

Consultant Report on the Proposal for Oregon Community Colleges to Confer Applied Baccalaureate Degrees

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Higher education is experiencing a plethora of changes across the United States, and Oregon is no exception. Changes in governance, funding, performance, and accountability are happening along side reforms to teaching and learning, student supports, and student retention and completion. With respect to college completion, a policy that is potentially important involves statutory change to college degree conferral that enables community colleges to confer baccalaureate degrees, typically in the form of applied baccalaureate (AB) degrees. This consulting report addresses the question of whether Oregon's community colleges should confer AB degrees by addressing four macro-level questions:

1. What can Oregon learn from other states about CCAB policy and program adoption? Why do states adopt CCAB programs? What factors (including demand) contribute to adoption and implementation?
2. What can Oregon learn from other states about CCAB demand? What can Oregon learn from other states about approval of CCAB degree programs?
3. What are the most common CCAB programs and types of degrees that are approved and implemented? How are CCAB programs funded, both in terms of their initial development and their on-going maintenance? What do these programs cost students and how does cost compare to other baccalaureate programs?
4. What are the success rates of students in CCAB programs in other states in terms of:
 - a. Enrollment and graduation rates?
 - b. Employment in CCAB degree-related occupations?
 - c. Graduate school enrollment?

Methods used to create this report include review of past research conducted by the consultant as part of national research on AB degrees (2007-2017), a thorough search of library and archival databases that include empirical, policy, and practical literature on AB degrees; telephone and personal interviews with policy makers and practitioners involved in and/or knowledgeable of AB degrees in Oregon and other states; and searches of websites of states and institutions that currently confer AB degrees. Results of these data collection activities are integrated throughout this report, with additional detail about methods available by contacting Dr. Debra Bragg at: Bragg.Associates.Inc@gmail.com.

This research is important because it provides an external perspective to the state's consideration of adoption of state legislation on baccalaureate degrees conferred by the community colleges. To this end, the consultant reviewed draft legislative language supplied by the state's community college leadership noting the following:

The amendment of ORS 341.465 to include:

(3)(a) The board of a district operating a community college, upon approval of the commission, may award applied baccalaureate degrees indicating satisfactory completion of a course of study offered by the community college in a field where there is a demonstrated workforce need.

(b) The commission shall establish, by rule, a process for reviewing and approving requests for programs to award applied baccalaureate degrees. The commission shall ensure that approved programs:

- (A) Are in a field with a demonstrated workforce need;
 - (B) Do not unnecessarily duplicate academic programs offered by other community colleges;
 - (C) Are not located in a geographic area that will cause undue hardship to Oregon’s other community colleges; and
 - (D) Are allocated among Oregon’s community colleges to maximize the achievement of statewide needs and requirements.
- (c) As used in this subsection, “applied baccalaureate degrees” has the meaning given that term in ORS 348.910.

and

Section 3. The amendments to ORS 341.009 and 341.465 by sections 1 and 2 of this 2017 Act first apply to programs for applied baccalaureate degrees that are proposed and submitted to the Higher Education Coordinating Commission for review and approval on or after the effective date of this 2017 Act.

This proposed legislative language has been reviewed and taken into account by this consultant, with special attention paid to the language focusing on applied baccalaureate degree conferral, workforce needs, and community college delivery of these degrees. The impact that this policy would potentially have on Oregon’s overall higher education system has also been taken into account, although a formal empirical study of this scope is not possible in this consulting contract.

The growth of states authorizing these degrees is discussed with special attention paid to how the state of Oregon and its community colleges and higher education institutions may be informed by these developments, especially when these degrees are awarded by the community college. The report attempts to offer a balanced perspective on potential benefits and challenges of state authorization of AB degrees to provide a foundation for policy making now as well as in the future.

Terminology

In this report, the term Community College Applied Baccalaureate degree is abbreviated to CCAB, referring to degrees such as the Bachelor of Applied Science (BAS), the Bachelor of Applied Arts and Science (BAAS), the Bachelor of Applied Technology, and other variations of this degree title that are conferred by community colleges. It is also important to recognize that BAS degrees are not exclusive to community colleges. In fact, the preponderance of BAS degrees are offered by four-year colleges and universities, including through transfer from community colleges to four-year colleges and universities (Townsend, Bragg, & Ruud, 2010). Knowing this, I use the abbreviation of UAB to distinguish CCAB degrees from AB degrees conferred by universities. The Bachelor of Applied Science (BAS) in Management at Southern Oregon University appears to be a degree that is consistent with the notion of a UAB degree as referenced in this report. The SOU website describes the BAS in Management as the first degree for students seeking managerial careers in technical fields that are aligned to completion of their Associate of Applied Science (AAS degree) (see: <https://inside.sou.edu/degreecompletion/bus/bas.html>).

The remainder of this report focuses discussion on the four mega-questions, including drawing in literature and contextual information from Oregon and other states that are conferring or considering conferring CCAB degrees.

Results and Discussion

1. What can Oregon learn from other states about CCAB policy and program adoption? Why do states adopt CCAB programs? What factors (including demand) contribute to adoption and implementation?

AB degrees have existed on a relatively modest level for several decades but these degrees have expanded to more states over the last two decades, especially at the community college level (Townsend, Ruud & Bragg, 2009). AB degrees emphasize the transfer of credits from a “terminal” Associate of Applied Science (AAS) degree to a CCAB or UAB degree. The transfer of the AAS degree is an important distinction because this type of degree has fallen outside of transfer and articulation agreement policies in many states.

By contrast, CCAB and UAB degrees provide for the transfer of credit similar to traditional transfer degrees for students who complete AAS degrees, enabling them to progress to the baccalaureate without substantial credit loss (Townsend et al., p. iv). Students who enroll in AB degree programs obtain a BAS, BAAS, BAT, or similarly titled degree that blends and extends academic, technical, and applied learning to coursework at the upper division level that is commensurate with a traditional baccalaureate degree that involves higher-order thinking. The idea is to create a baccalaureate that enables students who began in “workforce-oriented” studies to progress to the baccalaureate degree without losing credits, time and money.

In the United States, applied baccalaureate degrees are “a bachelor’s degree designed to incorporate applied associate courses and degrees once considered as ‘terminal’ or non-baccalaureate level while providing students with higher-order thinking skills and advanced technical knowledge and skills so desired in today’s job market.” (Townsend, Bragg, & Ruud, 2009)

In the United States, the adoption and implementation of AB degrees has been primarily a state and institutional decision; however, it is noteworthy that recently the federal government weighed in AB degrees as part of the Trade Adjustment Assistance Community College and Career Training Grants Program (TAACCCT) of the U.S. Department of Labor (DOL) (Bragg, 2015).¹ From October 2011 to the present, the DOL awarded over \$2 billion in federal funds to colleges and universities, mostly community colleges, to implement career pathway programs that were designed to prepare students for the workforce in high demand, family-living wage occupations. In Year Two of the TAACCCT program, grant applicants were encouraged to apply for funds to implement programs of study that culminate in AB degrees.² Though the extent to which AB degrees were implemented is unknown since no evaluation has been released by DOL as of yet, the federal TAACCCT policy gives credibility to AB degrees on a level that had not occurred in the past.

Distinct from federal policy, the number of states that authorize AB degrees to be conferred by community

¹ Internationally, higher education institutions are adopting AB degrees as well. In Australia, AB degrees are technical degrees associated with Technical and Further Education (TAFE) schools. In England, AB degrees are “dual degrees” associated with Higher Vocational Education (HIVE). In Canada, community colleges have long delivered AB degree through their provincial system of colleges (Bathmaker, 2016; Wheelahan (2016).

² According to the TAACCCT grant solicitation, “[T]wo-year degree programs must plan to develop an articulation agreement with at least one four-year institution that offers degrees such as a Bachelor of Applied Arts and Sciences (BAAS) or an Applied Baccalaureate (AB), or with a college that is authorized to offer a community college baccalaureate, because these four-year degrees are geared toward the adult student who is bringing experience and/or prior learning to the table, or who is transferring from a community college.” (U. S. Department of Labor, 2012, p. 6).

colleges is growing (Townsend, Ruud & Bragg, 2009). Whereas nearly every state authorized at least one university to confer some form of UAB degree by the turn of the 21st Century, Townsend et al. noted that state authorization of AB degrees by community colleges represented a potentially important development as well. This is because the adoption of AB degrees by community colleges requires change to long-standing state legislation that limited the degree-conferral authority of community colleges to associate degrees so that these institutions can confer baccalaureate degrees. As a result, both community colleges and universities are granted the authority to confer baccalaureate degrees, with the distinction being the type of baccalaureate degree that is conferred. In most states these baccalaureate degrees are limited to applied baccalaureates (AB) degrees, with the bachelor of science (BS) degree also be fairly commonly authorized.

Presently, 23 states authorize the conferral of baccalaureate degrees by community colleges. Figure 1 provides a map with shading of 23 states that have statutory authority to confer the CCAB degree, according to the Community College Baccalaureate Association (CCBA) website. The CCBA website includes shading for California which recently legislated a pilot program that enables 15 community colleges to implement AB degrees, giving the largest community college system in the United States the authority to begin implementation of AB degrees. Across the U.S., a total of 88 community colleges are offering a total of about 650 CCAB degree programs according to CCBA. (See: <http://www.accbd.org/resources/baccalaureate-conferring-locations>).

Nearly universally, the students who participate in CCAB programs are adult learners who are geographically bound by family and employment who also seek opportunities to advance in their careers (Bragg & Soler, forthcoming). These students often already hold full-time employment, with considerable experience in technical occupations, and they seek to participate in CCAB degree programs on a part-time basis so that they can continue to work full time. Because of their work arrangements, CCAB students often have tuition and fee support from their employers who endorse their participation because they foresee the potential to retain employees, which is a benefit to the firms as well as the communities. Thus, for many students, the CCAB degree is perceived as their only opportunity to secure a baccalaureate degree because they are unable or unwilling to relocate, and they also express a preference for continuing education at the community college (rather than university and/or online).

In addition to these states, research of this consultant reveals that four other states besides Oregon (Illinois, Missouri, Ohio, and North Carolina) are exploring legislative action to authorize CCAB degrees. Missouri may be the closest as legislation is drafted and hearings are underway at the present. Illinois is also on the cusp of hearings. In both of these states, state higher education and community college agencies and groups are actively involved in drafting legislation and preparing testimony in support of CCAB degrees. Additional discussion may also be occurring in other states, but these are ones that have emerged in this consultant's interviews and website searches.

Looking at states that have conferred AB degrees, there is considerable variation in the scope and scale of implementation of these degrees. For example, of all states with CCAB degrees, 17 offer these degrees at the present time, but 6 do not. This is because some of the earliest state adopters no longer consider the baccalaureate degrees to be CCAB degrees (e.g., Arkansas and Minnesota). Also, some community colleges that adopted AB degrees now confer baccalaureate degrees as their predominant credential, although the conversion from predominant associate-degree granting to predominant baccalaureate-degree granting is not common among institutions that have adopted the AB degree in recent years. Many community college leaders that this consultant has interviewed over the years are aware and concerned about the potential to shift the predominant mission of the two-year institution away from open access and speak passionately about the intention of the CCAB degree not being to convert their institutions into four-year universities. Daniel Phelan, President of Jackson College in Michigan and a state leader and advocate for CCAB degrees in his state, made this point when he said:

Some have argued that offering a baccalaureate degree at a community college is "mission creep" and they will become competitive with state universities. We don't believe that is the case, but rather represents a response to community need... [C]ommunity colleges traditionally have been sources of innovation, creativity, flexibility and responsiveness to local and state needs... Serving more students and helping Michigan's population become more educated will help everyone in today's economy.

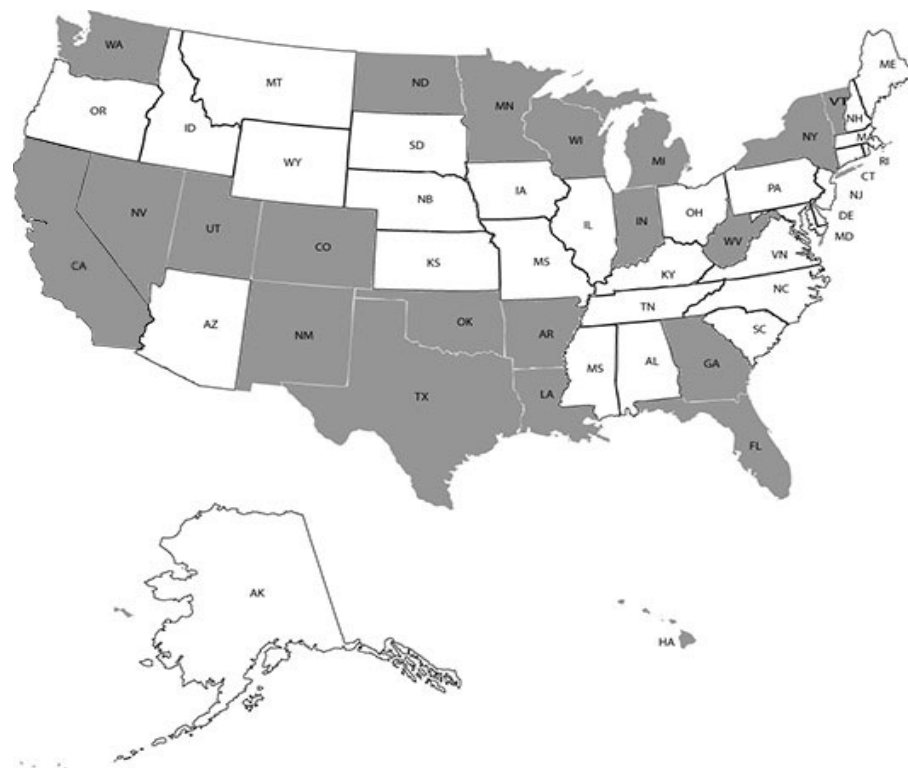


Figure 1. United States Map Showing States that have granted applied baccalaureate degree-conferral authority to community colleges.

Whereas most states have a relatively small number of colleges with AB degree programs, a few authorize a large number of community colleges to confer these degrees (Bilsky, Neuhard, & Locke, 2013; Hammer, 2016). Two states in particular have engaged in large-scale adoption of AB degrees. First, the state of Florida (FL) has authorized 26 of its predominantly two-year colleges to offer at least one AB degree, resulting in a large number of AB programs that focus on a wide range of occupations (see listing of program and degree types below). Due to the regional accreditor, Florida community colleges that have adopted an AB degree have dropped the word “community” from their titles and now belong to the state college system rather than state “community” college system.

The second state to adopt AB degrees on a large scale is Oregon’s neighbor to the north, the state of Washington. To date, WA has authorized 19 of its 34 community and technical colleges to offer a total of 45 AB degree programs, with this number slated to grow to 27 in 2017-18. (Similar to Florida, the regional accreditor requires that colleges that adopt AB degrees remove the word “community” from their name, thus college name changes have occurred even in cases where the community college personnel preferred continuation of the “community” college designation). When all 27 of the WA colleges adopt AB degrees,

WA will have 75 AB degree programs.

As the number of AB programs grows, so do enrollments although total enrollment in AB degree programs remains relatively small compared to total enrollment in the community and technical colleges in FL and WA. For example, less than 1% of the total credit student enrollment of WA colleges is attributable to AB programs, with an estimated average enrollment of 40-50 students in each program. Because of the workforce focus of each program, and often also due to limitations to program size in accordance with licensure and program-specific accreditation, the enrollments are not (nor were they intended to be) a substantial part of the overall WA two-year college enrollment. To this end, state policy is quite clear that the purpose of CCAB degrees is to enable students in AAS degrees to be able to progress to a baccalaureate degree, hence the focus on AB degree programs.

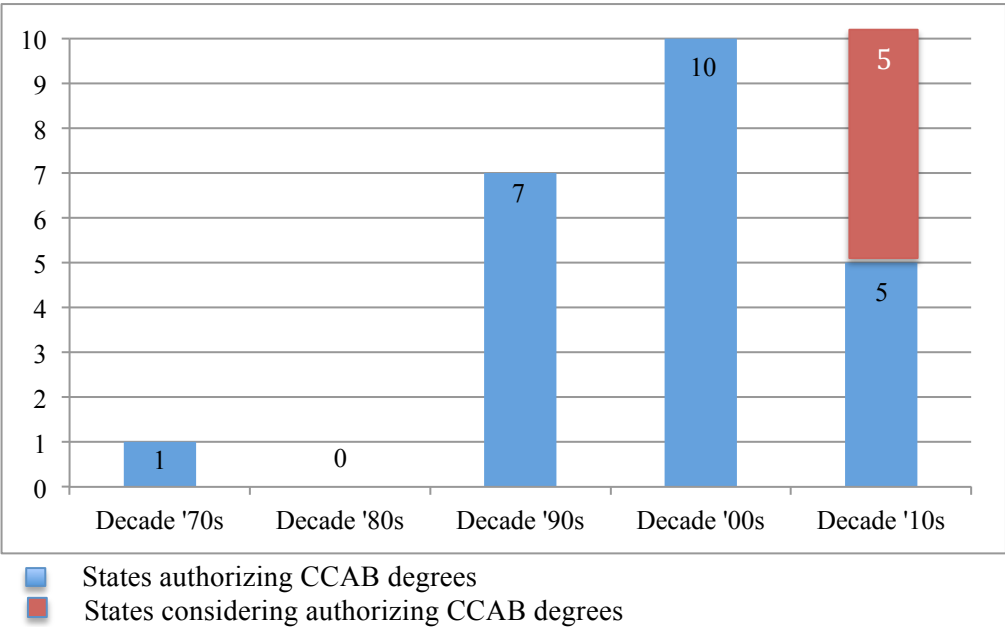


Figure 2. Number of states conferring and considering authorization of CCAB degrees in the United States.

Table 1. States Authorizing CCAB Degrees by Year

States Granting Community Colleges the Authority to Confer Applied Baccalaureate Degrees by Year					
1.	New York	1970	13.	New Mexico	2004
2.	West Virginia	1990	14.	Indiana	2004
3.	Utah	1992 *	15.	Washington	2005
4.	Vermont	1993	16.	Georgia	2005
5.	Idaho	1995 *	17.	North Dakota	2006
6.	Arkansas	1997 *	18.	Oklahoma	2006
7.	Florida	1997	19.	Wisconsin	2010
8.	Nevada	1998	20.	Michigan	2012
9.	Louisiana	2001 *	21.	Colorado	2014
10.	Hawaii	2003	22.	California	2014
11.	Texas	2003	23.	Delaware	2016
12.	Minnesota	2003 *			

*States with community colleges having authority to confer CCAB degrees but not actively doing so.

In a recent study of AB degrees nationally, McCarthy (2015) concurred that, whereas a sizeable number of states authorize CCAB degrees, a relatively small number of these degrees are being conferred. McCarthy noted that CCAB degrees may be attractive to employers and potentially beneficial to students, but unless these degrees are offered to a larger number of students their potential to create upward mobility for previously terminal-degreed students is limited. She noted that these programs offer a benefit to AAS students who can extend their lower-division applied course credits to baccalaureate degrees, but only if they can be scaled. She lamented that the idea of CCAB degrees has been slow to take hold, even within states that have given their approval. Recognizing the historic distinction of terminal degrees from transfer degrees, McCarthy noted that applied degrees can lead to inequitable outcomes, further marginalizing historically underserved students who enroll in disproportionate numbers to their majority peers. To this end, she recommended expanding CCAB degrees as a means of better integrating America’s dual system of transfer versus terminal education that is “very unequal” (p. 3).

McCarthy (2015) also discussed existing models for AB degrees, confirming an earlier study of Ruud, Bragg, and Townsend (2010) that identified several models. Representing the most comprehensive model,

career pathways integrate applied, professional-technical education (PTE) and academic studies from beginning to the end of a student’s baccalaureate program. In this model, the progression of knowledge and skills extends from the start of the AAS degree program to the culmination with an AB degree so that the students are learning theory and practice in a progressive fashion throughout their studies. This model would seem to be predicated on the idea that students intentionally enroll in AB degree programs from the start of their college studies rather than enroll in an AAS degree program and later decide to elevate to a program that confers the baccalaureate option.

A second model is the management model that concludes the first two years of AAS (PTE) curriculum culminating in an AAS degree with two years of upper-division study of organizational leadership, management, supervision, and similar content. Comparing the two models, the career pathways AB degree integrates academic and PTE curriculum with intensive instructor-led formats, laboratories and work-based learning from the start of college, typically enrolling small numbers of students, whereas the management model enrolls large numbers of students who are often return to college to enroll for the baccalaureate, often including engaging in online learning formats. Both McCarthy and Ruud et al. report that the management AB model is responsible for the production of more AB degrees in the United States than the career pathways model even though the career pathways model represents a potentially more impactful model due to its more highly integrated format. Also, cost is a factor that deserves consideration in these two models, with career pathway having a relatively high cost of instruction for fewer students than the management hybrid delivery model that can potentially reach large numbers of students.

Other models include upside-down curriculum that emphasizes the applied and technical coursework extensively in the AAS degree program and finishes the latter two years of general education. Completion models are similar because the latter two years of course work may or may not be well aligned to the technical component of the first two years of the program. Each of these models is also likely to be offered via online or hybrid online and face-to-face format. Figure 3 provides a graphic depiction of the AB degree models relative the foundational applied associate degree.

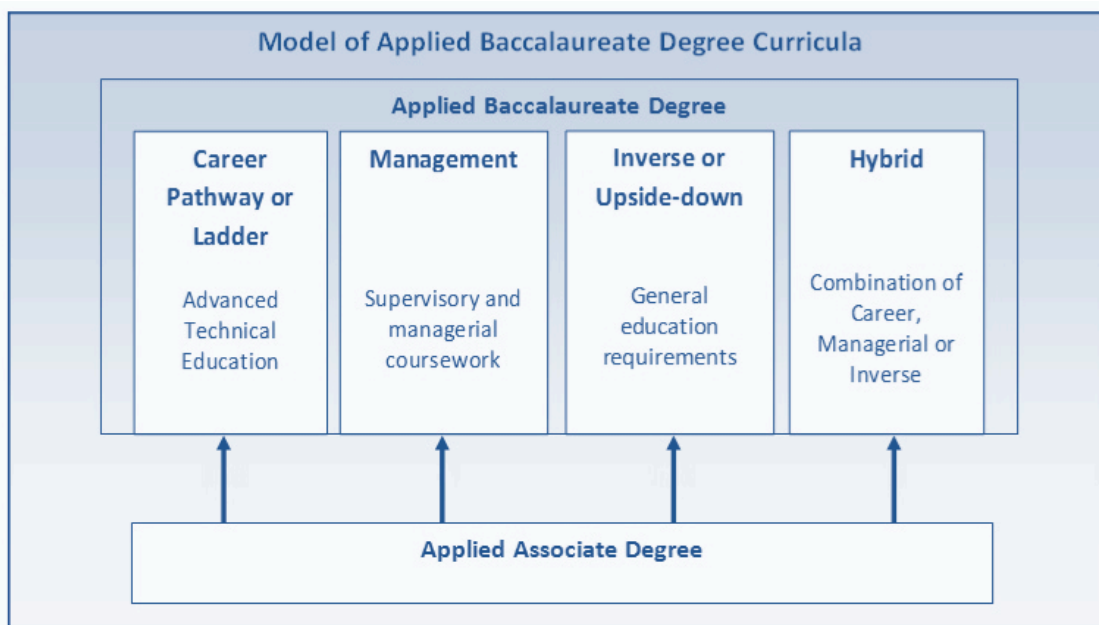


Figure 3. Models of AB Degree Curricula.

Concerns about AB Degrees

Considering the expansion of AB degrees to more states and the relatively scant information about these degrees, their controversial nature deserves attention. For one, the fact that AB degrees allow for the transfer of credits previously non-transferrable (terminal), typically associated with PTE coursework, raises concerns for state systems and institutions that have historic commitments to transfer and articulation policies that distinguish transfer from terminal degrees. Thus, allowing PTE credits to transfer and count toward the baccalaureate degree is a departure from historic transfer policies of the states. Dealing with these concerns can surface differing beliefs about the value of applied learning in the baccalaureate context that require attention and renegotiation. Often, facilitation of a dialogue involving diverse stakeholders and perspectives is needed to determine whether these distinctions can be overcome.

Ultimately, it is important to recognize that the decision to authorize community colleges to confer baccalaureate degrees is outside the norm of the historic college credential conferral pattern in the U.S. (Floyd et al., 2005). Despite the fact that nearly half of the states have passed legislation, the conferring of baccalaureate degrees by community colleges is not the norm. Changing the level and type of degrees that are authorized by two-year institutions is precedent-setting in terms of changing patterns of college degree conferral within states. Even when the rationale for CCAB degrees is rooted in workforce need, such as in the Science, Technology, Engineering, and Mathematics (STEM) occupations that states document as growing (Makela et al., 2015), the fact that these degrees require states to shift statutory authority of community colleges has potentially long-term effects that deserve careful consideration.

Some criticism of CCAB degrees also stems from their perceived narrow focus on applied learning that is attributed with lesser value by academe than the liberal arts and sciences (LAS) (an issue mentioned above), but also because applied learning carries high program costs for special equipment, facilities and work-based learning requirements. Moreover, the faculty who teach baccalaureate-degree programs are required to hold graduate degrees that are not necessary for applied associate-degree programs of study, also adding to program cost. Struggles finding qualified instructors for CCAB degree programs has been reported by various researchers and state staff interviewed by this consultant.

Criticism of CCAB degrees also relates to perceptions of program duplication and inefficiencies, leading to the claim that community colleges are shifting their mission in a way that creates “mission creep” (Ruud & Bragg, 2010) as noted above. This claim, coupled with concerns that the quality of CCAB degrees does not equate to the quality of baccalaureate degrees conferred by universities, is evident in research conducted in several states and on the national level. Having said this, no rigorous research is known to compare the quality baccalaureate degrees conferred by community colleges to similar degrees offered by universities (Bragg & Soler, 2016). Perceptions of the quality of the degrees are well documented, with university personnel consistently more skeptical of their value than community college personnel (see, for example, Bragg & Soler, forthcoming). On both sides of this coin, this consultant has observed that the depth of knowledge of what AB degrees actually entail is limited and therefore representative of modest value to evaluating impact.

In addition, policy leaders engaged in CCAB degrees mention issues that may arise between community colleges and universities because of changing pattern of degree conferral involving two- and four-year institutions (Bragg & Soler, forthcoming). For example, the adoption of CCAB degrees may raise new questions about how transfer and articulation agreements are working (or should work) within a state. Questions about whether students who secure a CCAB (which itself may be considered a terminal degree type) are able to pursue graduate education are raised. While WA state officials argue their CCAB students have not be hindered in matriculating to graduate education, little is known about upward education trajectory of CCAB degree holders.

Finally, the lack of research and evaluation on AB degrees is a concern that is raised frequently in the literature and on many levels, including by researchers and state education agencies. While some states have begun tracking CCAB degree recipients, these data are not substantial enough to provide a clear picture of the impact of these degrees (see further discussion below). Another complication of understanding the impact of AB degrees is that most higher education data systems do not distinguish AB degrees from other baccalaureate degrees, even when they are conferred by universities, it is difficult if not impossible to understand the impact of these degrees on graduates' labor market outcomes or progression to graduate education.

2. What can Oregon learn from other states about CCAB demand? What can Oregon learn from how other states about approval of CCAB degree programs?

Demonstrating that there is adequate demand for new baccalaureate degrees is important no matter what the nature of the proposed programs of study. With funding of higher education by the states and rising college tuition and fees being a continuing concern, it is important to know whether and how new programs are being justified. Because AB degrees focus so explicitly on the workforce, knowing what the labor market demand is for graduates and their ability to secure employment is critical. It is also important to understand whether new workforce-oriented degree programs will attract sufficient students to make any new investment of resources a wise decision. Knowing the supply and demand for AB degree programs is important to successful implementation as well as sustainability.

The state of Oregon has a number of sources of labor market information that colleges and universities may use to seek approval of new degree programs and to demonstrate the viability of degree programs over time. These data sources are evident in numerous documents related to program approval and program review that are offered by the state of Oregon's Higher Education Coordinating Commission.

Posted on the HECC website is program approval forms that specify information that universities need to supply to the state to obtain approval for new programs, and this information here to provide a starting point for similar information pertaining to AB degree program approval, if deemed appropriate.

Institution:

College/School:

Department/Program Name:

Degree and Program Title:

1. Program Description

- a. Proposed Classification of Instructional Programs (CIP) number.
- b. Brief overview (1-2 paragraphs) of the proposed program, including its disciplinary foundations and connections; program objectives; programmatic focus; degree, certificate, minor, and concentrations offered.
- c. Course of study – proposed curriculum, including course numbers, titles, and credit hours.
- d. Manner in which the program will be delivered, including program location (if offered outside of the main campus), course scheduling, and the use of technology (for both on-campus and off-campus delivery).
- e. Adequacy and quality of faculty delivering the program.
- f. Adequacy of faculty resources – full-time, part-time, adjunct.
- g. Other staff.
- h. Adequacy of facilities, library, and other resources.
- i. Anticipated start date.

2. Relationship to Mission and Goals

- a. Manner in which the proposed program supports the institution's mission, signature areas of focus, and strategic priorities.
- b. Manner in which the proposed program contributes to institutional and statewide goals for student access and diversity, quality learning, research, knowledge creation and innovation, and economic and cultural support of Oregon and its communities.
- c. Manner in which the program meets regional or statewide needs and enhances the state's capacity to:
 - i. improve educational attainment in the region and state;
 - ii. respond effectively to social, economic, and environmental challenges and opportunities; and
 - iii. address civic and cultural demands of citizenship.

3. Accreditation

- a. Accrediting body or professional society that has established standards in the area in which the program lies, if applicable.
- b. Ability of the program to meet professional accreditation standards. If the program does not or cannot meet those standards, the proposal should identify the area(s) in which it is deficient and indicate steps needed to qualify the program for accreditation and date by which it would be expected to be fully accredited.
- c. If the proposed program is a graduate program in which the institution offers an undergraduate program, proposal should identify whether or not the undergraduate program is accredited and, if not, what would be required to qualify it for accreditation.
- d. If accreditation is a goal, the proposal should identify steps taken to achieve accreditation. If the program is not seeking accreditation, the proposal should indicate why it is not.

4. Need

- a. Anticipated fall term headcount and FTE enrollment over each of the next five years.
- b. Expected degrees/certificates produced over the next five years.
- c. Characteristics of students to be served (resident/nonresident/international; traditional/nontraditional; full-time/part-time, etc.).
- d. Evidence of market demand.
- e. If the program's location is shared with another similar Oregon public university program, the proposal should provide externally validated evidence of need (e.g., surveys, focus groups, documented requests, occupational/employment statistics and forecasts).
- f. Estimate the prospects for success of program graduates (employment or graduate school) and consideration of licensure, if appropriate. What are the expected career paths for students in this program?

5. Outcomes and Quality Assessment

- a. Expected learning outcomes of the program.
- b. Methods by which the learning outcomes will be assessed and used to improve curriculum and instruction.
- c. Nature and level of research and/or scholarly work expected of program faculty; indicators of success in those areas.

6. Program Integration and Collaboration

- a. Closely related programs in this or other Oregon colleges and universities.
- b. Ways in which the program complements other similar programs in other Oregon institutions and other related programs at this institution. Proposal should identify the potential for

- collaboration.
- c. If applicable, proposal should state why this program may not be collaborating with existing similar programs.
- d. Potential impacts on other programs.

7. External Review

If the proposed program is a graduate level program, follow the guidelines provided in *External Review of New Graduate Level Academic Programs* in addition to completing all of the above information.

Resource:

<https://www.oregon.gov/highered/Documents/HECC/Resources/Academic/1.0PolicyGuidelinesNew%20Programs%205-16.pdf>.

The requirement to provide information about “need” is especially important with respect to AB degrees. Because the rationale for program approval falls so squarely on workforce need, as well as student interest in enrollment, it is important to ensure that program approval processes are designed to enable state authorities to make sound decisions about whether programs are justified. In this regard, the program approval guidelines of FL and WA provide additional insights into ways that these states have supplemented program approval processes relative to AB degrees.

These two states both emphasize the following elements of need in the program approval process, which is detailed below using WA state as an example: employer demand and regional skills gap where program accreditation requirements are also considered, unmet need by other providers in the region (other community colleges as well as universities), faculty qualifications, curriculum review by similar university programs, and conversations with university program faculty regarding pathway options.

The process of program approval implemented by the Washington State Board of Community and Technical Colleges (SBCTC) is shown in the Table 2. As noted, the process of program approval begins with preliminary steps that ensure that any AB degree program that is brought forward has a statement of intent that has been reviewed and approved by the SBCTC. Once this review is done, colleges prepare the program approval documentation.

Table 2. Steps in the Washington AB Degree Program Approval Process

Steps in the Washington AB Degree Program Approval Process	
Statement of Intent Submission by College	<ol style="list-style-type: none"> 1. College informs SBCTC of intent 2. SBCTC staff informs higher education community of intent 3. College develops Statement of Need
30-Day Review by SBTCT	<ol style="list-style-type: none"> 1. SBCTC staff informs all two-year, four-year, higher education institutions of new program for public comment 2. SBCTC staff reviews Statement of Need based on approval criteria adopted by State Board
Board Study Session	<ol style="list-style-type: none"> 1. Statement of Need is discussed by State Board in study session 2. College develops Program Proposal

Peer Review	<ol style="list-style-type: none"> 1. SBCTC staff in collaboration with Instruction Commission reviews Program Proposal 2. Peer Review of Program Proposal for colleges new to accredited BAS degrees
State Board Approval	<ol style="list-style-type: none"> 1. Program proposal is scheduled with State Board for approval 2. If approved...
Accreditation (NWCCU)	<ol style="list-style-type: none"> 1. College moves program to NWCCU for Accreditation 2. College submits application for Veterans Services approval 3. Nursing Commission (if applicable)
U.S. Department of Education/ Financial Aid	<ol style="list-style-type: none"> 1. College moves program to Department of Education for Financial Aid approval 2. Program Implementation

Source: Dr. Joyce Hammer, Washington SBCTC, Powerpoint Presentation on October 17, 2016 in Olympia, WA.

Several elements of this process that are consistent with Florida’s program approval process, including the series of reviews by the state, the right of refusal by universities that can validate the same or similar program offerings, and the processes of regional accreditation and U.S. Department of Education Financial Aid designed to ensure accessible and high quality higher education programming. The proposal criteria applied by the SBCTC are:

- Curriculum rigor
- Qualified faculty
- Admissions process
- Student services
- Financial commitment-sustainability
- Accreditation
- Pathway options beyond AB/external reviewers

In addition, Florida requires that AB degree programs agree to provide data that the state can use to assess the impact of these programs on student outcomes. These data document the viability of local AB degree programs over time as well as the enrollment and aggregate impact of these programs statewide (personal communications with Dr. Christopher Mullins, February 1, 2017). Appendix A presents information on several states’ implementation of AB degree programs to supplement this discussion, plus details of the Florida approval process (see: <http://www.fldoe.org/schools/higher-ed/fl-college-system/baccalaureate-degree-proposal-process.stml>).

The methods by which Washington colleges demonstrate the workforce need for new AB degree programs vary, but they all include labor market information, typically from the state matched to the federal Bureau of Labor Statistics (BLS), U.S. Department of Labor. The extent to which these data are useful for predicting program need is debatable, however. Projecting employment opportunities at the regional or local level is difficult with state and federal data, but Dr. John Lederer, Dean at North Seattle College, has developed a formula for computing supply and demand that may be valuable to Oregon. Lederer (2014) noted that AB degree program need is predicated on showing there is excess demand for baccalaureate-trained workers in the target occupation in a local region. To assess this phenomenon, Lederer suggests using annual program completions evidenced in IPEDS (by CIP) as a proxy for supply in a given local occupational area and to compare this number to the annual forecast job openings by cross-walking CIP to SOC codes. When the job openings exceed the number of annual program completions, there is evidence

that an AB degree program may be justified. The method has limitations as it is based on partial and imprecise knowledge of the labor market, but it is a more systematic method than most used today. Dr. Lederer also recommends supplementing these data with employer testimonials that address the need for employees.

In addition to the use of statistical data, some states advocate strongly for employer endorsement of AB degree programs, including testimonials and commitments to hiring AB degree graduates. To this end, recent changes in the program approval process in Florida require that colleges obtain employer input regarding the demand for employees and hiring AB graduates. Other state officials, including those in Michigan and Washington, spoke to the importance of active employer engagement in supporting AB degree program approval. These stakeholders made the point that if the jobs that these degrees were designed to fill do not materialize, AB degrees are a costly exercise that higher education can ill-afford in the current fiscal climate.

Labor Market Information for Oregon

Though no specific data on supply-demand was identified for Oregon community colleges, the following tables provide information about occupational areas that are in highest demand, including in health care and nursing. The ranking of occupations in a series of tables below show program areas that may be useful to explore. Beginning with Table 3, the data reflect where each occupation’s final score falls in the overall list of 714 occupations (see *Training Oregonians for the Right Jobs*, 2014). To qualify as a high-wage occupation, the occupation’s median hourly wage in 2013 had to be greater than the statewide median wage (\$17.60 per hour).³ To qualify as high-demand, the projected number of job openings for the occupation had to be higher than the median number of job openings.

Table 3. Overall Top High-Wage, High-Demand Occupations from Oregon Statewide Occupational Prioritization for Training (Top 10 High-Wage, High-Demand Occupations)

Standard Occupational Classification (SOC) Title	Total Openings 2012 – 2022	Ranking
Physical Therapists	1,244	1
Medical and Clinical Laboratory	657	2
Medical and Health Services Managers	1,470	3
Industrial Machinery Mechanics	2,298	4
Carpenters	4,094	5
Sales Managers	1,489	5
Industrial Engineers	1,393	5
Computer Hardware Engineers	1,291	5
Marketing Managers	1,271	5
Machinists	1,514	10

The ranking in Table 4 reflects an occupation’s final score in the overall list of 714 occupations. In this table, manufacturing occupations are defined as those with greater than 25% of their occupational employment in a manufacturing NAICs. To qualify as high-wage, the occupation’s median hourly wage in 2013 had to be greater than the statewide median wage (\$17.60 per hour). To qualify as high-demand, the

³ *Training Oregonians for the Right Jobs*, A Method to Prioritize Occupational Training, Oregon Employment Department Workforce and Economic Research Division, Sept. 2014, Page 8.

projected number of job openings for the occupation had to be higher than the median number of job openings. This list includes the top 9 of the top 20 high-wage, high-demand jobs.⁴

Table 4. Targeted High-Wage, High-Demand Occupation List from Oregon Statewide Occupational Prioritization for Training (Top 9 High-Wage, High Demand Manufacturing Occupations)

Standard Occupational Classification (SOC) Title	Total Openings 2012 - 2022	Final Rank
Industrial Machinery Mechanics	2,298	4
Industrial Engineers	1,393	5
Computer Hardware Engineers	1,291	5
Machinists	1,514	10
Welders, Cutters, Solderers, and Brazers	1,710	16
Structural Metal Fabricators and Fitters	934	27
Supervisors and Managers of Production and Operating Workers	1,776	45
Architectural and Engineering Managers	1,081	45
Industrial Production Managers	676	45

The ranking in Table 5 reflects where a STEM occupation's final score falls in the overall list of 714 occupations. STEM occupations are defined by the Commission on Professionals in Science and Technology and supported by the BLS. To qualify as high wage, the occupation's median hourly wage in 2013 had to be greater than the statewide median wage (\$17.60 per hour). To qualify as high-demand, the projected number of job openings for the occupation had to be higher than the median number of job openings (286). This list includes only the top 13 of the top 20 high-wage, high-demand jobs.⁵

Table 5. Oregon Statewide Occupational Prioritization for Training (Top 13 High-Wage, High Demand STEM Occupations)

Standard Occupational Classification (SOC) Title	Total Openings 2012 - 2022	Final Rank
Physical Therapists	1,244	1
Medical and Clinical Laboratory Technologists	657	2
Industrial Engineers	1,393	5
Computer Hardware Engineers	1,291	5
Medical and Clinical Laboratory Technicians	566	11
Veterinarians	562	11
Physicians and Surgeons	3,726	16
Computer Systems Analysts	2,069	16
Computer Operations, All Other	1,694	16
Pharmacists	1,475	16
Registered Nurses	10,907	27
Network and Computer Systems Administrators	1,538	27
Physicians Assistants	527	27

⁴ *Training Oregonians for the Right Jobs, A Method to Prioritize Occupational Training*, Oregon Employment Department Workforce and Economic Research Division, Sept. 2014, Page 9.

⁵ *Training Oregonians for the Right Jobs, A Method to Prioritize Occupational Training*, Oregon Employment Department Workforce and Economic Research Division, Sept. 2014, Page 10.

The ranking in Table 6 reflects where an occupation’s final score falls in the overall list of 714 occupations. When occupations’ scores are tied, more than 20 occupations can rank in the top 20. Health care occupations are those determined to be necessary for the delivery of health care services in the 2006 Oregon Health Care Workforce Needs Assessment. This determination was made in partnership with industry. To qualify as high wage, the occupation’s median hourly wage in 2013 had to be greater than the statewide median wage (\$17.60 per hour). To qualify as high-demand, the projected number of job openings for the occupation had to be higher than the median number of job openings. This list includes only the top 8 of the top 20 high-wage, high-demand Health Care Occupations.⁶

Table 6. Oregon Statewide Occupational Prioritization for Training (Top 8 High-Wage, High Demand Health Care Occupations)

Standard Occupational Classification Title (SOC)	Total Openings 2012 - 2022	Final Rank
Physical Therapists	1,244	1
Medical and Clinical Laboratory Technologists	657	2
Medical and Health Services Managers	1,470	3
Medical and Clinical Laboratory Technicians	566	11
Physicians and Surgeons	3,726	16
Pharmacists	1,475	16
Registered Nurses	10,907	27
Physicians Assistants	527	27

The ranking in Table 7 reflects where an occupation’s final score falls in the overall list of 714 occupations. When occupations’ scores are tied, more than 20 occupations can rank in the top 20. This list excludes health care occupations, but includes all other occupations. Health care occupations are those determined to be necessary for the delivery of health care services in the 2006 Oregon Health Care Workforce Needs Assessment. This determination was made in partnership with industry. To qualify as high wage, the occupation’s median hourly wage in 2013 had to be greater than the statewide median wage (\$17.60 per hour). To qualify as high-demand, the projected number of job openings for the occupation had to be higher than the median number of job openings (286). This list includes only the top 11 of the top 20 high-wage, high-demand occupations – excluding health care.⁷

Table 7. Oregon Statewide Occupational Prioritization for Training (Top 13 High-Wage, High Demand Occupations, Excluding Health Care)

Standard Occupational Classification (SOC) Titles	Total Openings 2012 - 2022	Final Rank
Industrial Machinery Mechanics	2,298	4
Carpenters	4,094	5
Sales Managers	1,489	5
Industrial Engineers	1,393	5
Computer Hardware Engineers	1,291	5

⁶ *Training Oregonians for the Right Jobs, A Method to Prioritize Occupational Training*, Oregon Employment Department Workforce and Economic Research Division, Sept. 2014, Page 11.

⁷ *Training Oregonians for the Right Jobs, A Method to Prioritize Occupational Training*, Oregon Employment Department Workforce and Economic Research Division, Sept. 2014, Page 12.

Marketing Managers	1,271	5
Machinists	1,514	10
Accountants and Auditors	5,418	11
Construction Managers	1,207	11
Urban and Regional Planners	600	11
Veterinarians	562	11

3. What are the most common CCAB programs and types of degrees that are approved and implemented? How are CCAB programs funded, both in terms of their initial development and their on-going maintenance? What do these programs cost students and how does cost compare to other baccalaureate programs?

There is no national source on AB degrees (CCAB or UAB) but some research has been done to document programs of study that are associated with these degrees. In particular, the National Science Foundation (NSF) Advanced Technological Education study led by this consultant showed a number of technology-oriented programs that offer AB degrees in programs across the U.S. (Makela et al., 2012). These data showed that programs of study culminating in AB degrees are offered in the following STEM fields:

- Biotechnology
- Chemical technology
- Computer and information technology
- Cyber security and forensics
- Electronics
- Energy
- Environmental technology
- Manufacturing and engineering technology
- Marine technology
- Nanotechnology
- Telecommunications
- Transportation technology

In addition, occupations associated with healthcare represent an area where AB degrees are implemented, particularly nursing. The CCBA reports 11 states authorize community colleges to confer BSN degrees, and most of the states seeking support currently from their state legislatures are asking for authority to confer CCAB degrees in nursing. Dental hygiene and other health-related occupations are also included in state legislative proposals.

Three states (Florida, Washington and California) publish the specific names of programs of study and degree types that they have authorized as pilots or full-scale implementation. Programs offered by these three states are useful to review because they provide insights into AB program delivery, with Florida being the earliest state adopter, Washington a slightly later state adopter, and California the latest state adopter with all of its colleges operating as pilots. The information listed below reveals AB degrees that may be relevant to other states, including Oregon (see Table 7).

Table 8. State Adopters, Sample of CCB/AB Programs, and Degree Types

State	Sample CCB/AB Programs	Degree Type
Florida	Nursing	Bachelor of Science
	Aerospace Sciences	Bachelor of Science
	Cyber Security	Bachelor of Applied Science
	Data Analytics	Bachelor of Science
	Data Science Management	Bachelor of Science
	Elementary Education	Bachelor of Science
	Hospitality and Ecotourism	Bachelor of Science
	Information Systems Technology	Bachelor of Applied Science
	Accounting	Bachelor of Science
	Supervision and Management	Bachelor of Applied Science
	Arts and Entertainment Technology	Bachelor of Science
	Early Childhood Education	Bachelor of Science
	Elementary Education	Bachelor of Science
Washington	Applied Management	Bachelor of Applied Science
	Information Technology (e.g., networking admin, systems software)	Bachelor of Applied Science
	Nursing	Bachelor of Applied Science
	Dental Hygiene	Bachelor of Applied Science
	Funeral Science Education	Bachelor of Applied Science
	Health professions, health informatics and management	Bachelor of Applied Science
	Cyber Security	Bachelor of Applied Science
	Teacher Education/Early Childhood Education	Bachelor of Applied Science
	Natural Resource and Conservation	Bachelor of Applied Science
	Computer Science	Bachelor of Science
California	Airframe Manufacturing Technology	<i>Exact degree title is unknown</i>
	Industrial Automation	
	Emergency Services and Allied Health	
	Mortuary Science	
	Equine Industry	
	Dental Hygiene	
	Bio-Manufacturing	
	Respiratory Care	
	Automotive Technology	
	Health Information Management (2)	
	Occupational Studies	
	Interaction Design	

Funding Strategies

While only a modest amount of information appears in the literature about financing new AB degrees, two there state funding strategies are evident that may be relevant to Oregon. First, some states have chosen a

pilot strategy wherein a small number of institutions is selected competitively to start-up CCAB degree programs. Washington state began its CCAB degree programs in this manner, and California is following suit now. In both cases, the colleges selected to run pilots received a 1-time award of \$200-250,000 to initiate and develop AB degree programs. After the programs were developed, it was the college's responsibility to fund implementation and maintenance by generating sufficient tuition and fees to make the program self-sustaining. Some Washington colleges have achieved self-sustaining level by obtaining state approval for numerous AB degree programs. As a consequence, they are able to generate sufficient revenue to hire a full-time AB degree coordinator who is responsible for recruitment and administration for several programs, thus achieving economy of scale.

By contrast, some states have taken the position that there is no state support for CCAB degree programs, so colleges begin their AB degree programs knowing they will be required to maintain fiscal responsibility on their own. Michigan community colleges are quite clear about this funding strategy, as are several states that are seeking state statutory authority at the present time (e.g., Illinois and Missouri). The argument goes that adding upper-division instruction represents relatively small additional cost to overall budget because the facilities and equipment are already secured for the first two years of instruction. Much of what gets taught in the latter two years is focused on general education that was missing from students' AAS degree programs, and the cost of instruction for this aspect of the college degree is relatively low. One important observation pertaining to these funding arguments is that the funding model used in Washington has prompted institutions to add CCAB degree programs while the self-funding model used in other states has resulted in AB degrees being offered on a more limited scale.

The Illinois Community College President's Council is an important decision-making body that is advocating for state statutory authority to confer BSN degrees in Illinois, and the Illinois Community College Trustees Association is another influential group that is advancing the idea with the state legislature (see Nardulli, 2015, <http://www.communitycolleges.org/baccalaureatefactsheet315.pdf>). In this case, the ICCB is focusing the state assembly on one AB degree only, the BSN, arguing that the labor market information is strongest for this degree program and attempting to avoid challenges from universities about over-reach of degree conferral authority.

Student Cost

Similar to funding strategies, there appears to be two distinct thoughts on the cost of CCAB degrees. Some states do not differentiate lower-division cost for tuition and fees from upper-division, at least not significantly, resulting in the cost of CCAB degrees equaling four years of full-time study at the annual rate of the two-year institution. In this case, the argument is made that the baccalaureate degree represents a low-cost bachelor's degree that should be highly accessible to underserved populations therefore the degree should not cost substantially more than the accumulated cost of two-year tuition and fees over four years. Michigan is a state that has not set specific tuition rates and kept tuition and fees relatively low by enabling community college to set tuition and fees locally. The argument is made that local institutions invest in these degrees and take on the risk of their success, so they should be responsible for tuition and fees. While some colleges in Michigan do apply differential tuition to account for the added expense of the upper-division technical instruction associated with the CCAB degree, the intention of the colleges is to offer these programs as inexpensively for the student as possible, according to personnel employed by the state community college association.

Looking at a different funding model, Washington suggests community colleges set tuition and fees at approximately the same level as regional university tuition and fees. The rationale for this approach is that the CCAB degrees should not undercut the regional universities on student cost, thereby avoiding the creation of what could appear to be an unfair advantage for community colleges. Washington state officials argue this approach does generate sufficient revenue to sustain the programs but does so without penalizing

the students unduly. Thus, the sizeable increase in tuition and fees from the lower- to upper-division (e.g., from \$3,852 for a lower-division academic year to \$6,178 for an upper-division academic year) is not thought to deter students from continuing their studies to the baccalaureate level.

- 4. What are the success rates of students in CCB/AB programs in terms of:**
 - a. Enrollment and graduation rates?**
 - b. Employment in CCB/AB degree-related occupations?**
 - c. Graduate school enrollment?**

As noted previously, there is very limited evidence of the impact of AB degrees, particularly CCAB degrees, on student outcomes. Thus, national studies conducted by this consultant are reviewed, with reference to other studies including dissertations, when possible. To this end, Soler and Bragg (2015) reviewed the literature on the outcomes of AB degree programs as part of their development of a report on evaluation of AB degree programs. Whereas the literature on AB outcomes is scarce, there are a few studies of AB program outcomes that are relevant to this report.

For example, student outcomes associated with AB degrees were evaluated in Washington and Florida, the two states mentioned frequently in this report as ones that are implementing CCAB degrees at scale, or nearly so. In Washington, an evaluation was conducted on 35 AB programs offered in 15 colleges in 2014-15 (Kaikkonen, 2015a). This study reported a target of 1,400 AB degree graduates by 2030, and projected the number of AB degree programs to grow substantially over this time. To obtain these figures, researchers employed by the Washington SCTCB used data from state datasets to analyze and report enrollments and outcomes. As such, Kaikkonen reported 1403 students enrolled in AB degree programs in 2014-15, accounting for a full-time equivalency (FTE) of 947. Nearly 250 students graduated from these CCAB degree programs, with an 81% fall-to-spring graduation or retention rate. This rate has increased since the start of CCAB degree programs in Washington, which was attributed to the growth in full-time participants. The WA results also provided a breakdown of outcomes by student subgroup, allowing the state to determine whether the number of minority students was rising in CCAB degree programs, a finding that the data do confirm.

Researchers of the Washington SBCTC also evaluated post employment outcomes to assess earnings differences between CCAB degree graduates and the graduates of AAS degree programs for which CCAB graduates completed but did not pursue the baccalaureate (see Kaikkonen, 2015b). This study asked whether having a CCAB degree results in higher earnings than having the AAS degree alone, whether the return to investment in earnings differs by field of study, and whether the target populations for CCAB degrees, including historically underserved students, experience the same earnings benefits from CCAB degrees as majority students. The evaluation computed post program earnings differences for graduates of AAS degree programs who sought employment compared to graduates of similar AAS programs who obtained a CCAB degree before obtaining employment. The final sample consisted of 281 AB graduates, with a 84% match rate on unemployment insurance wage records within three quarters following graduation, and 1,771 associate's degree graduates, with a 74% employment record match rate within three quarters of graduation. Results show the impact of CCAB degrees relative to AAS degrees on earnings by program of study, after controlling for student characteristics. In all but two programs the differences were statistically significant. The wage difference ranged from \$3,682 in one college's management program to a high of \$26,787 for one college's radiology program. The analysis showed the difference in wages by demographics, mostly gender. For example, in the case of the radiology graduates, males earned significantly more than females. Kaikkonen (2015a) also reported "no significant differences in earnings for students of color... [suggesting that] the target populations for applied baccalaureate degrees are benefitting from this level of education in the same way as their peers" p. 14).

In Florida, evaluation of the impact of AB degrees has focused on enrollment and demographic trends guided by two policy questions: 1) Are Community College Baccalaureates fulfilling their stated policy goals of increasing access to Bachelor's Degrees in Florida, or are enrollments from the State Universities simply being redistributed?, and 2) Are CCB programs serving the same student population as state universities, or are they expanding access by attracting students with different demographic characteristics (Bilsky, 2014)? These two evaluation questions are important because both have policy implications for higher education in Florida and also in other states. If Florida's stated legislative policy relative to AB degrees intends to expand access to baccalaureate degree programs through the use of the Florida College System (FCS) without affecting enrollment trends at the university system, then addressing this policy question is important. To answer the first question the state analyzed enrollment trends by program type (AA, AAS/AS, certificate, and baccalaureate) as well as enrollment at the FCS relative to state university system. According to Bilsky (2014), an evaluation that examined this question suggested that, after implementation of CCBs in 2002, upper-division enrollments at the Florida State University System increased by 55%, even in disciplines that potentially experienced duplication. Of approximately 355,000 students enrolled in the FCS, approximately 25,000 were enrolled in CCAB degree programs (Cunningham, n.d.), and approximately 5,000 students completed these degree programs (Hammer, 2016). Data reported by Cunningham of the Florida Department of Education suggest a high rate of success in matriculating to graduate education and employment. From 8% to 22% of Florida colleges continued their education and from 66% to 87% obtained employment. The estimated average salary of graduates who were employed full-time ranged from \$40,244 to \$61,604 representing a wide range that undoubtedly reflects different occupational foci. The wage range is also impacted by gender as female-dominated occupations also tend to have lower wages than male-dominated ones.

Whereas more research is needed, these results suggest the potential for positive employment outcomes for CCAB graduates although the results are modest and preliminary as even the states of Florida and Washington have not been engaged in implementation for a lengthy amount of time. If CCAB degree programs grow, more research and evaluation is needed to offer more definitive evidence of impact on student outcomes. All evaluation also needs to inform CCAB policy-making, to improve CCAB degree programs, and to promote program outreach and impact.

Recommendations

This report has provided a substantial amount of information about AB implementation throughout the country, with substantial documentation from Florida and Washington because of their extensive efforts to scale CCAB degree programs statewide. However, several other states that engage in CCAB on a more limited basis, such as Michigan and Texas, were reviewed, as were states that are pursuing state statutory support currently, including Illinois and Missouri.

In states that have developed CCAB degree programs, including Florida and Washington that have scaled these degrees on a fairly large scale as well as new adopting states such as California, the pursuit of CCAB degrees is a multi-year implementation process that is preceded by considerable time devoted to research to document the way to approach initial efforts (e.g., pilot versus statewide roll-out) as well as implementation over time. Getting the focus and pace of implementation right is important, particularly in times when higher education financing is constrained.

Also, in a state like Oregon where geography plays a major role in higher education delivery, it is important to consider student access relative to higher education degree programs and employment opportunities. This may ultimately provide the strongest case for CCAB degrees, if research demonstrates a need but it also raises the question of resources. If the CCAB program is a priority, are there sufficient resources to ensure all community colleges get a chance to pilot and implement these degrees? If the funding of CCAB degrees is determined to be local (without state support), will community colleges across the state – some of which

are located in remote areas – have resources to develop and offer the degrees? It is possible that community colleges located a long distance from urban areas have the greatest need to serve adults who have little chance to attend baccalaureate programs but the most limited resources to do so. This is the downside of a self-sustaining model in that those institutions with greater resources may be the best positioned to offer the degrees but not necessarily in the neediest locations, given geography often plays a role in baccalaureate degree enrollment for place bound adult students. This financial picture is also complex because decisions about CCAB degrees may impact higher education in ways unanticipated at the start. Anticipating the many ways higher education may be affected by this policy change requires state and local experts who know the state best and who can weigh the cost and benefit.

Finally, it is important to consider transfer and articulation policies that may be impacted by state authorization for CCAB degrees. In states that have implemented CCAB degree policies and programs on a larger scale, efforts to build collaboration rather than competition have boosted the success of implementation. The requirement of states to allow universities the “right of refusal” on the basis of program need (e.g., program duplication, viable enrollment) has been instrumental to implementing and growing CCAB degree programs without overly straining relationships among higher education institutions, though negotiations are always needed to ensure that new CCAB programs are viable. This is important because, whereas CCAB degrees may benefit some students, the preponderance of college students will continue to seek baccalaureates through existing degree pathways, including transfer from community colleges to universities. Knowing this, it is critical to keep the larger higher education ecosystem in mind when CCAB degrees are being contemplated at the state and local levels.

Taking into account all aspects of the information gathered, **this consultant recommends that the state of Oregon engage in additional research and policy analysis before launching state legislation on AB degrees at the community college level.** This recommendation reflects a concern that the problem for which CCAB degrees is predicated is not yet as clearly defined as it needs to be to generate support needed for a successful state launch. Limited information is available regarding supply and demand for these degrees, although the case for baccalaureate degrees may be evident in particular geographic areas or specific programs of study.

Given this perspective, the question arises as to when the need for CCAB degrees justifies a change in state statute pertaining to the baccalaureate degree conferral authority of community colleges, and this question requires a thoughtful, democratic response. To address this question, this consultant recommends creating a strategy that ensures as much definitive evidence as possible is gathered to show that CCAB degrees address workforce needs that cannot be filled through other existing baccalaureate programs. Also important is gathering testimonials of support from employers who are willing to advocate for state legislation, including committing to hiring CCAB graduates who will secure family living-wages jobs in the occupational fields for which they are trained. Joining these stakeholders into a coalition that optimally also includes higher education institutions (two- and four-year) is important to generating the support of the state legislature and ultimately to the success of the initiative.

References Available Upon Request

Appendix A

Florida:

- BAS Task Force (2006)
- Florida College System – Two-year colleges remove “community” and “junior” in names
- Approximately 150 programs “tailored to meet specific local and regional workforce needs”
- Selected Guiding Principles:
 - Students apply for baccalaureate degree-level (to protect open access at entry level)
 - Colleges complete the *Annual Baccalaureate Performance Accountability Report*, including graduate survey and employer survey

Washington:

- 2005 – pilot status (3 community colleges), 2010 regular status, and 2012 State Board approval
- Regional university tuition rate: 2-year (\$4,000 for 3 quarters), 4-year (\$6,000 for 3 quarters)
- Criteria:
 - Employer demand and regional skills gap (program accreditation requirements considered)
 - Unmet need by other providers in region
 - Qualified faculty
 - Curriculum review by similar university program
 - Universities have “right of refusal”
- 2016-17: 19 (of 34) colleges - 45 programs
- 2017-18: 27 colleges - 75 programs
- 2015-16: 1,543 FTEs enrolled, 2,155 Headcount enrollees, 474 Completions
- Average 40-50 students per program
- AB degree enrollments are 0.7% of total enrollments in college system

Texas:

- 2003 – State legislation allowing 3 community colleges to confer baccalaureate degrees in up to 5 programs of study. Institutions began enrolling students in 2005
 - Brazosport College – Management of Operation/Production Technicians
 - Midland College – Organizational Management
 - South Texas College – Computer and Information Sciences, Technology Management, Medical and Health Services Management, and Organizational Leadership
- \$400-600K start-up cost per college
- Tuition cost for upper division is 1/2 to 2/3 the cost of state university tuition
- Guiding Principles for AB degree program approval:
 - Meet unmet workforce needs
 - The state and students should realize benefits from any new program
 - Any policies limiting the scope of community college bachelor’s degrees should seek to address concerns such as mission creep and duplication of efforts without unnecessarily limiting benefits such as student access to expanded programs
 - Policies should compliment and promote investments in other pathways, particularly university-community college partnerships
 - Decisions about policy should consider costs

California:

- 2015 – 15 districts establish pilots in baccalaureate programs at one of their colleges in a field not offered by CSU or U of C
- Goal: “Assist the state in meeting the need for individuals in high demand technical disciplines which are increasingly requiring baccalaureate degrees and to increase college participation rates and improve workforce training opportunities for local residents who are unable to relocate because of family or work commitments”

- Lower division cost = \$46; upper division cost <\$84
- See SB 850 (Block) of 2014 below for information on this state's pilot strategy.

Michigan:

- 2004 – Community college baccalaureate conversation began
- 2012 – State legislature passed authorizing bill for:
 - Marine Technology
 - Concrete Technology
 - Energy Production
 - Culinary Arts
 - Nursing (initially included then dropped)
- No state funding for community colleges to pilot or implement programs
- Differential tuition by program areas but set no lower and upper tuition

States Deliberating on AB Degrees (Illinois, Missouri, North Carolina & Ohio):

- State legislation drafted and hearings occurring now
- Re-setting the college degree equilibrium – “quid pro quo”
- Focus on specific programs of study, especially Nursing
- Emphasis on demonstrated workforce needs – rigorous program approval processes
- Change in licensure requirements means state adoption for community colleges (Missouri)
- Universities are unresponsive to workforce needs
- Demonstrated partnership between community college and universities