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Trey Miller

Prepared for
the Texas
Higher Education
Coordinating Board

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EXECUTIVE SUMMARY

Assessing the Potential to Expand **Community College Baccalaureate Programs** in Texas

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Preface

States are increasingly exploring a greater role for community colleges in baccalaureate-level education. As of 2014, 17 states including Texas allow at least some community colleges to offer bachelor's degrees. Texas currently limits this authority to three community colleges.

On May 22, 2013, the Texas Legislature approved Senate Bill 414 mandating a study to consider further expanding community college baccalaureate degrees in Texas. The College for All Texans Foundation, which works to further the objectives of the Texas Higher Education Coordinating Board (THECB), asked RAND Education, a unit of the RAND Corporation, to partner with the Texas Higher Education Policy Initiative (HEPI) to conduct the study.

This study assesses unmet workforce-development needs, particularly those necessitating baccalaureate degrees, in nursing and four applied science occupations: computer and information technology, management of fire sciences, management of production/operations technicians, and health information technology. The report provides evidence to support the THECB and legislators in making policy decisions about whether to expand community college baccalaureate programs in these and other areas. The study also recommends activities and processes that can support the policy that is adopted.

This report was released in draft form for public comment and was revised to respond to the 22 public comments received, as well as two peer technical reviews.

This document is an executive summary of the full report. The full version of the report is available at www.rand.org and at www.thecb.state.tx.us.

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Assessing the Potential to Expand **Community College Baccalaureate Programs** in Texas

Lindsay Daugherty
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Lindsay Butterfield
Trey Miller

Prepared for the Texas Higher Education Coordinating Board

Executive Summary

Like much of the United States, Texas has seen significant expansion in higher education in recent years. Yet many workforce-development needs, particularly those requiring additional baccalaureate degrees, remain unmet in some areas of the state. Employers and students are calling for additional programs to develop workplace skills and to provide opportunities for career advancement. Increasing levels of education also would benefit individuals and society. Baccalaureate-level needs have been served primarily by universities, sometimes in partnership with community colleges, where a large percentage of students complete the first portion of a degree program. Community colleges are particularly important for first-generation college students from low-income families and for older students, many of whom work while enrolled in classes.

In an effort to make higher education more effective in meeting workforce needs, states are exploring whether community colleges might play a greater role in baccalaureate-level education. Supporters argue that community college expansion is necessary to meet local workforce needs and support a robust economy. They also contend that authorizing community colleges to offer baccalaureate programs will expand students' opportunities to improve their knowledge, skills, and abilities, and to attain credentials for career advancement. Yet there is considerable debate over the efficacy of community college baccalaureate expansion. Opponents express doubt that expanded community colleges will continue to fulfill their critical missions of workforce preparation and open enrollment. They also fear that expansion may lead community colleges and universities to compete with each other for students, state funding, and other limited resources.

Should community colleges provide baccalaureate degrees?

On May 22, 2013, the Texas Legislature approved a bill mandating a study on whether community college baccalaureate degree programs should be expanded in Texas. The Texas Higher Education Coordinating Board (THECB) asked the RAND Corporation to partner with the Texas Higher Education Policy Initiative (HEPI) to conduct the study. The study has several objectives, which we list along with the corresponding research questions, in Table S.1.

Table S.1. *Study Objectives and Research Questions*

Study Objective	Research Question
Assess unmet workforce-development needs in nursing and the applied sciences	Are there unmet workforce-development needs for baccalaureate degrees in nursing and four applied science occupational groups in Texas?
Assess the arguments for and against baccalaureate expansion and other information (e.g., costs) to support THECB and legislative policymaking related to community college baccalaureate expansion	Do community colleges provide an appropriate way of meeting unmet workforce-development needs, particularly those requiring greater baccalaureate production in nursing or the applied sciences?
Recommend potential activities to support implementation of any new policies undertaken to expand the community college baccalaureate	If the state determines community college baccalaureate expansion is an appropriate means to meet unmet workforce-development needs, what process should it use to recommend and approve new programs?

Community College Baccalaureate Programs in Texas

Community college baccalaureate programs are not new in Texas. In 2003, the state authorized the three community colleges of Brazosport College, Midland College, and South Texas College to each offer as many as five baccalaureate programs. The programs had to be approved by the THECB, and the community colleges themselves had to be authorized by their regional accrediting agencies to become baccalaureate-granting institutions. After a two-year approval process, the institutions began enrolling students in fall 2005 in the following Bachelor of Applied Technology programs.

- **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

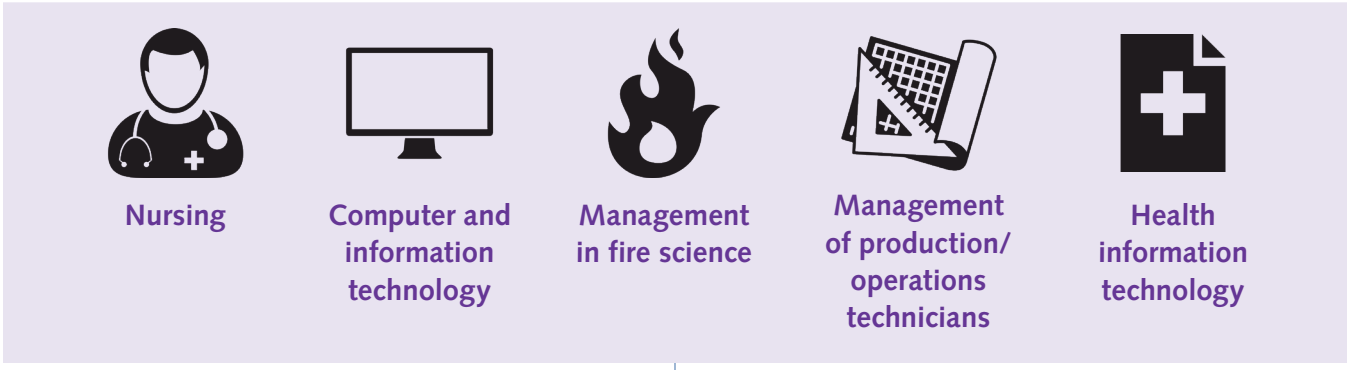
In 2010, the THECB and three external consultants conducted a study (as mandated by the Texas Legislature) and found that each of these community colleges had a strong commitment to the baccalaureate degree and to the quality of its programs. Graduates and their employers seemed satisfied with the education received. Nevertheless, the study also revealed several concerns, particularly about the costs, both startup and ongoing, that institutions incur when they implement baccalaureate degree programs.

Study Methodology

To support the state in determining whether community college baccalaureate offerings should be expanded, we first needed to ascertain whether Texas has unmet workforce needs that such programs could address. Based on input from the presidents and provosts of all Texas community colleges, we elected to focus our study on five fields (Figure S.1): nursing and four applied science fields:

- Computer and information technology
- Management in fire sciences
- Management of production/operations technicians
- Health information technology

Figure S.1. *The Five Degree Fields of Focus*



We also elected to focus on four distinct regions of Texas, which were chosen to represent the state's range of policy and workforce environments. We identified two regions with large urban centers and two regions that represent rural or otherwise distinct regions, and we conducted more detailed, deep-dive analyses within them. These regions (Figure S.2) are:

- the Dallas–Fort Worth region;
- the Gulf Coast region, including Houston and surrounding areas;
- the region of South Texas stretching from Laredo to Brownsville; and
- the West Central Texas region surrounding Abilene.

We visited the four regions in January and February 2014, spending one week in each to speak with a wide variety of stakeholders. We interviewed more than 300 people in total, including employers as well as institutional leaders and departmental experts at universities and community colleges (Table S.2). We also conducted literature reviews and surveys and analyzed quantitative data from the Texas Workforce Commission, the American Community Survey, the Texas Department of State Health Services, the Integrated Postsecondary Education Data System, the College Board, and other sources.

Figure S.2. *The Four "Deep-Dive" Regions*

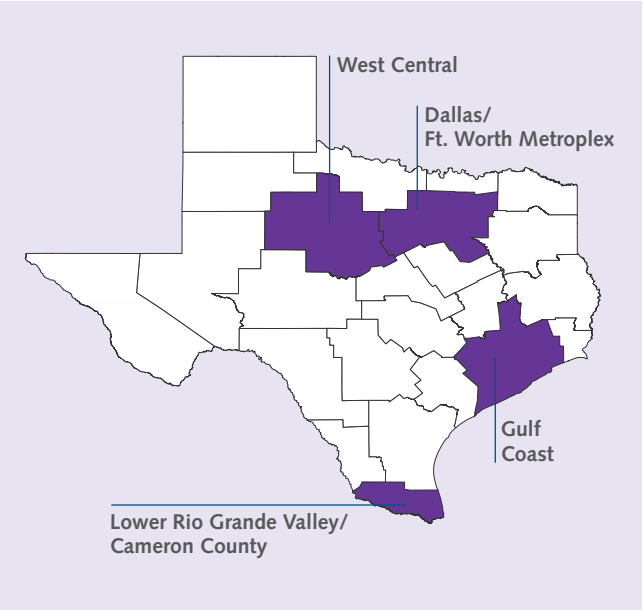


Table S.2. *Number of Stakeholders Interviewed for the Study, by Affiliation and Location*

Stakeholder Group	Organizations	Participants
Two-year colleges	13	231
Public universities	14	60
Private universities	2	2
Employers	25	25
Other labor market and professional experts	8	8
Accreditation agencies	1	1
Other states	4	11
Total	**67**	**332**

Given the time and resources available for the study, we faced a number of limitations. In assessing unmet workforce-development needs, we looked closely at several indicators of supply and demand, but we did not conduct a full assessment of shortages. RAND and HEPI are currently working on a study, also mandated by the Texas Legislature, to develop a workforce model to improve the ability of the state to identify the occupations with the greatest unmet needs. To assess unmet workforce-development needs, we considered:

- Do positions with unmet needs require a baccalaureate degree?
- What is the level of demand for candidates with baccalaureate degrees?
- What are the current sources and supply levels of candidates with baccalaureate degrees?

Although we spoke with a large number of stakeholders in our interviews and focus groups, we were unable to capture the perspectives of many more people inside and outside of Texas. Our analysis focused on just four regions of Texas, and there are likely to be some issues not raised here that are important elsewhere in Texas. Finally, we note there is limited objective evidence regarding many of the potential benefits and concerns related to community college baccalaureates, so we relied heavily on stakeholder perspectives.

Findings on Unmet Workforce Development Needs

Our analysis identified a number of workforce-development issues.

Nursing. Texas, like many other states, is facing serious nursing shortages. The 2010 recommendation of the Institute of Medicine that 80 percent of registered nurses (RNs) hold a Bachelor of Science in Nursing degree (BSN) has placed particular pressure on the demand for baccalaureate-degreed nurses. The demand for BSN nurses is particularly strong in urban areas, where the focus on meeting the 80 percent target is the greatest. Even maintaining the state's current 50 percent proportion of registered nurses holding BSN degrees will require that colleges continue to graduate 4,800 degree-holders each year. Increasing that proportion to 80 percent will require a substantial expansion of BSN programs.

Computer and information technology. Computer and information technology occupations increasingly demand knowledge, skills, and attributes beyond what can be provided in a 60-credit hour associate degree program, although associate degrees and advanced certificates still provide a common means of entry to these high-demand occupations. Compared with the level of demand, there are few information technology programs targeted at developing applied skills at universities, and traditional computer science programs do not focus on the applied skills needed in these occupations. Student demand, however, appears to be low, which presents a barrier to higher production. It is essential that any new programs address the pipeline issue.

Management in fire sciences. Management positions in fire sciences occupations—the supervision of firefighting and fire prevention—increasingly require candidates to hold bachelor's degrees, but Texas currently has no specific programs in the management of fire sciences. The Bachelor of Applied Arts and Sciences (BAAS) programs that are offered at universities might be able to meet these needs if universities offer a few industry-specific courses, but those courses may not provide the level of fire sciences proficiency that employers seek. A modest demand for baccalaureate degrees in fire sciences is spread around the state, so programs would need to draw from students statewide, likely through distance learning. A key limitation to sustaining or expanding programs is that working firefighters, who will generate the demand for these programs, are exempt from paying tuition for such courses.

Management of production/operations technicians. Those who manage production/operations technicians typically progress through their careers after earning an associate degree. For these technicians to move into management positions, some employers require baccalaureate-level education in leadership and business. The modest demand for these occupations is concentrated in specific regions, especially the Gulf Coast, and in specific industries or by large employers. Similar to fire sciences, BAAS programs at universities may be able to meet these needs but may not be able to provide the level of industry-specific proficiency that employers prefer. Baccalaureate-granting community colleges and a few of the regional universities offer more targeted programs that also can meet this need.

Health information technology. Health information technology accounts for several different occupations, including medical records coding, health information system design, and health information management. Medical records coding positions are unlikely to require education beyond the associate level. Occupations in the design of health information systems and system management typically require a graduate degree. The increasing use of information technology is driving new demands, but it is not clear that these changes will necessarily lead to new demand at the baccalaureate level. Employers and some community college stakeholders noted a preference for students entering graduate education in health information technology to hold degrees in nursing or information technology. In short, new baccalaureate programs in health information technology do not appear to be needed.

Potential Benefits of Community College Baccalaureate Expansion

Texas could realize a range of potential benefits from expanding community college baccalaureate programs. We identified the benefits described below from both the literature and our interviews.

The ability to help meet workforce needs. Community colleges may be well suited to meet local workforce needs because of their connections with employers, their flexibility in creating and modifying programs, and the geographic mobility patterns of their graduates. We found that, compared with universities, community colleges generally have a stronger connection with employers and a greater demonstrated willingness to work with employers to create programs that directly meet a workforce need. Some regional universities have placed an emphasis on workforce relationships and applied program development, but most universities have not made this a priority to the degree that most community colleges have. Community college stakeholders argue that because they attract working adults, their baccalaureate graduates may be more likely to remain in the region and help meet local workforce needs, but increased degree attainment also could motivate graduates to migrate to areas with high demand.

Community colleges could help meet workforce needs in applied fields and expand access to baccalaureate-level education.

The potential for increased student access and degree attainment. There are several reasons why community colleges may appeal to students who otherwise would not pursue a baccalaureate degree: their lower cost relative to universities, their flexibility in course scheduling and delivery, their open-enrollment policies, and the ability for students to make a seamless transition from an associate program to a bachelor's program within the same institution. We found that, compared with universities, community colleges serve a more diverse, nontraditional student population and, therefore, may attract students who otherwise might not pursue a baccalaureate-level education. Evidence from Washington and Florida suggests that community college baccalaureate programs have continued to attract students who are distinct from university baccalaureate enrollees. The evidence suggests that if Texas community colleges implement baccalaureate programs on a larger scale the community colleges would likely continue to offer low costs, flexible scheduling, and seamless transitions. Although community colleges offer open enrollment in their two-year programs, they may choose to establish more restrictive enrollment policies for baccalaureate programs. We note that the increased access provided by community colleges may differ by field and region.

Greater experience with applied education. Applied education encompasses certificate, associate, and bachelor's degrees in applied technical or vocational fields. Such education is contextualized within specific occupations and is primarily targeted toward preparation for employment. Community colleges may have more expertise than universities in delivering applied education. The baccalaureate programs of community colleges often build directly on associate-level programs and require a clear understanding of workforce needs. The advantage of community colleges in applied education, however, may be weaker in the field of nursing, where many universities offer programs.

A small, supportive environment for students. Particularly in small, specialized programs such as the potential baccalaureate programs, community colleges (and some universities) typically offer students small class sizes and close interactions with instructors and other students. These close interactions can be a source of student support. Because academic counseling departments at both community colleges and universities are severely understaffed, meeting student needs is a challenge at all types of institutions. While there is variation in size across both community colleges and universities, the smaller average class and cohort size in community colleges, particularly in the baccalaureate programs, could help to support students' needs.

Concerns About Community College Baccalaureate Expansion

Many stakeholders we spoke with in Texas contended that benefits of community college baccalaureate expansion would be outweighed by concerns associated with these programs and their potential negative effects on the higher education system. We identified the concerns described below from both the literature and our interviews.

Mission creep at community colleges. Mission creep was the most commonly cited concern. Many stakeholders fear that community college baccalaureate expansion would shift focus away from certificate and associate degree programs, increase costs for all students, and threaten some open-enrollment policies. The evidence for mission creep is mixed. Although there has been rapid growth of community college baccalaureate programs in Florida and Washington, these programs continue to account for a very small portion of community college enrollment in these states. Additional research and monitoring are needed to determine whether mission creep will lead to long-term problems for Texas higher education. Evidence does not support fears that expansion of community college baccalaureate programs will affect tuition costs across most institutions, even though one of the baccalaureate-granting community colleges in Texas has seen a large increase in tuition costs relative to other institutions in the state. Community colleges are unlikely to retain open-enrollment policies for baccalaureate programs, but this may not necessarily be related to mission creep as much as to higher admissions standards necessary to ensure that students are prepared for baccalaureate-level education.

Counterproductive competition between universities and community colleges. Specific concerns involved competition between universities and community colleges to attract upper-division students, faculty, and other limited resources; competition for state funding; and damage to existing university–community college partnerships. The degree of competition is likely to vary substantially by field and region. Duplication concerns are particularly strong in fields such as nursing, where universities offer programs. The recent expansion of RN-to-BSN programs in universities, combined with the challenges that university programs face in recruiting qualified faculty, suggests that community college programs may ultimately compete with universities for students. This situation also suggests that introducing nursing programs into community colleges might exacerbate faculty shortages to a greater degree than would university expansion. In computer and information technology, there may be competition for a limited supply of students. In

other applied sciences, the level of competition may vary by region. In the areas where regional universities have been proactive about meeting needs, competition from community colleges may damage existing programs, but in other areas of the state, it is clear that needs are being underserved and community college programs would be unlikely to generate counterproductive competition.

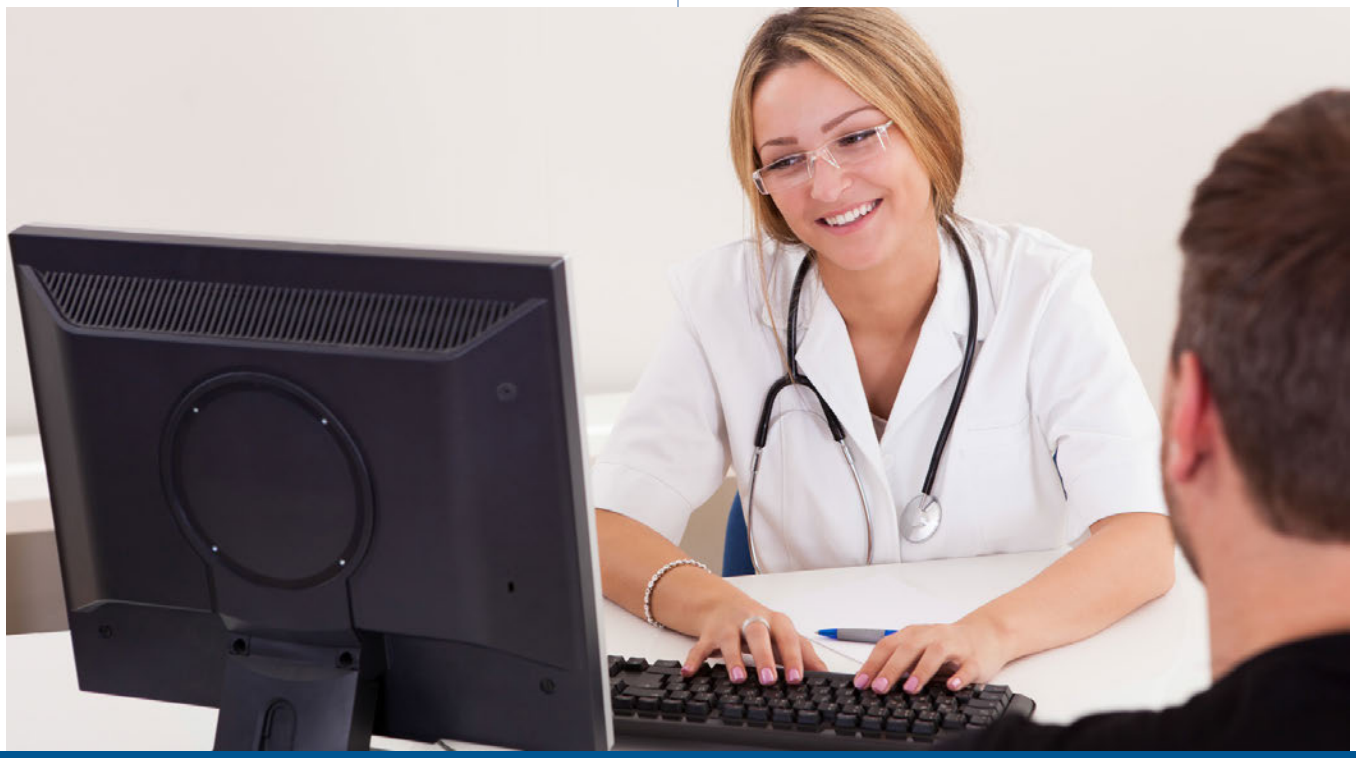
Potential benefits of community college baccalaureate programs may be outweighed by concerns about mission creep, counterproductive competition, and quality.

A decline in the overall quality of the Texas baccalaureate. Specific concerns about the ability of community colleges to produce baccalaureate degrees of equivalent value to those offered at universities have two sources. First, some note the challenges community colleges may face in providing the liberal arts courses required for baccalaureate degrees. Second, some question whether employers and graduate programs would accept community college–conferred baccalaureates. (We found little evidence among employers and graduate programs to support the latter concern.) In occupations that demand the knowledge, skills, and abilities associated with a broad liberal arts education, community colleges may not be able to match the quality provided by universities. Nevertheless, as previously noted, community colleges may have an advantage over universities in serving occupations that demand applied skills

Ongoing Efforts to Meet Workforce Needs

In addition to considering the benefits and concerns associated with community college baccalaureate programs, decisionmakers also must consider other options to meet workforce needs and the ways in which community college baccalaureate expansion might complement or compete with them. Many universities and community colleges are currently partnering to improve students' access to bachelor's degrees by establishing articulation agreements, implementing simultaneous enrollment programs, or offering upper-division university courses at community college campuses or regional higher education centers.

Stakeholders thought it was vital that any new policy not undermine these ongoing efforts. They also argued that new community college programs should be developed, particularly when existing pathways fail to meet workforce needs.



Costs and Funding

In evaluating options, decisionmakers must consider both the cost of various options for expanding baccalaureate production and the allocation of those costs across different funding sources. Stakeholders disagreed on the relative costs of options, with both community colleges and universities claiming advantages in some situations.

Financial records from two Texas community colleges with experience offering bachelor's degrees indicate that these colleges have been able to cover their identified operating costs from tuition revenue and state reimbursement. The colleges did experience significant startup costs both for institutional upgrades to meet accreditation requirements and for normal program startup costs until a full complement of students enrolled. The state provided each college with $1.2 million in special funding, which appears to have covered the startup costs at the two colleges we reviewed. Startup costs for future programs are expected to be lower because there will be no, or low, institutional costs.

Although community colleges have set upper-division tuition above the lower-division rate, it remains only one-half to two-thirds the cost of state university tuition. Thus, community colleges have been more affordable for students. To date, community colleges have been receiving the same state reimbursement for upper-division courses that universities receive. If the state lowers that reimbursement rate in the future, students or local taxpayers could face increased costs.

Our analysis did not examine the indirect costs for facilities and central administration that growing baccalaureate programs may require (and, indeed, at least one college now has built facilities with local funding). More detailed analysis of the full costs of expansion, including indirect costs, is needed to ensure that expansion of baccalaureate programs occurs at the institutions that can meet workforce needs most efficiently.

Policy Options for Community College Baccalaureate Expansion

Essentially, Texas has three major policy options to consider:

1. Make no significant policy changes.
2. Authorize community college baccalaureate expansion without special restrictions beyond those imposed by accreditation standards and THECB program approval.
3. Authorize community college baccalaureate expansion with restrictions.

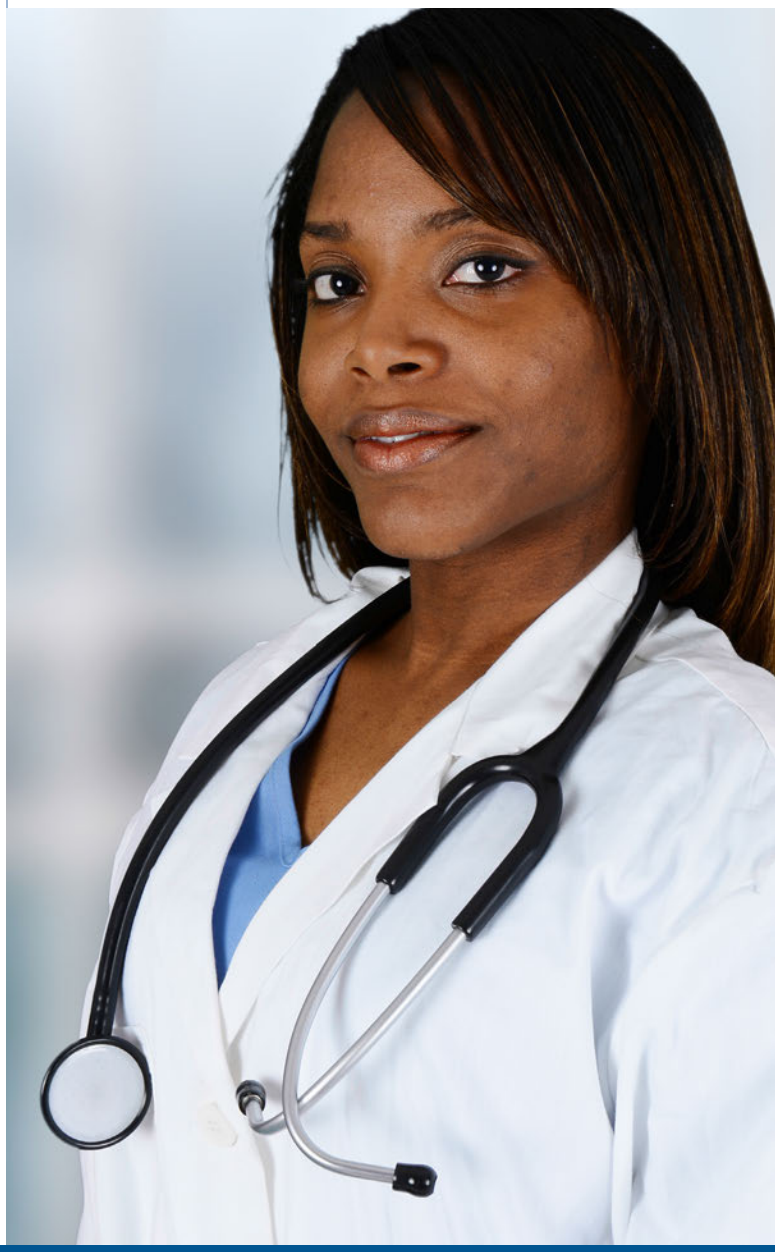
Although there was substantial disagreement among stakeholders about the best path forward for Texas, we found consensus around six general principles that should guide the selection of policy options related to community college baccalaureates:

1. Meeting unmet workforce needs should be a priority.
2. The state and students should realize some benefits from any new program.
3. 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.
4. Policies should complement and promote investments in other pathways, particularly university–community college partnerships.
5. Decisions about policy should consider costs.
6. Policies should be fair and transparent.

Authorizing community college baccalaureate expansion within specified limits would strike a balance between potential benefits and concerns. Some possible policies might:

- limit the scope of provision statewide by setting restrictions on fields or degree types, or on the number of programs offered by each community college;
- limit the scope of provision regionally by allowing universities the opportunity to develop programs first or requiring increased evidence of need when programs overlap;
- require additional planning or monitoring by limiting the number of community colleges initially authorized to offer baccalaureate programs, requiring self-studies for all proposals, or conducting follow-up studies to monitor quality and mission creep; or
- change financial arrangements by limiting reimbursement rates or changing the source of funding.

Any decision regarding community college baccalaureate expansion will necessarily involve difficult tradeoffs, balancing the potential benefits of expansion with the concerns that expansion raises.



Recommendations for Processes and Supporting Activities

In the course of our research, we identified a number of supporting activities that the state could pursue to address some concerns about mission creep, counterproductive competition, and threats to quality. Some of these activities would be valuable even without expansion of community college baccalaureate programs; others would be appropriate only if expansion occurs.

Clarify different degree types. Texas currently has three different types of applied baccalaureate degrees, and there is confusion about the distinctions between different degree types. As the applied baccalaureate expands in the state of Texas, students and employers would benefit from a well-defined set of degree types and a clear understanding of the student and workforce needs that are met by a degree to ensure some consistency and transparency across programs.

Clearly define fields of study. The legislature has suggested community colleges focus on the applied sciences, yet there is no clear definition of applied science fields. If community colleges are authorized to propose baccalaureate degrees in the applied sciences, it is essential that a clear definition of each field be adopted to guide all parties.

Continue to use THECB criteria for program approval. Most stakeholders agreed that the criteria for program approval should be the same for universities and community colleges, but university stakeholders also argued for restrictions on the types of programs that community colleges can offer. Community college stakeholders asked that the process for program approval be transparent and that the criteria for program approval be applied fairly.

Coordinate proposals across institutions when demand is limited or resources are constrained. When student demand is limited across the state, or there are resources that could be seriously strained by approving too many programs, comparing proposals from all interested institutions can identify the best approach.

Provide guidance and mentoring to community colleges. The three existing Texas community colleges that confer baccalaureate degrees can be valuable guides for future colleges; future colleges also can support each other through networking and mentoring arrangements.

Conduct more empirical analyses. More detailed analysis of costs, outcomes, and mission creep would be very valuable in understanding the tradeoffs Texas faces and in improving decisionmaking in the future.

Conclusion

Our review of evidence from Texas and other states highlighted a number of benefits that community college baccalaureate programs could offer but also raised several concerns.

We found a range of situations across the five specific occupations we examined, with some occupations experiencing major shortages of workers that community colleges might be able to address and others in which there is either no clear shortage or no clear need for an industry-specific bachelor's degree.

The state has three broad options related to community college baccalaureate programs:

1. It can rely on the existing arrangements with no new community colleges authorized to add baccalaureate programs.
2. It can expand the number of community colleges authorized to add baccalaureate programs without any restrictions other than those imposed by the existing requirements to receive regional accreditation and THECB program approval.
3. It can expand authorization of baccalaureate programs under some specific limitations, which could address the concerns raised by expansion but also might limit the benefits of expansion.

These policy choices necessarily involve difficult tradeoffs.

Acknowledgments

This report was produced in collaboration with the Texas Higher Education Policy Initiative (HEPI) of Texas Higher Education Coordinating Board. HEPI is funded by a generous grant from Houston Endowment to ensure that policymakers have access to objective research on topical higher education policy issues.

The authors would like to thank the commissioner and staff of the THECB for helpful guidance throughout the research process, with particular acknowledgement to Gary Johnstone, Susan Brown, David Gardner, Julie Eklund, Stacey Silverman, Rex Peebles, and Nina Wright. We also thank Paul Turcotte, Ginger Gossman, and Jana Cossairt, who undertook essential analyses of THECB data to support the project.

We appreciate the valuable assistance of staff of the Texas Workforce Commission and a number of business service representatives in the four regions we visited in helping us contact employers for the study. Peter Gawenda also provided a great deal of valuable information.

We also thank RAND colleagues Diana Lavery for expert research assistance and Erin-Elizabeth Johnson and Clifford Grammich for helping us communicate our findings in a clear and engaging way. We greatly appreciate the thoughtful reviews of Tom Bailey, Susan Gates, and Cathy Stasz on the project's briefings and the drafts of this report.

We acknowledge the contributions made by 22 individuals and institutions that responded with thoughtful comments when a draft of this report was released for public comment.

Finally, we thank our interview participants, who numbered more than 300. Although we agreed not to name them or their institutions, we deeply appreciate their cooperation, without which this report would not be possible.

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RR-745/1-CFAT