

Chapter 7

The Next Steps

A comprehensive study to define the roles of comprehensive high schools, county vocational-technical school districts and county colleges in providing CTE education.

Structures that facilitate student achievement for all, regardless of family background or zip code of residence, must be in place during all phases of a child’s life. All children need a safe, caring, supportive climate and a healthy lifestyle, as well as an *educational* program that meets their learning styles and curricula that will prepare them for their future—not the past.

RECOMMENDATION

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.

BACKGROUND/DISCUSSION

NJSBA projects that have focused on supporting student learning and well-being since 2014 include the following task force reports: *Special Education: A Service, Not a Place* (2014); *What Makes Schools Safe?* (2014); *The Impact of Health and Wellness on Student Achievement* (2015); *The Final Report of the Task Force on Student Achievement* (2017), and this report, *Educational Opportunities for the Non-College-Bound Learner*. The overarching goal of

these projects is to provide information and strategies that boards of education, school administrators and educators can use to advance student growth, learning, well-being and success.

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Reviewing these reports against the background of emerging technologies—artificial intelligence, robotics, and automation—and their impact on all students makes it clear that a coordinated strategic plan to redefine preK-12 public education, and particularly the comprehensive high school, is long overdue. Such a review is further warranted when one considers the following:

- The significant societal changes for which schools are preparing students and the increased rigor at all grades.

- The fact that our current high school organizational structure, standardized curricula, and related decisions are based on recommendations made by the NEA’s “Committee of 10”¹²¹ dating back to 1894, as described earlier in this report.
- The substantial debt facing students upon completion of their post-secondary education, especially a bachelor’s degree. Also of concern are the number of students who have accumulated debt without having completed their degree, and the number of students who receive a degree but are underemployed due to a mismatch in the employment requirements of jobs and their educational background.

As referenced by this Task Force and others, graduating from high school with a diploma can be a pathway to post-secondary educational experiences, but currently does not provide a career pathway to earning beyond a minimum wage. Suffice it to say that upon graduation from high school, an overwhelming number of students do not have the skills or educational background to be fully self-sufficient.

Without a restructure of school organizations, without a review of what we are teaching and when, and without an alignment to the needs of business, industry and post-secondary educational organizations, the preK-12 public school systems cannot fully prepare all students for their futures.

In 2017, the U.S. Department of Labor’s Bureau of Labor Statistics reported that individuals born in the latter years of the baby boom (1957-1964) held an average of 11.9 jobs from ages 18 to 50.¹²² Previously released BLS data show an average of 11.5 jobs held by the age of 48.

Number of jobs held by individuals from ages 18 to 48 in 1978 to 2012, by educational attainment	
Education Level	Number of Jobs
Less than a high school diploma	11.5
High school graduate (diploma or equivalent), no college	11.5
Some college or associate degree	12.3
Bachelor's degree and higher	11.7
Total.....	11.5
SOURCE: “Number of jobs held by individuals from age 18 to age 48 in 1978 to 2012 by educational attainment, sex, race, and Hispanic or Latino ethnicity,” BLS, U.S. Department of Labor, 2015, http://www.bls.gov/nls/79r25jobsbyedu.xlsx .	

¹²¹ *Report of the Committee of Ten on Secondary School Studies*, <https://books.google.com/books?id=PfcBAAAAYAAJ&pg=PA3&lpg=PA3#v=onepage&q&f=false>.

¹²² “Number of Jobs, Labor Market Experience, and Earnings Growth Among Americans at 50: Results from a Longitudinal Survey,” Bureau of Labor Statistics, U.S. Department of Labor, August 24, 2017, accessed September 4, 2018, <https://www.bls.gov/news.release/pdf/nlsoy.pdf>.

The Task Force believes that many students do not have the benefit of a thorough career-awareness program. Career awareness should (and, in most districts, does) begin in the primary grades. However, depending on the district, students may have ample support—or virtually no support—as they choose potential careers. There must be formalized efforts to ensure that by middle school and through high school every student benefits from a program that helps him or her identify potential future careers based on interest, aptitude and ability—a career awareness program that also guides the student toward the appropriate post-secondary educational path.

Matriculating in a four-year college program is the appropriate step for many students immediately after high school. New Jersey’s public and private four-year colleges and universities enroll nearly 195,000 students, according to the Office of the Secretary of Higher Education. However, to be fair to all students, we must dispel the myth that “all should attend college” to lead successful lives. Although schools have advanced this belief for generations, the Task Force feels that it is no longer true. We also know that post-secondary educational experiences, whether they be in-person or through webinars or other technology-based means, are among the keys to success.

Dual enrollment should become the norm for all high school students. In other words, a student should graduate from high school with a certificate that qualifies him or her for a position that pays above the minimum wage and provides flexible pathways to continue advancing in that chosen career. Alternatively, a student should graduate from high school with a two-year (associate) degree or with significant coursework completed toward that degree. Dual enrollment promises to have a positive impact for all students, regardless of their chosen career paths.¹²³

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Some students currently benefit from internships while in high school, but most do not. Even fewer have an apprenticeship experience like the highly successful Colorado CareerWise initiative.¹²⁴

While districts should identify the educational needs of local businesses, the state Departments of Education and Labor & Workforce Development should collaborate with regional employers to determine the skills required for entry-level positions in their various industries.

The Task Force believes that the growth of academies has resulted in a decline of available seats in county vocational-technical high schools and reduced opportunities for career-focused students to learn a trade. The expansion of CTE programs at comprehensive high schools can address this deficit. Sharing of CTE programs among neighboring high schools and districts—especially programs for which there are limited student demand and a shortage of qualified, certified instructors—should be explored.

¹²³ Jennifer Dounay Zinth, "CTE Dual Enrollment: A Strategy for College Completion and Workforce Investment," Education Commission of the States, March 2014, accessed September 4, 2018, <https://www.ecs.org/clearinghouse/01/11/50/11150.pdf>.

¹²⁴ "Colorado’s Swiss Apprenticeship Model," https://www.colorado.gov/pacific/sites/default/files/CO_Swiss_Apprenticeship_Model.pdf.

Additionally, Congress and the U.S. Department of Labor should amend federal law (*P.L.* 113-128) and regulations (20 CFR 681.410) that limit the ability of county Workforce Development/Investment Boards to serve students before they drop out of, or graduate from, high school.

The modes used to deliver instruction should expand, with the goal of enabling students to acquire employment traits considered important in this century. High school students should have exposure to asynchronous web-based courses, experience in working in collaborative teams, and the opportunity to communicate by “telling a story” or communicate while becoming aware of their empathetic feelings.¹²⁵

We must reconsider the courses we offer and the reasons we offer them. For example, rather than offering science courses in alphabetical order, there should be a pedagogical rationale for the timing and sequence of these courses. Engineering and science application are among the more important and growing careers. For a decade there has been a national movement to teach “physics first” in the sequence of high school sciences; especially an Algebra I-based physics program.¹²⁶ In some New Jersey districts, physics classes that would earn high school credit has been introduced in middle school. Consideration must be given not only to the re-ordering of subjects, but also to the choice of courses that will be offered to high school students.

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However, with the focus on technology, engineering and the sciences, we must not lose sight of the liberal arts type of education that, historically, we have believed best prepares students to be contributing, knowledgeable members of our society and our evolving culture. As important as science and math are to our nation’s future, so are the humanities, the arts, the social sciences, and the historical development of our nation and the world.

Finally, there is a need for a comprehensive and thorough review of high school organizations and curricula that were established during a time when our society was agrarian. As a first step in redefining the structure and roles of high schools, the recommendations of the NJSBA studies cited at the beginning of this chapter should be considered; each report raises important issues. A collaborative effort that includes higher education, the state Department of Education, NJSBA and other state-level education associations, and business, industry and trade unions should conduct a thorough study on high school organization that will meet the needs of 21st century learners and develop recommendations for how to redesign high schools for the Information and Technology Age.

¹²⁵ Dan Schawbel, “Geoff Colvin: Why Humans will Triumph Over Machines,” *Forbes*, August 4, 2015, accessed June 26, 2018, <https://www.forbes.com/sites/danschawbel/2015/08/04/geoff-colvin-why-humans-will-triumph-over-machines/#6a2dd6322b54>.

¹²⁶ Bamford, “Physics for All,” *New Jersey School Leader*, <https://www.njsba.org/news-publications/school-leader/julyaugust-2014-volume-45-1/physics-for-all/>.