

## **List of Recommendations**

### Chapter 1

*Ascertain the skills required to meet the needs of business and industry, and change the attitude toward jobs that do not require a college education.*

1. The New Jersey Department of Education should explore the use of new assessment tools to measure the skills necessary to succeed in available jobs. The effort should address the use of NJCAN<sup>127</sup> as an assessment support.
2. NJDOE should develop additional measures of school and student success that focus on career readiness.
3. The New Jersey Departments of Education and Labor & Workforce Development should establish a formal, standing structure to facilitate collaboration with representatives of industry, trade unions, and other entities to ensure that students recognize the array of careers available to them and the multiple pathways to those careers. These pathways include earning job-specific professional certification and two-year degrees, as well as experience in apprenticeships and internships and CTE programs at the secondary and post-secondary levels.
4. NJDOE should ensure the availability of a staff liaison to engage in dialogue with schools about meaningful career preparation.
5. Inter-agency collaboration is critical to address the issues raised by the Task Force. Therefore, the state Departments of Education and Labor & Workforce Development, along with other state agencies, should establish a formal structure to identify current programs and propose additional efforts that would support the goals of this Task Force.
6. Working with its partners in business and industry, government and higher education, the New Jersey School Boards Association should conduct programming for its members to promote consideration of, and dialogue about, the full range of career pathways available to students.

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### Chapter 2

*Strengthen communication, collaboration and support among local school districts, county vocational-technical schools, community colleges, state government and its various agencies, business and industry, and other prospective partners.*

#### A Communications Gap and Lack of Collaboration and Support

7. The state should support and fund the expansion of CTE programs in all school districts, including those that operate comprehensive high schools. (There is no state funding category specifically aimed at CTE programs in comprehensive high schools. A state bond issue that

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<sup>127</sup> The New Jersey Career Assistance Navigator is an internet-based system sponsored by the NJDOE and the state Department of Labor & Workforce Development that provides information on careers, post-secondary education and financial aid. See: <https://njcis.intocareers.org/materials/portal/home.html>.

will appear on the November 2018 ballot would set aside \$350 million for both school security enhancements and expansion of high school CTE programs. Funds for CTE program expansion, however, would apply only to county vocational-technical school districts.<sup>128)</sup>

8. The state Department of Education should take a more active role in assisting local school districts in developing CTE programs. The assistance should facilitate the sharing of CTE programs among neighboring districts, thereby providing additional educational opportunities in a cost-efficient manner.
9. The New Jersey Department of Education and local school districts should study the Colorado CareerWise program<sup>129</sup>, a public-private partnership that provides three-year apprenticeships to high school students starting in junior year and leads to industry credentials and associate degrees.
10. The New Jersey School Boards Association should advocate for changes in federal law and U.S. Department of Labor regulations that limit the ability of Workforce Development Boards and Workforce Investment Boards to use federal Workforce Innovation and Opportunity Act funds for the training of currently enrolled high school students. Upon such changes, the N.J. Department of Labor & Workforce Development should ensure that state procedures enable the use of such funds for the training of in-school youth.
11. The state Department of Labor & Workforce Development should provide preK-12 and regional school districts with a level of assistance comparable to its support of county CTE schools.
12. NJDOE should establish regional liaisons to help K-12 school districts respond to area employment needs. It should consider the use of the county roundtable structure for assistant superintendents and curriculum directors to encourage dialogue among schools and businesses about regional employment needs and the status of education programs.
13. County vocational-technical schools should actively share information with local boards of education about the needs of employers and the skills that the business community requires of its employees.
14. Local school districts should actively forge relationships and networking opportunities with business organizations and community groups to obtain information and share resources related to the labor market.
15. Parents and guidance counselors should be involved in discussions of CTE options and their benefits with students as early as the 7<sup>th</sup> or 8<sup>th</sup> grade.
16. Local school districts should provide programming for all students beginning in elementary school and continuing through the middle grades and high school to raise awareness of all careers and the broad variety of career pathways. Districts should consider initiatives, such as

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<sup>128</sup> Brent Johnson, "N.J. Voters Will Decide on \$500M for School Projects after Murphy Slashes Plan in Half," NJ.com, August 29, 2018, accessed August 29, 2018, [https://www.nj.com/politics/index.ssf/2018/08/nj\\_voters\\_will\\_decide\\_500m\\_in\\_school\\_projects\\_after\\_murphy\\_slashes\\_plan\\_in\\_half.html](https://www.nj.com/politics/index.ssf/2018/08/nj_voters_will_decide_500m_in_school_projects_after_murphy_slashes_plan_in_half.html).

<sup>129</sup> "Colorado's Swiss Apprenticeship Model," accessed June 25, 2018, [https://www.colorado.gov/pacific/sites/default/files/CO\\_Swiss\\_Apprenticeship\\_Model.pdf](https://www.colorado.gov/pacific/sites/default/files/CO_Swiss_Apprenticeship_Model.pdf).

open houses and “Career Awareness Days” with follow-up discussions, as effective introductions. Districts should provide students with additional age-appropriate opportunities, such as site visits, technology-based field trips and internships, to foster greater understanding of careers and to refine students’ potential career interests and pathways.

17. Local boards of education should forge relationships with county, municipal and state government. For example, representation by a school district on the community Industrial Development Board (or similar structures) would provide a forum for local industry to explain the skills that entry-level employees should possess.

Tension between County Vocational and K-12 Districts

18. Representatives of local school districts and county vocational-technical school districts should create opportunities to engage in respectful dialogue about the issues they face, and work constructively toward the advancement of student achievement.
19. Local school districts and county vocational-technical school districts should consider possible areas of collaboration, such as offering career pathways to students in other districts where such programs do not exist.
20. If a local district offers a unique career pathway, that district is encouraged to offer other districts the option to enroll tuition students in the program when seats are available.
21. Vocational-technical schools are encouraged to establish “satellite” programs in local school districts through inter-local agreements. Such CTE programs would be open to students from the host district as well as from neighboring high schools.

Impact on School Performance Reports and Access to Opportunity

22. County vocational-technical schools should structure their admissions processes to create more options for students across the achievement spectrum.
23. The New Jersey Department of Education should develop additional measures of school and student success that place more emphasis on “career readiness” as opposed to “college readiness.”
24. NJDOE should revise or weight its performance measurement system in a way that does not penalize a comprehensive high school for the loss of its highest achievers to county vocational-technical schools. The departure of high-achieving students creates a perception about the quality of the district, which may be misleading or completely inaccurate.

Lack of Information about Military Opportunities

25. School districts should educate students and parents about the opportunities that the military can offer with respect to post-secondary education and career training and about requirements for enlistment.
26. School districts should actively confront the stigma associated with the military that may dissuade parents and students from considering this option.
27. School districts should establish a “Military Opportunities Day” as part of their efforts to prepare students for their post-secondary pathway.

Overlooking the Faith-Based Community

28. School districts should consider consulting faith-based communities when developing CTE programming. These communities can provide a point of access for employers to engage with students who are preparing to enter the workforce.

Is Higher Education the Best Preparation for Every Student?

29. Local school districts should provide appropriate career awareness guidance to students who are contemplating post-secondary education with honest conversations about college-readiness and the availability of other pathways.

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Chapter 3

*Revisit curricula and programs so that they reflect economic realities, expose all students to the full array of post-secondary opportunities and prepare them for careers.*

30. As they consider a replacement for PARCC as the state’s assessment program, the New Jersey Department of Education and State Board of Education should explore a variety of alternative methods to determine student progress toward state learning standards. These alternatives may include the SAT, the ACT, the Armed Services Vocational Aptitude Battery, licensing/certification tests, and admission to apprenticeship programs.
31. School districts should provide exposure to various post-secondary opportunities through community-based instruction, job shadowing, internships, college visits, and apprenticeships. These efforts should focus on the career opportunities that will exist when students graduate, which will be affected by artificial intelligence, robotics and automation.
32. School districts should ensure that the curriculum provides all students with instruction in the “soft skills,” such as punctuality and teamwork, that are necessary for workplace success, as well as experience with asynchronous web-based courses.
33. School districts should educate parents and students about the cost and return on investment for all post-secondary opportunities, as well as methods to reduce the expense.
34. Students should be able to benefit from a dual-enrollment system that would allow them to graduate from high school with (a) certification that qualifies them for entry-level employment in certain fields and/or (b) a two-year associate’s degree or significant credit toward that degree.
35. School districts should evaluate the choice of courses offered to students and the sequence in which they are provided. For example, the “biology-chemistry-physics” sequence is based on alphabetical order of the subject areas, not a pedagogical rationale. A reevaluation is especially critical in subjects related to engineering and science, areas that have experienced substantial growth.
36. Students should be made aware of all post-secondary options including military careers, post-secondary certification opportunities, non-traditional academic settings, as well as traditional two- and four-year degree programs.

37. School districts should assist students in determining the economic sustainability of various career paths so that they are well-informed when faced with career choices.
38. School districts should offer access and preparation for a student's preferred career regardless of the student's current placement or socioeconomic status.
39. Local districts should consider developing short- and long-term strategic plans to revise curricula and course offerings at all grade levels, along with accompanying short- and long-term funding for those programs.

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Chapter 4

*Revise preparation and certification requirements to resolve a shortage of teachers in the STEM/STEAM and Makerspace areas.*

40. The New Jersey Department of Education and the State Board of Education should clarify CTE teacher certification and preparation requirements that contain conflicting and ambiguous provisions involving required levels of education and the substitution of work experience for a college degree.
41. NJDOE and the State Board of Education should consider revisions to alternate-route-to-certification qualifications to encourage more skilled individuals to become licensed to teach CTE programs.
42. The state Department of Education should relax teacher certification standards in vocational instructional areas to allow credit for years of working experience.
43. NJDOE should collaborate with employers and labor organizations when revising requirements for the CTE endorsement.
44. NJDOE and the State Board of Education should create a new certification category, or amend existing requirements, to enable non-CTE teachers to instruct in the STEM/STEAM (science, technology, engineering, the arts and mathematics) and Makerspace<sup>130</sup> learning areas. There is a shortage of teachers in these content areas, which stress problem-solving and practical application.
45. The state Department of Education should collaborate with NJSBA, the New Jersey Technology and Engineering Educators Association, university partners, NJEA and other organizations to create the framework for a short course for Integrative STEM/STEAM and Makerspace courses.
46. The state Department of Education should create a shorter training program (6-12 months) for teachers so that they can obtain a certificate to teach STEM and STEAM courses that include design-based pedagogy and manufacturing components.

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<sup>130</sup> For information on Makerspaces in education, see: "The 'Maker Mindset' and How It Can Transform Schools" by Marc Natanagara, *New Jersey School Leader*, March 30, 2017, 15, New Jersey School Boards Association, accessed July 30, 2018, <https://www.njsba.org/news-publications/school-leader/march-april-2017-volume-47-5/maker-mindset-can-transform-schools/>.

47. The state Legislature and the State Board of Education should identify and revise statutes and regulations, respectively, that unduly impinge on the ability of school districts to deliver necessary services to students pursuing post-secondary employment opportunities.
48. School districts should identify and publicize issues that they face in hiring and retaining appropriately certified staff to provide required instruction to students who are pursuing post-secondary employment opportunities.

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**Chapter 5**

*Develop an assessment system that better reflects student growth and learning. Revise student assessment and graduation requirements in collaboration with the business community.*

49. NJDOE and the State Board of Education should revise graduation regulations to allow credits for internships, apprenticeships and cooperative learning opportunities.
50. NJDOE should consider the use of multimodal testing platforms to more accurately measure student growth and learning, and assessments to enable students to demonstrate competency in vocational applications of mathematics and technology.
51. NJDOE should align statewide testing to standards for entry-level employees based on NOCTI (National Occupational Competency Testing Institute) or comparable industry benchmarks.<sup>131</sup>
52. NJDOE should review graduation requirements to ensure that career-focused students have appropriate elective credits available to enable them to secure post-secondary employment.
53. The New Jersey Department of Education should place more emphasis on applied learning or problem-based learning, rather than on theoretical learning, for all students.
54. NJDOE, in consultation with various industry entities, should disseminate information regarding the minimum standards necessary for post-secondary entry-level employment.
55. The business and labor sectors should collaborate with the New Jersey Department of Education to ensure that certification and licensing requirements are consistent with industry standards.
56. Education leaders at all levels should initiate a public advertising campaign to re-introduce the concept of vocational education as an alternative to traditional post-secondary alternatives.
57. The education community should use the term, “career-focused learner,” in lieu of the term “non-college-bound learner,” when referring to the population of students who do not plan to attend college directly after high school but intend to pursue other career pathways.

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<sup>131</sup> NOCTI is a not-for-profit consortium focusing on improvement of the American workforce. (See: <https://www.nocti.org/aboutnocti.cfm>.) NOCTI's Job Ready tests are one of two assessment batteries used by the Pennsylvania Department of Education to measure the occupational competency of career and technical education students. (See: <https://www.education.pa.gov/K-12/Career%20and%20Technical%20Education/Pages/Assessment-Information.aspx>.)

Chapter 6

*Assess financial needs and concerns, and explore alternative funding sources.*

Financial Resources for the Education of Career-Focused students

- 58.** NJSBA and other state education organizations should work with local school districts to advocate for more state and federal funding for CTE programs to benefit students in all settings, including comprehensive high schools.
- 59.** NJSBA, other state education organizations and local school districts should create partnerships with business and industry and labor unions to generate internships and apprenticeships.
- 60.** Local districts should reach out to businesses and labor unions that operate in their regions for funding, support and resources.
- 61.** Boards of education should identify areas in which existing funds for curriculum can be reallocated to meet the needs of all students, including college-bound and career-focused learners.
- 62.** Wherever possible, school districts should identify resources within the annual budget to support the career-focused student.
- 63.** Boards of education should establish public-private partnership committees that include school officials, local business leaders, municipal officials and members of the municipal economic or industrial board.
- 64.** The New Jersey School Boards Association should involve the New Jersey Public School Labor-Management Collaborative in the development of public-private partnerships for the benefit of students.
- 65.** NJSBA and/or its corporate members should assist local school districts by developing a guide on effectuating public-private partnerships.
- 66.** NJSBA should explore grant opportunities and formal partnerships with all branches of the military to support non-college-bound learners.

Inter-District Collaboration

- 67.** Boards of education and state education leaders should collaborate on the cost-effective inter-district delivery of career training for the non-college-bound student.
- 68.** NJDOE and NJSBA should provide a forum for addressing the delivery of career training to non-college-bound students through inter-district collaboration.

Chapter 7:

*The Next Steps*

- 69.** The New Jersey business and education communities should engage in a formal study to determine the best methods to deliver CTE training to our students and to define the roles of local school districts, county vocational-technical high schools and community colleges in the effort. The study should be initiated by the state. It should involve representatives of the following: The New Jersey School Boards Association; other stakeholders in K-12 education, including county vocational-technical school districts; community colleges; other institutions of higher education, the New Jersey Department of Education; the New Jersey Department of Labor and Workforce Development; state-level business organizations, and government workforce development agencies.