

NJBIA
New Jersey Business
& Industry Association

FOCUS NJ
Center for Economic Research
& Workforce Solutions



**The Future of Work in NJ:
INDUSTRY SERIES STUDY**

EDUCATION

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***THE FUTURE OF WORK IN NJ:
Study Introduction & Background***

Challenges in the Garden State

There are many programs and partnerships forming around New Jersey that are working to address the changing dynamics of human employment. However, they are currently operating in silos with **little inter-connectivity** among regional stakeholders to expand these initiatives throughout the state.

Often, stakeholders (including businesses, government, and academia) see each other as **competitors instead of partners**.

The **opportunity for collaboration is immense** and the outcome of sincere statewide partnerships will aid New Jersey in configuring a leading innovation economy with a strong workforce pipeline.

As the changing dynamics of the workforce unfold, it is imperative that the business community, academia, and government work together to ensure the skills needed for the jobs of tomorrow are embedded within K-16 education throughout the state today.

Challenges in the Garden State Cont.

According to NJBIA's 2020 Business Outlook Survey, **6-in-10 businesses have difficulty locating** technical/middle skilled (63%) and professional/highly skilled (62%) **talent to fill their job openings**. Additionally, 81% of New Jersey companies are likely to recruit talent from community colleges, while 75% are likely to recruit from four-year institutions. Meanwhile, 75% of businesses only recruit talent from New Jersey's postsecondary institutions.

Disappointingly, only **26%** of New Jersey's businesses **are engaged with their local community college or four-year institution**. When asked why they are not engaged, nearly **50%** of New Jersey businesses said they **either don't know who to contact, how to best participate, or they are unaware of available opportunities** to engage with postsecondary institutions. This is a major obstacle for New Jersey's future workforce pipeline.

Given that New Jersey businesses are looking to the state's postsecondary institutions to fill their workforce needs, it is imperative that postsecondary institutions understand the skills desired by employers to ensure a properly educated workforce pipeline that will provide employees with valuable, employable skills and supply employers with relevant talent.

Connecting the Dots: Bridging the Gap between Business & Academia

Workforce development and excellence in workforce skills are issues that are embedded into NJBIA's and Focus NJ's **vision for New Jersey**.

In 2018, NJBIA released a study titled **“The Education Equation: Strategies for Retaining and Attracting New Jersey’s Future Workforce.”** The study, which was a deliverable from NJBIA’s Postsecondary Education Task Force, **was a “Phase 1 deep dive” into** researching and analyzing **factors that affect New Jersey’s workforce pipeline.**

The task force, which included 100 prominent members from academia, state education and labor departments, businesses, and young adults, worked to build a framework that **sought to better prepare, preserve, and place New Jersey’s future workforce.** The group made 13 recommendations to ensure New Jersey’s workforce and the state’s education programs are aligned with the needs of the private sector.

Our Study

NJBIA and Focus NJ have made it a priority to identify and understand how New Jersey's industries and the jobs they provide are advancing into the future. As such, the duo has embarked on a **"Phase 2 deep dive"** into a statewide, seven-industry study to gather insights from New Jersey business and industry **to identify the changing dynamics, opportunities, challenges, and emerging skill sets.**

Our goal is to work collaboratively with academia to ensure the skills needed for the jobs of tomorrow are embedded within programs at the state's postsecondary institutions.

NJBIA & Focus NJ conducted targeted industry outreach in the following formats: focus groups, an online survey, and personal communication via in-person, phone and/or email. Businesses located within New Jersey that employ 10 or more individuals were targeted in our outreach efforts. Business and industry leaders such as Presidents, CEOs, COOs, CFOs, and HR/Workforce executives were invited to participate in the study. In total, 250 New Jersey businesses participated in the NJBIA/Focus NJ Industry Series-Future of Work study.

The information provided in this slide deck is a synopsis of key findings/overarching themes and **are direct responses from leading industry experts** that were provided via our industry-specific research approach.



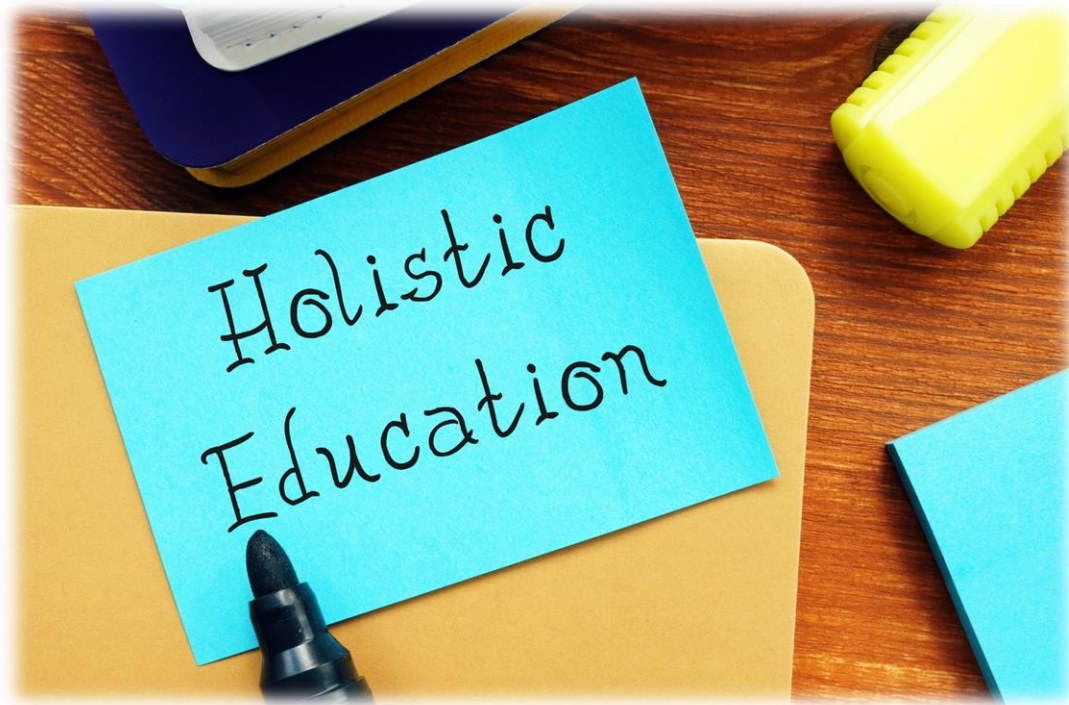
K-12



Changing Industry Dynamics & Emerging Trends

- The introduction of **technology and artificial intelligence is not a new concept in the K-12 education space**. However, the adoption of **new technology in everyday life is requiring teachers to take on new, often more sophisticated duties and responsibilities in the classroom** than previously required.
- The integration of technology in the education space includes the use of interactive whiteboards/smartboards, tablets/laptops, presentation software, school websites/portals, online tests/assessments, online classes, and augmented reality. These tools provide an interactive experience for students, which has resulted in new learning strategies.
- The **continued integration of new technologies in the K-12 education space is providing teachers with more information than ever before, requiring an overall better understanding and use of student data throughout the industry**.

Changing Industry Dynamics & Emerging Trends Cont.



Perhaps the most prominent dynamic industry shift in the K-12 space is occurring in the teachers' approach to educating students. In recent years, **there has been an increased push for educators to also focus on students' psychological and emotional health.** As a result, teachers are taking a holistic approach to educating their students.

Industry Opportunities

- Targeted career pathways to guide future teachers to specialties in **English as a Second Language (ESL), Math and Science**.
- The adoption of **online/virtual learning** for all students.
- The improvement of **data systems** to enhance student tracking.
- **The creation of articulation agreements** between high schools, community colleges, and four-year institutions to assist with the affordability of continued education.



Industry Challenges

- Ability to find **teachers who are certified to teach ESL, Science and Math.**
- A lack of **educator diversity**, *i.e. "teachers who look like students"*
- Perception among industry professionals of **systemic devaluation of K-12 educators.**
- **Inadequate use of financial resources** in school districts, resulting in a lack of in-classroom materials.
- **Access to internet and technological resources** for low-income and underrepresented student populations.



Preparing the Workforce Pipeline for the Jobs of the Future

Advancements in technology are altering the way in which teachers educate their students and perform their administrative duties. But it will not result in a loss of jobs. Rather, **educators who are unwilling to embrace the use of technologies will be slowly phased out of the industry.**



Preparing the Workforce Pipeline for the Jobs of the Future

To prepare the K-12 workforce pipeline for the jobs of the future, students must gain knowledge and master skill sets in the following areas:

Hard Skills

1. English as a Second Language (ESL)
2. Math & Science
3. AI Management
4. Holistic Training
5. Data Analytics
6. Ubiquitous Connectivity & Tracking
7. Mobile Interfaces & Augmented Reality

Essential Career Attributes

(previously referred to as Soft Skills)

1. Emotional Intelligence
2. Critical Thinking Skills
3. Decision Making Skills
4. Adaptability
5. Leadership
6. Motivation
7. Self-Awareness

In-Focus: Adding Context to a New Skill Set

Augmented Reality



Augmented reality is an interactive experience where the objects that reside in the real world are altered and/or enhanced by computer-generated information.

Augmented reality **allows teachers to get the attention of students, increases engagement, and keeps students interested in the curriculum.** The most common form of augmented reality in the education space is the use of apps directly in the classroom with the purpose of helping teachers explain a subject by providing visual representation of the material.

Tying it all Together: Ideas to Guide the Future of Work in NJ

- **Reintroduce trade skill sets** into K-12 education.
- **Emphasize the importance of the arts** and artistic endeavors in K-12 education.
- **Shift away from teaching towards standardized tests.** Instead the K-12 system should focus on educating students on career pathways and helping students find their passions.
- Guide students to help them pick the next educational step that is right for them. **Stop pushing students towards a four-year institution or the military.**
- Enrollment in **community colleges, an apprenticeship program, and/or seeking employment after graduation must be considered successful student placement.**



Postsecondary Education

Changing Industry Dynamics & Emerging Trends

- Historically, **postsecondary education has been a predominantly in-person activity**. However, the advancements in technology are altering the way institutions provide education by offering an increased number of online and hybrid courses each semester.
- The **integration of technology in the higher education space provides unique opportunities** for postsecondary institutions **to engage with students** unlike before.
- However, because of the broad incorporation of online coursework, **New Jersey's institutions are experiencing increased competition from institutions in other states who offer similar course work**.

Changing Industry Dynamics & Emerging Trends



Traditionally, postsecondary education has been divided into three levels: bachelor's, master's and doctoral work. However, to attract more students and to provide increased opportunities for more individuals, **higher education is shifting towards non-traditional adult learners, lifelong learning, stackable credentials and career enhancing certificate programs** (noncredit and for credit programs).

Industry Opportunities

- **Online and hybrid learning** gives students the flexibility they want and/or need to continue their education.
- **State funding opportunities that give low-income students the opportunity to pursue courses** at the State's community colleges and/or postsecondary institutions with subsidized or reduced tuitions costs, such as EOF, TAG, and CCOG.
- Willingness for **increased collaboration and partnerships** amongst K-12s, 2-year institutions, 4-year institutions, business & industry.
- **Modification of curricula to offer programs that seamlessly lead to career opportunities** by training students based on employer needs. This is a shift from traditional educational models where institutions offer set courses with little regard to local employment opportunities or local business needs.

Industry Challenges

- Aging workforce and a lack of qualified workers.
- Decreasing number of high school graduates.
- The **migration of NJ students** to out-of-state higher education institutions.
- **Continually changing technology** makes managing change and modernization difficult.
- **Online and hybrid learning** gives students additional opportunities to attend institutions that they otherwise would not have considered because of location. Students who otherwise would have taken courses (at any level) in New Jersey may look to take courses in different states for reasons such as, prestige, cheaper tuition costs, and/or better program alignment with career goals.



Preparing the Workforce Pipeline for the Jobs of the Future

Technology by itself will not cause a decrease in employment in this industry. However, there is increasing demand for institutions to offer flexible online programs. **A need for new strategies, innovative thinking, and outside-the-box planning will ultimately drive employment trends** in an industry that is traditionally slow to adapt.



Preparing the Workforce Pipeline for the Jobs of the Future

To prepare the higher education workforce pipeline for the jobs of the future, students must gain knowledge and master skill sets in the following areas:

Hard Skills

1. Student Success Coaches/Advisors
2. eLearning Administration
3. Ubiquitous Connectivity
4. Data Analytics
5. Leadership Development
6. People Management
7. Cybersecurity & AI Management
8. Strategic Planning

Essential Career Attributes

(previously referred to as Soft Skills)

1. Communication Skills (Verbal & Visual)
2. Adaptability
3. Decision Making Skills
4. Critical Thinking Skills
5. Leadership
6. Problem Solving Skills
7. Collaboration

In-Focus: Adding Context to New Skill Sets

Ubiquitous Connectivity



Ubiquitous connectivity is a concept which means providing connectivity to everyone and everything, everywhere, all the time.

As the postsecondary education industry continues to innovate into the future, it is imperative that institutions have employees who are trained in ensuring there is ubiquitous connectivity throughout their institutional platforms. This **will allow students to access their educational information on the go, anywhere at any time, ultimately providing a modern, flexible learning experience for students.**

Tying it all Together: Ideas to Guide the Future of Work in NJ

- Embrace the idea of **learning and developing skill sets while working.**
- **Create more paid experiential learning opportunities** for college students to gain on-the-job training.
- **Accept, embrace, and implement** the use of modern **technologies.**
- **Adopt institutional policies that embrace societal shifts** associated with the next generation workforce (i.e. work-life balance).
- **Educate high school students about career pathways and lifelong earning potential** to help guide them in their postsecondary education careers.

Contributors



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Sourcing for the data presented in the introduction slides can be found by [clicking here](#).