalaureate degree development forces colleges and technical institutes to support a student experience that enables students to have more choices in terms of course options during their degree, occupational options once they graduate, and further education opportunities for lifelong learning (M. Patton, personal communication, May 17, 2017).

Degree Programs at SAIT: Today and the Future

"We will be selective and respond to market need as we develop future degree offerings."

– Brad Donaldson, Vice President Academic, SAIT

SAIT's credential offerings are designed and developed to enable students to gain employment with baccalaureate degrees or continue to further education. As the needs of students and industry continue to evolve, the institution's education plan commits to carefully assessing the types of credentials that will best suit these needs. Continuing to enhance curriculum development and invest in quality assurance while evolving academic and student policies to grow with the institution, its students, and programs will be part of deliberations on degree development.

To differentiate degrees offered at the institution, SAIT has committed that its educational philosophy—applied education—will characterize all learning experiences, including within the degree programs. This means that all new baccalaureate degrees offered at SAIT will be niche focused to provide graduates with a competitive edge in the labour force and enable career advancement. The focus of new degree programming will be mostly applied, in disciplines not otherwise available in western Canada. These programs will leverage and build upon the institution's existing strengths in type and subject area.

Considerations for cost and balance in SAIT's program mix are key to the growth of baccalaureate program offerings. Leveraging existing strengths in program offerings to provide students with broader credential choice is critical; SAIT is unlikely to develop degrees from scratch in areas in which it does not already have a proven track record of experience.

SAIT plans to seek opportunities for degree students to have a learning experience that mirrors the realities of the workplace.

To this end, students will work on multidisciplinary teams consisting of apprentices, technicians, and degree students who will collaboratively solve applied problems. This experiential approach will help students to learn different problem-solving approaches and test their skills in an academic environment before they enter the workforce or progress to further study.

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Degrees of Success: Santa Fe College Expands Access With Baccalaureate Programs

By Jackson N. Sasser

Santa Fe College began offering baccalaureate degrees for the same reason it was constituted 50 years ago: to enhance access. That decision reflects values compatible with one of the greatest accomplishments in higher education—the opportunity for millions of veterans to earn a college degree following World War II.

The GI Bill led to a profound shift in American perceptions about education and is often credited with the creation of the middle class. As with the growth of today's baccalaureate degree programs, the expansion of the student population to include large numbers of veterans was met with dire predictions that never materialized. Back then, critics inside and outside education feared that veterans lacked the motivation and ability to pursue their studies, and because so many were older and married, would not adjust to the academic environment. However, the 2.2 million World War II veterans were among the most successful students on campus. They were twice as likely as nonveterans to complete a four-year degree program, according to research conducted by John Bound and Sarah E. Turner for a 2002 article in the *Journal of Labor Economics*. That educational foundation led to good jobs with opportunities for career advancement and contributed to robust national prosperity.

Economics and social stability influenced passage of the GI Bill just as they have the recent increase in baccalaureate programs at community colleges. In the mid-1940s, in the aftermath of the war and Depression, there were concerns about millions of veterans returning to civilian life with scarce employment opportunities. Similarly, in the early 21st century, especially during the Great Recession, support for community colleges offering baccalaureate degrees was driven by a necessity to provide opportunities to place-bound, nontraditional working students to meet growing economic demands. There was a need for baccalaureate-level programs because universities were at capacity, leaving several economic sectors without the potential to grow.

Of greatest urgency in Florida was the unmet need for trained workers in health care, education, and information technology. As a result, some of the first baccalaureate degrees were offered in these areas. In North Central Florida, home of Santa Fe College, health care is the second largest employer behind government. Therefore, it was not surprising that Santa Fe College's first two baccalaureate degrees were in health care.

One of our first Bachelor of Applied Science (B.A.S.) degrees was in Health Services Administration, which meets unique demands in the health care industry. Like our other baccalaureate programs, and like the GI Bill decades before, it was designed for the working adult; it assists associate-level degree holders in continuing their education at an affordable cost. The majority of students in this program already work in health care and want the degree for promotion. Others are interested in employment in health management but not as medical practitioners. A smaller group wants the B.A.S. degree as a step toward a master's degree in a health field. As in our other health programs, students in Health Services Administration apply knowledge they learn in the classroom to internships with local health care organizations. Graduates from the program are educated to be supervisors and managers in hospitals, clinics, and other health care facilities, agencies, and organizations that offer health care and related services.

Our other earliest B.A.S. degree was in Clinical Laboratory Science. Graduates use microscopes and instruments to diagnose diseases and disorders; they play an important role as knowledge workers in the Santa Fe College area's burgeoning biotechnology and life sciences industries. Students in Clinical Lab Science take classes at Santa Fe's Perry Center, which focuses specifically on emerging technology degrees. Many graduates find work in one of the companies located in Progress Park, a biotechnology industrial park across the street from the Perry Center. While South Florida has more biotech companies, Alachua County, where the Perry Center and our main campus are located, has the most compact cluster in the state, with many

firms located in Progress Park. Later we added a versatile B.A.S. degree in Industrial Biotechnology, which is geared toward the pharmaceutical industry. Many of Santa Fe's graduates find work at pharmaceutical companies in Progress Park as mid-level employees necessary for the companies to expand.

Santa Fe's selection of Health Services Administration, Clinical Laboratory Science, Industrial Biotechnology, and other degree programs is part of an informed and deliberate process based on demonstrated need. Interest in potential baccalaureate programs is conveyed to Santa Fe through several sources. One is CareerSource North Central Florida, which is part of a statewide public-private consortium that focuses the efforts of business and industry toward educating students with specific skills they will use as knowledge employees in selected high-wage, high-growth industries. Secondly, advisory boards, which guide the curriculum of each of our Technology and Applied Sciences programs, play an important role. These boards are composed of representatives from the community and local businesses and industries to ensure that the curriculum meets actual needs. They have the advantage of close knowledge about the college and local economy. Thirdly, individual employers contact the college to request graduates or a greater number of graduates with particular skills. This is an effective gauge of local and regional needs. Lastly, we rely on the initiative of college staff and trustees to recognize a need in the local economy. In this case, the process is identical except that the college contacts business and industry to ascertain whether its assumptions are valid.

In developing proposals for new baccalaureate degrees, Santa Fe works closely with our best partner across town, the University of Florida (UF). Our goal from the outset has been to avoid program duplication and to make our programs complementary, not competitive. Nursing is a good example. In fall 2007, citing economic concerns, UF closed its accelerated RN to BSN program for nurses with an associate's degree who were seeking a bachelor's in nursing. Santa Fe was prepared to step in after meeting with UF officials before the closure of its program. In 2012, we launched our Bachelor of Science in Nursing (BSN) program in an attempt to fill the growing local need for nurses with a higher level of training. At the time, of the 4,560 working registered nurses in Gainesville's Alachua County, more than half did not have a bachelor's degree, according to the Florida Center for Nursing. In Bradford County, the other county in our service district, more than 65 percent of registered nurses did not hold bachelor's degrees. Concurrently, area hospitals were placing greater emphasis on hiring registered nurses with a bachelor's

degree to ensure patients received better care. Research has shown that an increase in the proportion of nurses holding bachelor's of science degrees in nursing significantly decreases the risk of patient complications and death.

In a 2012 *Gainesville Sun* column, Kathleen Long, then Dean of the University of Florida's College of Nursing, expressed support for Santa Fe's new baccalaureate program. She wrote that this program for those already licensed as RNs to earn the bachelor's degree would build a better-educated nursing workforce. She added, "We are proud, too, of our years of collaborative partnership with the nursing faculty at Santa Fe College, and congratulate them on offering a new option to advance the education of those who are already RNs."

The majority of Santa Fe's bachelor's degree program in nursing is online to serve working nurses. As baccalaureate degrees were added to nursing and other areas, it was always with an emphasis on serving the needs of local industry while meeting the needs of in-place students, most of whom are older, work, have families, and juggle other competing priorities, and, therefore, benefit from the convenient online opportunity. Like the GIs years before, they want better salaries, more responsibility, or are topped out in current employment.

Such was the case for employees aspiring to managerial positions in our region. Santa Fe's B.A.S. in Organizational Management was designed to meet local business demand for supervisors and to serve workers who want to advance in their professions. It fills a niche in our community in that its philosophy is much more applied and hands-on than a research or theoretical-based university program. This provides an opportunity otherwise not available to students with two-year degrees, the majority of whom work. Conversely, UF prefers full-time students and most do not work. At Santa Fe, students are able to continue working and to apply their job experience while completing their degrees. Besides general management, the degree has concentrations in information technology, human resources, and public safety. Information technology emphasizes softer skills of personnel and project management instead of focusing exclusively on technology. Human resources was included because personnel management is becoming increasingly important as business becomes more complex and managers seek to keep companies out of human relations difficulties. In the Santa Fe area, there is demand for such training among small, independent local companies. Also, the much larger Nationwide Insurance in Gainesville sends employees to the program. In the public safety track, most students are already working in the field and need the degree to advance.

The bachelor's degree in Organizational Management with a concentration in Public Safety is a \$10,000 degree. Santa Fe and some other colleges accepted a challenge from Florida Governor Rick Scott to create a four-year degree program that would cost students \$10,000. Such a degree will provide police officers, paramedics, and firefighters with the complete range of management skills necessary to advance to leadership positions and meet the growing demand for public safety services in our state's communities. Many areas of law enforcement now require a four-year degree, and a specific set of skills is necessary for supervisory and management positions.

Challenges

There are challenges outside academics. One is promoting Santa Fe College's baccalaureate programs without advertising in nearby college districts or appearing to compete with the state university system. In Florida, each college is assigned a primary service district composed of one or more counties. An upshot of the district arrangement is a traditional practice of not advertising outside one's district to preclude imposing on another community college. The one concerning the state universities is similar in avoidance of programming conflicts even though universities are designed to serve statewide. Yet in many cases, Santa Fe's programs could serve many more students and are better bargains. For example, Santa Fe offers a B.A.S. in Multimedia and Video Production Technology, which costs students less than \$20,000 for four years. At a private, for-profit college outside our district, this degree may cost anywhere between \$60,000 and \$100,000. Santa Fe's program trains students to be multimedia video producers, editors, and cinematographers. It is unique in that it relates to all areas of production, unlike traditional film programs, which are limited to film industry techniques. By also being trained in commercial and industrial production, students are prepared to work at production companies, start their own business, or freelance. Freelancing has a solid place as many smaller businesses need videos for their websites and the growing affordability of video production enables them to hire freelancers to perform this service. Our students are versatile with the technical skills to produce videos for education, fundraising, training, advertising, and other purposes. Opportunities include producing professional videos for start-up companies that are part of Gainesville's growing technology and media culture and thriving innovation movement.

Sometimes making our own community aware that we offer baccalaureate degrees is a challenge, especially in a town known

for its outstanding graduate research university. The reaction has a parallel to an earlier time. When Santa Fe opened its doors in 1966, community colleges in this country were experiencing their greatest period of growth, yet the initial reaction in Gainesville was to question the need for a community college in a university town. That sentiment has changed profoundly, as it has with any reservations about our offering bachelor's degrees. In this university town, Santa Fe has earned a respected name. Moreover, by steadily developing new programs and serving the community and students, Santa Fe solidifies its reputation as a four-year college.

The most significant reservations about the bachelor's degrees have been expressed at the state level. In 2014, the Florida Legislature imposed a one-year moratorium on approving new bachelor's degrees offered at community colleges. Some legislators contended that offering four-year degrees is the job of the state's 12 public universities and not its 28 community colleges. They expressed concerns about colleges duplicating university programs and competing with them for students. There were suggestions that bachelor's degrees would siphon resources from the traditional two-year community college mission. Still, in that same year, Santa Fe demonstrated that such concerns were unfounded.

Santa Fe submitted its initial application for a new baccalaureate program in Information Systems Technology to the Florida College System in the spring of 2014, just before the statewide moratorium on the consideration of new baccalaureate programs went into effect. There was strong local demand for graduates in this discipline. While UF graduates with bachelor's degrees in computer science or engineering are sought by nationally and internationally relevant companies like Google, local businesses had an unmet need for programmers and information systems managers. Employers in our community were outsourcing by hiring people in India and recruiting people from out of the country for jobs since our market did not provide the skilled labor force. Santa Fe assessed and developed the program, and it was ready to implement once the moratorium was lifted. The program today prepares students for high levels of application and system programming, network design and management, and database design and management, and it provides the sophisticated training required by the region's growing information technology sector.

The concerns about our bachelor's degrees remain, and thus the state has made the process of seeking approval far more challenging. When the Florida State Board of Education reviewed baccalaureate degree programs in spring 2017, the

daunting approval process left Santa Fe's proposed accounting baccalaureate degree program as the only one ready for consideration. It received unanimous approval and was launched in spring 2018. As always, there is strong local demand. Since UF's accounting school is ranked in the top 10 in the United States, UF accounting graduates are offered and usually accept lucrative positions with national and international firms, leaving the local market in dire need of accountants. Santa Fe began discussing offering such a program in October 2015 after local employers said they were having a hard time hiring. Our college received strong support from UF in pursuing this degree because it did not compete with UF and would support the regional market. The Associate Dean and Director of UF's Fisher School of Accounting reported that typically fewer than five UF graduates out of 180 remain in our county.

Accounting is Santa Fe's ninth bachelor's degree. While the future of baccalaureate proposals statewide is unclear, the essential reasons for them remain unchanged: baccalaureate degrees provide—and will continue to provide—educational

opportunities for students who otherwise would not have them. Just as the GI Bill served veterans after World War II, our bachelor's degrees, based on public needs and personal aspirations, will continue to transform our region, state, and nation.

Resources

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Foothill College Bachelor of Science Degree in Dental Hygiene Pilot Project

By Phyllis Spragge

With passage of Senate Bill 850, California joined 21 other states in the United States that offer a baccalaureate degree in a community college setting. The bill was signed into law by Governor Jerry Brown on September 28, 2014, and authorized the California Community Colleges, under the administration of the Board of Governors of the California Community Colleges, to establish a statewide baccalaureate degree pilot program at not more than 15 community college districts.

The legislation, introduced by Senator Marty Block (D-San Diego), allowed only one baccalaureate degree program per district and delegated selection of participating programs to the Chancellor of the California Community Colleges with approval by the Board of Governors. Participating community college districts had to meet specified requirements, including, but not limited to, offering baccalaureate degree programs and program curricula not offered by the California State University or University of California systems in subject areas with unmet workforce needs. The bill required that the districts begin the pilot program by the 2017-2018 academic year and that students participating in the pilot program would have to complete their degrees by the end of the 2022-2023 academic year.

The impetus for offering bachelor's degrees in the California Community Colleges system was to mitigate a projected shortfall of 1.1 million workers with bachelor's degrees needed in the California workforce by 2030. The California State University and University of California systems are currently overcrowded and this limits the number of bachelor's degrees that can be granted in California by public institutions.

The state Chancellor's Office issued a request for proposals in October 2014 and the Board of Governors chose the 15 pilot programs in January 2015. Foothill-De Anza Community College District put forward a proposal to offer the bachelor of science degree in dental hygiene. The proposal was selected as one of the 15 pilot programs.

Why Foothill College? Why Dental Hygiene?

Foothill College was founded in 1957 as the first of two colleges in the Foothill-De Anza Community College District. Foothill College, along with its sister school De Anza College, serves the communities of Cupertino, Los Altos, Los Altos Hills, Mountain View, Palo Alto, Sunnyvale, and portions of San Jose, and draws students from throughout the region. In 2013-2014, Foothill enrolled 28,241 students, of which 51 percent were female. The ethnic backgrounds represented included African American (4 percent), Asian (24 percent), Filipino (4 percent), Latino/a (22 percent), Native American (1 percent), Pacific Islander (1 percent), Unknown (7 percent), and White (36 percent). Almost two-thirds of students were between 20 to 39 years of age (62 percent).

The Foothill College Dental Hygiene Program began in 1964, with the first graduating class in 1966, and has a long history of excellence. During the years dental hygiene programs were ranked based on Dental Hygiene National Board Examination scores, Foothill College consistently ranked among the top 10 schools in the United States and was often in the top five scoring institutions, frequently outscoring four-year bachelor's degree programs. The Foothill College Dental Hygiene Program has a 100 percent pass rate on the Dental Hygiene National Board Examination for the history of the program. This is a remarkable achievement given that the average failure rates for the Dental Hygiene National Board Examination range from 2 percent to 6 percent. In 2008, the Joint Commission on National Dental Examinations (JCNDE) discontinued program rankings based on Dental Hygiene National Board Examination results. However, the JCNDE continues to report data on exam results, and dental hygiene programs receive data on their students' performance in each of the 14 subject matter areas compared to the national average. Foothill College has consistently scored above the national average in every one of the subject matter areas on the Dental Hygiene National Board Examination. The program admits 24 students each year. The academic rigor and success of the Foothill College Dental Hygiene Program made it an ideal

candidate for the development of a bachelor's degree under the pilot program.

Graduates of associate degree dental hygiene programs in community colleges take the same National Dental Hygiene Board Examination and the same clinical licensing board exams as students from baccalaureate degree programs. The accrediting body for dental hygiene programs is the Commission on Dental Accreditation (CODA). CODA standards for associate and baccalaureate degree programs require that the curriculum must deliver the same content. The differences between the associate and baccalaureate programs are (1) the total number of units and (2) the upper-division general education courses. Entry to most dental hygiene programs requires approximately three semesters of prerequisite coursework prior to the mandatory two-year dental hygiene curriculum. In a recent American Dental Hygienists' Association survey, 79.9 percent of first-year dental hygiene students had already completed at least two years of college.

Need for the B.S. Degree in Dental Hygiene

The American Dental Hygienists' Association (ADHA) has long advocated that the Commission on Dental Accreditation revise the Accreditation Standards for Dental Hygiene Education Programs and raise the minimum academic preparation requirement to a baccalaureate degree as the point of entry for dental hygienists. ADHA has had a policy statement since 1986 that supports advancing the educational preparation necessary for entering the dental hygiene profession. The policy declares the intent to establish the baccalaureate degree as the minimum entry level for dental hygiene practice in the future (American Dental Hygienists' Association, 2016a, 2016b).

Policy makers in a number of states are considering the creation of new types of licensed professionals who would work with dentists to deliver primary dental care to children and other underserved patients (Nash, et al., 2012; Institute of Medicine and National Research Council, 2011; National Governors Association, 2014; Pourat & Finocchino, 2010). A 2010 Pew Charitable Trusts report, *It Takes a Team: How New Dental Providers Can Benefit Patients and Practices*, examines the impact that hiring new types of providers such as dental therapists and hygienist-therapists would have on the productivity and profits of a private dental practice, where more than 90 percent of the nation's dentists work. The findings include:

1. Allied providers—dental hygienists and dental therapists—can strengthen the productivity and financial stability of dental practices.
2. Allied providers can help practices treat more Medicaid-insured patients in a financially sustainable way.
3. Fully utilizing allied providers is key to realizing productivity and profit gains (The Pew Charitable Trusts, 2010).

The California Employment Development Department (2010) published *2010-2020 Fastest Growing Occupations* for the San Jose-Santa Clara-Sunnyvale metropolitan area, with a projected growth rate for dental hygiene at 29 percent, higher than the projected statewide growth of 23.4 percent. The economy of the Bay Area is booming and the robust regional economy is an additional reason the Foothill College dental hygiene program is an excellent site for the baccalaureate pilot program.

Data from the annual Early and Periodic Screening, Diagnostic and Treatment Program participation report by the U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, for fiscal year 2011 showed that 58.6 percent of Medicaid-enrolled children did not receive dental care in 2011 in California. In a 2011 California Dental Association (CDA) report, *Phased Strategies for Reducing the Barriers to Dental Care in California*, the CDA acknowledged the potential to improve children's health and passed a resolution encouraging a study of the safety and effectiveness of mid-level providers to help the underserved:

There is evidence that additional dental providers who provide basic preventive and restorative oral health care to low-income children, in or close to where they live and go to school, have the potential to reduce the disease burden in the population most in need. (p. 5)

A California Health Care Foundation (Pourat & Finocchio, 2010) survey found that 24 percent of children aged 0-11 in the state have never visited a dentist. California children's dental health was ranked third from the bottom in a recent National Survey of Children's Health, above only Arizona and Texas, in a study of all 50 states (Institute of Medicine and National Research Council, 2011).

Support for the Foothill College BS-DH degree

The Foothill College Dental Hygiene Program received many letters of support from current and former students, professional organizations, industry partners, and educational institutions

that were submitted as part of the state Chancellor's Office RFP application. A consistent theme was the need for such a program given the increasingly complex and varying requirements in the practice of dental hygiene. Additionally, graduates would be qualified to apply for jobs outside of private dental practices in the domains of research, education, public health, and corporate/industry jobs.

Representatives from the four other community college dental hygiene programs in the San Francisco Bay Area—Cabrillo College, Chabot College, Diablo Valley College, and Santa Rosa Junior College—wrote letters of support for Foothill College's selection for the pilot program. In addition, University of California San Francisco (UCSF) Dental School representatives wrote a letter in support of Foothill College's application for the baccalaureate pilot program; Foothill College's bachelor of science degree is articulated with the master of science in dental hygiene at UCSF.

Foothill College BS-DH Program Description

The Foothill College bachelor of science degree in dental hygiene (BS-DH) requires completion of 196 quarter units. The first two years of the baccalaureate program include general education courses required for the major and supporting science and social science courses, which include English, statistics, chemistry, anatomy and physiology, microbiology, nutrition, pharmacology, health, psychology, sociology, communication, and humanities, for a total of 90 quarter units of preparation. Following application and acceptance into the program, juniors and seniors seeking the DH-BS degree must complete 106 units of dental hygiene core courses, interprofessional allied health courses, and upper-division general education.

In addition, students awarded the Foothill College bachelor's degree in dental hygiene must complete a California State University (CSU) or Intersegmental General Education Transfer Curriculum (IGETC) transfer pattern for the lower-division general education totaling 67 quarter units. We have added upper-division coursework in critical thinking, writing, and research for the baccalaureate degree. This includes 14 units of upper-division general education in statistics and composition, critical reading, analysis, and thinking to bring depth to the baccalaureate level and meet CSU requirements.

Pilot Program Resources

Each of California's pilot baccalaureate programs received one-time funding of \$350,000 from the state for implementation of the pilot program. In September 2016, an additional \$15,000 was

given for marketing and promotion of the program. Funding was used for dental clinic technology and equipment, classroom fixtures and furniture, development of an online application, additional library resources and references, release time for the program director, supplies, materials, tutoring resources for students, and professional development and travel for implementation and development of the pilot program.

The pilot programs are allowed to charge an additional fee for upper-division courses (\$84 per semester unit or \$56 per quarter unit) that is higher than the fees set by the state for undergraduate education. These additional fees stay with the institutions and help with ongoing support of the baccalaureate degree programs.

Student Success and Support

The first baccalaureate cohort of 24 students was admitted to the Foothill College Dental Hygiene Program in September 2016. The cohort is diverse: Fifteen different languages are spoken fluently by entering dental hygiene students, seven are the first in their families to go to college, and 11 have applied for financial aid (eight have federal student loans, four have grants and/or scholarships, and nine have program fees and tuition partially covered). We are tracking student outcomes and will graduate the first cohort in June 2018.

Upon admission to the program, dental hygiene students receive a program policy manual that lists all degree requirements and courses. Each quarter students are given a course syllabus from the instructor of record that includes the student learning outcomes (SLOs), learning objectives and goals, grading criteria, assignments, projects, and evaluation methodology for the course. At the beginning of the quarter, instructors review the course SLOs and all other course policies with their students. Instructors evaluate the SLOs at the end of each quarter and complete a reflection and course planning document on TracDat planning and assessment software. Program faculty discuss curriculum outcomes and student course satisfaction survey results as part of the department curriculum management and development plan.

Comprehensive student services are available, including, but not limited to, academic counseling, financial aid, library services, health services, psychological services, legal services, tutoring, veteran's services, disability resource center services, ride sharing, transfer services, and transition to work.

Curriculum Development

The Dental Hygiene Department undertook an extensive revision of all dental hygiene courses to create the curriculum for the bachelor of science degree. Courses were reviewed at the department and division levels and by the Foothill College Curriculum Committee. Upper-division numbering (300 level) was chosen for the new dental hygiene courses. The courses were written using high-level learning objectives and outcomes in keeping with the upper-division level of the courses.

The Foothill College dental hygiene faculty researched several bachelor's degree dental hygiene programs in the United States as part of the curriculum revision process. All U.S. dental hygiene programs must be accredited by the Commission on Dental Accreditation and the standards for dental hygiene are very specific. To implement the baccalaureate program, the Foothill College dental hygiene curriculum was completely revised from the associate of science degree courses to the bachelor of science (upper-division) courses; objectives and outcomes were rewritten at the higher level of learning taxonomy, emphasizing critical thinking, analysis, writing, communication, cultural sensitivity, research, and reporting. We added upper-division general education courses; revised our research course to span an entire year in which the students would develop, implement, and evaluate a capstone dental health program; and added more evidenced-based research methods and business practices to the curriculum. Student learning outcomes (SLOs) were written for each course and will be assessed as each course is taught. The program learning outcomes (PLOs) and goals were revised with the intention that graduates of the baccalaureate degree program will have additional opportunities for employment beyond clinical practice of dental hygiene, for example, in the fields of education, sales, marketing, public health policy, research, and management.

Lessons Learned

One of the most noteworthy steps we took at Foothill College was forming an ad hoc committee for the bachelor's degree pilot program that included representatives from faculty, administration, counseling, curriculum, articulation, admissions and records, the library, technical services, marketing, and others to anticipate the needed changes in all these areas to successfully plan, develop, and implement the pilot program. The project was complex and crossed virtually all areas of the college. The advance coordination and planning has paid off with a smooth transition for our first baccalaureate degree cohort.

The state Chancellor's Office established regular phone conference meetings for all 15 programs in the pilot to discuss challenges and solutions. In addition, we had symposium meetings several times a year to learn from leaders in other states who have implemented bachelor's degree programs in community colleges.

Future of Baccalaureate Degrees in California

A new bill, Senate Bill 769 by Senator Jerry Hill (D-San Mateo), was introduced in 2017 to enlarge and extend the baccalaureate pilot program established in 2014 under Senate Bill 850. Senate Bill 769 would expand California's community college baccalaureate pilot program from 15 to 25 programs, based on recent amendments to the legislation, and extend the current 2023 sunset date by five years. Extending the sunset date would allow more time for the pilot programs to fully develop. Under the current timeline, some prospective students have expressed hesitancy about enrolling in the pilot programs in the future for fear that they may not complete their degree program before the sunset. Senator Hill says expanding the pilot program would allow the state to better assess its effectiveness by providing a larger sample size while continuing to address California's workforce needs. The independent state Legislative Analyst's Office is scheduled to conduct a preliminary review of the pilot program in 2018, and then again in 2022.

It is worth noting that many allied health professions, such as nursing, respiratory therapy, and dental hygiene, are promoting the bachelor's degree as the entry level for the profession due to the increasing complexity of medical/dental conditions within the population. Community colleges operate the majority of allied health programs and this has been a barrier to students in community colleges earning a bachelor's degree. Graduates of dental hygiene, nursing, and respiratory therapy programs all take the same licensing board exams, regardless of their degree level. Licensed graduates enter the profession with the same license regardless of their degree level. Yet there are certain jobs for which associate degree graduates do not qualify because these positions require a bachelor's degree. It follows that allowing community colleges to offer bachelor's degrees in subjects and professions not offered in four-year institutions makes sense from a student equity standpoint and serves the public by having well-prepared healthcare professionals.

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