Acknowledgements

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In March of 2021, MissionSquare Research Institute released an issue brief on public service employment that included some discussion of the workforce composition of and employment projections for colleges and universities. The current issue brief provides a more in-depth analysis of this workforce, covering current staffing, projected workforce levels, and the impact of the COVID-19 pandemic on postsecondary education staffing.

To begin with, unlike the K-12 sector where most providers are either local school districts or nonprofit providers, postsecondary education involves a wide array of providers, from local community college districts to state universities; nonprofit, not-for-profit and for-profit colleges; and a mix of technical and career training centers. A breakdown of employment in these fields is shown in Figure 1.

Of these, the most sizeable portions of the workforce are in colleges and universities run by states (2.1 million employees) and private or nonprofit organizations (1.79 million employees). The largest local government portion of total employment is in the category of junior colleges (438,000 employees). Beyond these providers, more specialized schools also offer instruction in business, management, computers, and technical or trade programs.

**Employment Trends 1999–2020**

Over the past 20 years, college and university staffing has steadily increased, while more specialized schools have seen a variety of peaks and troughs.

As shown in Figure 2, college and university staffing increased by 51% between January 1999 and January 2020, only dropping with the onset of the COVID-19 pandemic, with a 9% drop from January to December 2020.
The second largest category of postsecondary schools - “other schools and instruction” - mirrored the steady growth of colleges and universities, seeing employment increase by 192% through January 2020, followed by a decline of 19% thereafter (see the bottom portion of Figure 2). A wide variety of schools may fit the definition of “other,” but what is perhaps most instructive about that category is the breakdown of occupation types. Of the 460,000 employees in those schools, 28% are self-enrichment teachers assisting adult learners to meet personal or recreational, rather than occupational objectives, and another 33% are tutors, coaches, or fitness trainers. Of the total employment, 25% are in schools of fine arts. Some of these other schools may contribute to workforce readiness, just as colleges may also offer non-workforce-oriented classes.

Employment in other schools and instruction is almost exclusively (98%) nongovernmental, with state and local schools together totaling less than 10,000 employees. Remaining school types may be administered either by the government, private, or nonprofit sectors.

By contrast, three career-oriented categories of postsecondary schools had roughly the same, much lower level of employment in 1999, but they trended in very different directions (see Figure 3).

Business, computer, and management training employment fluctuated somewhat initially, with an increase of 16% from January 1999 to April 2001, followed by a net decrease of 16% from then until January 2020. The subsequent drop of 12% in January-December 2020 continues this trend, and while it was more precipitous, it may be too early to tell whether there will be some rebound or whether it will continue its longer-term decline. One factor in this sector may be the emergence of Google’s, and other providers’, online certification programs,
which may not take the form of standard bricks and mortar schools, but could meet a significant portion of the need for information technology or related training.

Technical and trade schools trended upward through 2014, with a 67% increase in employment, but declined thereafter by 13% through January 2020, and declined by another 13% from January to December 2020.

Junior colleges saw a few peaks in employment over the past 20 years but declined by 51% from October 2010 to January 2020. Considering this long-term trend, the 9% drop in 2020 simply continued this decline.

**Projected Employment 2019-2029**

Prior to the pandemic, the projected employment figures through 2029 showed increases in employment for all types of colleges, universities, and professional schools, with larger increases at local (+19%) and private institutions (+9%) as opposed to state colleges (+2%; see Figure 4). Areas projected to see significant decline in employment were local junior colleges (-13%), state technical or trade schools (-31%), and private junior colleges (-47%).

Two logical questions on reviewing these figures are: 1) why are these various schools projected to see such changes in employment, and 2) did the pandemic-influenced changes in 2020 accelerate, postpone, or confound those expectations?

**Figure 4: Projected Postsecondary Education Employment Change, 2019-2029**

- **Other schools and instruction; private** 26%
- **Colleges, universities, and professional schools; local** 19%
- **Colleges, universities, and professional schools; private** 9%
- **Junior colleges; state** 8%
- **Technical and trade schools; local** 8%
- **Technical and trade schools; private** 5%
- **Total wage and salary employment (all industries)** 4%
- **Business schools, computer, and management training; private** 3%
- **Colleges, universities, and professional schools; state** 2%
- **Junior colleges; local** -13%
- **Technical and trade schools; state** -31%
- **Junior colleges; private** -47%

*Source: U.S. Bureau of Labor Statistics, National Employment Matrix. Figures shown are for those categories of postsecondary education with at least 10,000 employees.*
Reasons for Projected Employment Changes

Demand will continue to drive postsecondary employment, regardless of whether all education providers are affected equally.

Trade and technical school employment is projected to grow through 2029 by 1% overall at a time when demand for those working in skilled trades remains high. Although state-level employment is projected to experience a steep decline, this change is within a small segment of the total technical and trade school workforce nationwide (15,000 employees at the state level; see Figure 1).

In the short term, undergraduate enrollment in 2020 dropped by 3.6% compared to 2019 and two-year public schools saw a decline of 10.1%.\(^3\) Graduate schools and private for-profit schools saw increases, but total postsecondary enrollments were down more than 473,000. This decline far exceeds the foregoing enrollment trends and appears to be occurring in both general fields of study (liberal arts enrollments decreased for both two- and four-year institutions) and high-demand skills (two-year enrollments in construction trades programs increased by 8.6% in 2019, but decreased by 10.9% in 2020).

These postsecondary enrollment figures run counter to the fact that the number of high school graduates has been increasing since the mid-1990s and that total is not expected to peak until 2025 (see Table 1).\(^4\)

Although the actual graduation figures from 2020 have not yet been tallied, the drop in college enrollments would be impacted by any decline among those who completed their high school graduation requirements, plus those choosing to consider the pandemic an appropriate time to take a gap year, and those deciding to forego college altogether.

Economies of scale may also be a factor. Not pictured in Figure 4 due to the smaller number of people employed are local business, management, or computer schools. These are projected to decline from 1,900 employees to 1,100 – a 57% decrease. Since there is such a small number of people employed at these schools nationwide, it is possible they are not as competitive with their private sector counterparts (projected to grow by 3%), or that the local governments operating them have decided to shift such operations from these standalone schools into broader technical, junior college, or college structures.

If such consolidation or reshuffling were occurring, it might be expected that total employment would stay somewhat consistent. This does not appear to be happening among junior colleges and career-oriented schools. For instance, the sum of all non-college/university employment (for junior colleges, technical/trade schools, business schools and other schools and instruction) is projected to decline by 12% across the local sector, while it is projected to

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Table 1: Actual and Projected Number of High School Graduates (in millions)

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2019</th>
<th>2025</th>
<th>2037</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Graduates</td>
<td>3.5</td>
<td>3.77</td>
<td>3.93</td>
<td>3.52</td>
</tr>
</tbody>
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increase by 6% in the state government sector and by 15% in the private sector (see Figure 5). Such changes may indicate more of a shift, not within a given sector, but from one sector to another.

To the extent there is any reshuffling within the local government education sector, it appears to be toward the college/university portion of the workforce, which is projected to increase by 19%. Nevertheless, putting that category together with the junior college and technical category, local postsecondary employment is projected to see an overall 8% decline.

In the detailed projections by occupation (Figure 6), there is a correlation between the type of institution and the projected employment. In general, automation might be expected to decrease the need for administrative or customer service positions, such as in state and local government, where clerical positions are projected to decline by 18-25%.

In these postsecondary examples, the administrative staffing projections follow the projection

![Figure 5: Postsecondary employment by school type and sector, projected change 2019-2029](image)

![Figure 6: Postsecondary employment by school type, sector, and occupation, projected change 2019-2029](image)

for teaching or management positions, but in each case the administrative staffing projection is lower.

Taking two of these examples further - private technical and trade schools and local junior colleges - the trend in teacher employment even tracks with fields as disparate as installation, maintenance and repair, computer and mathematical occupations, and arts, design, entertainment, sports, and media occupations, with administrative support staff projections lower than each of the others (see Figure 7).

Obviously, the financial means available to private colleges via tuition, donations, and endowments may vary significantly from those of local junior colleges, which are also subject to public hearing constraints on their budgeting or on efforts to increase revenues.

Pandemic-Influenced Employment Changes in 2020

The COVID-19 pandemic led to many schools closing or at least shifting to online courses. With that, college campuses, classrooms, dormitories, and cafeterias that would normally be hubs of activity suddenly went quiet.

As a result, just as local governments experienced reduced demand for programming within convention or recreation centers, so too did schools experience a decrease in facility-specific staffing needs, such as custodians and food service workers. This commonly led to layoffs or furloughs of affected staff. Some larger operation may have been able to shift staff to other duties, such as custodians at the University of California at Davis moving to temporary duties at the hospital on campus.6

But rather than layoffs being limited to support positions for on-campus activities, they have also impacted full-time

![Figure 7: Private colleges and local junior colleges, employment projections by occupation, 2019-2029](Diagram)

and tenured faculty, as well as department structures and degree offerings.\(^7\)

The impact of the pandemic on retirement plans has varied. In general, those in direct public contact roles may have been more inclined to accelerate retirement plans for health reasons, while those able to work remotely may have been better positioned to postpone that decision. With 41% of colleges reducing or stopping their matching contributions to pension plans, employees may have felt less financially prepared for retirement.\(^6\) MissionSquare Research Institute’s survey of state and local employees and K-12 education staff supports this, with results revealing employee concerns with health, safety, finances, and morale.\(^9\)

**What to Expect Going Forward**

As of this writing, a number of states are lowering the age of current or planned COVID-19 vaccine efforts to include those 12 years old and above. This could facilitate a return to more normal academic and social life on college campuses, which in turn could help turn around some of the job cuts experienced in 2020. However, particularly where there were already financial hardships, the economic impacts of the pandemic and the loss of revenues from closed dormitories, arenas, and other facilities may accelerate the closure or consolidation of some schools.\(^10\)

The pandemic wrought acute havoc on revenues, staffing, and technology. Rather than just returning to business as usual, this could spawn a strategic reassessment of how academics, administration, and career training are structured and foster experimentation around cost controls, semester schedules, or hybrid in-person, online, interdisciplinary, or project-based curricula.\(^11\) As postsecondary schools plan for the 2021-22 school year, traditional classroom learning may once again change to be more feasible, but it may not be the only path forward, and the assumed staffing complement of the past may no longer apply. Adjunct faculty - an early segment of the burgeoning gig economy - could see further growth. Likewise, online instruction could grow, either as direct replicas of in-person classes or as larger or more interactive learning opportunities that combine elements of on-demand video, skill-building exercises or simulations, and synchronous lecture, discussion, and collaboration with live instructors and worldwide guest lecturers.

One factor that may reverse the 2020 postsecondary enrollment decline is the continuing demand for talented workers, either tied to the ongoing wave of baby boomers retiring, or to the demand for those with key skills, such as health care workers, information technology specialists, and tradespeople. Regarding retirements, the “silver tsunami” has started, with 60% of that age cohort expected to retire in the next few years.\(^12\) Replacing those employees will require both attention to succession planning within employer organizations and recruitment of a new generation of postsecondary graduates.

According to the 2021 workforce survey by MissionSquare Research Institute, IPMA-HR and NASPE, 57% of state and local governments indicated that they had a hard time filling skilled trade positions, and 79% that were hiring registered nurses indicated that they received fewer qualified applicants than they had available positions.\(^13\) That survey also found that the top skill sought in new employees was not technical training but rather analytical thinking, sought by 74% of state/local employers.

No matter what shape the postsecondary workforce may take going forward, its central role in serving the career, professional, and critical thinking education for the next generation of employees will remain.

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**State and local government recruitment challenges:**

- **57%** had a hard time filling skilled trade positions
- **79%** received fewer qualified RN applicants than they had positions available

**Source:** 2021 Workforce Survey, MissionSquare Research Institute
A Cross-Sector Review of Public Service Employment includes more detailed discussion of K-12 education employment, as well as the health care and nonprofit sectors.

The "private" category in BLS data does not differentiate between private, nonprofit, and not-for-profit enterprises, but rather differentiates the sum of those subcategories from all state or local government-administered schools.

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MissionSquare Research Institute (formerly the Center for State and Local Government Excellence at ICMA-RC) promotes excellence in state and local government and other public service organizations so they can attract and retain talented employees. The organization identifies leading practices and conducts research on retirement plans, health and wellness benefits, workforce demographics and skill set needs, labor force development, and topics facing the not-for-profit industry and the education sector. MissionSquare Research Institute brings leaders together with respected researchers. For more information and to access research and publications, visit slge.org and follow on Twitter and LinkedIn.