

An Initial Report of the Select Committee on the Future of Higher Education in Vermont



The National Center for Higher Education Management Systems

December 4, 2020

Executive Summary

In accordance with the requirements of Act 120, the Select Committee on the Future of Higher Education in Vermont submits this interim report due on December 4, 2020, the first of three required by the legislation. Act 120 charged the Select Committee with “addressing the urgent needs of the Vermont State Colleges (VSC) and developing an integrated vision and plan for a high-quality, affordable, and workforce-connected future for higher education in Vermont” and to offer recommendations regarding “the financial sustainability of the VSC system” as judged through the lens of having “impact on institutional capacity to innovate and meet State goals and learners’ needs.”

In keeping with that charge, the Select Committee developed a set of goals to frame the recommendations as follows:

- i. The committee interprets “meeting learner needs” to mean:
 1. Providing access to relevant academic programs in all regions of the state—relevant means programs that prepare students for the world of work and for participating in a democratic society.
 2. Ensuring that these programs are available to students regardless of income, race/ethnicity, parents’ education, age, prior academic experience, or place of residence.
 3. Students are provided the necessary support to ensure that they can succeed in their academic endeavors—they successfully complete their programs of study. Necessary support includes access to broadband and the technology necessary for on-line learning.
 4. Institutions in the VSC System are affordable to all students regardless of their economic circumstances.
- ii. The committee interprets “meeting state needs” to mean:
 1. Fulfilling the state’s workforce development needs—meeting the needs of employers in all sectors of the state’s economy (including the creative economy).
 2. Preparing students for participation in the world of work and in democratic society.
 3. Reducing gaps in educational opportunities available to students of all types and from all communities throughout the state.
 4. Stimulating and supporting the economic and cultural vitality of the state and its communities.
 5. Attracting and retaining talent to a vibrant and growing Vermont economy fueled by an entrepreneurial spirit, creativity, skilled labor, and relevant basic and applied research supplied by thriving VSC institutions.
 6. Being a good steward of public funds and of funds received from tuition payments through efficient academic and administrative operations/functions.

The Select Committee asks the legislature to consider and elevate these goals as strategic objectives that form the basis for policymaking regarding the VSC System and its institutions. In the process, policies considered by the legislature should always be sensitive to differences in institutional missions as approved by the VSC Board.

In order to achieve these objectives, the Steering Committee has agreed on a series of priority recommendations, among them being:

1. **The VSC System should be restructured and its institutions should be assigned clear mission statements**, as follows.
 - a. Maintain the Community College of Vermont (CCV) as a separate institution with a mission to focus on exclusively sub-baccalaureate programming expanded to encompass a greater focus on workforce-relevant education and training and services to adult learners and to employers, including non-credit programming.
 - b. Unify the remaining three VSC institutions under a single leadership structure and accreditation. In the process, ensure that it serves a mission to provide affordable and accessible baccalaureate-level education, limited master's programs in areas where the need for such programs is geographically dispersed (e.g., education, health care), and limited technical sub-baccalaureate programs in partnership with CCV.
 - c. Both institutions should be capable of delivering education to residents in ways that prioritize access and success. This means that students of all types—including working adults, underrepresented and low-income populations, and rural residents—have access to physical campuses, robust online education, and adequate student support services.
 - d. Ensure that the Chancellor's Office retains the capacity to provide for systemwide leadership on academic integration and interinstitutional collaboration; coordinate with other institutions, state agencies, employers, and other key stakeholders; and assure that the benefits of scale across the system are realized.
2. **The VSC System should move aggressively to coordinate administrative service operations.** Although effective delivery of some services will require an on-campus presence, the System needs to develop a standard set of policies and policy enforcement coordinated centrally in order to capture the benefits of scale across the System. This requires thoughtful reorganization of the administrative structure, including reporting relationships, but it does not necessarily require a larger centralized presence as leadership for each service can be managed by personnel with appropriate expertise located at a campus. At a minimum, the VSC System also needs highly professionalized project management expertise to achieve a smooth transformation of administrative service delivery.
3. **The State of Vermont should adopt a strategic approach to how it funds the VSC System.** This approach should start with clear and specific objectives for its investments in the VSC System along the lines as those adopted by the Steering Committee and be accompanied by appropriate measures that help to assure that the state's investments are aimed at achieving those objectives.

More specifically, the problems facing the VSC System that the Select Committee was created to address have roots that span many years, are not caused by the pandemic (though it surely has worsened them), and require a coordinated and comprehensive response. All parties must recognize the seriousness and the need for urgency in working together to address these problems. It is no longer possible for this can to be kicked further down the road, with hopes that the individual institutions and the Chancellor’s Office will come up with cost reductions substantial enough to achieve long-term financial sustainability, without help from the legislature working in partnership with the governor’s office. To be effective, this response must involve additional funding that stimulates the needed transformation, yields reduced costs, and leads to improved affordability for Vermont residents attending public institutions in the state.

These investments will need to be a combination of one-time funding and additional ongoing support. The one-time funding support should be spread over multiple years consistent with a reasonable yet aggressive timeline for the implementation of needed changes. Ongoing additional support is also needed in order to address weakness in student accessibility, success, and affordability at the VSC System and throughout the state, to ensure that the VSC System has the necessary support to serve its recommended expanded mission, and retains the capacity to adapt to meet the evolving needs of students and the state.

Figure 1 and Figure 2 outline the timing and purposes of the needed state investments (in millions). The top section of Figure 1 recognizes the need for the state to cover the extraordinary costs associated with the pandemic, which remain uncertain beyond FY 2022. The remaining deficit after COVID mitigation is an estimate of the structural deficit that the VSC System must close to become minimally fiscally sustainable, which is to be reduced by \$5M annually with the support of state investments described in Figure 2.

Figure 1. Schedule for Reducing VSC’s Structural Deficit

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & Beyond
VSC Total Operating Deficit	45					
COVID Mitigation (Assumes additional fed stimulus)	20	?	?			
Existing VSC Structural Deficit	25	20	15	10	5	0
Reductions in VSC Structural Deficit (Annual)	5	5	5	5	5	
Reductions in VSC Structural Deficit (Cumulative)	5	10	15	20	25	

Figure 2. State Investments in Transformation and Ongoing Support at VSC

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & Beyond
State Investment in Transformation	25	20	17	10	5	
Operational	20	15	15	10	5	
Capital (eliminate underutilized space, renewal/refurbishments)	5	5	2			
State Ongoing Investments in Improved Capacity and Affordability at VSC	17.5	17.5	17.5	17.5	17.5	17.5
Operational	10	10	10	10	10	10
Capital (deferred and major maintenance)	7.5	7.5	7.5	7.5	7.5	7.5
Total Additional State Investments in VSC	42.5	37.5	34.5	27.5	22.5	17.5
Historic VSC State Appropriation	30	30	30	30	30	30
Total State Investments to VSC	72.5	67.5	64.5	57.5	52.5	47.5
Ongoing State Investments in Affordability through VSAC	5	5	5	5	5	5
Total Additional State Investments to VSC & VSAC (Above FY 2020 Levels)	47.5	42.5	39.5	32.5	27.5	22.5

The top section of Figure 2 shows the one-time funds, spread over multiple fiscal years, that will be needed to support the transformation effort at the VSC System. These funds will allow the VSC System to eliminate its structural deficit over the next 4-5 years in a stepwise fashion through reduced costs and enrollment increases among new student populations to be targeted. Operational funding will support the restructuring effort and the aggressive consolidation of administrative services recommended above, while capital funds will enable the System to demolish obsolete and unusable buildings and repurpose others to better support student learning and engagement with employers and the community.

In addition, the VSC System needs additional ongoing state funding to ensure that it has adequate capacity to evolve as needs change, to provide capital support for keeping pace with maintenance requirements, and to begin to address affordability issues that have become serious barriers to student access and success. Finally, while the Steering Committee is still deliberating over recommendations about how to address the state's investments in affordability beyond the need to keep tuition prices in check within the VSC system, it is clear that affordability is an issue that deserves additional attention by the legislature. (More detail concerning these investments is provided in the body of the report.)

If implemented, these recommendations will help usher into existence a re-envisioned VSC System that will be:

- Nimble in response to the needs of students, employers, regions and communities, and the state.
- Accessible—programs will be readily available to all types of students in all parts of the state.
- Ubiquitous—the VSC System will be a resource to residents in all parts of the state.

- Essential—the VSC System will continue to provide essential support to stimulating economic and workforce development for the state and its regions and communities.
- High-quality—transformation will help to smooth educational pathways and improve program relevance and delivery.
- Financially self-sustaining—systemwide scale will yield greater efficiencies in academic delivery and administrative services, while keeping tuition revenue focused on paying for instruction and support costs.

Finally, in addition to these more specific recommendations, the Select Committee is considering others that will be further developed as its work moves forward. This interim report includes some of the thinking concerning these additional areas of focus. Even though more detail, discussion, and engagement with stakeholders are needed before recommendations can be formally put forward, it is timely at this point to signal the need to address at least two significant issues. First, it is widely agreed that affordability for postsecondary education in Vermont has eroded and become an unsustainable barrier to access and success, especially among student populations most in need. The Select Committee is considering the nature of a standardized means of measuring and reporting on Vermonters’ ability to afford a postsecondary education, and strategies for improving affordability.

Second, there may be an opportunity for Vermont to create greater coherence concerning how programs closely related to workforce development are organized and funded by the state. Among those that may be deserving of a fresh approach include the organization and funding of adult basic education and career technical education programs, which is currently dispersed and largely uncoordinated throughout the state, as well as the current array of efforts among state agencies and institutions that aim to promote and support “earn-and-learn” activities like apprenticeships, internships, and work/study.

These additional recommendations are still under development and will be included in subsequent reports required of the Select Committee by Act 120. Similarly, the early work of the Select Committee focused on ensuring that the VCS System can proceed into its future on a sound economic basis, a focus directed by Act 120. Subsequent refinements of this report will focus on the legislative mandate to “develop and integrated vision and plan or a high-quality, affordable, and workforce-connected future for public higher education in Vermont.” Because of the abbreviated amount of time allowed for developing the key set of recommendations contained in this initial report, the lead-in sections of the report are presented in outline form. These sections will be fully developed in the subsequent version of the report.

Introduction

- a. The precipitating conditions for VSC
 - i. Enrollment declines—declining numbers of HS grads
 - ii. History of low state support
 - iii. Increasing reliance on tuition revenues and escalating costs to students—affordability an issue
 - iv. Previous chancellor’s recommendation to close three campuses as a way of balancing the System’s budget
- b. The response of the legislature
 - i. Pushback against the recommendations of the Chancellor
 - ii. Commissioned studies by the State Treasurer and Jim Page
 - 1. Confirm (or not) the fiscal situation as presented by the System
 - 2. Determine the level of “bridge funding” required to keep the System going until a plan for System sustainability could be developed and implemented
 - 3. Allocated \$30 million in supplemental funding to fill the immediate needs for the System
 - iii. Circulated an RFP seeking a consultant to assist the Select Committee in offering recommendations on how to increase affordability for students, access, retention, attainment, relevance, and fiscal sustainability, including the following issues:
 - 1. The financial sustainability of the VSC system and its impact on institutional capacity to innovate and meet State goals and learners’ needs, including a comparison of higher education programs, delivery models, tuition, tuition-reduction ad tuition-free programs, and structures in other states
 - 2. The current organizational structure of the VSC and public higher education in Vermont and its ability to promote student success
 - 3. The alignment of VSC and the public higher education system in Vermont with workforce development goals, policy frameworks, and partnerships between businesses and institutions of higher education that are designed to meet the needs of employers and promote the public value of education
 - 4. Collaboration among Vermont’s public higher education institutions to move Vermont toward increasing affordability for students, access, retention, attainment, relevance, and fiscal sustainability
 - iv. NCHEMS was awarded the contract to conduct this work.

The Work of the Select Committee (SC)

- a. The SC, with assistance from NCHEMS, developed and endorsed a set of guiding principles for a process that was:
 - i. Be data-driven, informed by robust analysis of the current realities facing the state and public institutions.

- ii. Be consultative and inclusive, incorporating input from a broad range of stakeholders.
 - iii. Incorporate insights and recommendations from reviews of the Vermont State College System currently underway and completed in the past.
 - iv. Provide for a respectful—and robust—dialogue about needs and solutions.
 - v. Emphasize the urgent need for change, providing specific proposals for change and innovation.
 - vi. Be action-oriented, providing a detailed plan.
 - vii. Be future-oriented, envisioning the future postsecondary learning needs of the state.
 - viii. Result in a process and a plan that fits the Vermont context, is owned by the SC members, and lays out implementation steps that have a high likelihood of adoption.
- b. More detail about the process
- i. Data analysis—major topics covered—details in an appendix
 - ii. Monthly reviews with the Select Committee
 - iii. Stakeholder reviews—specifics in an appendix
 - iv. Draft report in December, revised report in February, final report in April

The Ends to be Served—State Goals and Student Needs

- a. The charge to the Select Committee states that the Committee should make recommendations regarding “the financial sustainability of the VSC system” as judged through the lens of having “impact on institutional capacity to innovate and meet State goals and learners’ needs.”
- b. The work was framed by agreement about the following goals
- i. The committee interprets “meeting learner needs” to mean:
 1. Providing access to relevant academic programs in all regions of the state—relevant means programs that prepare students for the world of work and for participating in a democratic society.
 2. Ensuring that these programs are available to students regardless of income, race/ethnicity, parents’ education, age, prior academic experience, or place of residence.
 3. Students are provided the necessary support to ensure that they can succeed in their academic endeavors—they successfully complete their programs of study. Necessary support includes access to broadband and the technology necessary for on-line learning.
 4. Institutions in the VSC system are affordable to all students regardless of their economic circumstances.
 - ii. The committee interprets “meeting state needs” to mean:
 1. Fulfilling the state’s workforce development needs—meeting the needs of employers in all sectors of the state’s economy (including the creative economy).

2. Preparing students for participation in the world of work and in democratic society.
 3. Reducing gaps in educational opportunities available to students of all types and from all communities throughout the state.
 4. Stimulating and supporting the economic and cultural vitality of the state and its communities.
 5. Attracting and retaining talent to a vibrant and growing Vermont economy fueled by an entrepreneurial spirit, creativity, skilled labor, and relevant basic and applied research supplied by thriving VSC institutions.
 6. Being a good steward of public funds and of funds received from tuition payments through efficient academic and administrative operations/functions.
- iii. The committee interprets “innovate” to mean:
1. That VSC institutions offer postsecondary educational programs and credentials aligned with the needs of students (of all kinds, including adult and lifelong learners), the business community, and the state.
 2. Adapting/enhancing the ways VSC institutions deliver programs in order to overcome deficiencies in service to students and the state.
 3. Changing how VSC functions—the ways in which it organizes and delivers administrative services and educational programs—in order to ensure its financial viability.
 4. Adjusting state-level policies to ensure that the VSC System is oriented toward serving the needs of students and the state.
- iv. Additionally, the SC anticipates that the final products of its work will (by April 2021):
1. Include an implementation plan that outlines the roles and responsibilities of key parties to a ‘compact’ for public postsecondary education for Vermont.
 2. Establish key metrics for performance, outcomes, funding and accountability—linking performance metrics to each goal in the plan.
 3. Be addressed to the roles that public postsecondary education must play—including not just VSC institutions but also UVM and the state’s adult-focused career/tech education
 4. Ideally position Vermont as a national leader among similarly situated states in addressing the realities facing public postsecondary institutions and systems, particularly those searching for alternatives to circumstances facing public higher education caused by unfavorable demographics, declining enrollment, low state investment, and constraints of legacy systems, etc.

Document review

- a. Reference statement about the expectation for providing postsecondary education “substantially at the state’s expense”
- b. Legislature provides little guidance in enabling statutes nor in appropriations bills
- c. State statute invests nearly all requisite authority in the VSC board, with the exception of closing an institution
- d. By-laws delegate considerable authority to the chancellor
 - i. Resource allocation policy (currently suspended) has flaws, but recent changes to present a consolidated budget is a step in the right direction
 - ii. Policies regarding program array, including evaluation, low-enrolled courses, etc.
- e. Convergence around some principals and some recommendations among multiple groups examining the VSC challenges
 - i. System-ness
 - ii. Calibration of program array to workforce needs

An Overview of the Quantitative Evidence (Data Exhibits in Appendix B)

- a. Findings relative to meeting needs of students
 - i. Numbers of potential students are decreasing and will continue to do so (Figure 2-Figure 4 in Appendix B)
 1. HS graduates
 2. Adults
 - ii. Low participation rates
 1. Recent high school grads (Figure 5)
 2. Adults (Figure 6)
 - iii. Great disparities across the state with regard to
 1. Educational attainment (Figure 7-Figure 10)
 2. Per capita income (Figure 11-Figure 13)
 3. College participation (Figure 14)
 4. Etc.
 - iv. Characteristics of Vermonters who are not participating in PSE (Figure 15-Figure 16)
 - v. Measures of student success
 - vi. Migration patterns—Are graduates finding jobs in VT? (Figure 20-Figure 22)
 - vii. A heavy orientation to baccalaureate programs. Relative lack of workforce-oriented certificate and associate programs.
 - viii. Affordability of VT postsecondary education (Figure 24-Figure 27)
- b. Findings regarding meeting state needs (Figure 28-Figure 31)
 - i. The characteristics of employers in the state
 1. Size of enterprises—Largely small employers
 2. Employment by industry—how it’s changing
 3. Employment by occupation—how it’s changing

4. The unmet workforce needs: Data on open positions and growth occupations
- ii. PSE's contributions to economic development
 1. Higher education as employer—the role in sustaining economies in communities.
 2. Role in fostering economic development
 - a. Entrepreneurship
 - b. Meeting the needs of small employers
 - c. Research spin-offs
 - d. Innovation assets—New Economy Index. (Figure 32-Figure 33)
- iii. Findings regarding financial support
 1. Low levels of state support
 2. Unusually high proportion of support provided by students and families
 3. Heavy and highly variable price discounting by VSC institutions
 4. Affordability to families of different incomes
 5. Saturated/competitive postsecondary marketplace
- iv. What will it take to make VSC economically sustainable? (Figure 36-Figure 38)
 1. Audit data
 2. System data presented to the board
 3. Peer data (Figure 39-Figure 44)
 - Savings/efficiencies in delivery
 - Savings/efficiencies in administrative functions
 - Additional funding
 4. The combination of appropriations/student financial aid—especially investment funds to support necessary changes
 5. Investments in “buying down” costs to students
 6. The need to balance funding of institutions and funding of students

Summary of Comments Gathered During Stakeholder Engagement Activities to Date

- a. Dealing with the problems being faced by public higher education (and VSC in particular) is made more difficult by the reluctance of policymakers to clearly articulate their expectations regarding outcomes sought from higher education, e.g., alignment to workforce needs, connections from cradle to career, improved student success, service to working adults, etc. Lacking that set of objectives, policy and resource allocation decisions made by policymakers are incremental rather than strategic, and their absence also fails to give system and institutional leaders with a clear impetus to act decisively to enact needed changes.
- b. Need to better align programs and practices with student needs around:
 - i. Maintain student affordability; no appetite to impose a greater financial burden on Vermont residents
 - ii. Mobility/transferability of credits

1. Difficulties of transferring credit within the system—easier to transfer credits to private institutions
2. Low limits on credits that can be transferred in
- iii. Cost reductions that can be passed on
- iv. New, flexible delivery modes particularly those that serve the needs of adults
 1. Online programming that is supported with high-quality instructional design and effective coaching
 2. System-wide, flexible academic schedule
 3. Prior learning assessment and incorporation of principles of competency-based education
- i. Access to full array of System programs regardless of where student resides, including at UVM.
- ii. Inclusion of a work experience, e.g., work-based learning activities, internships, apprenticeships, etc., in as many programs as possible, including liberal arts programs
- c. Recognition of the need to calibrate the program array to state needs—especially employers’ and adults:
 - i. More deliberately differentiating missions at VSC member institutions, especially NVU and Castleton. Locus of expertise for programs located on a campus, but programs delivered across the system.
 - ii. Eliminating some programs and combining others across campuses
 - iii. Developing new programs that lead to sub-baccalaureate credentials with better alignment to the needs of employers, as well as adult learners, displaced workers, etc.
 - iv. Need to seek efficiencies in both academic programs and administrative services
 - v. Consideration of complementarity with UVM offerings
 - vi. Acknowledgment that too narrow a view of workforce relevancy is unhelpful. Workforce relevancy is most frequently translated to mean programs that are specifically designed to prepare students for entry into specific occupations. However, the term should be broadened to incorporate the liberal arts recognizing that these programs impart skills that are highly valued in the workplace (communications, problem solving, etc.) and that they also prepare students for a less specific set of occupations; liberal arts graduates find employment in a wide variety of occupations but those ties are hard to document in the absence of data that link education to occupations.
- d. Working with faculty through the assembly and its unions to effect change will be critical, but failure to achieve broad agreement cannot be used as an excuse for not making necessary changes quickly
- e. Need to both adapt and downsize physical space through various means, including the following. Choices about which of these to employ should be deliberate and mission-aligned and not just opportunistic.

- i. Leasing
 - ii. Selling
 - iii. Renovation/repurposing
 - iv. Demolition (in recognition that obsolete buildings have substantial carrying costs that impact operational budgets year after year)
- f. Potential willingness to consider a “grand bargain”
 - i. Chancellor Spaulding’s aborted proposal, together with the reports produced by the State Treasurer and Jim Page, and the conditions created by the pandemic, have elevated alarm over VSC conditions. This combination of conditions has created an environment in which there is at least the possibility of additional funding from the legislature.
 - ii. But any additional state funds will come with strings attached, for example, one-time investments (or a series of them over up to 5 years) provided on the assurance that substantial structural reform will occur
 - iii. As costs are brought down through these structural reforms, any longer-term operational commitments should increasingly go towards improving affordability—the substitution of state funding for tuition revenues through either:
 - 1. Funding to institutions on the condition of reductions to the sticker price.
 - 2. Additional funding for need based student aid.
- g. The need for political will to lead the necessary changes
 - i. Uncertainty regarding locus of that political will.
 - ii. Assumption among stakeholders interviewed to date is that leadership must be provided by the governor working in concert with the legislature, but
 - 1. The governor has not made VSC a priority (though has supported the legislature’s efforts to take the lead and provided an infusion of funds).
 - 2. There has been a perceived lack of clear direction from state policymakers—now and historically—about what specific purposes the VSC institutions should serve.
 - 3. Legislators in key areas defend critical employment centers in their districts, or in other rural areas, and will likely oppose some of the changes necessary to achieve sustainability if not handled adroitly.
 - 4. Lack of guidance from the public and political leadership about the role they want VSC to play/the outcomes they want the system to produce.
 - iii. Perceptions from stakeholders interviewed to date is that the VSC board has not historically taken bold action.
 - iv. Lack of a strong network of large and influential businesses in multiple sectors in Vermont — “pull” from the business community is diffuse and weak, with little tradition of business involvement in education policy discussions
- h. Little to no coordinated economic development strategy at the state level
 - i. Recent efforts by VSC institutions to engage public/private partnerships notwithstanding

- ii. VSC institutions not currently expected to contribute in any obvious way apart from their workforce development missions, and these expectations are focused on CCV and VTC. No obvious expectations regarding
 - 1. Developing new businesses through entrepreneurship
 - 2. Commercialization of UVM research
- iii. No regional strategy
- iv. Uncoordinated workforce development strategy and splintered set of providers (17 adult CTE training centers, 4 independent non-profit ABE providers, CCV and VTC).

Summary Observations

- a. Business as usual is not an option, nor is incremental change to the status quo.
- b. VSC is overbuilt for the size of its current student population—in both personnel and facilities.
- c. In the face of unfavorable demographic trends, right-sizing VSC will require some combination of increasing enrollments among populations not currently being served and reducing the size of the enterprise—both employment and the physical footprint of campuses.
- d. Neither the state’s higher education policies nor institutional practices are designed to meet the needs of underserved populations—adults and low-income students.
- e. Compelling educational and political reasons exist not to close institutions but maintaining existing locations can only be accomplished by implementing substantial changes to institutional missions and functions and sharing across campuses.
- f. VSC institutions’ policies are designed to serve institutional needs, not students’, and create barriers to student enrollment and success.
- g. Vermont lacks a clear, strategic approach for how it provides funding to the VSC System that recognizes the role the System plays in achieving goals related to the needs of students and the state. The legislature and governor will have to more strategically allocate state resources to the VSC System, and to postsecondary education more generally, and in the process provide appropriate direction and incentives related to those goals.
- h. It will be critical to identify the locus of leadership—and the ability to marshal the political will—that will be necessary to implement the Select Committee’s recommendations.

Criteria for Solutions

- a. Summary of Necessities
 - i. Maintaining a physical presence in each of the sites where VSC has campuses although recognizing that the activities carried on at those sites will necessarily change.
 - ii. Sharing administrative services
 - iii. Academic “renovation”

1. Program array better aligned, including liberal arts (e.g., technical writing requirement for English majors)
 2. Sharing of academic programs and resources across institutions
 3. Delivery modes and innovations in credit recognition
 4. New credentials and improved outreach to adults
- iv. Cost reductions/sustainability that leads to improved affordability for students and the state
 - v. Delivery of student supports to ensure success
 - vi. Adequate funding support over a reasonable timeframe to achieve these large-scale changes.
- b. Criteria for achieving the goals related to student needs
 - i. Students in all parts of the state will be able to access the full array of academic programs offered by VSC System institutions, or through agreements between VSC and UVM.
 1. For some students, programs will remain primarily (or wholly) face-to-face, based on where faculty expertise is concentrated. Those programs will also be accessible to students attending other campuses in the system via online or other modes of delivery.
 2. Some programs will be online (in whole or in part) rather than face-to-face.
 3. The exceptions will be those programs that require considerable hands-on experience with specialized equipment.
 - ii. VSC institutions will ensure that programs are aligned with current and future workforce needs by
 1. Leveraging evolving educational models such as stackable credentials (certificates) with clear labor market payoffs.
 2. Working with local and statewide employers to develop meaningful internship and apprenticeship experiences for which students will earn academic credit toward relevant credentials and, where possible, wages that help cover costs of attendance.
 - iii. Students will be provided the full array of student support services they need to successfully take advantage of this array of academic services. Such support services will be available to students in-person and through other means designed to meet the different needs of different types of students. These supports will also include pre-enrollment career and financial planning to help students make informed decisions.
 - iv. Programs that require hands-on instruction will be provided in communities throughout the state where
 1. Local employers can demonstrate a demand for program completers.
 2. There is sufficient student demand to make the program economically viable. In cases where student demand is not sufficient to ensure economic viability, the program may still be offered if a

local community or employers provide the necessary “bridge” funding.

3. In providing such programs VSC will work with adult CTE programs to deliver these programs in a cost-effective manner.
 - v. The VSC system will be much more student-centric in terms of assuring more seamless recognition of credit across all member institutions, as well as from UVM (and, ideally, other institutions).
 - vi. Courses in the General Education core will be reengineered as hybrid courses and designed to:
 1. Be delivered across the System either in person, online, or a combination of the two.
 2. In ways proven to deliver superior learning outcomes at substantially reduced costs.
 3. Improve quality through the incorporation of faculty development activities aligned with the needs of such delivery.
 - vii. Back-office functions will be centrally coordinated but with access to generalist service providers to link users (students and employees) to these services as required.
 - viii. Staff with deep functional expertise will be shared among the institutions, whereas staff who require expertise and deep relationships with end users will be assigned to specific institutions.
- c. Criteria for achieving the goals related to state needs
- i. The VSC system and its institutions will be understood as critical state assets and resources for the pursuit of state goals; they themselves are not to be treated as ends themselves, nor strictly as employment centers.
 - ii. The VSC system will have a clear path toward sustained financial sustainability, including, at a minimum, reduced costs per student.
 1. VSC institutions will have an employee complement that matches current and likely future enrollment.
 2. VSC institutions’ infrastructure will match the needs of current and likely future enrollment, in order to ensure that the carrying costs of operating/maintaining obsolete and unused space are minimized.
 3. VSC institutions will have sufficient flexibility to deliver academic programs to all parts of the state at a sustainable cost. This will require shared academic programming across the system and, where appropriate, in collaboration with UVM.
 4. Restructuring of VSC institutions will recognize the realities of collecting bargaining agreements.
 - iii. VSC institutions will provide accessible and affordable postsecondary institutions primarily for the benefit of Vermonters.
 - iv. VSC institutions will have a clear mission with appropriate areas of expertise/excellence, e.g., with lead responsibility assigned for clusters of programs (engineering, business, health, etc.), both online and face-to-face.

The refined missions will inform decisions about how best to reduce costs and consolidate programs.

- v. Graduates of the state's public institutions will be prepared to participate actively, in and contribute to, civil society.
- vi. VSC institutions migrate toward offering more content that provides students with skills that are needed by Vermont employers and consistent with Vermont's economic development plans. In order to meet employer needs, VSC will work with employers by
 - 1. Soliciting employer input in the development of programs for short-term certificate programs with clear labor market returns.
 - 2. Developing non-credit programming to meet immediate employer needs, under the condition that resulting competencies can be converted to credits for students wishing to build on them.
 - 3. For employers seeking further education for their employees, providing a single point of contact who will ensure a response from an individual who can address their interests.
 - 4. Creatively seeding and nurturing entrepreneurialism generally, in connection to their programmatic areas of expertise, and in collaboration with UVM.
- vii. VSC institutions will contribute to the cultural vitality of the state and of their local communities.
- viii. Academic programs will be available to residents throughout the state through a mix of online and face-to-face instruction. The latter will require maintaining a presence in existing communities, even if it is diminished.

Recommendations

The criteria for solutions described above have informed the following set of draft recommendations. Most of these will be addressed to the VSC system—either the Board, the Chancellor’s Office, or the leadership of member institutions. But in recognition of the reality that the VSC system and its institutions do not find themselves in a precarious fiscal position entirely of their own making, some of the recommendations will be address to the Vermont legislature and to the governor.

At this stage, these recommendations are presented in draft form, and some include options still on the table for the Select Committee’s consideration. The Select Committee and leadership at the VSC recognize that their respective efforts at reform should be complementary and mutually informative. Therefore, we have concentrated on adding specificity to those recommendations that are among the highest priorities given the need for the VSC system and its Board to move forward rapidly during this academic year.

The recommendations are presented in nine categories: recognizing the urgency of the challenge, articulating a clear expression of statewide goals by the legislature, structure and mission, coordination of administrative services, resource allocation, physical spaces, affordability, economic development, and accountability.

1. The Need for Urgency

The Select Committee urges that all parties recognize the seriousness of the problems facing the VSC System and work together to address these problems. It is commendable that the governor’s office and the legislature stepped in with substantial funds for the current fiscal year to help address fiscal impacts related to the coronavirus pandemic and to encourage the VSC to undertake major changes. That this additional funding was made possible by federal stimulus package does not alter that fact, nor does the current uncertainty over additional stimulus obviate the need for the VSC to receive additional help to continue its transformation initiatives.

The recommendations that have been advanced by various groups in Vermont that are looking into this problem have tended to focus on ways that VSC can reduce costs. There is no question that the VSC and its institutions must bring their costs down. But the scale of the cost reductions required and the haste in which they must be made will inevitably get in the way of deliberate approaches that are most needed. Add to this the facts that 1) the Vermont institutions (including UVM) are among the least well-supported public institutions in the country and consequently are among the least affordable to students, and 2) demographic trends will exacerbate competition within a postsecondary marketplace that has more institutions competing for students than most places in the country. These conditions make it nearly impossible for VSC institutions to deal with their financial issues by increasing tuition revenue. These realities suggest that cost reductions alone are not likely to be enough to address the long-term fiscal challenges facing the VSC.

Any workable solution will have to pair substantial cost reductions with new investment by the state. To ensure that the state gets the “biggest bang for its buck,” the state should have strategic objectives in mind before making those investments. But there is no sign that the political leadership of the state has ever clearly specified those objectives as they relate to the VSC and its institutions. If the state is to invest more in VSC, and higher education more generally, it should do so with intentionality.

This is no longer a can that can be kicked further down the road, with hopes that the individual institutions and the Chancellor’s Office will come up with cost reductions substantial enough to achieve long-term financial sustainability without help from the legislature working in partnership with the governor’s office. After all, the VSC—or at least some of its institutions—are facing the very real prospect of insolvency. Should that happen, the state will be on the hook for substantial costs associated with teach outs, campus closures and the costs associated with shuttering or demolishing buildings, outstanding debt obligations, liabilities related to the sudden addition of recently employed faculty and staff to retirement and health care payouts, and other consequences. None of these costs will be offset by tuition revenue (at least from any institutions forced to close), the source of revenue that currently covers the bulk of VSC’s operational budget.

Ultimately, it is crucial that the state’s political leadership recognize that the fiscal problems within the VSC have roots that span many years. They are not the result of the coronavirus pandemic, though that has surely worsened the dilemmas and has served to intensify the need for a coordinated and comprehensive response. That recognition will need to be paired with funding support sufficient to help the VSC transform. That support will need to be sustained beginning with the state budget for FY2022 and continue for a number of years to follow. Failure to do so risks hobbling the recommended efforts to transform the System and will cause a reversion to an unsustainable status quo.

2. Articulating Statewide Goals

In the enabling statutes for UVM and the VSC System, and in the language of recent appropriations bills, the Vermont legislature has been notably silent on what it expects out of its investments in the broader postsecondary education enterprise. In the VSC System’s case, the only statement is that the VSC is to be “supported in whole or in substantial part with State funds.”¹ This vague statement has provided weak guidance even for what affordability and access should mean, given that what “substantial part” means in practice is open to interpretation and given the reality that the State lags nearly all others in providing support to its public institutions.

The legislature should develop a clear set of strategic objectives for its investments in the VSC System and place these goals in statute. The list should be brief and include objectives that go beyond simply achieving financial viability and get to the heart of what the System and its institutions are expected to do. This report provides several candidates for goals that might be

¹ 16 V.S.A. § 2171

considered—affordability, making access to a full range of academic programs available to students in all parts of the state, meeting workforce needs, etc. Such objectives would help set guidelines for how the VSC Board carries out its fiduciary and other duties and prioritizes its own investments and initiatives. Further, the legislature should act much more strategically in distributing available resources and in making policy with regard to postsecondary education. If, for example, affordability is selected as a priority, then legislative action to increase scholarship funding or to increase funding to institutions as a quid pro quo for lowering tuition would be strategic policy responses in furtherance of this goal.

Strategic action at the state level should extend beyond decisions about allocation of funds set aside for use to support postsecondary education. Also important is ensuring that other funds can be utilized in ways that support multiple objectives. For example, using Education Fund resources to support more extensive dual credit instruction, especially instruction that leads to some level of workforce certification. Or using federal workforce and training funds (such as WIOA and Perkins) more intentionally to not only support workforce development but to ensure that CCV and/or VTC are foundational service providers in an integrated system.

3. Structure and Mission

The recent merger of Johnson State College and Lyndon State College into Northern Vermont University, the subsequent aborted attempt to close NVU and the Randolph campus of VTC, and the report from the Labor Task Force urging the consolidation of the four existing institutions into a Vermont State University under single accreditation and the elimination of the Chancellor's Office, have presented the VSC with a broad array of ideas for addressing its fiscal sustainability challenges through restructuring. The Select Committee has concluded that restructuring will be a necessary, but not sufficient, strategy. Further, any restructuring must be strategic and result in institutions that have clearly defined and distinct institutional missions. To help frame the recommendations, it is helpful to present a brief conceptual background regarding missions.

In Vermont, responsibility for defining institutional missions falls to the Board of the VSC for its member institutions; the enabling legislation is silent on the nature and purpose of the individual institutions, as well as of the system, except to expressly require the VSC to provide instruction in dental hygiene. The VSC Board policies regarding institutional missions are unclear. Neither the approved by-laws nor the adopted Policies and Procedures Manual discuss the process for approving and reviewing institutions missions. However, the manual does require academic programs to be consistent with the institutional mission and the Board evidently approves mission statements.

Effective system-wide governance begins with establishing and maintaining clear missions that deliberately specify:

- the array of programs by level and field to be offered at each institution, with attention to distinctive clusters of expertise—including the liberal arts and applied programs like business and education, and unique capacity like NVU's meteorology program—as well as differences in local needs;

- the audiences to be served by each institution—specified in terms of geographic location, level of academic preparation, age, race/ethnicity, income levels, attendance status (full- or part-time), employers and their employees, and any other characteristics worthy of special attention;
- features of the educational model(s) employed by the institution in terms of the curriculum and the co-curriculum; and
- other special or unique characteristics—such as NVU’s on-line delivery expertise.

Applying this conceptual framework to the VSC context, it is evident that the VSC system should retain its capacity to deliver high-quality liberal arts programming and a coherent general education curriculum that can be accessible to students at all its campuses. Ensuring this requirement is met need not be in conflict with the need to also align programming more closely with the workforce needs of the state and of the local community, and with the post-graduation employment expectations of VSC students. It is also important to recognize the unique campus cultures or environments for teaching and learning. Doing so means

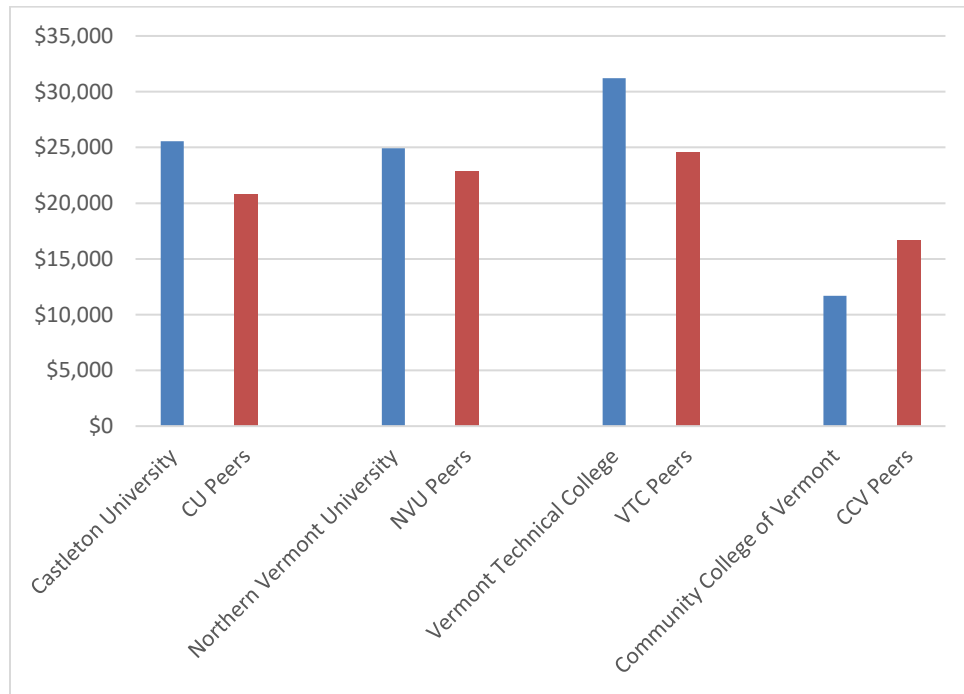
- ensuring that liberal arts programming is augmented in ways that deliver targeted workforce-relevant skills (e.g., by establishing a technical writing requirement for English majors);
- providing all majors with ready access to meaningful work-based learning opportunities;
- supporting the success of students, especially populations that are typically underserved;
- developing new sub-baccalaureate credentials specifically aligned to employer needs and which can show a clear return on investment; and
- offering non-credit programming in response to employer needs that can be converted into stackable credits.

With this as background, recommendations to restructure the VSC system should aim to create institutions that:

- have distinctive missions and cultures, including the preservation of elements of institutional history and traditions that make each place unique;
- can collectively deliver a standardized general education program;
- can collectively deliver shorter-term workforce-oriented programming in response to student and employer needs;
- can collectively offer courses and programs in multiple modalities and according to schedules that remove barriers to students’ enrollment and success;
- have special competence in selected majors that can be delivered on-site and throughout the state—at other campuses and on-line;
- have a critical mass of faculty in each of their areas of special competence so that students get a variety of perspectives within their major and that small classes are avoided;
- can collectively provide the full range of System academic offerings to students in all parts of the state.
- can serve the needs of adult students as well as recent high school graduates.

Available evidence suggests there exists considerable room to create greater efficiency. Figure 3 shows that Castleton, NVU, and VTC were each substantially more costly to operate than their institutional peers in FY2018, while CCV was relatively less costly than its peers. (An appendix supplies details about the methods used to identify institutional peers, as well as the peers selected for each institution.)

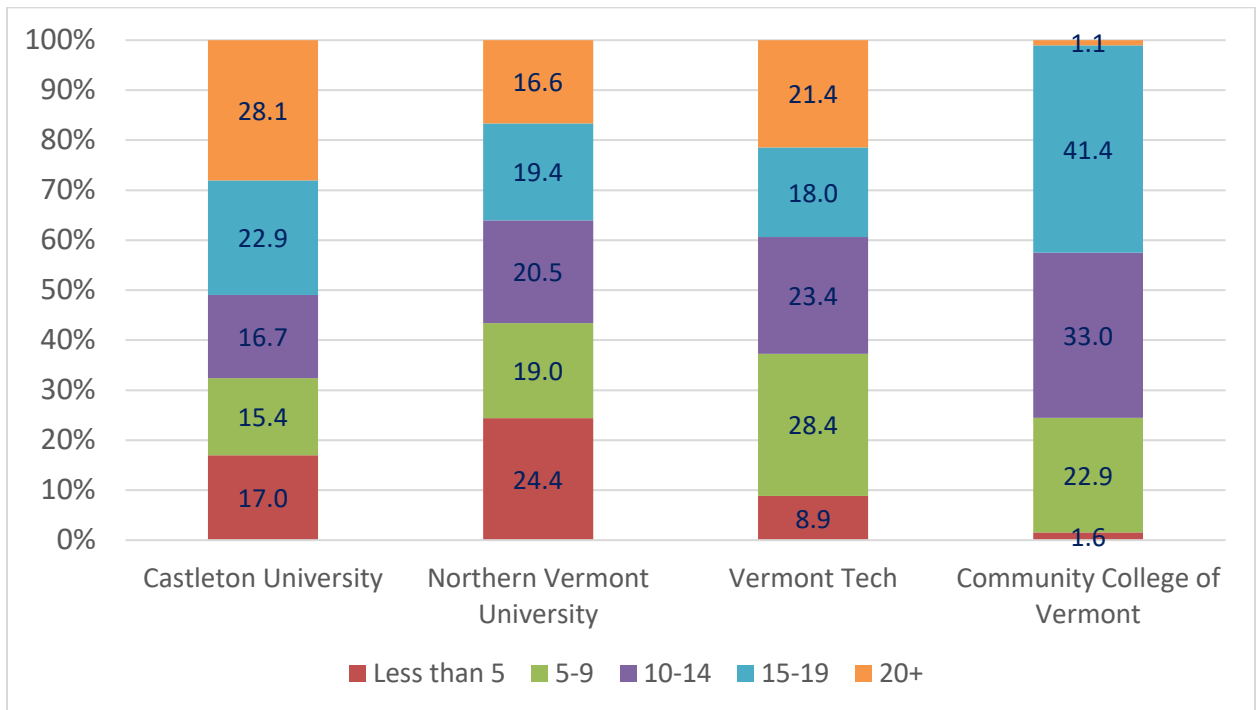
Figure 3. Total Expenditures per FTE, 2017-18



Source: NCES IPEDS.

Additionally, data supplied by the VSC shows that Castleton and NVU operate a large share of their course sections with low enrollment (Figure 4). This figure obscures the fact that there may be compelling pedagogical reasons to maintain relatively small classes in some courses or in some disciplines, but this only reduces the discrepancy in these data without eliminating it. Small course sections are also a consequence of declining enrollment unmatched by commensurate reductions in the faculty.

Figure 4. Percent of Course Sections by Enrollment and Institution, 2019-20



Source: VSC Chancellor’s Office

Figure 5 shows the distribution of awards conferred by VSC institutions in 2017-18 by level and broad field of study. Awards in the health professions are the most common throughout the system and at all institutions except for CCV, where transfer-oriented awards rise to the top. Outside of the health professions, business and a variety of liberal arts programs are common, and excluding the large number of transfer-oriented associate’s degrees awarded by CCV, bachelor’s degrees dominate. Moreover, programs in fields of study that prepare Vermonters for the in-demand jobs identified by the McClure Foundation report (e.g., careers in finance, information technology, manufacturing, marketing, computer programming, health care, and trades²) are in relatively short supply at VSC institutions, or are under-enrolled.³

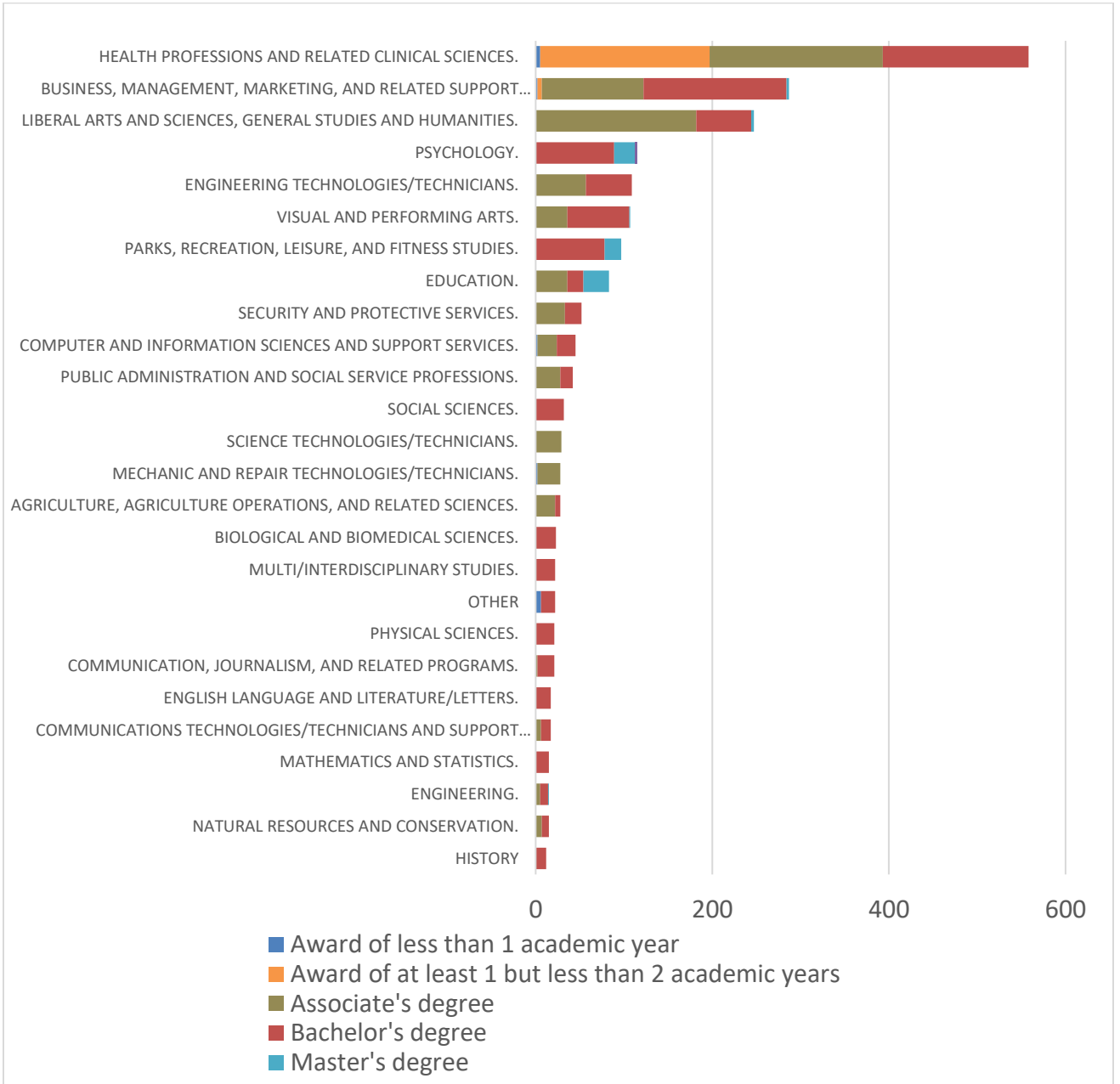
Finally, VSC institutions—most notably Castleton and NVU—are heavily invested in serving students of traditional age (Figure 6).

These data highlight gaps in the provision of postsecondary education and training that meets the needs of students—especially adult learners—and the state.

² https://mcclurevt.org/assets/Website-Documents/2021_BestJobs.pdf

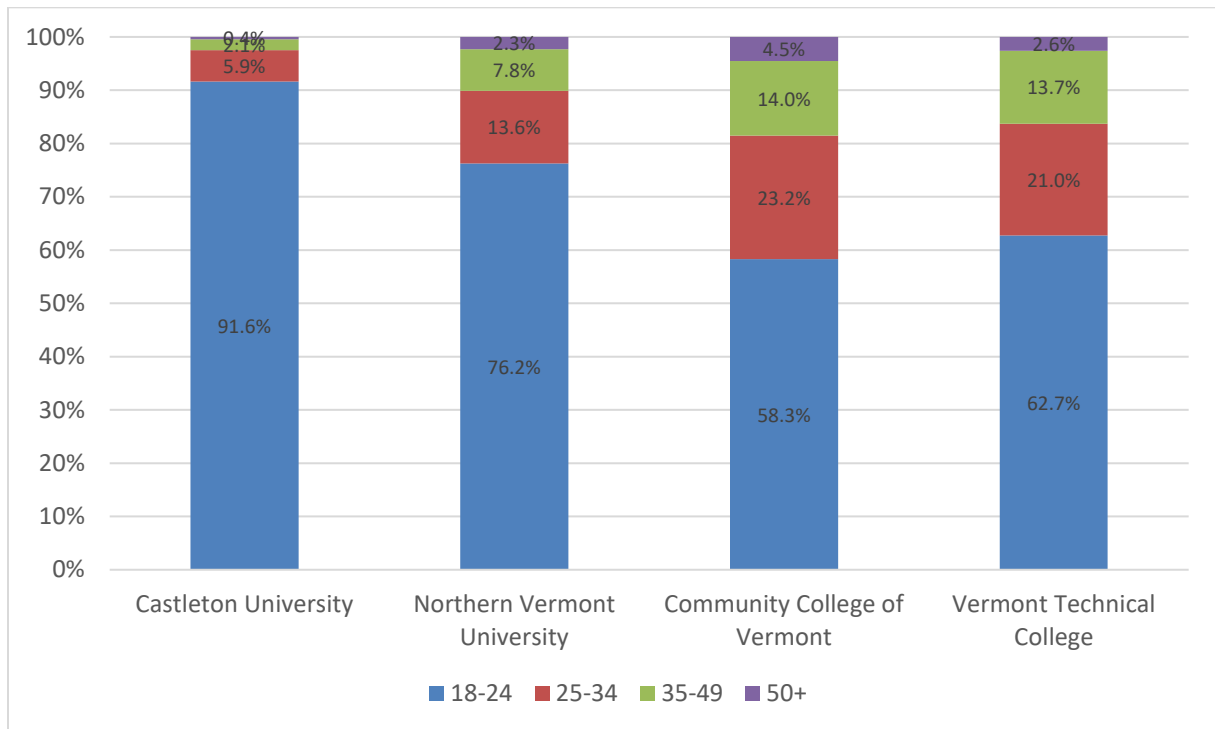
³ McClure Foundation, *Pathways to Promising Careers & VSCS Programs: 2019*

Figure 5. Awards by Level and Selected 2-Digit CIP, 2017-18



Source: NCES IPEDS

Figure 6. Undergraduate Enrollment by Age, 2019



Source: NCES IPEDS

To best assure that the criteria specified above are met, the Select Committee should advance the following recommendations or select from among the options presented.

Restructuring VSC Institutions and Aligning Their Missions to State Needs

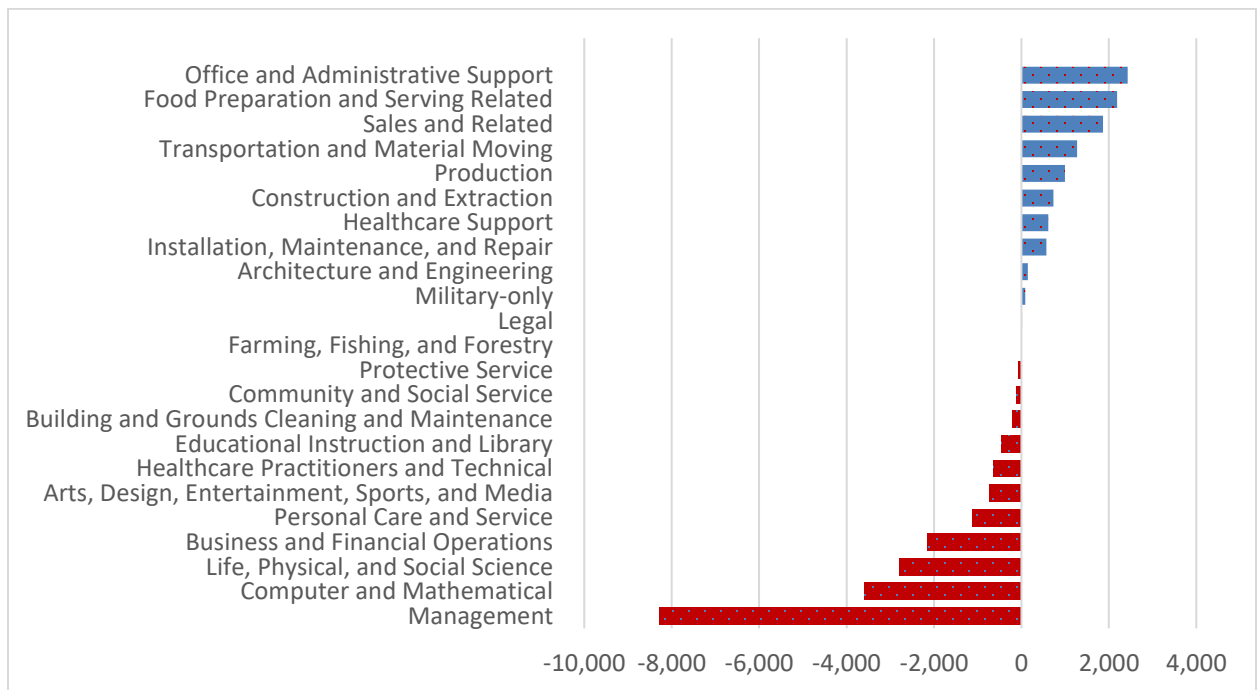
A. First, CCV should remain a separate institution within the VSC System. As the only state institution providing exclusively sub-baccalaureate programming, CCV fills a critical role in the provision of educational services and one that needs to grow to meet rising workforce needs for sub-baccalaureate education and training and to serve adult learners in larger numbers. Specifically:

- CCV operates with a unique culture and business model that has made it the least expensive of the VSC institutions, and made it relatively nimble in responding to statewide and local demand for programs.
- CCV serves a relatively distinctive student population, especially working adults. Adult learners comprise a population that represents the only significant opportunity for growing enrollment among Vermonters, and they are likeliest to attend an institution that provides convenient access to programs and courses that lead directly to in-demand jobs.
- There appears to be a growing opportunity to respond to employer needs with non-credit programming, and CCV is well positioned to meet that need.
- There is a considerable risk that combining CCV with the other VSC institutions could serve to limit its ability to flexibly and affordably provide ongoing or expanded sub-baccalaureate programming.

- CCV is the only institution in the system without a residential component. It also has campuses distributed throughout the state in locations selected to be convenient for its target student populations.

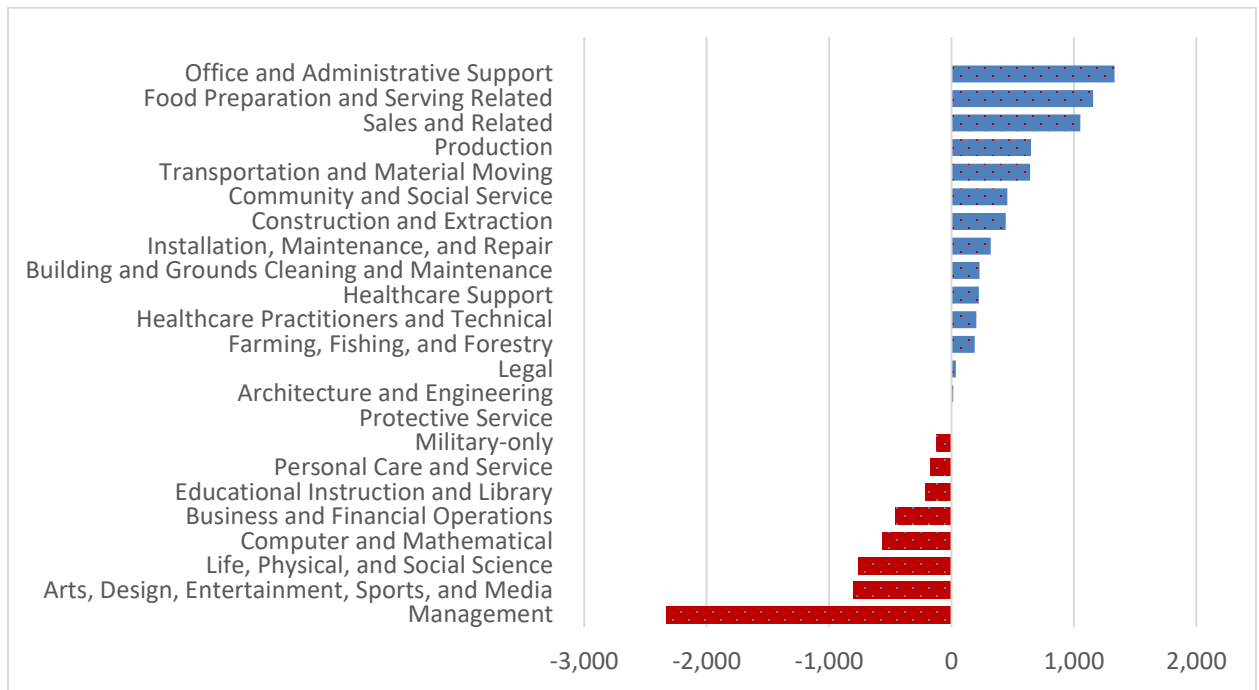
The State of Vermont should ensure that CCV continues to focus on its mission to provide Vermont residents with affordable access points to postsecondary education throughout the State, and to develop and deliver responsive workforce-relevant education and training programs. With respect to the latter goal, CCV should enhance and expand its efforts to develop and deliver short-term certificates and associate’s degrees with demonstrable labor market value, especially for adult learners seeking new skills and for employers seeking to train their employees. Preparation for employment in the fields identified by the McClure Foundation and the Department of Labor would be a good start in this regard, but there also appears to be evidence that regions have differential gaps in the demand for education and training programs and the local supply (as suggested by Figure 7-Figure 9).

Figure 7. Unmet Demand and Excess Supply (Annual Openings Less Regional Completions), Chittenden/Burlington MSA



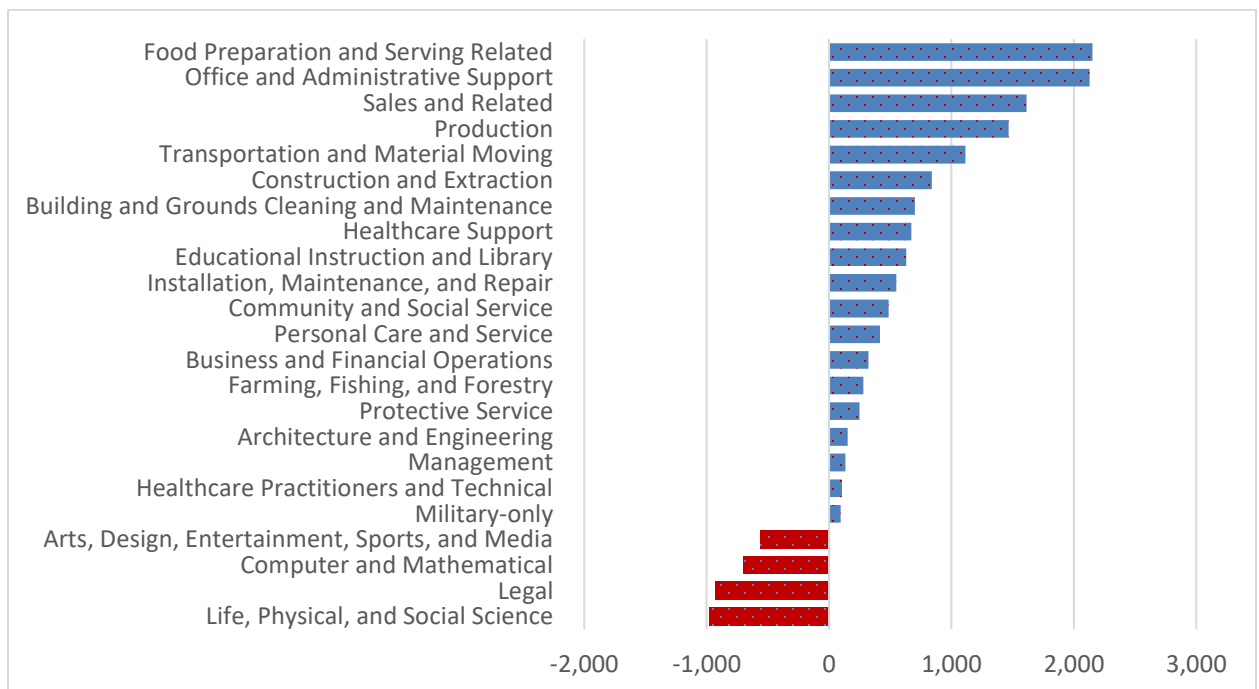
Source: EMSI

Figure 8. Unmet Demand and Excess Supply (Annual Openings Less Regional Completions), Northern Vermont



Source: EMSI

Figure 9. Unmet Demand and Excess Supply (Annual Openings Less Regional Completions), Southern Vermont



Source: EMSI

Current efforts to address these gaps rely heavily on localized Adult Education and Family Literacy (AEFL) organizations, occupational training offered at adult career and technical education (CTE) centers, and local sub-baccalaureate programs through CCV and VTC. This balkanized approach results in limited capacity for marketing and outreach to adult learners and employers, less effective contributions to local and regional economic development, and an inability to measure how and if these efforts are meeting regional and statewide needs for trained workers. As its work advances, the Select Committee will continue to explore how the VSC System should support a statewide system and work as seamlessly as possible with the regional technical centers and providers of AEFL programs to ensure a more integrated, organized, and responsive delivery of adult CTE and AEFL services.

- B. There are multiple possible options for how best to structure the remaining three institutions. The first option is to combine all three of them into a single institution and seek single accreditation for the new institution. Renaming the unified institution something like “Vermont State University” may be considered as a way to signify the transformative nature of the change. The resulting institution would remain a part of the VSC system with its leadership reporting to the Chancellor’s Office, retain campuses distributed throughout the state, operate under a single set of institutional leaders (e.g. President, Provost, etc.), and organize its academic content around a set of disciplinary focus areas that could be labeled as “colleges” (e.g., College of Arts and Sciences, College of Engineering and Technology, etc.) The colleges would oversee the delivery of related disciplinary content throughout the distributed sites, ensuring that students at any of the sites have access to the full program array available at the institution through a combination of instructional delivery modes. Models for this arrangement exist at the University of Connecticut and the University of Washington. While both institutions are nominally research universities that are not straightforward comparisons to the VSC system, they have multiple campuses that are each the primary hosts for certain academic specializations and concentrated expertise. Collectively, these campuses operate under the university’s single accreditation and employ a single faculty. The arguments in favor of that approach are as follows.
- It combines all of the baccalaureate programs in the system into one institution.
 - They all share elements of a common business model, especially as shaped by a single set of collective bargaining agreements and by having a residential component. In addition, there is widespread overlap in the liberal arts offerings between NVU and Castleton, as well as some overlap in some of the more technical programs offered by NVU and VTC. With fewer institutional boundaries, students will experience fewer barriers in the recognition of credit, they will have more immediate and seamless access to programs and courses offered at another campus of the same institution than they currently experience trying to piece together courses and programs from multiple institutions.
 - Collectively, the three institutions account for the operating deficit being run by the VSC system. Combining them creates a situation that ensures that solutions are addressed by all of them collectively, rather than creating a situation where avoiding

- the necessity of making painful decisions remains just one more way that the institutions compete with one another.
- The combination puts under one academic leadership and faculty governance arrangement the task of right-sizing the institution on a department-by-department basis. With a single faculty that has members distributed across campuses, this process will lead to the creation of larger academic departments that will be superior to the existing proliferation of small departments. The aggregation of a critical mass of faculty in key areas will both improve program quality and contribute to more fiscally sustainable departments through enhanced operational efficiencies resulting from larger course sections, adequately staffed and more attractive majors, etc. Program review activities by the combined institution will be less time-consuming as well since they will be focused on only one institution rather than three.
 - Bringing VTC's program array, with its more heavily technical and workforce orientation, and its related expertise together with the programs at NVU and Castleton may accelerate the incorporation of applied learning opportunities and work-based learning experiences into all programs.
 - This arrangement will remove competition for students among the three constituent institutions, reduce the level of price discounting, and create an environment in which all components of the combined institutions share a common interest in attracting students of all types. If the combination leads to more robust programs supported by an adequate faculty complements, it may also aid the combined institution's ability to compete for other students through a more comprehensive and higher-quality array of programs. It also enhances marketing opportunities by making possible a more cohesive message about an accessible public institution in Vermont able to offer a wide range of programs.
 - It will allow the provision of a more robust set of student support services.
 - The combined institution will have a physical presence in key parts of the state. By forging closer ties with CCV, these locations will meet a Steering Committee requirement that programs be available to residents throughout the state. Under a unified model, there is an opportunity to strategically focus the operations of existing campuses in new ways that capitalize on the availability of existing faculty and staff expertise, but above all using their distributed presence as a way to better ensure that students will have geographic face-to-face access to faculty and staff and to student support services in ways that promote their success even when they are taking courses online.
 - It will foster building out the existing online delivery capacity at NVU Online in a strategic manner, enabling the expansion of that capacity to serve additional students with a broader array of programs. If the vision for VSC is to be fully realized most faculty will have to be able to teach their courses using a variety of modalities. In this context, the major contribution of NVU Online will be as a support mechanism that provides instructional design, faculty development and technical support rather than as a separate delivery arm of the university. It will also help address challenges related to broadband access for online courses by ensuring that campus locations with

sufficient access are accessible to any student with limited access to adequate broadband capacity.

- Notwithstanding the challenges of seeking and obtaining the necessary change in accreditation, the single accreditation will resolve challenges that otherwise may imperil efforts to share academic programs across institutional boundaries in ways that accreditors will deem compliant.

There are some significant limitations or tradeoffs associated with this option. Among them are:

- The challenge of combining disparate organizational cultures that is inevitable in a consolidation may be elevated with the inclusion of VTC. VTC's disciplinary mix is significantly different from what exists from NVU and Castleton, and it also offers a relatively larger proportion of sub-baccalaureate degrees.
- The danger that the hard work that is going on to integrate Lyndon and Johnson could be stalled or confused with yet another consolidation. It is important to sustain the momentum of the NVU consolidation while learning from that experience and applying the lessons learned to the larger consolidation.
- It complicates efforts underway by VTC's Transformation Task Force. VTC is actively seeking to reduce its residence hall capacity and adopt more low-residency delivery models, a strategy that is not being matched at the same level by Castleton, for example. But some of the strategies VTC is pursuing would be as relevant in a combined institution as they are for VTC individually.
- It would require a plan for how individual institutional brands, as well as the various symbols, would be honored in the combined institution in ways that are culturally relevant and fiscally reasonable.
- Challenges related to developing internal resource allocation strategies for reducing operating deficits and for sharing academic resources, and courses (though these must be addressed regardless of the structure selected).

A major reason for unifying institutions is to reduce costs through greater efficiency that leads to improved affordability for students or to reallocating resources that better support student success or other mission objectives. To estimate the potential for gains in efficiency that may be available if these three institutions were unified, NCHEMS built a set of peer institutions selected to be similar in size, program array, and other characteristics. (More details concerning the estimation method and the peer institutions selected for VSC institutions individually and in combination are discussed in Appendix A.) These comparison institutions reported total expenditures averaging about \$19,000 per FTE student in FY 2018. This compares to an expenditure level per FTE student of approximately \$26,600 at the combination of NVU, Castleton, and VTC. Multiplying the \$7,600 difference by the number of FTE students reported across the combined three institutions in FY 2018 suggests the total difference may be in excess of \$40M. The actual amount of potential efficiency gains would likely be significantly lower, however, as enrollments have declined in the years since these data were reported and because it is not reasonable for the unified institution to achieve this level of cost reductions in the short

term, or without deep engagement with stakeholders. But the comparison with peers provides relatively clear evidence that substantial improvements in efficiency are possible, because other institutions with similar structures are able to document much lower costs. Thus, within a reasonable timeframe, the evidence suggests that savings of \$20-25M should be possible.

- C. Recognizing that VTC is unique within that group of three institutions, a second option would be to maintain VTC as a separate institution and consolidate NVU and Castleton. This option would reduce the challenges of integrating VTC's unique culture and disciplinary array with that of two larger institutions with deeply embedded cultures of their own. Maintaining VTC as a separate institution may also ensure that there remains a place in Vermont where priority is given to technical sub-baccalaureate and baccalaureate programs. The consolidation of NVU and Castleton would serve to have many of the same advantages as those enumerated above, especially in terms of reducing competition for students between them, promoting the mobility of credits and overcoming accreditation barriers to program sharing.

Using the same methodology as briefly outlined above, combining NVU and Castleton is also likely to yield opportunities for significant gains in efficiency, although the total estimated is less without VTC included in the unification. Nevertheless, the average of a set of peer institutions' total expenditures per FTE in FY 2018 was roughly \$22,300, as compared to about \$25,200 per FTE in expenditures aggregated for NVU and Castleton, roughly equivalent to savings of \$14M. This would leave VTC to generate at least \$10 million in cost reductions on its own and without the benefit of doing so within a larger framework.

- D. A third option would simply retain each of the current institutions as separate entities with separate accreditation. This option may be the least obviously disruptive in terms of generating headlines and stimulating distractive protests, but it can really only be a viable path forward only if there are clear mission distinctions among the institutions that create a similar set of conditions for transformative change that the other options do. These relate especially to creating more distinctiveness between NVU and Castleton and to the needed cost reductions and efficiency gains made possible through the sharing of programs and courses, as well as greatly improved and seamless pathways for students to complete programs by combining credits at any of the other institutions via a combination of delivery modes (including in-person, online, prior learning assessment, etc.).

Done right, the assignment of mission characteristics may create as much upheaval as a formal consolidation, except to the degree that institutions would likely find it easier to preserve symbols of institutional pride, history and the like. And such assignments will require the VSC leadership to make extremely difficult and politically fraught decisions in order to achieve the level of clarity and differentiation needed between the campuses. It would be necessary to ask and answer questions about the degree to which each of the following characteristics, among others, would be assigned to each institution as primary features:

- A concentration in the liberal arts at the upper-division level (even if students at other institutions will retain access to the general education curriculum, as well as to select majors in fields of study where faculty expertise is concentrated).
- An emphasis on professional and pre-professional programs and on workplace-based learning experiences.
- Specific concentrations in key fields that shape institutional identity, such as environmental sciences, tourism/recreation/hospitality, and applied technology.
- The proportion of awards offered at each different level—certificates, associate’s degrees, bachelor’s degrees, and graduate degrees.
- A residential experience, with relatively rich intercollegiate athletics.
- A focus on service to traditional-aged students vs. adult learners.

In general, it would be exceedingly difficult to force very many programs to relocate to different institutions, so this option assumes that programs already in existence would remain where they are. This could continue to be a barrier to collaboration across institutional boundaries, in the process preserving some otherwise avoidable inefficiencies. As a result, it is unclear whether this option provides a realistic avenue to achieve the changes at the scale that is needed. In any case, it points to the need for the VSC System to play an active and engaged role in regularly and rigorously monitoring mission alignment and facilitating the delivery of programs across institutional boundaries. It would also need to guide a process whereby program area expertise is intentionally concentrated at and coordinated from a specific institution within the system. This option is likeliest to assure the preservation of unique institutional characteristics and cultures, and may appear to be least disruptive or threatening to the communities and regions that host existing VSC campuses. But it must otherwise be just as transformative in nature; even if institutions themselves are not consolidated, their academic programs and administrative services must be. These will require important sacrifices by institutions and their communities as missions shift and become more clearly delineated and distinctive from one another.

The Chancellor’s Office

Some of the recommendations being advanced by other groups have suggested the elimination of the VSC chancellor’s office, with its duties distributed across the campuses within a singly accredited institution (as per the Labor Task Force’s recommendations) or simply eliminated. While language that suggests the need for a more integrated and systematic approach to program delivery is common in the reports produced, successfully taking a systems approach to the challenges will require an office that is dedicated to resolving issues that fall among and between institutions (as well as campuses newly unified into a single institution but long accustomed to operating independently) and are coordinated across campus sites. There are good reasons to maintain the Chancellor’s Office and to expect it to play a key role in leading transformative change.

The specific roles that the system office needs to play will differ to some degree depending on the option selected. There are, however, a set of functions the Chancellor's Office should perform regardless of the structure of the institutions within the system, among them being:

- Supporting the Board and ensuring implementation of Board and System policies and initiatives. Among the policies deserving particular attention are:
 - Setting and enforcing policies that establish a minimum level of institutional performance.
 - Implementing policies that ensure that course sections enroll a minimum number of students in order to operate, with the provision that minimum section sizes can be reached by enrolling students at multiple locations.
- Exercising policy leadership on behalf of the system. This requires the capacity to gather and analyze data and to develop and lead the execution of strategic plans. The policy leadership function also includes the role of keeping the state's political leadership informed and advocating on behalf of the System and its institutions.
- Working with other entities to ensure the smooth operation and alignment of those activities to functions within the VSC system. For example:
 - The Agency on Education with regard to matters dealing with college and career readiness.
 - The Department of Labor on matters of workforce development.
 - The Agency of Commerce and Community Development on issues relating to the development and implementation of state and regional economic development strategies.
 - The institutions within the System and the University of Vermont to ensure seamless transfer pathways for academic credit.
 - Working with business and industry to ensure provision of the necessary training for current and future employees. A result of this relationship should include robust non-credit programming that meets the workforce needs of specific employers or targeted industry groups; such programming should be easily converted into credits that lead to stackable credentials.
 - VSAC and the legislature to ensure that students have funded opportunities for meaningful work through paid internships and apprenticeship programs, which also receive academic credit toward a credential or degree. Engaging with VSAC should also enhance the mutual support of policy-relevant research and analysis regarding student access, success and affordability.
- Exerting oversight in the implementation of institution/campus missions to ensure alignment while preserving distinctiveness. These tasks include program review and approval, as well as more proactive efforts to engage members of the employer community in identifying and addressing gaps in the supply of postsecondary programs to meet demand. In order to overcome the habits of history—the conditions that led Jim Page to describe the functioning of the VSC as “a confederation of institutions” (an accurate observation)—and move the VSC toward a model in which the constituent institutions operate like a system, there should be clearer reporting relationships (at least dotted-line) between institutional officers below the presidential level and the leaders of the respective functions at the Chancellor's Office.

- Maintenance of a robust institutional research/institutional effectiveness function that coordinates the submission of required federal and state reports and provides high-quality decision support for the System and its campuses. Given the rising importance of making evidence-based, data-informed decisions, it is essential that this function is sufficiently well resourced so that the former necessity does not overwhelm the latter, as is too often the case in American higher education especially among smaller, less wealthy institutions.
- Execution of systemwide strategies to promote quality and credit recognition, online learning, prior learning assessment, competency-based education, and a common general education curriculum. Recognizing that allowing each institution to independently develop and conduct such strategies sacrifices opportunities for scaling programs as well as for optimizing quality and student success, the system office should assign responsibility for developing and ensuring adherence to common policies and procedures to a specific unit. Its requirements will be to coordinate across institutions and departments to ensure that there exists:
 - The capacity to optimize VSC’s investments in online learning, including: a centralized catalogue of courses across VSC available to be taken in an online format with full transferability within the system, the capacity to assist departments and faculty with high-quality instructional design for programs and courses, the provision of professional development opportunities (and associated policies) that ensure faculty are well prepared to adapt their pedagogy to an online setting, the availability of effective coaching and other student supports, and the establishment of conditions for integrating the regular full-time faculty and faculty assemblies into the design and delivery of online instruction.
 - Standard processes and procedures for awarding credit for prior learning, including communications strategies to academic advisors and students.
 - The capability to evaluate and share lessons from efforts to implement innovative academic delivery models.
 - Planning for the expansion of programs that ensure the needs of students (including new audiences) and the state are met in a cost-effective manner.

The Select Committee has weighed these options and their associated tradeoffs and has concluded that the VSC continue to be organized as a system with a Chancellor’s Office and that the System be comprised of two subordinate institutions—a unified institution (forged from Castleton, NVU, and VTC) and CCV. This combination is outlined above, and includes the expanded mission described for CCV.

4. Coordination of Administrative Services

The VSC system should spare no effort to aggressively move to coordinate administrative service operations. This task should not wait for decisions on structure to be finalized, as the need to forge the path forward on achieving efficiencies in this area is a critical requirement for reducing costs over the long term. Effectively delivering some administrative services may require an on-campus presence. But what is missing is a standardized set of policies and

enforcement of those services across the System accomplished by the VSC Board and supported by the Chancellor's Office. For example, the task of providing financial aid counseling will require students to have access to appropriate counseling and, even if such counseling can be done virtually, students are likely to continue to need in-person access to a financial aid office. Yet the System should lead the development and implementation of a common policy for financial aid allocation, manage recordkeeping, and carry out compliance functions. It is not assumed, however, that consolidated services are managed by personnel working out of the Chancellor's Office. It may be more appropriate to situate the oversight and management role for each of the consolidated services at one of the member institutions where expertise is most concentrated or where it can most easily be created. Where possible, these consolidated efforts may also engage UVM where existing differences in services provided do not create insurmountable barriers.⁴

- Procurement
- Audit, budgeting, and accounting services
- Facilities and construction management
- Human resources
- Business relationships (by which the VSC system will mount a coordinated effort to develop and manage work-based learning opportunities, identify and respond to employer workforce development needs, etc.)
- Information technology (major aspects of IT service delivery and policy development and implementation are centralized within the Chancellor's Office already)
- Institutional research and effectiveness
- Student success tracking and coordination
- Risk management – perhaps in collaboration with UVM
- Cyber security and related insurance – perhaps in collaboration with UVM
- Research oversight and compliance – perhaps in collaboration with UVM
- Compliance with federal regulations – perhaps in collaboration with UVM
- Grant-writing and grants management – perhaps in collaboration with UVM
- Book stores and food services – perhaps in collaboration with UVM
- Student services functions such as admissions and financial aid

There is some evidence of consolidated services within the VSC—the Chancellor's Office assumes a role in providing oversight of systemwide student information system, data center, and network operations, for example. And transitioning to a more consolidated structure for administrative services will be a major assignment that the system cannot fail to get right. A recent effort to consolidate payroll processing at the Chancellor's Office did not proceed smoothly by all accounts. That experience highlights the need for a deliberate, disciplined, and highly professionalized project management approach, which demands experience and a skill set that is not commonly available, as well as a dedicated focus. Accordingly, it will be essential

⁴ Analyses already conducted have convincingly demonstrated that a consolidation of health benefits programs are likely to yield limited savings to VSC institutions (or to UVM). There may be a better opportunity to reassess this in the future as a component of the negotiations over the renewal of collective bargaining agreements.

that the VSC system move rapidly to hire an experienced project manager (or firm) for this task.

The VSC System has two options for managing the consolidated administrative services over the long haul. First, as previously described, is to make the assignment for leading the management and delivery of each separate service either to the Chancellor's Office or to the member institution where the capacity will reside. In either case, it should be evident that this organization clearly expresses a service orientation and mindset in its work with other components of the System. If it is not adding value through cost reductions, improved service, and workable solutions to common problems, it is not fulfilling its role. Moreover, the individual responsible for leading each service will need to have a formal reporting relationship with the Chancellor's office. In systems with robust system-level finance and administrative services functions, each campus has an officer who reports to the campus CEO for campus-level implementation and to the system chief finance and administration officer for system purposes. The campus-level staffing is minimal and only as necessary to provide good "customer service" to the campus/faculty/staff/students.

An alternative possibility is for the VSC System to create a separate subsidiary service corporation whose mission would be to ensure the effective delivery of administrative services to the System institutions and potentially to other similar organizations, including UVM and private postsecondary institutions in the region. It would also help manage the relationship with UVM for jointly sourced functions (as enumerated in the list above). A corporation has several advantages, including:

- Providing a more flexible way to develop, deliver, and maintain real competence in project management and product delivery.
- Creates an arm's-length relationship between consolidated administrative services for the System and the Chancellor's Office itself. This has three key benefits: first, it helps assure that priority is given to policy leadership at the System office by creating a separate organization to focus on the day-to-day operational tasks that otherwise routinely dominate the activities and attention of the System office's regular focus. Second, it promotes accountability for creating system-wide efficiency gains and more starkly reveals their value to the System, its campuses, and external stakeholders. Finally, it distinguishes the costs associated with the essential elements of the Chancellor's Office that are related to policy leadership as separate from the costs of central services provided by the System on behalf of the campuses.
- Being self-supporting (after an initial period) by creating value for VSC and similar institutions in the form of greater efficiencies, improved performance, and potentially through the creation of a new revenue stream if it provides services to institutions that are external to VSC (in the process, it may further extend scale efficiencies that will be shared by all).

To be effective, a service corporation will need to operate more like a business in a competitive market. This requires it to be flexible, nimble, and recognized for its competency at conceiving and managing projects and at leading change. It needs to have characteristics like the following:

- To assure that its first responsibility is to the VSC members institutions, their students and employees, and the taxpayers of Vermont, the service corporation should be a subsidiary of VSC (and of UVM if any co-ownership requirements are necessary).
- Freedom or flexibility with respect to state regulations that constrain its ability to operate, including state personnel requirements that may apply (e.g., compensation schedules) that might limit its ability to attract and retain well-qualified and high-performing leaders and staff.
- Dedicated leadership at an appropriate level, with dotted-line relationships to the Chancellor and VSC Board.
- Demonstrated competence and experience at project and change management.
- An adequate schedule and timeline for realizing the benefits of the initiative, as well as targets for cost reductions built on a reasonable methodology.

Fortunately, there appears to be a broad consensus reflected in various reports and stakeholder perspectives that there exists need to reform the delivery of administrative services within the VSC in order to reduce costs, gain efficiencies, and improve performance. It would be helpful to pair that interest with realistic estimates of how much money may be saved.

5. Resource Allocation

A basic tenet of budgeting/resource allocation is that funding should reflect and support the primary objectives being sought by the funder. From the state's perspective, the primary objectives should be to ensure that 1) public higher education is affordable for the residents of Vermont and 2) public sector institutions are financially viable and can continue to serve the needs of the State of Vermont and its citizens.

Underlying the decisions in this arena are some basic facts that are relevant to maintenance of affordability and institutional viability, specifically:

- Tuition and required fees at VSC institutions are higher than at similar institutions elsewhere in New England, in most cases by a significant amount. For four-year institutions, only New Hampshire institutions have (slightly) higher tuition than VSC institutions. For other states, tuition at their four-year institutions are generally \$2,000 or more per year lower than VSC institutions. The tuition and fees at CCV are anywhere from \$1,000 to \$4,000 per year higher than their counterpart institutions elsewhere in New England. Perhaps more unsettling is the fact that tuition at VTC is approximately \$15,000 per year and this tuition level applies to its associate level programs as well as its baccalaureate programs. This makes tuition for the technically oriented associate programs it offers more than twice the tuition levels for similar programs elsewhere in New England. Research indicates that there is a relationship between price to students and their likelihood of enrolling in college.⁵ There is little

⁵ Evidence from a meta-analysis of price sensitivity research has found that for every \$1,000 change in net price, there is an inverse effect on enrollment of about 3-4 percent (Leslie & Brinkman, 1988; Heller, xxxx) and that price sensitivity is greater for students from low-income backgrounds (Kane, 1999).

doubt that there is a relationship between the high sticker price of Vermont public higher education and the low level of college participation.

- Students provide a greater share of institutional revenues at Vermont institutions (86.9 percent) than is the case in other New England states. Only in New Hampshire do students contribute a generally comparable share (78.3 percent). In all other states in the region the share is below 60 percent.
- Revenues from the combination of tuition and state appropriations, on a per-student basis, is higher in Vermont than in all other states in New England with the exception of Connecticut. This can be partially attributed to the mix of enrollments in Vermont; a smaller proportion of students are enrolled in (less expensive) community colleges in Vermont than is the case in the other states. Vermont's tuition revenue figures are also inflated by the high proportion of out-of-state students enrolled in Vermont. However, there is also evidence that the VSC institutions have higher than normal costs. As previously shown in Figure 3, NVU, Castleton, and VTC have expenditures that outpace their peers by 8.4 percent, 18.7 percent, and 21.5 percent, respectively, while CCV is less costly than its peers. The fiscal problems of the system can be attributed to both too little revenue and expenditure levels that are too high.
- The VCS institutions have consistently operated at a loss over the last several years. In the process the System has depleted its reserves. Pre-COVID the operating losses were in the neighborhood of \$11M.⁶ The pandemic has created circumstances in which the anticipated operating deficit has ballooned to \$28.4M for FY 2021 before the CRF and bridge funding supplied by the legislature (with those additional funds, VSC reports a \$2M surplus) and to \$47M in FY 2022. These deficits are fueled by a combination of reduced revenues from enrollment decreases, a growing reliance on tuition discounting, and COVID-induced extraordinary expenses.
- Institutions that offer different programs at different degree levels have different cost structures. Being highly technical and geographically dispersed, VTC's costs of delivering its programs will be higher than Castleton's costs for its more liberal arts focused offerings, all other things equal. These added costs are difficult to pass on to students through tuition. Assuring that institutions are equitably funded relative to their respective program arrays and other key characteristics will be key to ensuring that incentives to offer a full array of needed programming are aligned with the outcomes desired.

With regard to ensuring the viability of the VSC institutions, there needs to be a strategy for removing the large and growing operating deficit in the System's institutions, which VSC estimates to have reached \$42-\$47M for FY 2022. A portion of that estimated deficit is due to COVID-related costs, but there remains approximately \$25M of an ongoing structural deficit. Both need to be addressed with assistance from the state, the former by an infusion of funding for as long as it takes to see out the pandemic's effects. For the latter, there should be a strategy covering 4-5 years during which the state provides funding support for the VSC System's efforts to create the changes necessary to eliminate its structural deficit. In the

⁶ VSC Financial Statement FY 2019

broadest possible terms, it is not unreasonable to think about reducing the operating deficit through the following combination of actions.

- As noted, the state should provide funding sufficient to overcome the extraordinary costs created by COVID.
- The state should also provide support equivalent to \$15-20M for investments in change. Such support is needed over a multi-year timeframe during which transformation is underway at the VSC System. It may be that this state investment will be consistent over the full transformation period, or it may choose to provide a larger amount in the first year and gradually reduce its investments each year as the VSC System makes progress toward sustainability.
- Additionally, the state should provide \$10-15M in additional ongoing state institutional appropriations in order to ensure they have the capacity to continually adapt to changing conditions and to student and state needs.
- By the end of the specified time frame for transformation, the VSC System may be expected to close its structural deficit through a combination of reduced operating costs across the System and increased enrollments among currently underserved populations.
- Finally, the state should provide \$5M in on-going state appropriations designed to improve affordability for Vermont residents attending Vermont institutions, either through tuition reductions or through improvements in state grant aid for needy students.

The tables below outline the timing and purposes of the needed state investments (in millions).

Figure 10 presents a prospective schedule for eliminating VSC's structural deficit over the upcoming five fiscal years. The top section of this table recognizes the need for the state to cover the extraordinary costs associated with the pandemic, which remain uncertain beyond FY 2022. The remaining deficit after COVID mitigation is an estimate of the structural deficit that the VSC System must close to become minimally fiscally sustainable. The remaining two sections show the elimination of that structural deficit based first on annual reductions of \$5M in each year, with the final section showing the cumulative progress that results. In the first year, aided in part by the bridge funding supplied by the legislature in FY2021, VSC should aim to reduce operational administrative costs by \$3M and reductions in other spending categories of \$2M. Beginning in FY 2023, the VSC System can anticipate seeing a reduction in the costs of operating some of the excess physical space that has been removed from its inventory of physical space (either through demolition, sales, or leasing arrangements under which lease payments cover those costs). The VSC System will also continue to find efficiencies in administrative cost savings and other reductions in expenses.

In addition to efficiency gains, this figure provides targets for increased revenues resulting from new and returning enrollments and associated revenue. Between FY 2021 and its FY2022 budget, the VSC System has projected losses from tuition and fees and housing expenses of about \$10M. This figure assumes that some of those enrollments will return beginning in FY 2023, though not all at once as the loss of first-year students caused by the pandemic

sequentially impacts second-year enrollments in FY 2024 and beyond. However, in addition to recapturing some of the students who elected not to enroll during the height of the pandemic, VSC’s expanded mission to serve adult populations has the potential to bring new students into its programs. While many of these students may be expected to have weaker financial positions than the average student currently attending VSC institutions, VSC’s efforts to engage the employer community in helping to support student tuition payments has the potential to tap a new source of funding. The figure’s estimates for the potential of such revenue enhancements are modest, amounting to about \$500,000 each year until it reaches \$2M in new revenue by FY 2026. Taking the average net tuition revenue generated by VSC students on average across its member institutions, the total additional revenue to be generated by FY 2026 means the VSC system would need to enroll (or reenroll) about 650-700 more students (in FTE terms) than the anticipated low point in FY 2021.

Figure 10. Schedule for Reducing VSC’s Structural Deficit

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & Beyond
VSC Total Operating Deficit	45					
COVID Mitigation (Assumes additional fed stimulus)	20	?	?			
Existing VSC Structural Deficit	25	20	15	10	5	0
Target Annual Reductions in VSC Structural Deficit	5	5	5	5	5	
Reductions in VSC Structural Deficit (Annual)	5	5	5	5	5	
Efficiency Gains	5	3	3	3	3	
Reduced Operational Costs for Physical Facilities		1.5	1.5	1	0	
Reduced Administrative Costs	3	1	1	1	2	
Reductions in Other Expenditure Categories	2	0.5	0.5	1	1	
Tuition Revenue from Enrollment Increases		2	2	2	2	
Recapture of pre-COVID Enrollments		1.5	1.5	1.5	1.5	
Outreach to Underserved Populations		0.5	0.5	0.5	0.5	
Reductions in VSC Structural Deficit (Cumulative)	5	10	15	20	25	
Efficiency Gains	5	8	11	14	17	
Reduced Operational Costs for Physical Facilities		1.5	3	4	4	
Reduced Administrative Costs	3	4	5	6	8	
Reductions in Other Expenditure Categories	2	2.5	3	4	5	
Tuition Revenue from Enrollment Increases		2	4	6	8	8
Recapture of pre-COVID Enrollments		1.5	3	4.5	6	6
Outreach to Underserved Populations		0.5	1	1.5	2	2

To support the VSC System’s efforts to reach fiscal sustainability, the state will need to make significant one-time investments in transformation. Shown in the first section of Figure 11, these funds will allow the VSC System to eliminate its structural deficit over the next 4-5 years. Operational funding will support the restructuring effort and the aggressive consolidation of administrative services and otherwise to implement changes that yield tangible progress toward eliminating its structural deficit. The capital funds will enable the System to save substantial carrying costs associated with maintaining and operating buildings that are unneeded or are obsolete, and to repurpose others to better support student learning and engagement with employers and the community. The capital investments are front-loaded in

order to more quickly realize savings from buildings that are past their effective use in serving institutional missions effectively.

Figure 11. State Investments in Transformation and Ongoing Support at VSC

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & Beyond
State Investment in Transformation	25	20	17	10	5	
Operational	20	15	15	10	5	
Capital (eliminate underutilized space, renewal/refurbishments)	5	5	2			
State Ongoing Investments in Improved Capacity and Affordability at VSC	17.5	17.5	17.5	17.5	17.5	17.5
Operational	10	10	10	10	10	10
Capital (deferred and major maintenance)	7.5	7.5	7.5	7.5	7.5	7.5
Total Additional State Investments in VSC	42.5	37.5	34.5	27.5	22.5	17.5
Historic VSC State Appropriation	30	30	30	30	30	30
Total State Investments to VSC	72.5	67.5	64.5	57.5	52.5	47.5
Ongoing State Investments in Affordability through VSAC	5	5	5	5	5	5
Total Additional State Investments to VSC & VSAC (Above FY 2020 Levels)	47.5	42.5	39.5	32.5	27.5	22.5

In addition, the Select Committee recommends that the state provide additional ongoing support to ensure that the VSC system has adequate capacity to evolve as needs change by developing and maintaining curricula that fit with local needs; ensuring that students learning in different formats have the supports they need to be successful; cultivating and nurturing deep engagement with employers, schools, and workforce development centers; and assuring high-quality programs. Ongoing support is also needed to keep pace with maintenance requirements of the physical assets owned by the VSC System. This includes realistic funding to better care for deferred maintenance obligations, keep buildings compliant with safety and accessibility requirements, and to address unanticipated major maintenance costs. Currently, when an expensive repair is suddenly required, the VSC System pays for it out of its limited discretionary funds, most of which comes from student tuition payments. It would be better if there was a major maintenance fund to support such unbudgeted costs, any excess of which may be returned to the state if it turns out to be unneeded at the end of each fiscal year. Finally, this additional ongoing support is critical to begin to address affordability issues that have become serious barriers to student access and success, a growing problem for institutions which are expected to provide the most accessible and affordable postsecondary option for Vermont residents.

While state investments in one-time and ongoing funds appear to be needed on this scale, they can take multiple forms, including direct state appropriations and other approaches such as having the state assume responsibility for a portion of the VSC System’s debt service obligations, retirement plan payouts, and its unemployment insurance coverage, etc.

Finally, while the Steering Committee is still deliberating over recommendations about how to address the state’s investments in affordability beyond the need to keep tuition prices in check within the VSC system, it is clear that affordability is an issue that deserves additional

attention by the legislature. This is needed to ensure that Vermont residents with the lowest incomes may have access to financial assistance to support their attendance at the postsecondary institution in Vermont that best fits their educational needs. This will be needed even if the VSC institutions are able to improve their own affordability, and especially if they successfully transform in ways that reach new audiences of adult learners.

The details of these amounts are subject to refinement. However, it is unreasonable to expect that VSC will reach the targets for the first two of the categories suggested above overnight or, given demographic trends and structural imbalances related to labor and facilities costs, for it to do so acting alone. Instead, it will be necessary for the VSC System and the legislature to come to agreement over a reasonable multi-year period during which progress is being made toward the targets.

As a partial alternative to direct appropriation support, the State of Vermont could assume responsibility for paying certain ongoing obligations of the VCS System, obligations the state pays for on behalf of other state enterprises. Among such obligations could be unemployment insurance and annual debt payments on bonds issued for construction of academic facilities. Such actions could reduce overall costs since payments would be made on the basis of a larger pool of employees, in the former case, and by reducing the burden on tuition-paying students of debt payments being made for necessary facilities that are ultimately under state ownership.

There is widespread sentiment among those interviewed in the course of this project that the ability of the state to increase levels of ongoing support through the general fund will be limited. There is no appetite for raising taxes and the list of competing needs is long. As a result, the state should consider creating a dedicated source of revenues that is devoted to making one-time investments in educational innovation and change. There are a wide variety of expenditures that could fall into the category of investments including funding an early retirement program for full-time employees, paying for the demolition of physical facilities unsuitable for an alternative use, making a down payment on an effort to reduce the tuition VTC charges for its sub-baccalaureate programs, providing start-up funds for new programs that meet workforce needs of the state's employers, and expanding the System's capacity to deliver on-line programs. Some of these investments are needed to help the System reduce its operating costs. Others are needed to create conditions that will grow enrollments, particularly among adult residents who could benefit from further education, new skills, and a credential. These investments should be conditioned on requirements such as institutions not increasing tuition rates and providing evidence of cost reductions expanded services to underserved populations. (These may be elements of the state investment components outlined above.)

If the state is to more closely link its allocation of state resources to the priorities espoused by the Select Committee, it must creatively use available resources not only to promote the change and innovation necessary in VSC institutions, but ultimately to improve affordability. In the best of all worlds, Vermont would have sufficient resources to "buy down" tuition at its state institutions, substituting state resources for tuition revenue and decreasing the share of the burden borne by students. Failing that, the next best option is to invest additional resources in student financial aid. This investment could take different forms. The most

straightforward would be to provide additional resources to VSAC to distribute to Vermont residents through its existing need-based grant program. This would allow a larger number of low-income students to enroll in (and complete) postsecondary education programs. An approach that would promote a broader array of Steering Committee goals, including the linkage between education and workforce preparation, is the creation of a state work-study program to be administered by VSAC. Such a program would have the benefit of supporting earn-and-learn academic programs and would foster stronger relationships between higher education and employers. Further, it would bring revenues from the private sector into the mix of higher education funding. To be most effective, such a program should be designed around the following principles:

- Require the student participant to apply for a position with the participating employer and go through the employer's normal hiring process. The institution should provide the student support services necessary to prepare the student for engaging in this experience—resume writing, interview skills, etc.
- The student should receive a regular paycheck with the pay scale in line with the going rate for the position. Half of the paycheck amount would be paid by the employer and half by the work-study program.
- The student must receive academic credit for the work experience. This means there will have to be coordination between the employer and the institution regarding the nature of the position into which the student is placed. As part of this experience, the student should be required to create a portfolio of the work and the learning associated with that work—there needs to be a paper trail supporting the awarding of credit.
- Unresolved is whether or not the employer should receive a tax credit for their share of the wages paid to the student. Such a credit would serve as a further inducement for employers to participate in the program, but this is a decision that can only be made by the legislature.
- It will be important to ensure that any such program is adequately integrated with other existing state efforts to incentivize and grow “earn-and-learn” activities, such as registered apprenticeships. Doing so will maximize the benefits across all the similar investments by aligning marketing efforts with prospective students and employers and assuring that compliance, oversight, and evaluation activities are smoothly arranged.

The need to modify resource allocation practices extends beyond the state level to the VSC System as well. In this regard, it is recommended that VSC:

- Continue to utilize a system-wide approach to resource allocation but change the mechanism employed in the distribution of resources received from the state in some key ways. The allocation mechanism historically used has been based heavily on the amount of tuition revenue generated by each of the institutions. This creates an incentive for institutions to increase tuition rates and seek to enroll non-residents rather than to minimize increases or decrease them. Equally important, this method of allocation does not recognize the cost differences faced by institutions with different types of programs and the associated differing costs of delivery, with different levels of deferred maintenance and other cost drivers. By failing to reflect these operating

realities, the allocation model inadvertently creates incentives for institutions to offer low-cost programs and to avoid offering those with higher costs that may more directly and immediately align to workforce needs. This may help to explain why VSC institutions produce so few degrees and certificates in the skilled trades, repair, and manufacturing fields.

The past approach to allocation of resources also comes up short with regard to its failure to provide clear incentives for producing priority outcomes—completion of programs of study, successful passage of gateway courses, achievement of credit accumulation milestones (30 credits, 60 credits, etc.), and ensuring the success of students from priority populations (low income, adults, etc.). The approach being employed also fails to create incentives for institutional collaboration; to the contrary, it reinforces institutional competition through its incentives for increasing enrollments that yield additional revenues. In the interest of students, it would be better if the institutions were rewarded when they shared academic courses and programs, facilitated student transfers, and otherwise found ways to collaborate for greater efficiency.

In short, it is recommended that the System proceed with the revamping of its resource allocation model in ways that more consciously reflect differences in costs of education delivery and reward institutions for achieving desired outcomes and exhibiting behaviors supportive of System goals.

- Develop a cost reduction plan designed to eliminate the System’s structural deficit within a period of five years. This plan should identify those reductions that the System can make through its own decision-making processes and those that will require one-time assistance through use of state investment funds. The latter include such things as early retirement/separation incentives and the realignment and sharing of programs. At the end of this process, the ratio of FTE students to full-time employees should be roughly equivalent to the lowest level found within the last 10 years.
- Establish a Systemwide policy addressing the level of tuition discounting authorized for each institution and providing criteria for the types of students who should be prioritized to receive tuition waivers or discretionary institutional grants. This policy should prioritize the needs of low-income Vermont residents—both recent high school graduates and adults—and reduction of competition for students among System institutions. The policy should require review and approval of institutional aid budgets by the Chancellor’s Office before implementation.

6. Physical Spaces

The VSC System should take steps to analyze its inventory of physical facilities for ongoing suitability to the needs of students, communities, and others including employers. Such steps may include repurposing spaces for use by firms or other organizations willing to enter into a

partnership/leasing arrangement and for converting spaces into flexible “maker” spaces connected to new entrepreneurial centers capable of helping to fuel local economic development plans. In such cases, preferences should be given to uses that provide students with opportunities for experiential learning, or are otherwise part of an intentional academic strategy to cultivate entrepreneurial initiative. The existence of underutilized space that could be occupied by another institution in the System, e.g., CCV assuming a presence using available space on another campus, should only be considered if such an arrangement is in the best interests of students and provides them with greater access to courses and programs than they otherwise would have.

Underutilized buildings that cannot be safely refurbished or renovated for an imminent alternate use, or when doing so stretches the limits of fiscal responsibility, should be demolished. This may require one-time funding from the legislature. The costs of ongoing operation and maintenance of such structures will remain a burden on the VSC System without appropriate attention.

The VSC System should remain alert to consider alternative spaces that may be suitable for use where such spaces can help extend access to new student populations and promote their success, e.g., by forging a partnership with the CTE centers.

Given likely changes in the characteristics of the student body the VSC System will be serving in the years ahead—both due to demographic change and due to intentional policy choices to serve a larger population of adult learners as articulated in this report and elsewhere—one area for particular focus for reducing the VSC footprint is housing. The possible need to do so is far from a consensus matter. But reports from stakeholders suggest that some of the residence halls are among the buildings most in need of refurbishment and renovation, and those that do are not capable of attracting new students to enroll and may also be among the most expensive to renovate. Past experience in other states suggests that housing costs—especially the need to carry stubbornly low-occupancy residences on the books—has a direct and meaningful impact on students’ costs of attendance that feeds on itself and deters enrollment. For instance, in Pennsylvania a decision was made more than two decades ago, when the demographic picture was substantially brighter than it is now, to replace old and unsafe housing capacity with newer, more feature-rich options. The decision was justifiably on a number of fronts at the time, and one reason cited was to compete more effectively for students in a tightening marketplace. But in recent years, with far fewer students leading to housing occupancy substantially reduced, institutional policies requiring on-campus housing were necessary to prop up the auxiliary budgets and contributed to unnecessarily high costs of attendance.

Additional information and analysis to be added as they become available.

7. Affordability

There is strong consensus among members of the Steering Committee and the external constituents consulted during the development of the Committee’s report that the opportunity

to enroll in, and complete, programs of study at Vermont’s public institutions should be affordable to all residents of the state. While affordability was identified as a priority by a broad array of informants, the discussions made clear that the term “affordability” means very different things to different people. For some it means keeping tuition low—at the very least, no higher than other states in New England. For others it means ensuring that students can graduate with no (or “reasonable” levels of) debt. In the latter case there was considerable variation in the definition of the word “reasonable.”

For decision-makers to take action regarding assurance of adequacy there first must be an agreed-upon, working definition of the term “affordability,” a definition that can be measured. Without effective measurement, crafting policy solutions that address the topic is likely to yield ineffective and unnecessarily expensive solutions. To avoid that outcome, NCHEMS recommends that the legislature adopt an Affordability Standard, the details of which will be the subject of further deliberation by the Steering Committee as its work continues.

8. Economic Development

The data presented clearly show that Vermont is plagued by a declining, aging population and a loss of jobs in some historically important industry sectors. If the state is to reverse these trends, it will be necessary for it to bring all available assets to bear on an intentional effort to create its future economy. The state’s institutions of higher education can be critical partners with the state as it pursues its economic development strategies. In order to become a more valued contributor to the creation of the state’s future, the VSC System and its constituent institutions should:

- Make a concerted effort to work more closely with the Agency of Commerce and Community Development to identify roles that VSC can play in implementing the state’s economic development strategy.
- Develop town/gown task forces in each region of the state in order to facilitate the development of a clear strategy for local economic development. In this context, VSC can serve a critical convening and supporting role in the identification and development of solutions to local problems.
- Place a premium on providing students with academic programs and related experiences that prepare them for pursuing entrepreneurial endeavors. Vermont is a state of small employers. Economic development strategies designed to foster the seeding of such enterprises in various regions of the state. As part of this focus the VCS institutions should strive to devote a portion of their underutilized physical space to use as makerspaces or other types of spaces that brings entrepreneurs and employers onto the campuses in ways that let them interact with students in academically fruitful ways. This may include providing incubator space for start-up companies.
- As indicated previously, build a work component into as many academic programs as possible.
- Seek ways to collaborate with the new UVM Office of Engagement to seek ways in which VSC can add value to efforts to link higher education with community and regional needs.

One of the roles that the VCS System can play is to link UVM Office of Engagement efforts to communities in which UVM does not have strong ties.

9. Accountability

Ultimately, the long-term sustainability of VSC will hinge on its ability to commit to a set of goals aligned with the needs of the State of Vermont, to build consensus about the importance of these goals within the system, to persistently pursue implementation actions designed to achieve these goals and to demonstrate effectiveness in accomplishing the desired ends. To these ends the VSC Board of Trustees must more deliberately and effectively exercise its leadership and oversight roles. The leadership role will require first, and foremost, that the Board make clear the priority goals to be pursued and the behaviors to be exhibited by System institutions—behaviors such as collaboration in delivery of academic programs and minimization of tuition increases. To ensure that there is no misunderstanding of Board intentions and expectations, the metrics by which progress will be monitored should be made explicit and broadly communicated from the outset. Data tied to these metrics should become the basis of annual accountability report that can be used to demonstrate the contributions of the System to the State and its citizens. These data can yield greater benefits in that they:

- Can promote a culture of information use within the System.
- Help identify areas where mid-course corrections may be needed.
- Can provide the basis for holding all elements of the System accountable for the collective success of the enterprise.

The Board must not only exhibit leadership in the ways suggested above, but it must also play a much more active oversight role than it has in the past. A review of legislation establishing the Board indicates that it has all the authorities it needs to direct the changes that need to be made. Yet the Board has been hesitant to exercise those powers in ways that might have prevented mounting fiscal challenges from reaching the current crisis state. As first steps in reasserting the oversight role appropriate to current circumstances, it is recommended that the Board:

- Quickly establish an expectation that the Chancellor's Office develop, in consultation with institutional leadership, a revised resource allocation model, one that creates strong incentives for goal attainment, collaboration in the delivery of academic programs, and improving affordability for Vermont residents. This allocation model should be reviewed and approved by the Board before its implementation.
- Provide input in the process of renegotiating the System's collective bargaining agreements and, once negotiated by the Chancellor's Office, formally ratify those agreements.
- Ensure that the Board directive regarding the development and implementation of a common core general education requirement is put in place in a timely fashion.
- Monitor the enforcement of Board policy regarding under-enrolled course sections and determine if additional actions are necessary.
- Review/develop policies regarding streamlining curricula, policies designed to ensure efficiency in educational delivery.

- Quickly formulate a policy that requires the Chancellor to develop a strategic finance plan for the System, indicating the strategy for enhancing revenues and controlling costs in ways that ensure continued fiscal viability of the System. Approve the plan annually as the basis for budget formulation for the coming year.

These recommendations will likely take the Board outside its comfort zone. As a result, it is recommended that the Board instigate a robust Board development program that will better prepare the Board to perform its necessarily expanded role with confidence and a common understanding of its authority (and the limits of that authority). An enhanced orientation program should be developed so that all new Board members are effectively informed of the circumstances facing the System and the oversight role that Board members must play. In this vein, Board development should also encompass training to ensure that Board committees are capable of fulfilling their responsibilities—analyzing data relevant to functions under their supervision and advancing bold, carefully considered recommendations for action by the full Board.

In order for the Board to fulfill its oversight functions in the ways recommended, the Chancellor’s Office must also develop an enhanced set of capabilities. Some of these enhancements involve improving the capacity of the System Office to develop the information needed to support Board decision-making. Among the list of data requirements are:

- The set of performance metrics identified in the context of communicating the Board’s goals. These include information about student access and success, supporting the workforce and economic development needs of the state, extent to which affordability is being achieved/maintained, and efficiency of institutional operations, both academic and administrative. As an extension of these metrics, the VCS System should develop the capacity to report on the employment outcomes of graduates and non-graduate of VCS institutions (and UVM) who work in Vermont. This will require forging a data-sharing agreement with the Vermont Department of Labor. There are numerous examples of such agreements in other states.⁷
- The data needed to create a strategic finance plan for the System.
- Those required to allow monitoring adherence to Board policies regarding efficient delivery of academic programs and collaboration in academic delivery.

⁷ Florida and Texas use these data as part of their performance-funding models. Other states create consumer information tools to help prospective students consider institutions and programs; several states are partnering with the U.S. Census Bureau to report on employment outcomes of graduates, including out-of-state employment (see https://lehd.ces.census.gov/data/pseo_explorer.html?type=earnings&compare=postgrad&specificity=2&state=08&institution=00137000°reelevel=05&gradcohort=0000-3&filter=50&program=52,45). These data can also be informative to curriculum development and alignment to workforce needs.

Implementation Steps

These will be fleshed out in future reports following the December 4 report. But in recognition that the healthfulness and effective functioning of Vermont's public postsecondary education depends on shared goals and shared responsibilities, this section will make assignments for implementation to entities such as:

- a. The Executive Branch of Vermont state government
- b. The Legislature
- c. The VSC Board
- d. The VSC System Office
- e. VSC campuses
- f. UVM
- g. Employers
- h. VSAC

Appendix A. Peer Selection Methodology

To assess the extent to which VSC institutions might be able to achieve cost reductions, individually or through a consolidation, NCHEMS analyzed finance data in comparison to institutional peers. NCHEMS first created a separate set of institutional peers for each institution and each combination of VSC institutions based on characteristics such as enrollment size (including the relationship between headcount and FTEs), location, size of faculty complement, control, Carnegie classification, program mix in terms as revealed by award levels and fields of study, and other characteristics. After specifying the relative importance of key characteristics (e.g., a heavy concentration of high cost programs), NCHEMS calculates distance scores for institutions that meet the identified criteria. From that list, NCHEMS selects a group of 8-15 of the most similar institutions. With the peers identified, NCHEMS then gathers data on revenues and expenditures and staffing.

To develop the peers for hypothetical combination of VSC institutions, NCHEMS first summed the counts of enrollments, employees, and awards at each level and field, and then used that aggregated institution to build a set of comparable peers.

All data are based on NCES IPEDS and use the most recently available data, which at this time is FY2018.

This process resulted in the following lists of institutional peers.

Castleton University

Institution	State
University of Maine at Farmington	ME
Lander University	SC
University of South Carolina-Beaufort	SC
Mayville State University	ND
University of South Carolina-Aiken	SC
Pennsylvania State University-Penn State Lehigh Valley	PA
Indiana University-Kokomo	IN
Pennsylvania State University-Penn State Scranton	PA
West Liberty University	WV
Dickinson State University	ND
University of Minnesota-Crookston	MN
Missouri Western State University	MO

Northern Vermont University

Institution	State
Concord University	WV
Eastern Connecticut State University	CT
SUNY College at Old Westbury	NY
University of South Florida-Sarasota-Manatee	FL
Western State Colorado University	CO
Christopher Newport University	VA
Indiana University-East	IN
Northwestern Oklahoma State University	OK
Mansfield University of Pennsylvania	PA
Mississippi Valley State University	MS
Savannah State University	GA

Vermont Technical College

Institution	State
Chipola College	FL
Abraham Baldwin Agricultural College	GA
Oklahoma State University Institute of Technology	OK
Great Basin College	NV
Northern New Mexico College	NM
SUNY College of Technology at Alfred	NY
SUNY College of Agriculture and Technology at Cobleskill	NY
SUNY College of Technology at Canton	NY
SUNY College of Technology at Delhi	NY
Montana Tech of the University of Montana	MT
South Dakota School of Mines and Technology	SD

Community College of Vermont

Institution	State
Norwalk Community College	CT
Atlantic Cape Community College	NJ
Mendocino College	CA
Massasoit Community College	MA
Mercer County Community College	NJ
Mott Community College	MI
Yuba College	CA
College of Southern Idaho	IA
Barton County Community College	KS
Chattanooga State Community College	TN
College of the Redwoods	CA
Del Mar College	TX
Hutchinson Community College	KS

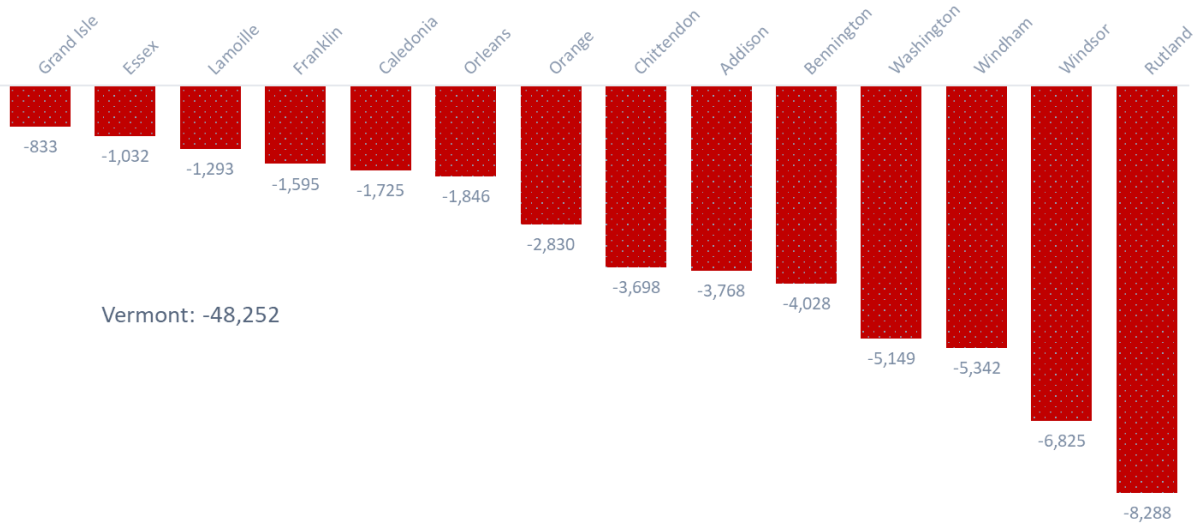
Castleton University + Northern Vermont University

Institution	State
Clayton State University	GA
University of Wisconsin – Superior	WI
Western Connecticut State University	CT
University of Wisconsin – Green Bay	WI
Lander University	SC
Minnesota State University Moorhead	MN
University of Wisconsin – Parkside	WI
Keene State College	NH
Ramapo College of New Jersey	NJ
Indiana University – South Bend	IN
SUNY College at Plattsburgh	NY
Southern Oregon University	OR

Castleton University + Northern Vermont University + Vermont Technical College

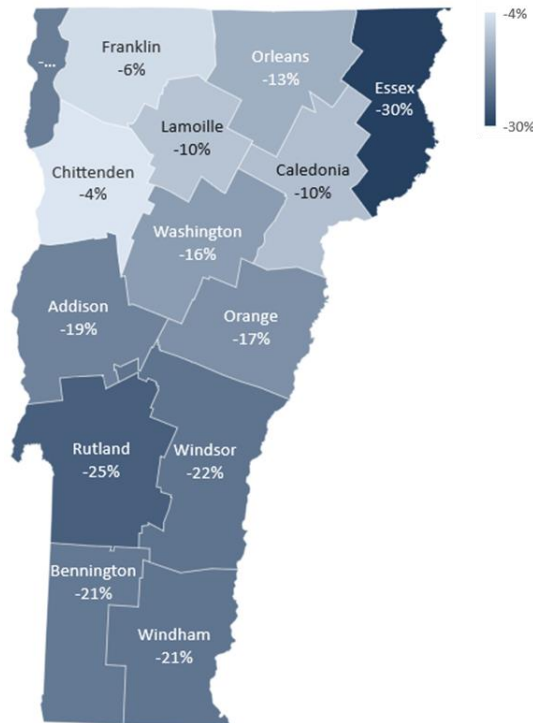
Institution	State
Washburn University	KS
Northern Michigan University	MI
University of Arkansas-Fort Smith	AR
McNeese State University	LA
Missouri Southern State University	MO
Montana State University-Billings	MT
Austin Peay State University	TN
Nicholls State University	LA
Ferris State University	MI
Clarion University of Pennsylvania	PA
California University of Pennsylvania	PA
University of Maine at Augusta	ME

Figure 3. Projected Change in Population by County, Adults Aged 25-64, 2010-2030



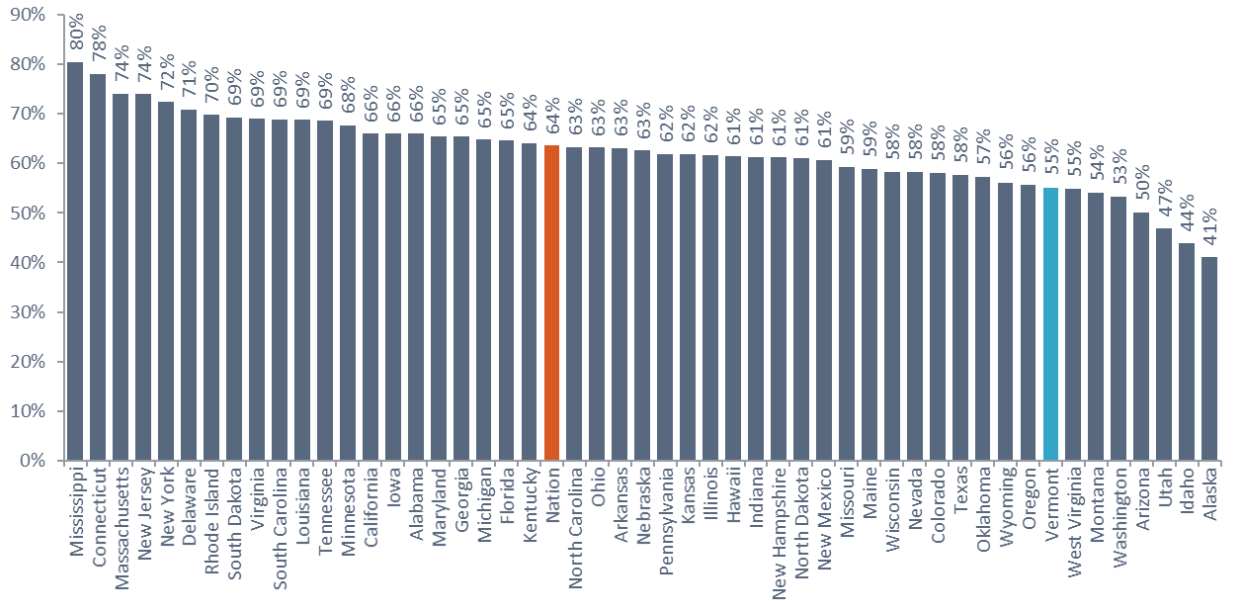
Source: State of Vermont, Vermont Population Projections – 2010 – 2030, August, 2013; Ken Jones, Ph.D., Economic Research Analyst

Figure 4. Projected Percent Change in Population, Adults Aged 25-64, 2010-2030



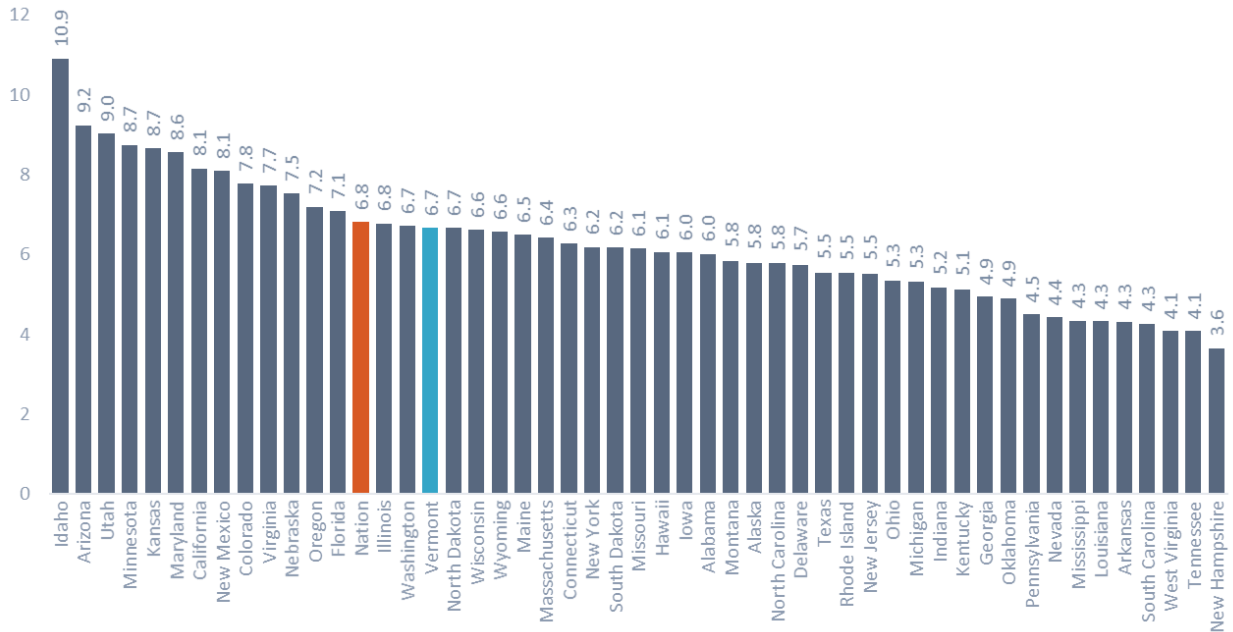
Source: State of Vermont, Vermont Population Projections – 2010 – 2030, August, 2013; Ken Jones, Ph.D., Economic Research Analyst

Figure 5. Percent of High School Graduates Directly Out of High School Going Directly to College, 2018



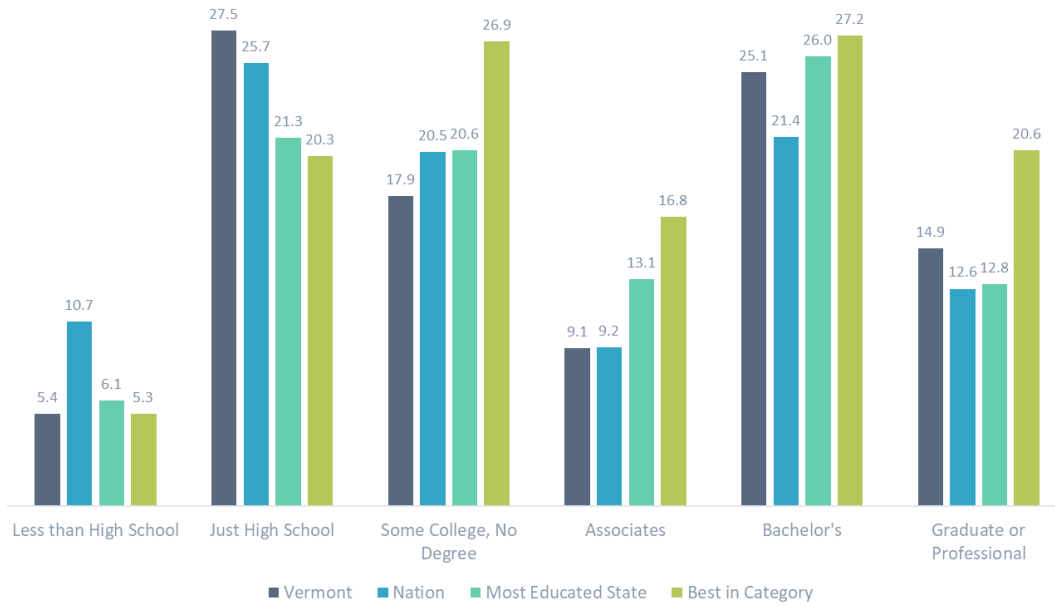
Source: Western Interstate Commission for Higher Education, Knocking at the College Door: Projections of High School Graduates, 2016; NCES, IPEDS Fall 2018 Residency and Migration File; ef2018c Provisional Release Data File.

Figure 6. Undergraduate Enrollment Age 25-49 as a Percent of Population Age 25-49 with Less than an Associates Degree, Fall 2017



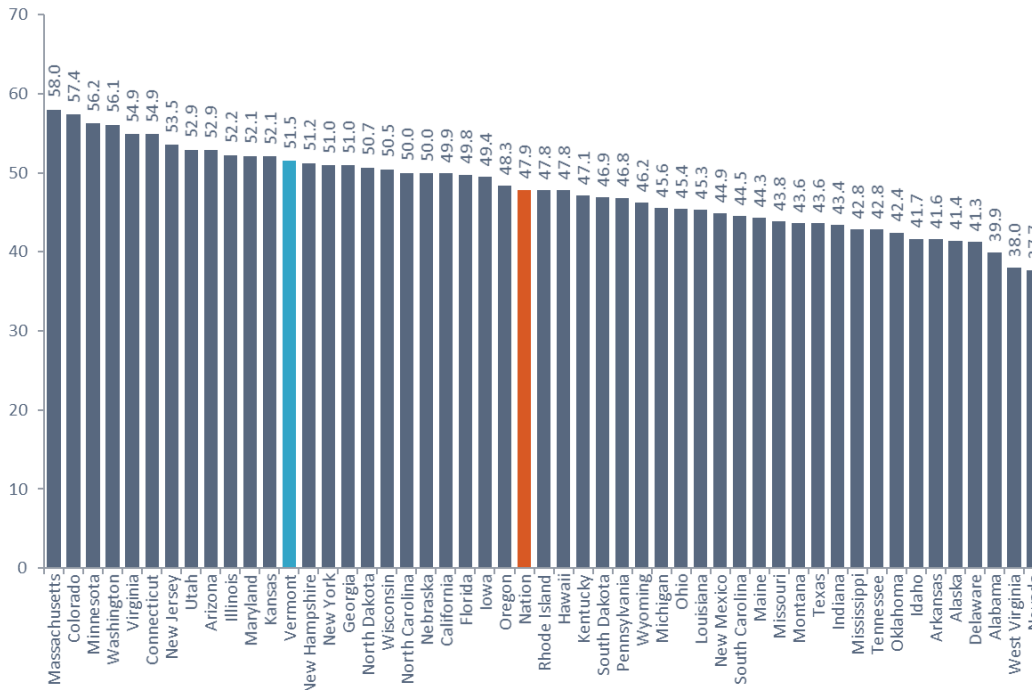
Sources: NCES, IPEDS Fall 2017 Enrollment File; ef2017b Provisional Release Data File; U.S. Census Bureau, 2017 American Community Survey One-Year Public Use Microdata Sample.

Figure 7. Educational Attainment of Working Aged Adults Aged 25 to 64 – Vermont, the US, and the Most Educated State (2018)



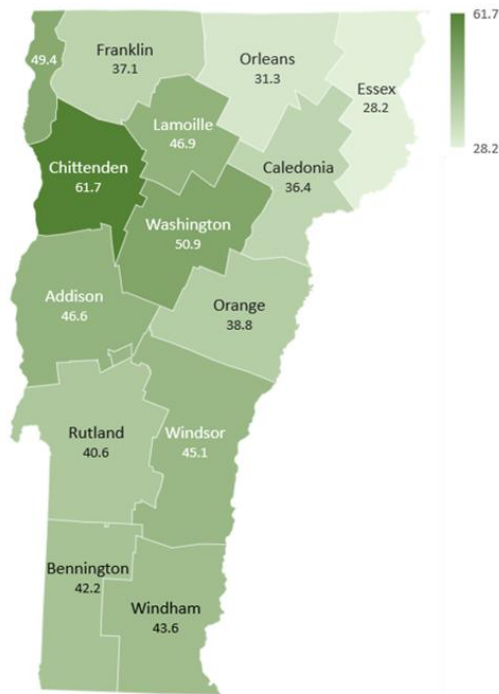
Source: U.S. Census Bureau, 2018 American Community Survey One-Year Estimates; Table B15001.

Figure 8. Percent of Residents Ages 25-64 With A High-Quality Certificate or Higher, 2018



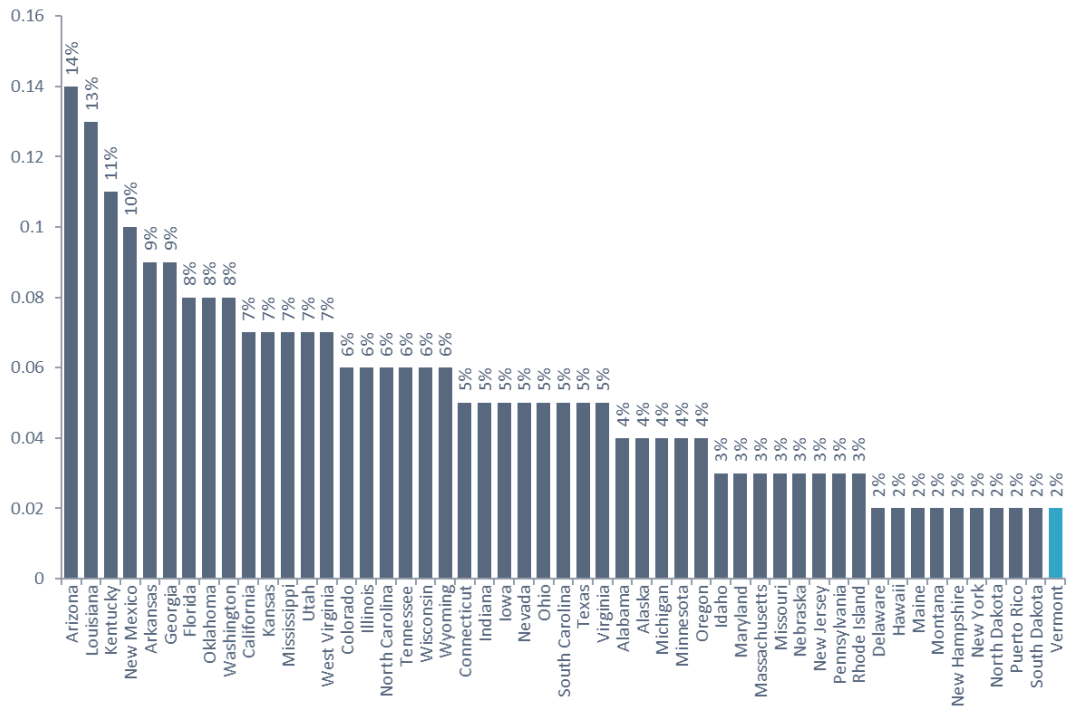
Source: U.S. Census Bureau, 2018 American Community Survey 1-Year Public Use Microdata Sample, Source: Lumina Stronger Nation Report 2020

Figure 9. Percent of Adults Aged 25-64 with an Associates or Higher by County, 2014-18



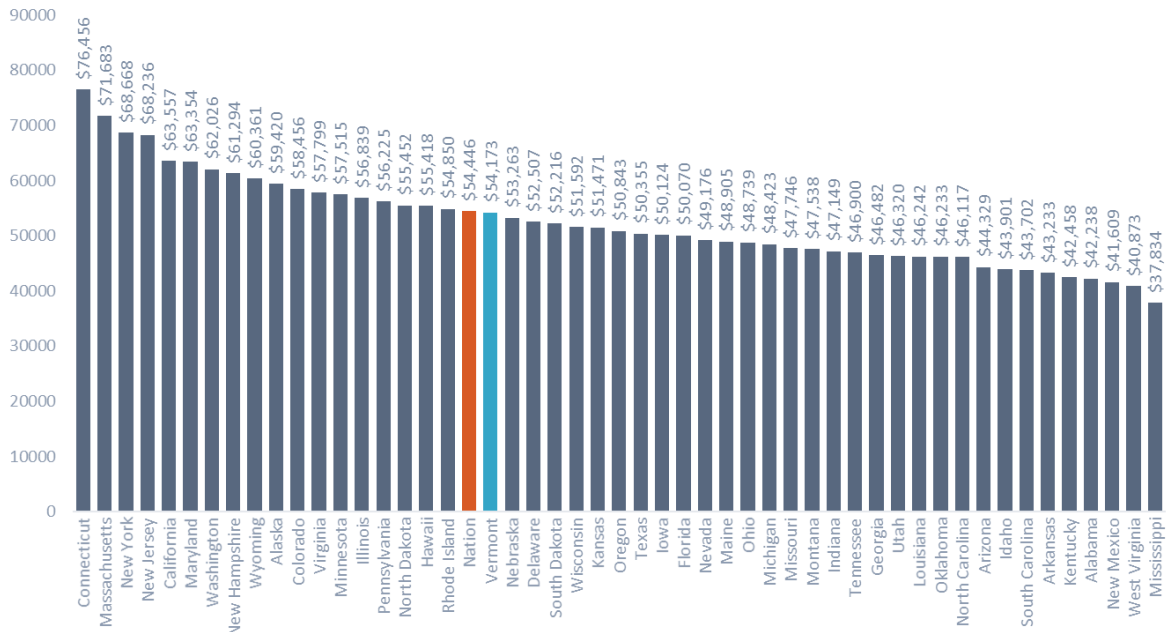
Source: U.S. Census Bureau, 2014-18 American Community Survey Five-Year Estimates; Table B15001.

Figure 10. Percent of Residents Ages 25-64 With A High-Quality Certificate



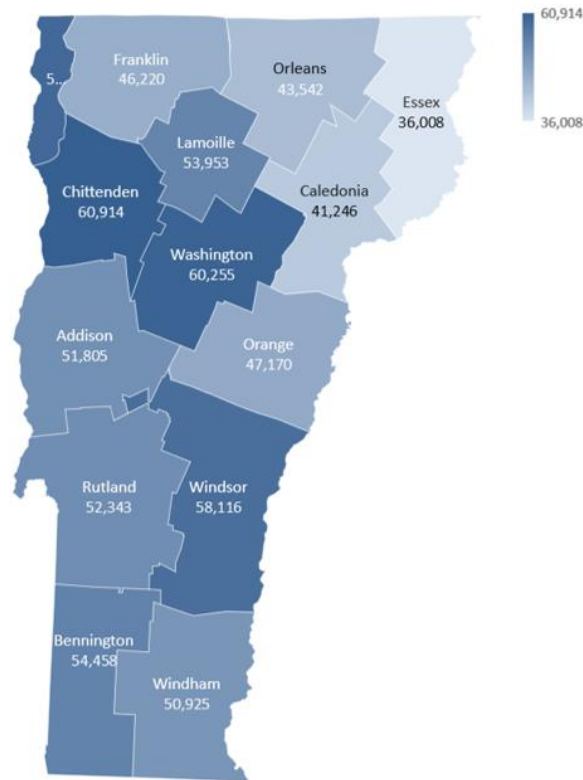
Source: Lumina Stronger Nation Report 2020

Figure 11. Per Capita Income by State, 2018



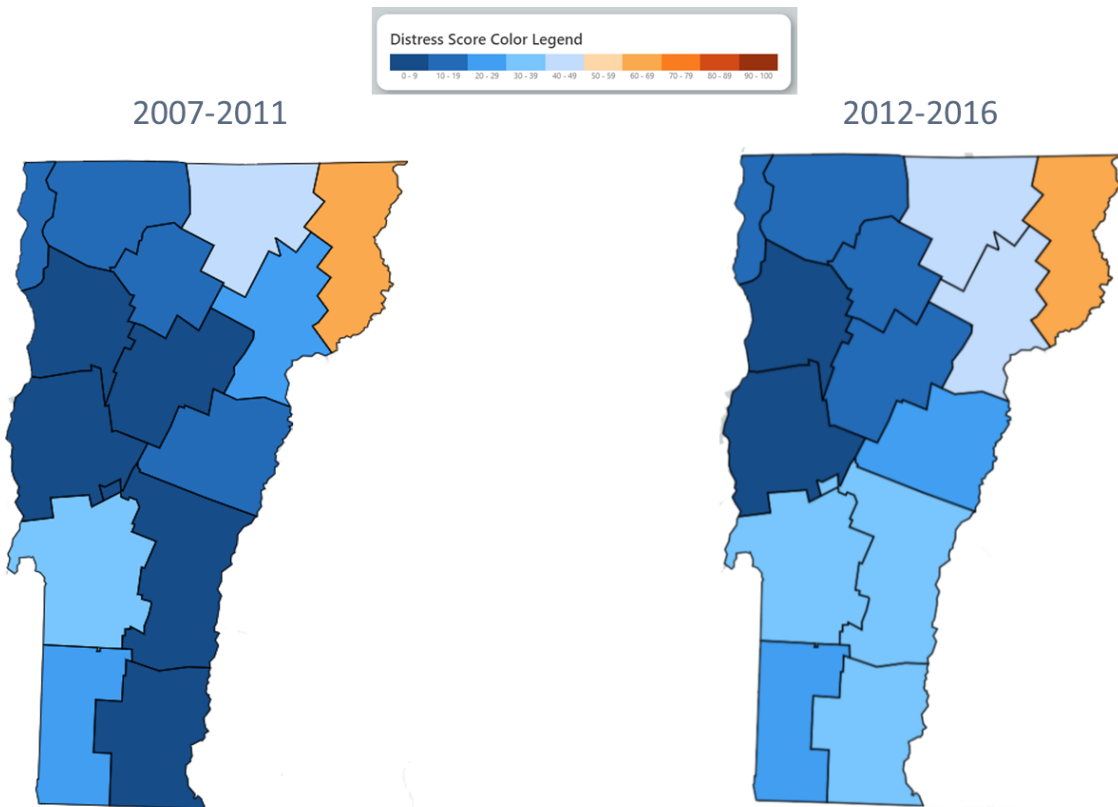
Source: Bureau of Economic Analysis

Figure 12. Per Capita Income by County, 2018



Source: U.S. Bureau of Economic Analysis

Figure 13. Distressed Communities Index⁸



Source: Economic Innovation Group.

⁸ The Distressed Communities Index (DCI) is a comparative measure of the vitality and wellbeing of U.S. communities, and combines seven complementary metrics into a holistic measure of comparative community economic wellbeing.

No high school diploma: Percent of the 25+ population without a high school diploma or equivalent

Housing vacancy rate: Percent of habitable housing that is unoccupied, excluding properties that are for seasonal, recreational, or occasional use

Adults not working: Percent of the prime-age (25-64) population not currently employed.

Poverty rate: Percent of the population living under the poverty line

Median income ratio: Median household income as a percent of the state’s median household income (to adjust for cost of living differences)

Change in employment: Percent change in the number of jobs

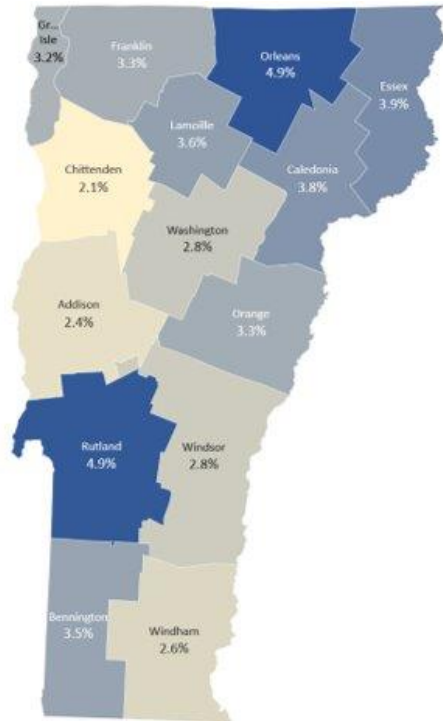
Change in establishments: Percent change in the number of business establishments

Each component is weighted equally in the index, which is calculated by ranking communities on each of the seven metrics, taking the average of those ranks, and then normalizing the average to be equivalent to a percentile.

Distress scores range from approaching zero to 100.0, such that the zip code with the average rank of 12,500 out of 25,000 will register a distress score of 50.0. Communities are then grouped into quintiles, or fifths. The best-performing quintile (with distress scores of 0 to 20.0) is considered “prosperous,” the second-best “comfortable,” the third “mid-tier,” the fourth “at risk,” and the fifth, or worst-performing (with distress scores of 80.0 to 100), “distressed.”

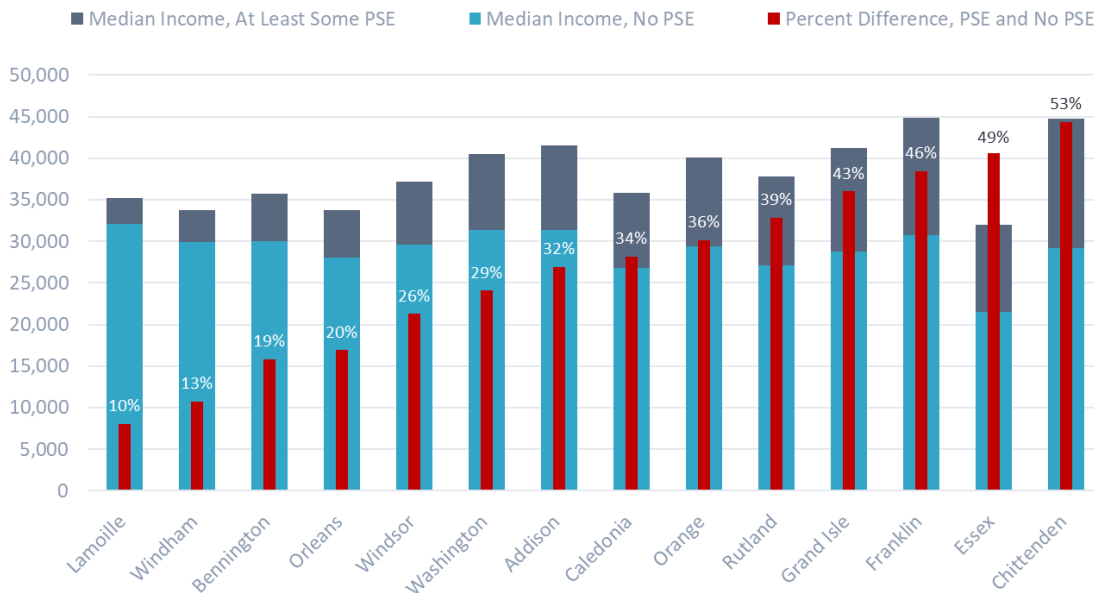
For a full description of the methodology underlying the DCI, see eig.org/dci/methodology.

Figure 14. VCS Participation by County



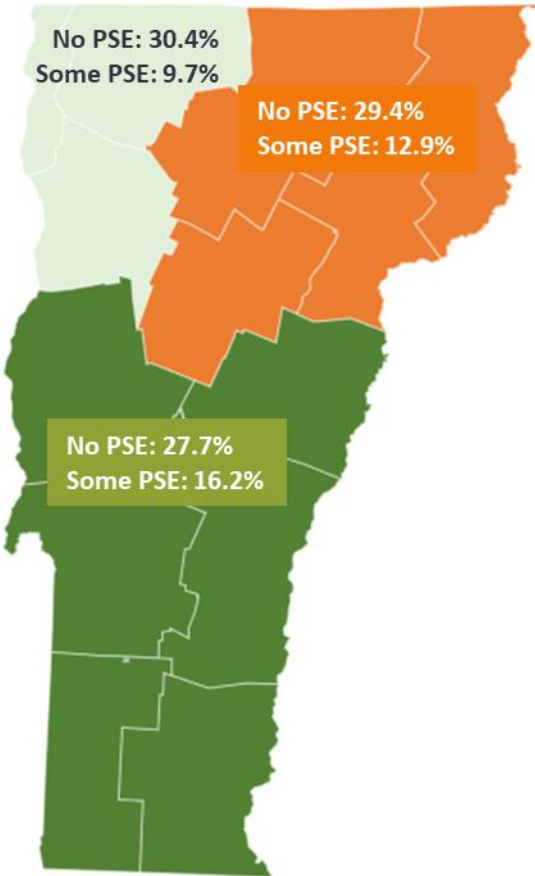
Source: Vermont State Colleges; U.S. Census Bureau, 2014-18 American Community Survey Five-Year Estimates; Table B15001

Figure 15. Median Income for Vermont Residents with No Postsecondary Education and Those with at Least Some Postsecondary Education, Adults Aged 25+ with Earnings, 2014-18



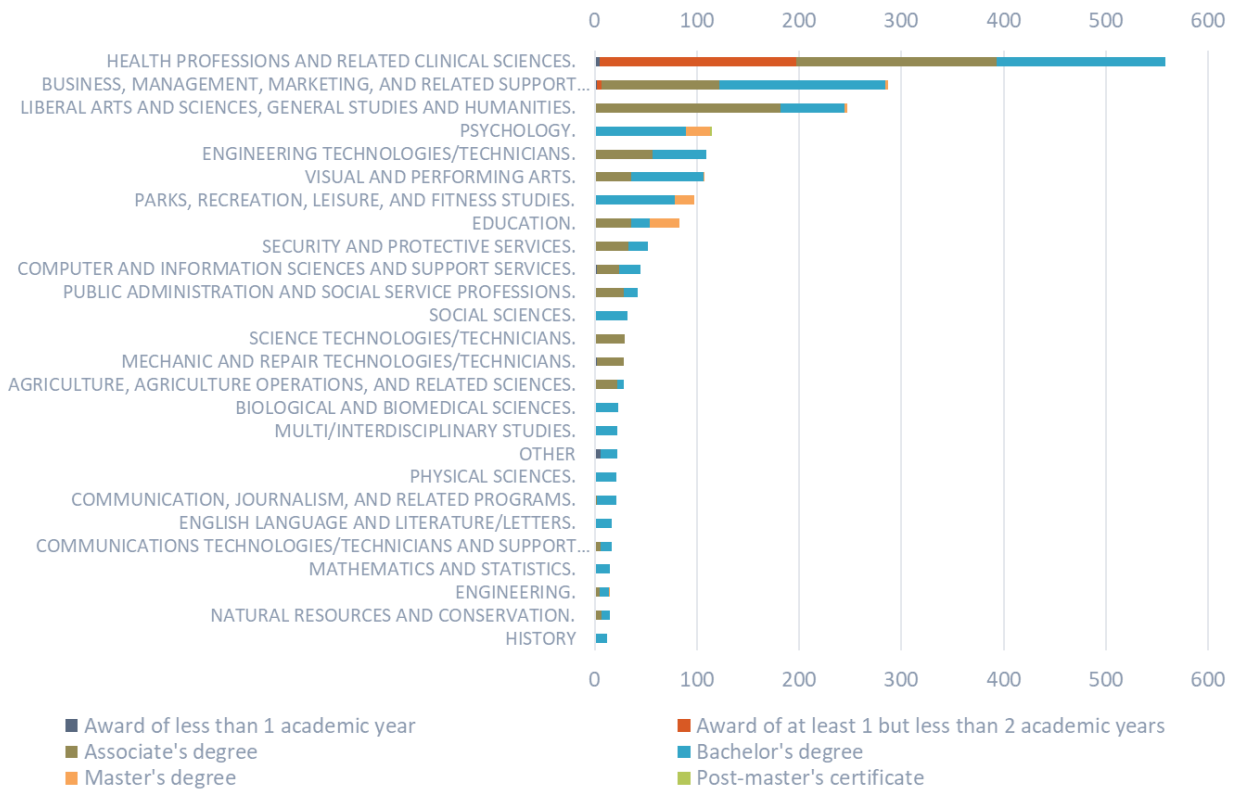
Source: U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates

Figure 16. Percent of Vermont Residents Not in the Workforce: Those with No Postsecondary Education and those with at Least Some Postsecondary Education, Adults Aged 25-64, 2019



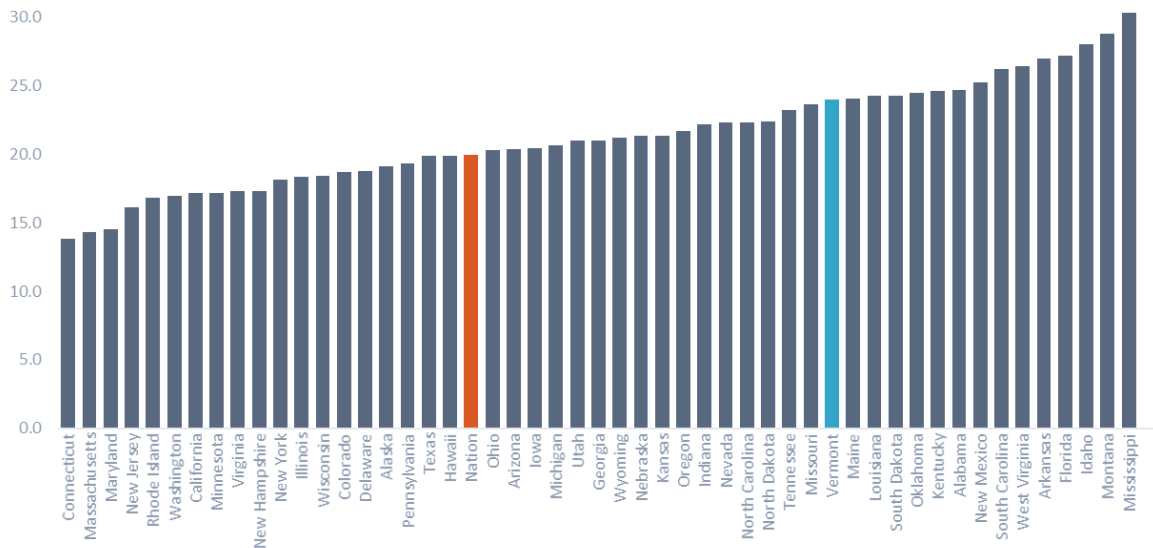
Source: U.S. Census Bureau, 2019 American Community Survey 1-Year Estimates

Figure 17. Awards by Selected 2-Digit CIP, Vermont State Colleges, 2017-18



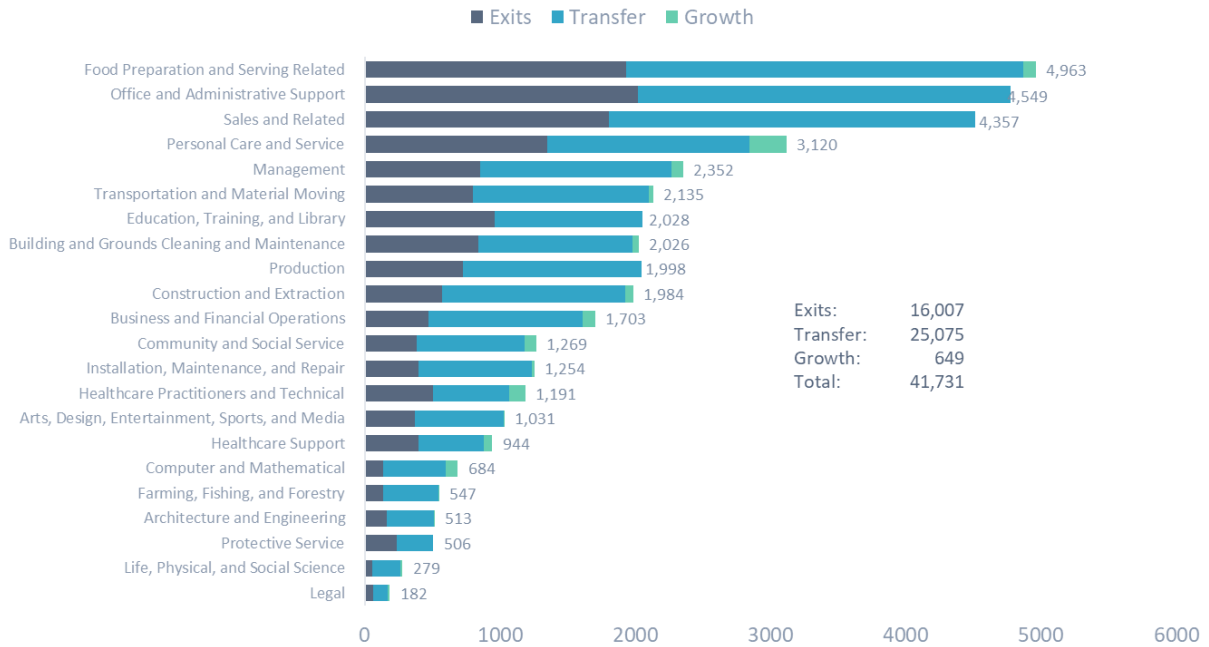
Source: NCES IPEDS IPEDS c2019_a

Figure 18. Percent of Workers Earning Low Wages, Associate and Above, 2017



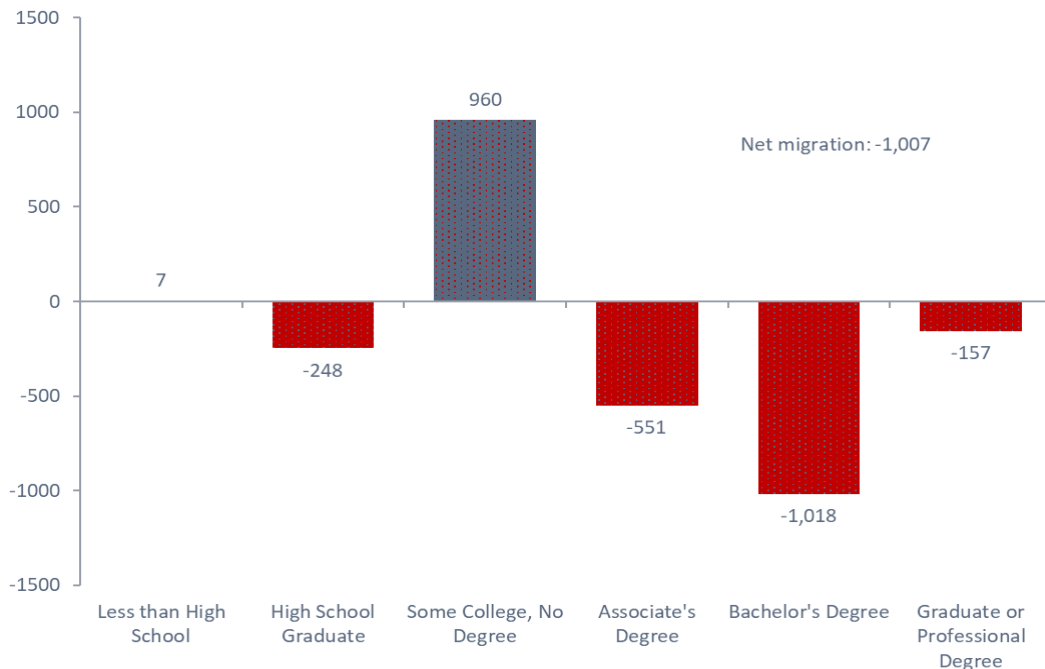
Source: U.S. Census Bureau, 2017 American Community Survey One-Year Public Use Microdata Sample.

Figure 19. Projected Annual Job Openings by Occupation, 2018-2028



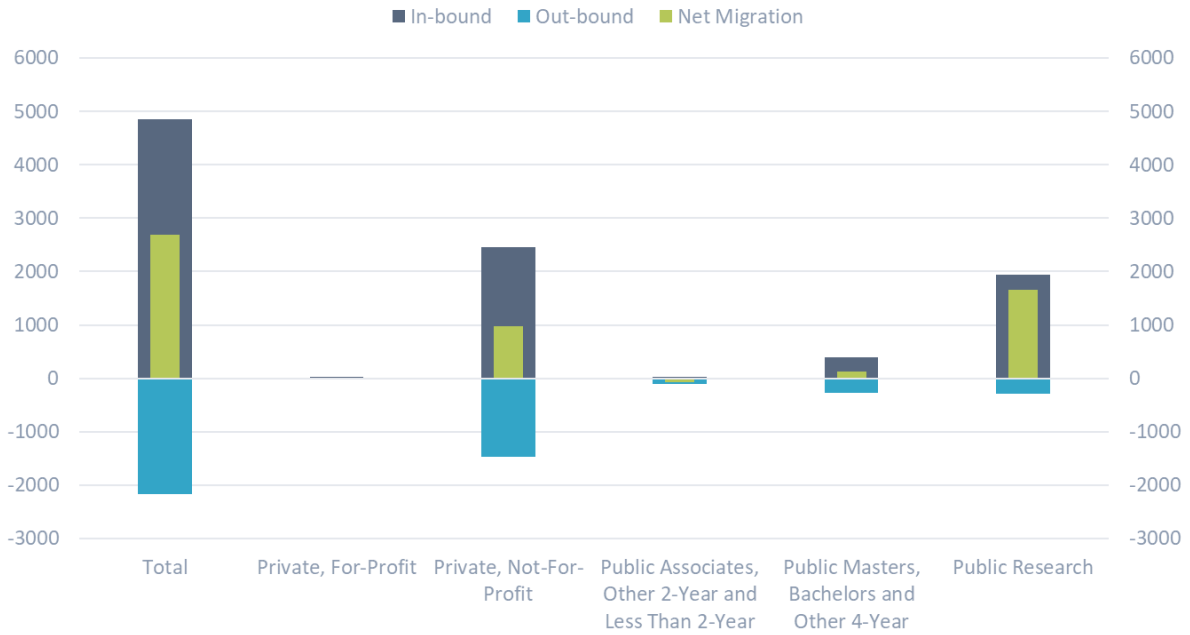
Source: Vermont Department of Labor

Figure 20. Average Annual Net Migration of 22 to 64-Year-Olds by Education Level, Vermont, 2013-18



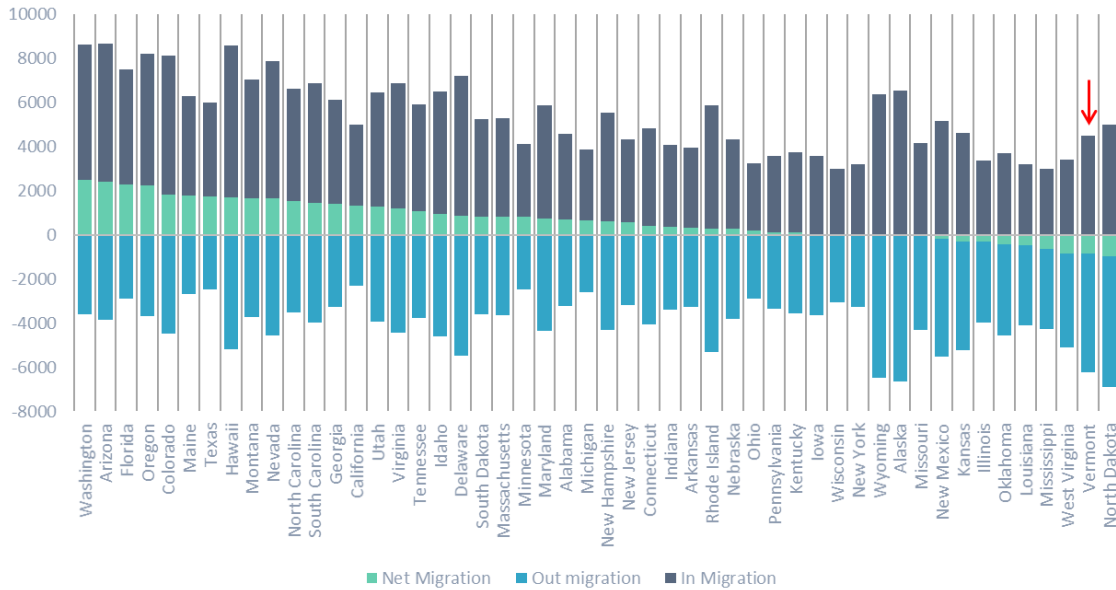
Source: U.S. Census Bureau, 2013-18 American Community Survey (ACS) Public Use Microdata Samples.
 Note: * indicates statistically significant results

Figure 21. Student Migration, First-time Degree/Certificate-seeking Undergraduate Students, Fall 2018



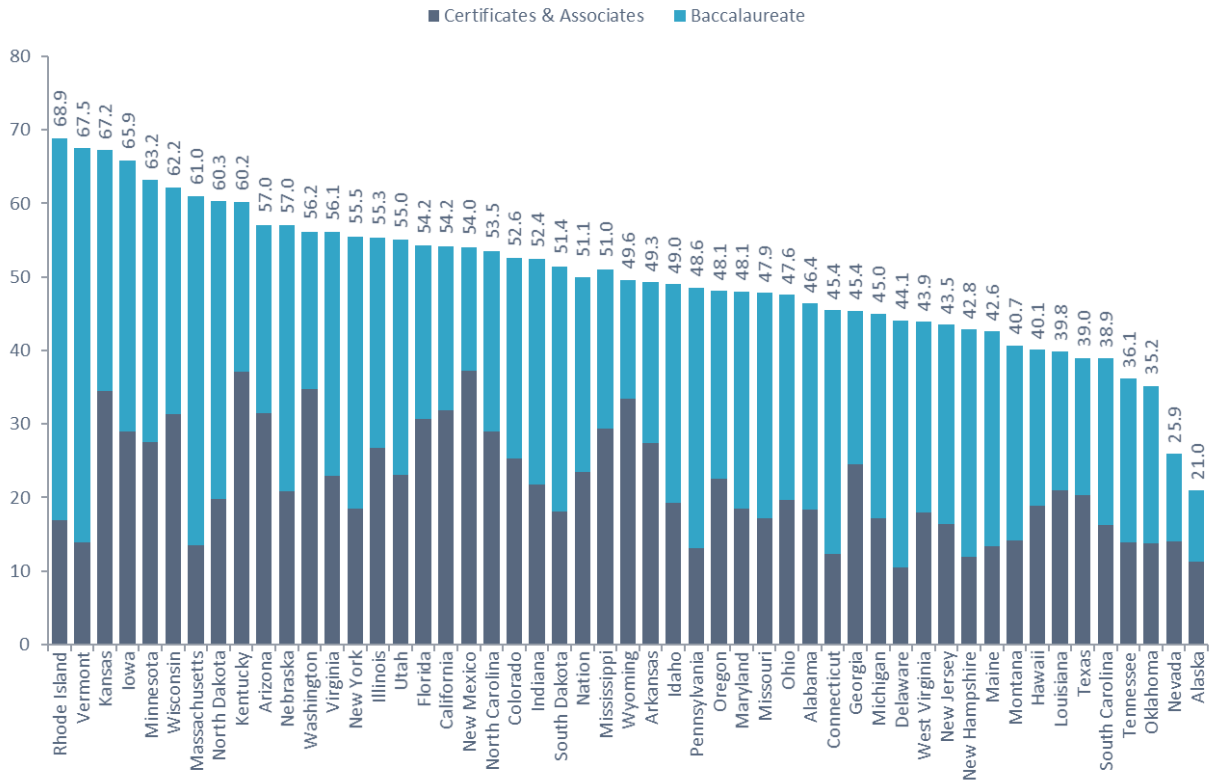
Source: NCES, IPEDS Fall 2018 Residency and Migration File; ef2018c Provisional Release Data File.
 Note: Data restricted to Title IV degree granting institutions. Data reflect in-migrants from U.S. territories and foreign countries. Out-migrants to foreign countries cannot be accounted for.

Figure 22. Average Annual In-, Out- and Net-Migration per 100,000 22-64 Year-Olds With an Associate's Degree or Above, 2016-18



Source: U.S. Census Bureau, 2016, 2017, and 2018 American Community Survey (ACS) One-Year Public Use Microdata Samples.

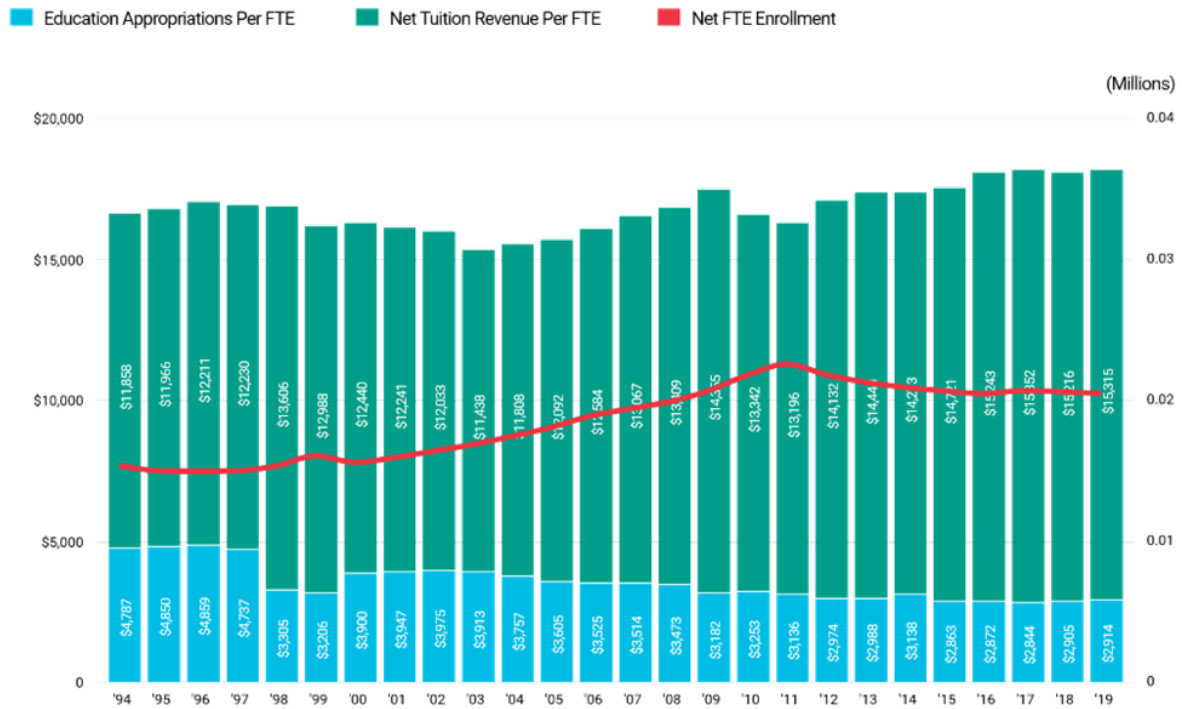
Figure 23. Undergraduate Awards per 1,000 Population Age 18-44 with No College Degree, 2017-18



Sources: NCES, IPEDS 2017-18 Completions File; c2018_a Provisional Release Data File. U.S. Census Bureau, 2018 American Community Survey One-Year Estimates; Table B15001.
 Note: Awards aggregated for Public and Private Postsecondary Title IV Degree-Granting Institutions in the 50 States and District of Columbia. Awards include first majors only.

Figure 24. Vermont's Heavy and Increasing Reliance on Tuition Revenue

Public FTE Enrollment, Education Appropriations Per FTE, and Net Tuition Revenue Per FTE, Vermont, FY 1994-2019 (Constant Adjusted Dollars)

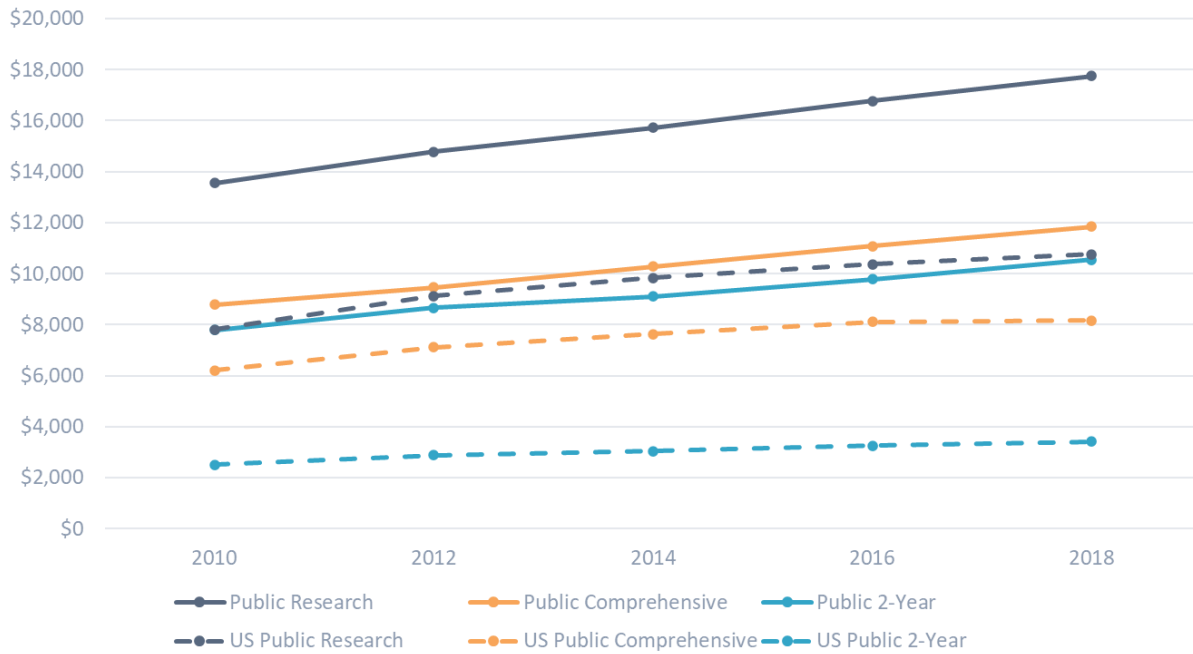


Notes:

1. Full-time equivalent enrollment converts student credit hours to full-time, academic year students, but excludes medical students.
2. Education appropriations are a measure of state and local support available for public higher education operating expenses, excluding appropriations for research, hospitals, and medical education.
3. Net tuition revenue is calculated by taking the gross amount of tuition and fees, less state and institutional financial aid, tuition waivers or discounts, and medical student tuition and fees.
4. Constant dollars adjusted by the Higher Education Cost Adjustment (HECA).
5. Adjusted to account for interstate differences using the Enrollment Mix Index (EMI).
6. Adjusted to account for interstate differences using the Cost of Living Index (COLI). The COLI is not a measure of inflation over time.

Source(s): State Higher Education Executive Officers Association

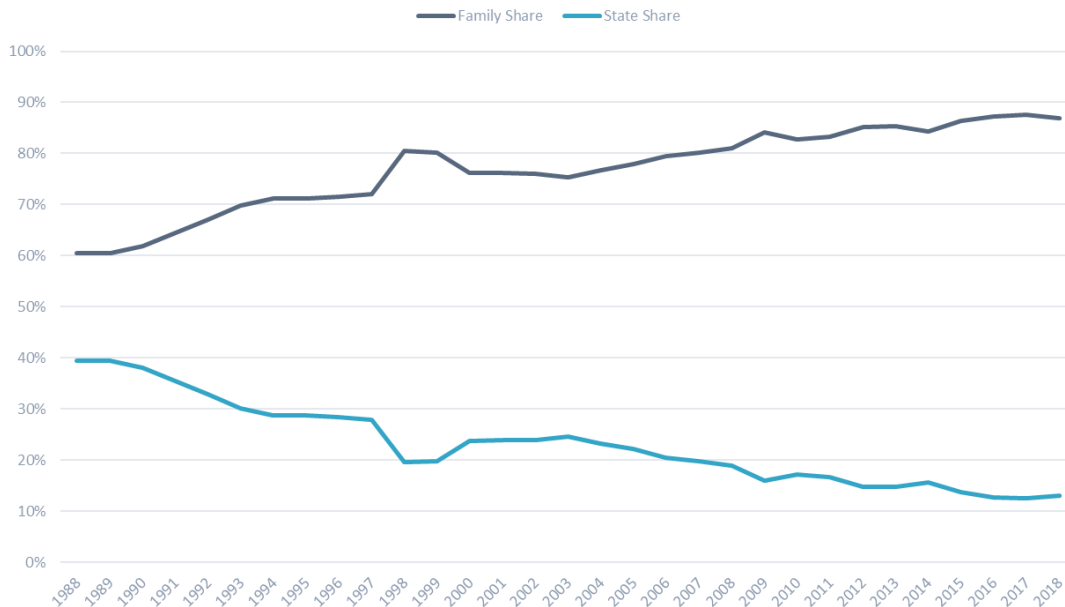
Figure 25. Tuition and Fees Over Time, Vermont and US Average



Source: NCHEMS Net Cost Files - NCES, IPEDS Institutional Characteristics Files; hd2008 through hd2018 and ic2008_ay through ic2018_ay Provisional Release Data Files.

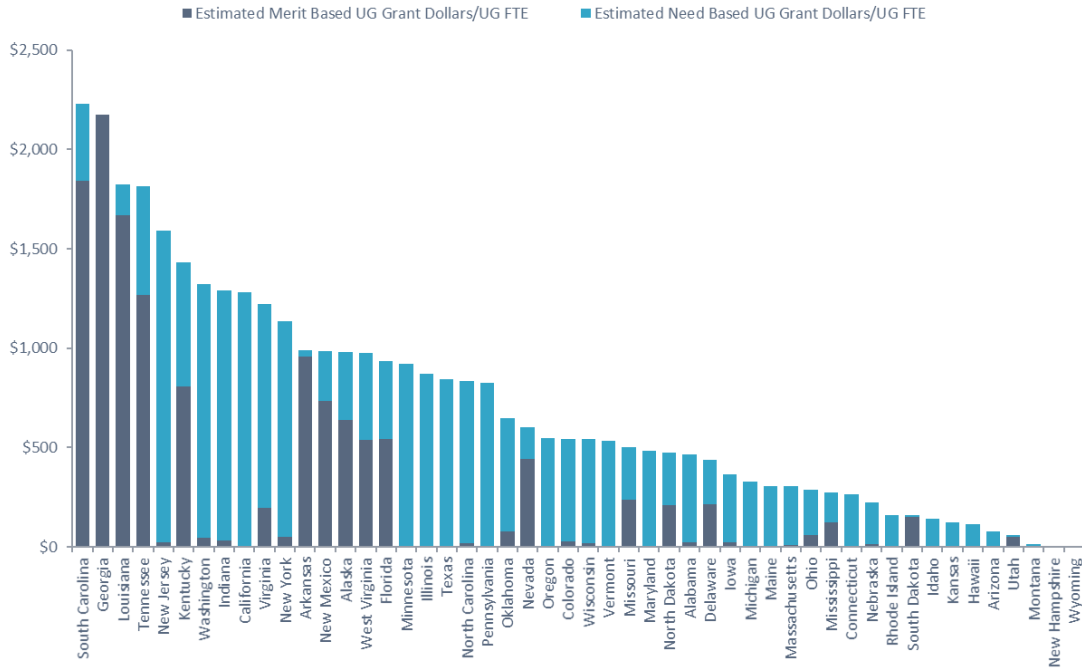
Note: In-State Charges for 4-Year Institutions, In-District Charges for 2-Year Institutions. Tuition and Fee charges prior to 2017-18 for Northern Vermont University are a weighted average of Johnson and Lyndon using enrollment of first-time full-time undergraduates.

Figure 26. Family Share of Public Higher Education Operating Revenues, Vermont



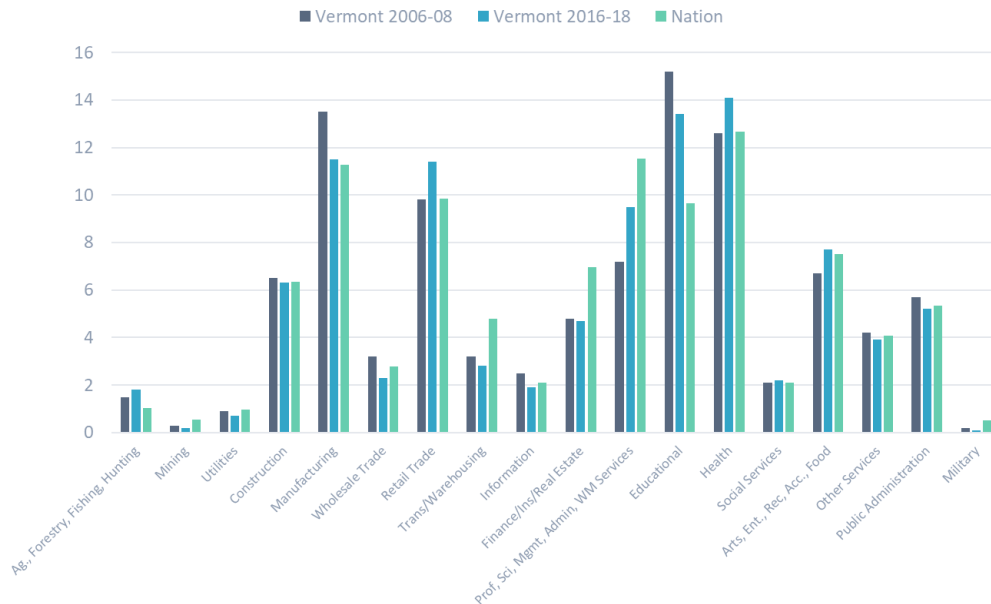
Source: SHEEO

Figure 27. Need- and Merit-Based State-Funded Grant Dollars per Undergraduate FTE, 2017-18 by State



Source: NASSGAP 49th Annual Survey Report on State-Sponsored Student Financial Aid, 2017-18 Academic Year

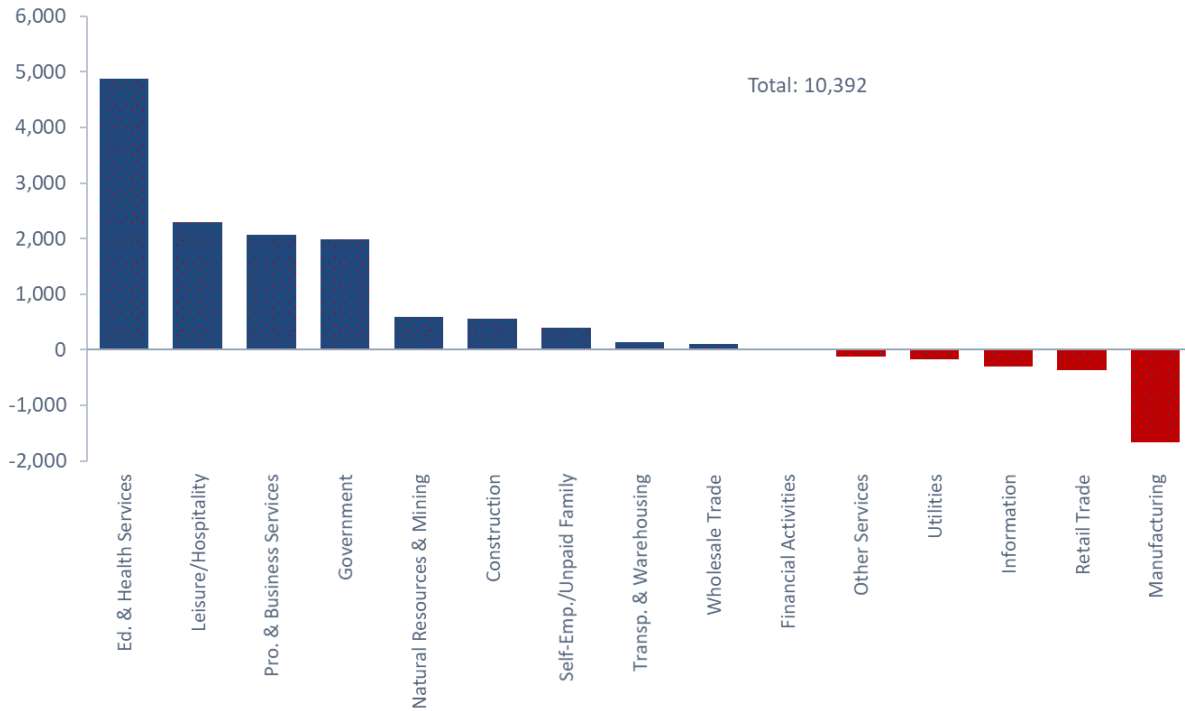
Figure 28. Average Annual Employment by Industry, 2016-18



Source: U.S. Census Bureau, 2016, 2017, and 2018 American Community Survey One-Year Public Use Microdata Samples.

Note: Figures aggregated for employed persons age 25-64 with positive wage earnings.

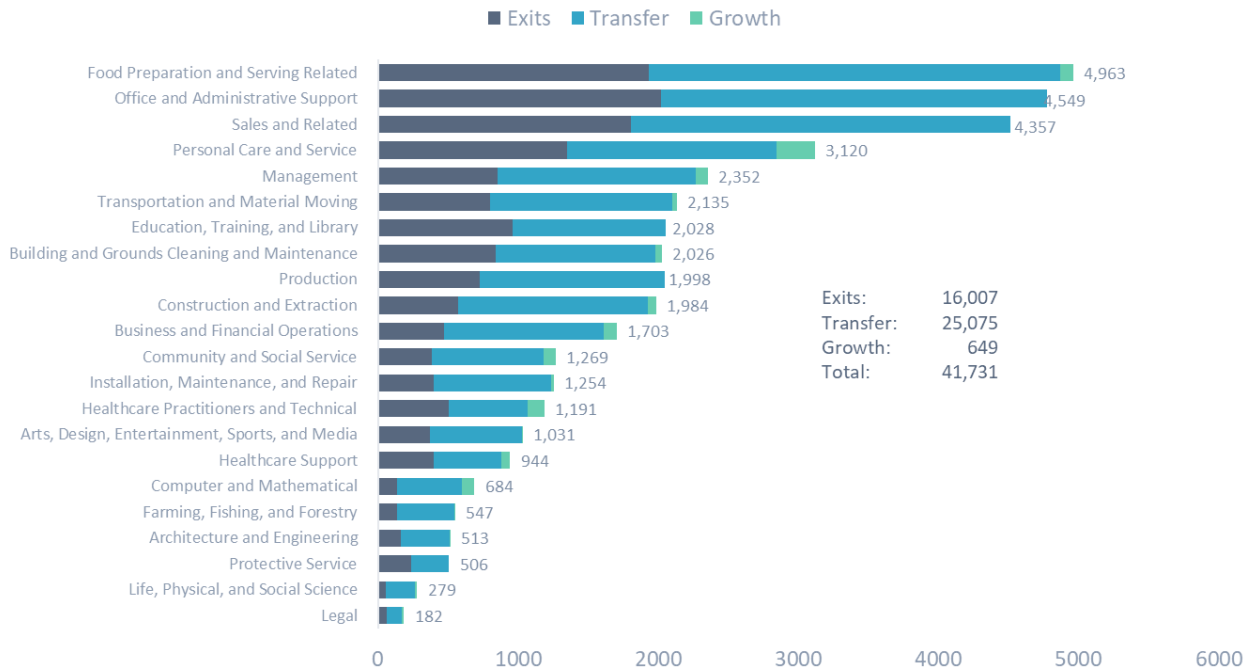
Figure 29. Projected Change in Employment by Industry, 2018-28



Source: Vermont Department of Labor.

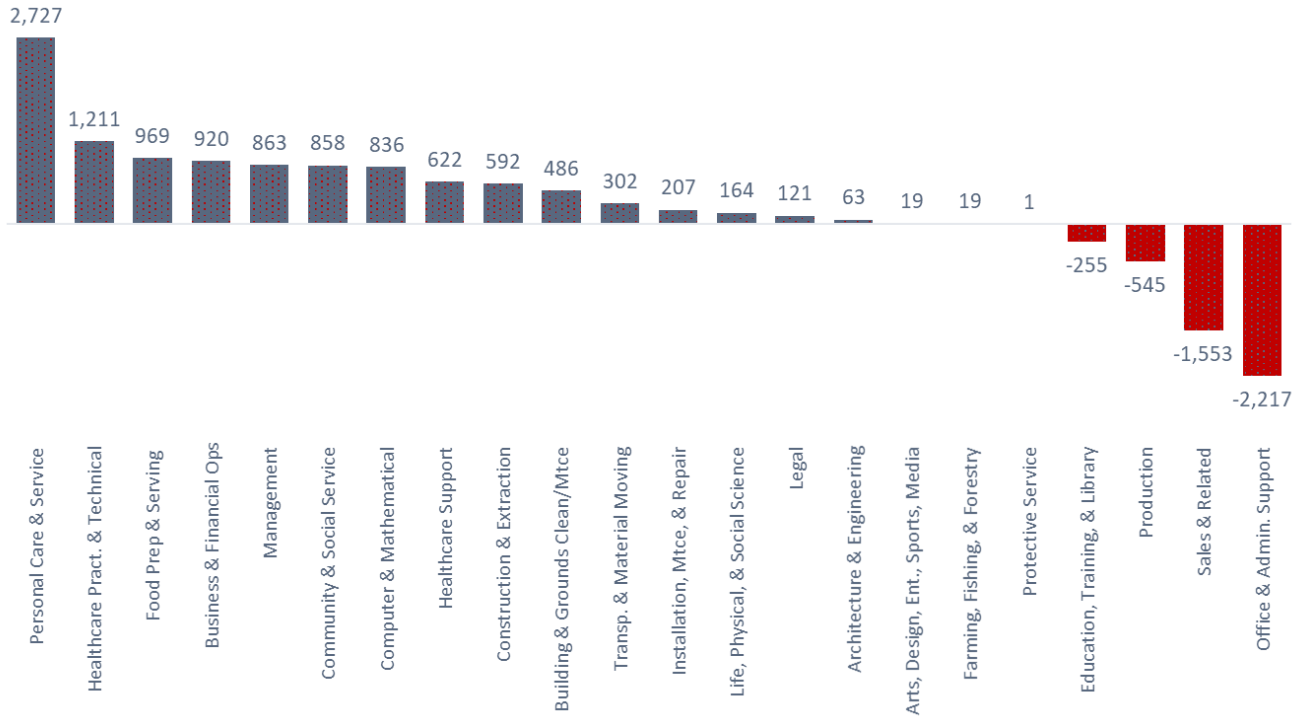
Note: Deviation in published data and chart data due to data not meeting disclosure standards.

Figure 30. Projected Annual Job Openings by Occupation, 2018-2028



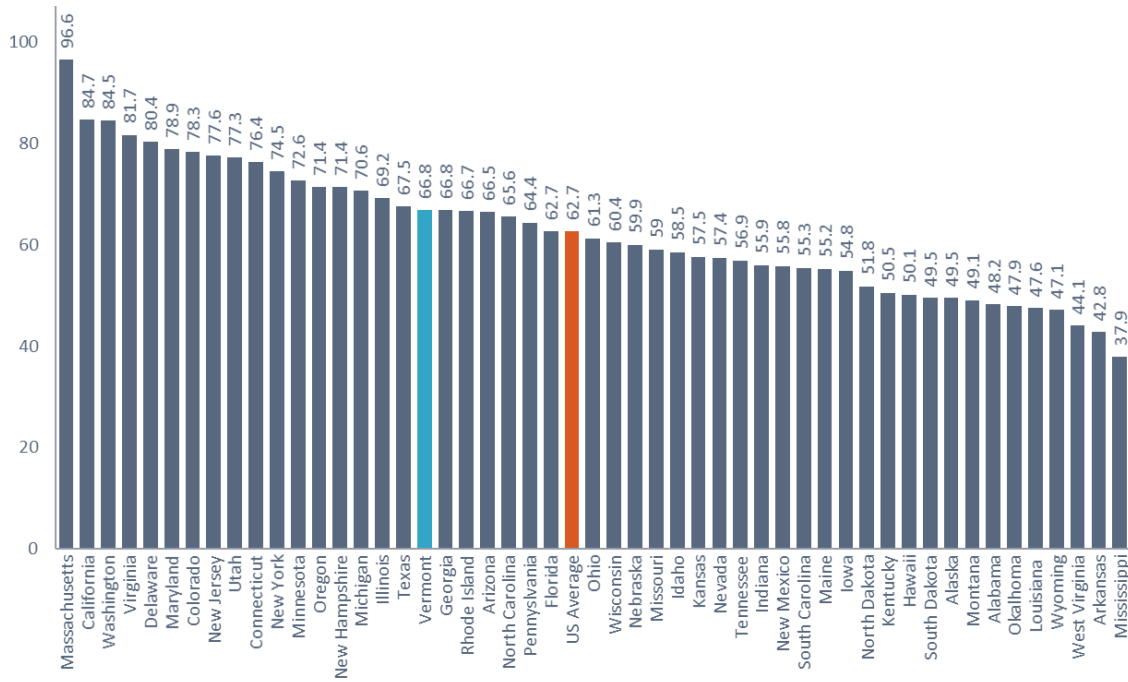
Source: Vermont Department of Labor

Figure 31. Employment Projections by Occupation, Vermont, Change 2018-2028 (Count)



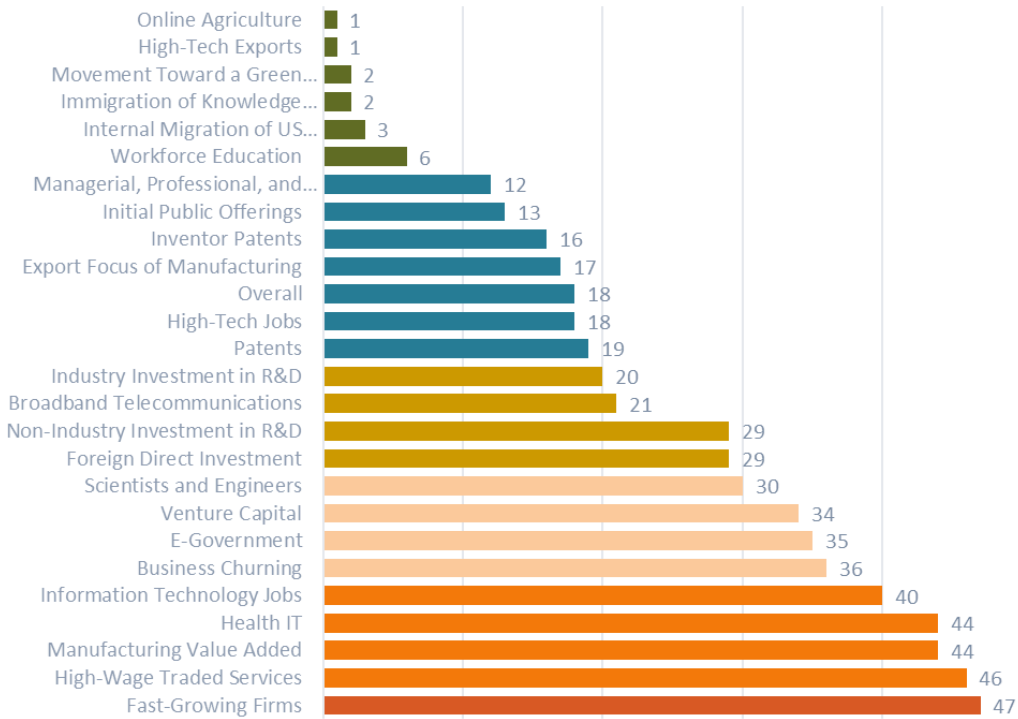
Source: Vermont Department of Labor

Figure 32. 2017 State New Economy Index – Overall Index Scores



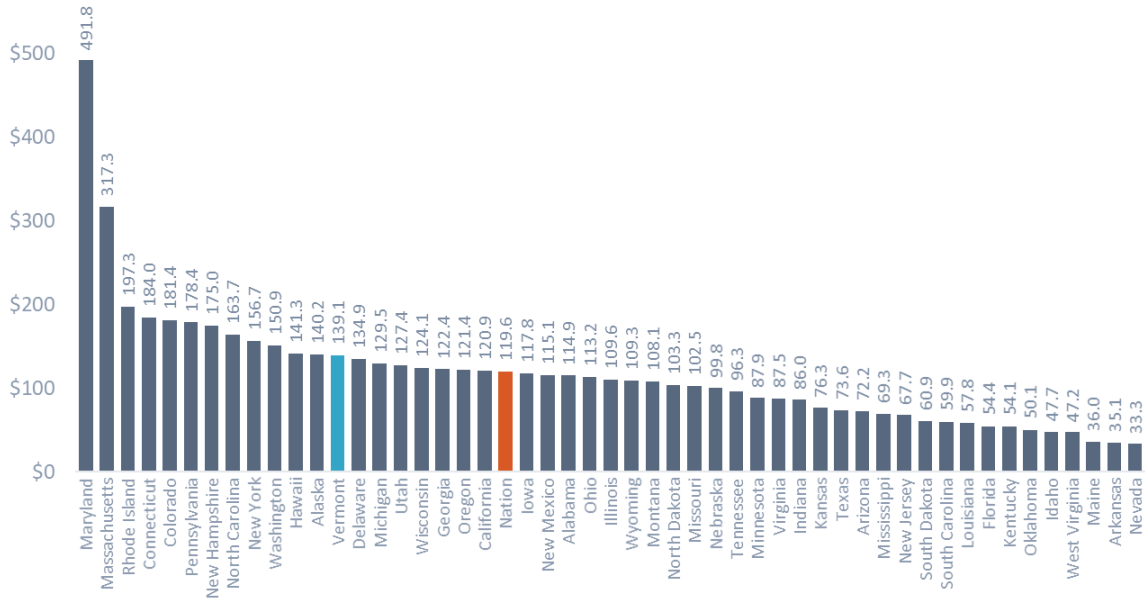
Source: ITIF 2017 States New Economy Index

Figure 33. Vermont Rankings in the New Economy Index, 2017



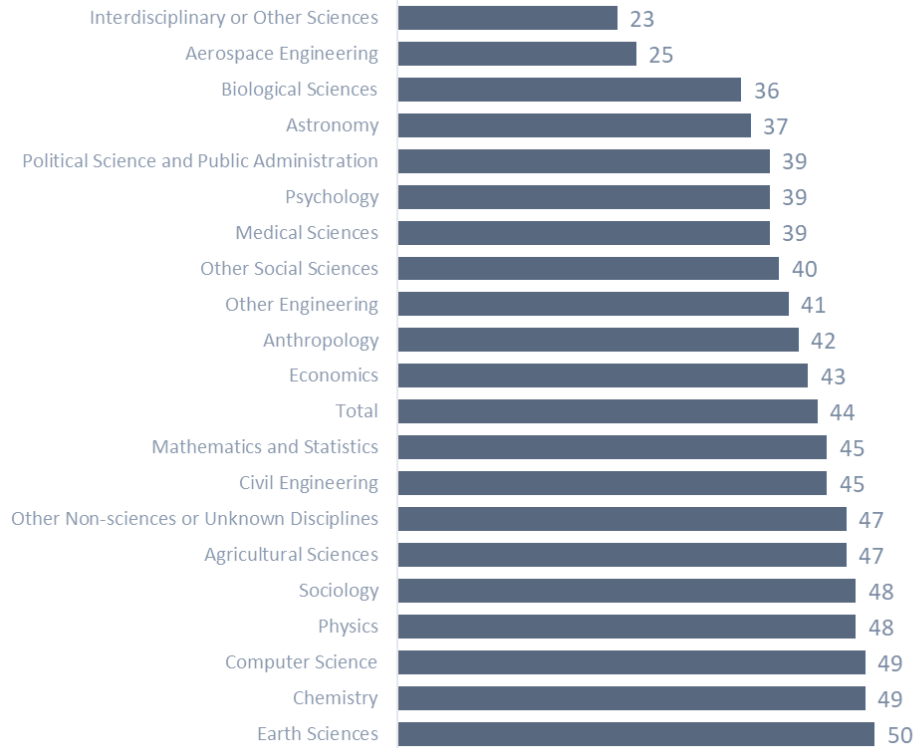
Source: ITIF, The 2017 State New Economy Index

Figure 34. Federally Financed R&D Expenditures Per Capita, State Totals, 2016



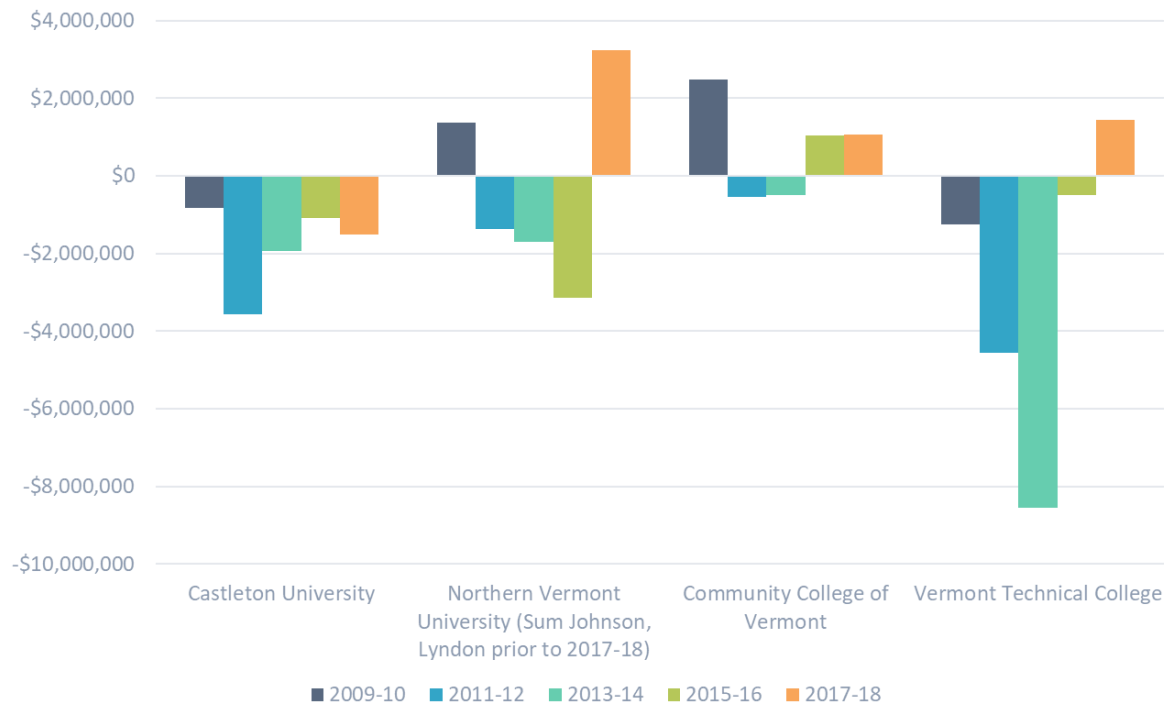
Source: National Science Foundation; WebCASPAR

Figure 35. R&D Expenditures at Universities and Colleges/Higher Education Institutions by Field, Vermont Rank (2016)



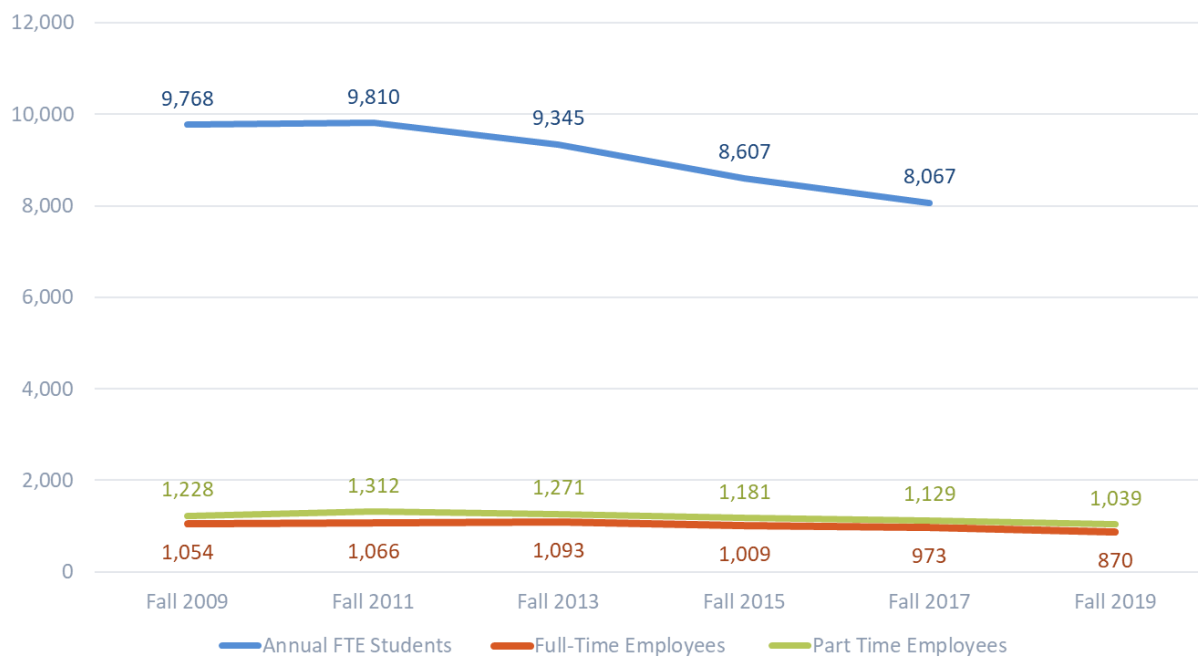
Source: NSF Survey of Research and Development Expenditures at Universities and Colleges/Higher Education Research & Development Survey; National Science Foundation; WebCASPAR, <http://ncesdata.nsf.gov/webcaspar/>. Vermont does not hold a rank in the following disciplines: Chemical, Electrical, Mechanical, Materials and Industrial Engineering; Other Physical Sciences, Atmospheric Sciences, Oceanography, Other Geosciences, Other Life Sciences, Humanities, Arts and Music, Education, Business and Management, Communication and Librarianship, Law, and Social Service Professions.

Figure 36. Revenue Minus Expenditures, Vermont State College Institutions



Source: NCES IPEDS

Figure 37. 10 Year Trend in Student FTE and Staff/Administration, Vermont State Colleges (including System Office)

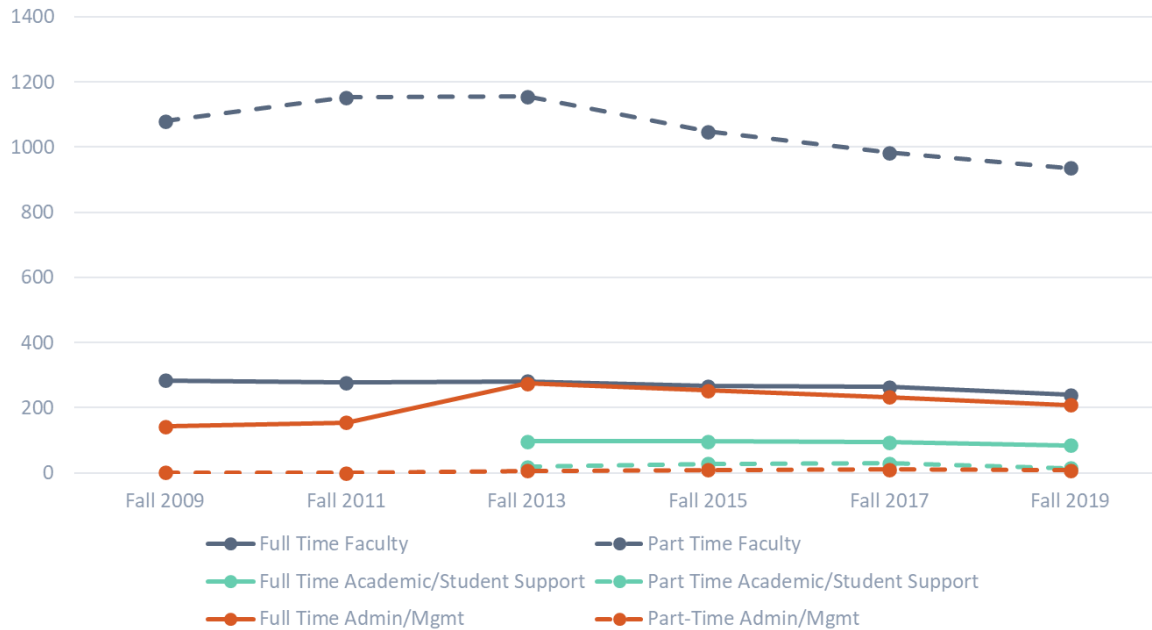


Source: NCES, IPEDS Fall Employees by Assigned Position Files; eap2009_rv, eap2011_rv, eap2013_rv, eap2015_rv, and eap2017_rv Final Release Data Files.

Fall 2019 figures hand entered from VSC Submitted IPEDS Human Resources Reports for 2019-20.

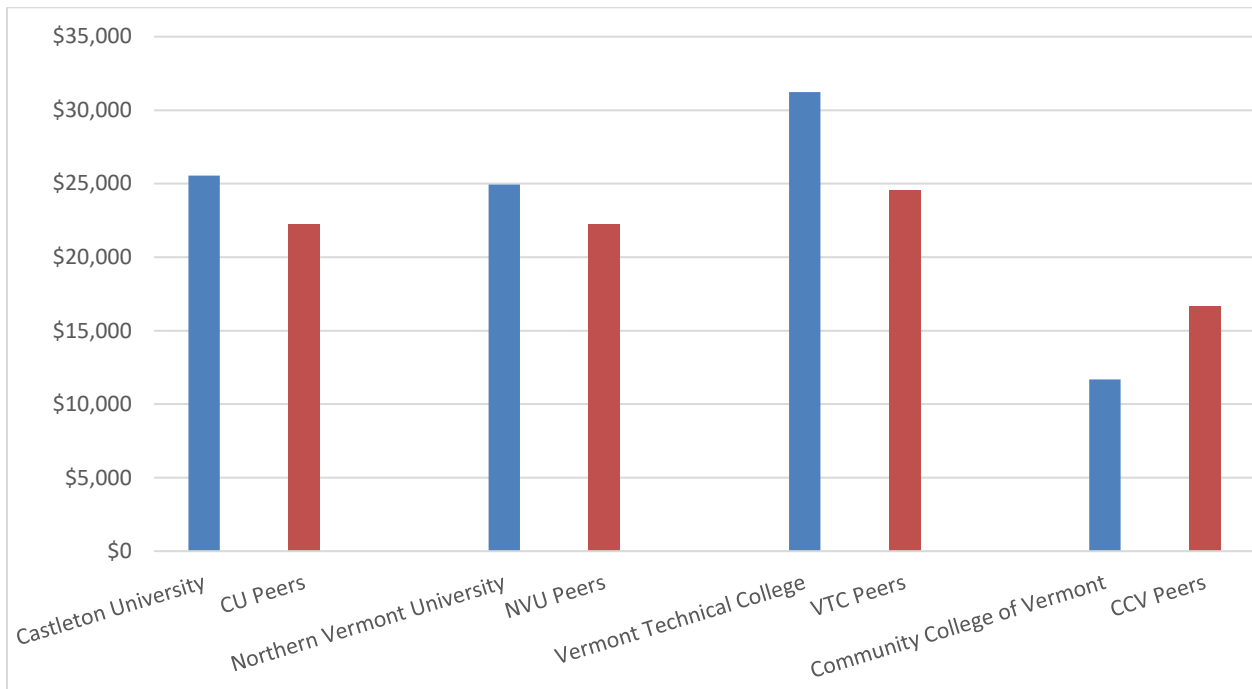
NCES, IPEDS 2009-10 Instructional Activity Files; efi2010_rv, efi2012_rv, efi2014_rv, efi2016_rv Final Release Data Files and efi2018 Provisional Release Data File.

Figure 38. 10 Year Trend in Student FTE and Faculty/Staff, Vermont State Colleges (Includes System Office)



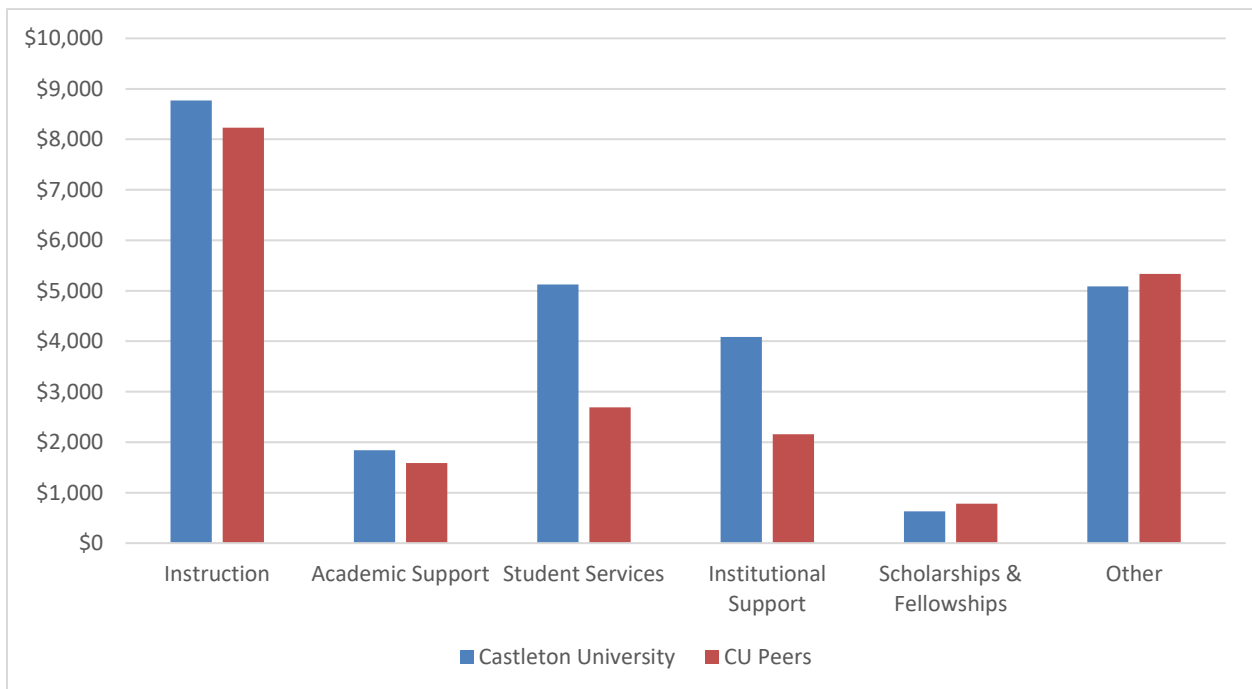
Source: NCES, IPEDS Fall Employees by Assigned Position Files; eap2009_rv, eap2011_rv, eap2013_rv, eap2015_rv, and eap2017_rv Final Release Data Files; NCES, IPEDS 2009-10 Instructional Activity Files; efi2010_rv, efi2012_rv, efi2014_rv, efi2016_rv Final Release Data Files and efi2018 Provisional Release Data File.

Figure 39. Expenditures per FTE, 2017-18, VSC Institutions vs. Peers



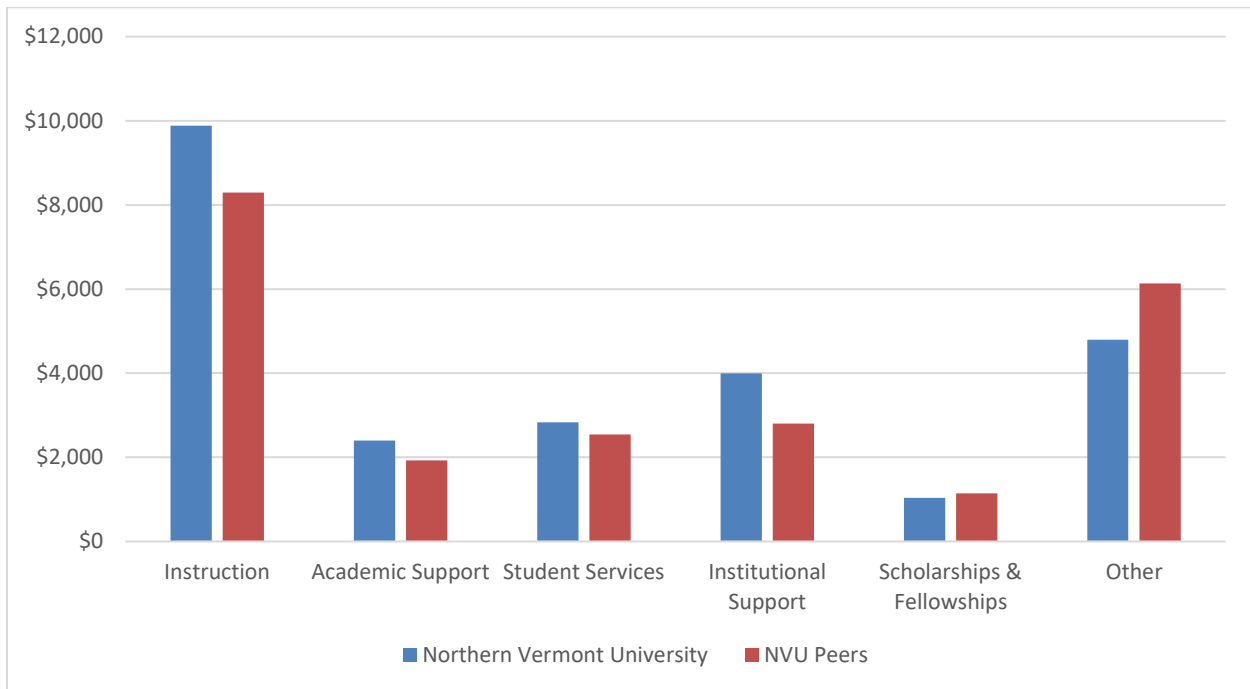
Note: Peers are listed in Appendix A.
Source: NCES IPEDS

Figure 40. Expenditures per FTE by Function, 2017-18, Castleton vs. Peers



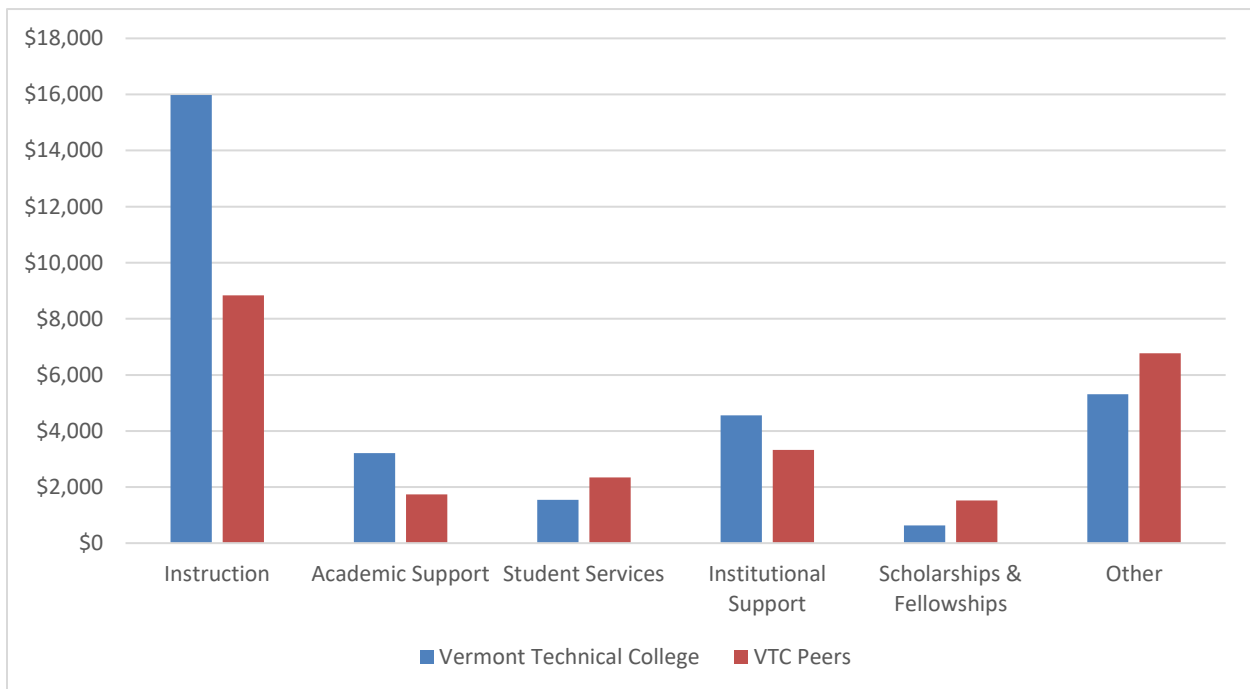
Note: Peers are listed in Appendix A.
Source: NCES IPEDS

Figure 41. Expenditures per FTE by Function, 2017-18, NVU vs. Peers



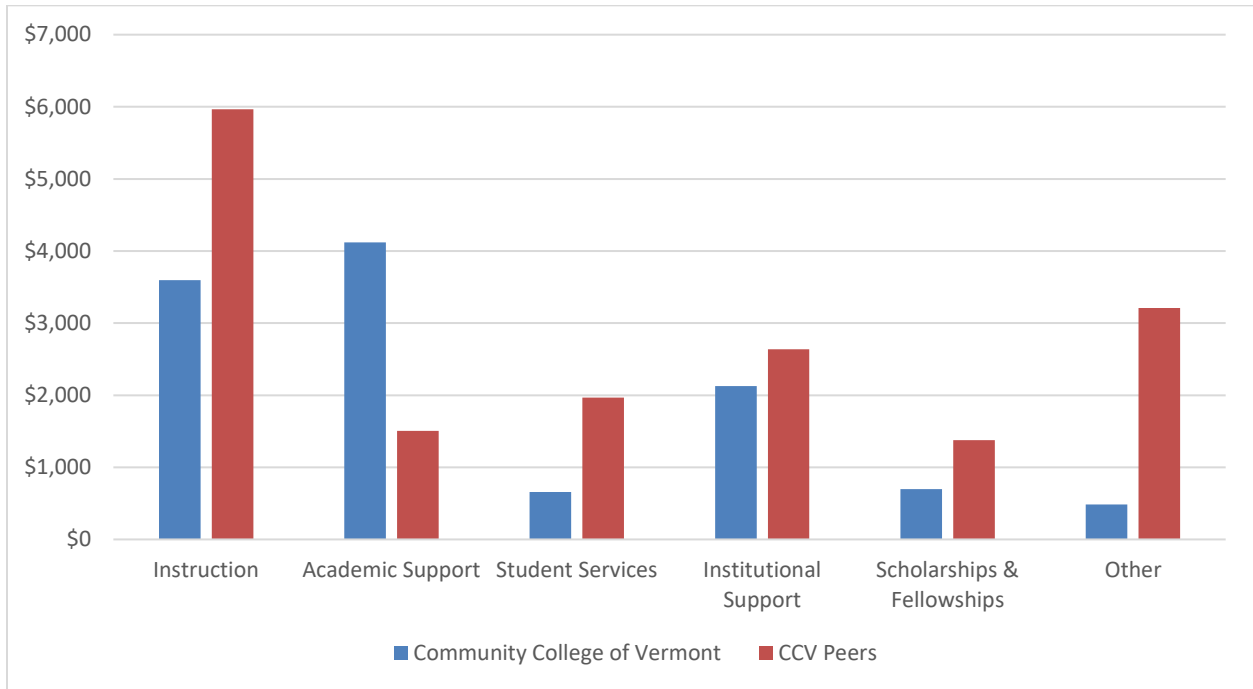
Note: Peers are listed in Appendix A.
Source: NCES IPEDS

Figure 42. Expenditures per FTE by Function, 2017-18, VTC vs. Peers



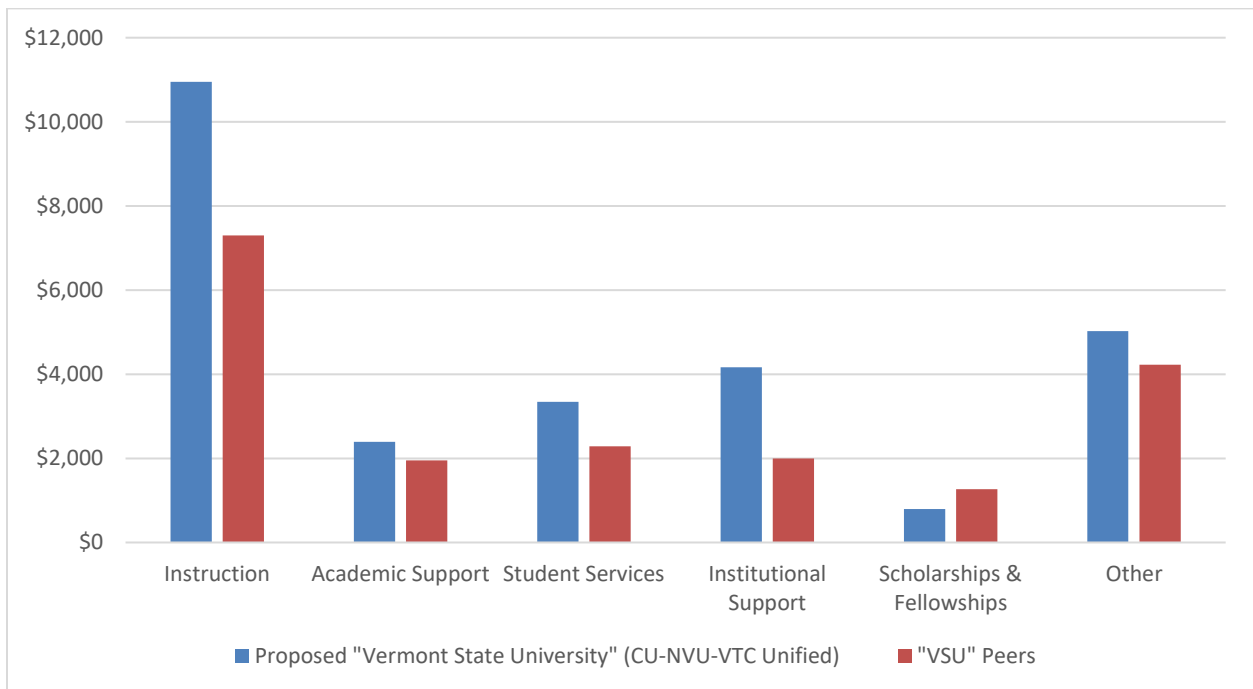
Note: Peers are listed in Appendix A.
Source: NCES IPEDS

Figure 43. Expenditures per FTE by Function, 2017-18, CCV vs. Peers



Note: Peers are listed in Appendix A.
Source: NCES IPEDS

Figure 44. Expenditures per FTE by Function, 2017-18, Proposed Unified Institution (CU-NVU-VTC) vs. Peers



Note: The figures for the proposed "VSU" institution represent the sum of the data for the constituent institutions. Peers are listed in Appendix A.
Source: NCES IPEDS