John J. Heldrich Center for Workforce Development

Edward J. Blosutein School of Planning and Public Policy Rutgers, The State University of New Jersey

Taking the Next Step: High School Students, College, and Careers

Prepared by:
John J. Heldrich Center for Workforce Development
Rutgers, The State University of New Jersey

Prepared for:
The Fund for New Jersey and the
Strengthening Career Guidance
for New Jersey High School Students Conference

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Table of Contents

Background

Executive S	Summary	1
Section 1:	Introduction	5
Section 2:	Beyond High School: Juniors and Seniors Choose College	7
Section 3:	After College: Students Contemplate the Workplace	11
Section 4:	Preparing for College and the Workplace	13
Conclusion	s and Issues for Discussion	16
Append	dix 1: Methodology	19
Append	dix 2: Survey Results	20

Background

The John J. Heldrich Center for Workforce Development at the Edward J. Bloustein School of Planning & Public Policy at Rutgers University was founded as a research and policy organization devoted to strengthening New Jersey's and the nation's workforce during a time of global economic change. The Heldrich Center researches and puts to work strategies that increase worker skills and employability, strengthen the ability of companies to compete, create jobs where they are needed, and improve the quality and performance of the workforce development system.

Since 1998, the John J. Heldrich Center has grown rapidly, working with federal and state government partners, Fortune 100 companies, and major foundations. The Center embodies its slogan 'solutions at work' by teaming with partners and clients to translate cutting-edge research and analysis into practices and programs that companies, unions, schools, CBOs, and government officials can leverage to strengthen their workforces, create jobs, and remain competitive. The Center's projects are grounded in a core set of organizational

priorities: to close the skills and education gap, of re-employing laid-off workers, of ensuring economic opportunity for all, of ensuring high quality education and training for all students and jobseekers, and of strengthening the management and effectiveness of government programs.

Since its inception, the Heldrich Center has sought to inform employers, union leaders, policymakers, community members, as well as media and academic communities, on critical workforce and education issues that relate to the emerging global, knowledge economy.

Funding for this project was provided by the Fund for New Jersey (FFNJ). FFNJ is non-profit organization that organizes its grant making around a simple principle, that in a democracy like ours an informed and involved citizenry holds the ultimate authority. FFNJ's grants promote projects that share a high purpose of furthering effective democracy through a range of methods encompassing education, advocacy, public policy analysis and community problem-solving.

Executive Summary

Overview

As part of its mission to help prepare New Jersey's young people for today's labor market, the John J. Heldrich Center for Workforce Development at Rutgers surveyed 881 New Jersey high school juniors and seniors in April 2003. Our goal was to gain a clearer understanding of their attitudes about, knowledge of, and assumptions regarding post-secondary education and careers.

We gained important insights into the challenges facing New Jersey's high school students as they approach graduation, and uncovered some serious misconceptions regarding the requirements of today's labor market.

The findings in *Taking the Next Step* suggest that high school guidance counselors need additional resources and information to adequately educate students about the various combinations of lifelong learning options that could help prepare them for today's labor market. Not surprisingly, students indicate that they feel unprepared for life after high school and need more assistance to make the transition.

This report is intended to stimulate further discussion and reform in the way we inform and prepare young people for the next step beyond high school. We offer several specific recommendations and welcome comment and additional ideas to advance the common purpose of helping young people make wise choices for their future education and employment.

Major Findings

New Jersey's high school juniors and seniors express some level of concern about their education. While the vast majority (93%) of students tell us that they plan to attend college immediately after high school, many students are worried that high school is not preparing them adequately to meet the challenges of higher education:

- Nearly all of New Jersey's high school juniors and seniors say they plan to attend college after high school, but less than half (43%) of these students feel that they will be very prepared for it.
- Despite the emphasis placed on the college track, many New Jersey juniors and seniors tell us that they often do not receive the information they need from their high school to prepare and apply for college:
 - One in five students report that they did not receive any advice about filling out their college applications, including 13% of high school seniors.
 - One in six students report that that they did not receive any information from their high school regarding either classes that will prepare them for college or advice about paying for college/applying for financial aid.
- Of all the students who plan on entering the labor market directly after graduation, none report that a teacher or guidance counselor was instrumental in helping them choose a career or find employment.

- Many students are not engaging in the more challenging coursework in their school that can help them attain entrance into the four-year post-secondary education that they believe is critical to their success. More than one-third (38%) of all seniors say that they have not taken any Advanced Placement (AP) courses, even though their school offers them. In particular, African-American seniors are more likely than white seniors to say they have not taken any AP courses (54% and 35%, respectively).
- More than half (59%) of all students say they do not plan to take any AP courses before graduating, while 9% indicate that they do not know if they will do so.

The survey findings suggest too few students are aware of the education and skills required in the contemporary labor market. For example, despite the fact that many new jobs in New Jersey do not require a bachelor's degree, most high school juniors and seniors assume that it will be difficult for them to find a good job without a college education. And many have little or no idea how post-secondary education will contribute to preparing them for successful careers.

Issues for Consideration

Rather than provide specific recommendations, the Heldrich Center believes it is more valuable to raise some issues for consideration by policy makers, educators, business leaders, students, and parents. We will explore these issues in more depth at a statewide conference on October 3, 2003 and through additional research, analysis, and discussion. As a beginning point, we have identified several important questions:

1. How can educators most effectively strengthen career education?

- At what point in a child's education should it begin?
- How do we better equip educators to fulfill this function?
- How can business leaders become engaged in schools?
- 2. What are the most effective strategies for integrating school-based and work-based learning?

Internships and academically connected cooperative education are widely recognized as highly effective career exploration and contextual learning experiences. Among students who participated in an internship program, nearly six in ten tell us it helped them a lot in deciding about their post-high school plans. Unfortunately, only one in ten students participated in a formal internship program with an employer while in high school even though more than half of high school juniors and seniors work part-time. This raises questions such as:

- How can we expand internship opportunities for young people in the context of current educational requirements? What changes are necessary to enable students to participate in internships?
- Where in the educational system should we place the responsibility for enhancing these opportunities?
- 3. How can educational institutions and businesses most effectively establish partnerships with each other?
 - What kinds of models are the most successful partnerships? What are their key goals and components?
 - What roles are played by the Department of Education, the county, school district, teachers, business leaders, and industry associations?

- What types of businesses make the best partners? What sort of funding options exist?
- 4. How can educators most effectively help students connect career goals with their education?
 - How can we achieve a better balance between the "college for all" goal, and the realities of the labor market, where many entry-level good jobs that pay high wages do not require a college education?.
 - How can we best help young people and their parents and advisors determine how post-secondary education can be most helpful in preparing them for the careers of their choice?

- 5. How can the state best develop and distribute timely and reliable information about the knowledge, skills, and abilities required in various sectors of the New Jersey workforce?
 - What are the appropriate roles for the state departments of labor and education?
 - What are the best methods for disseminating this information?
- 6. How can schools most effectively provide enriched professional development opportunities for teachers, principals, and guidance counselors?

1. Introduction

The labor market that our parents knew – plentiful blue-collar jobs, high wages for college graduates – is long gone. Today's best work opportunities take a completely different shape, and employers have vastly different needs than they did even a decade ago. Yet, despite massive efforts at reforming our public education system over the last few decades, comparatively little has been done to improve the way students are educated about career and occupational opportunities.

As part of its mission to help prepare New Jersey's young people for today's labor market, the John J. Heldrich Center for Workforce Development surveyed 881 New Jersey high school juniors and seniors in April 2003. Our goal was to gain a clearer understanding of their attitudes about, knowledge of, and assumptions regarding post-secondary education and careers. The survey results confirm the importance of listening to American high school students, as they provide key insights into how well schools are preparing students for making the leap from school to work.

For example, our survey found that the majority of students (79%) plan on attending a four-year college immediately after graduation, and very few know about or even consider post-high school job training programs. Of the 79%, virtually all are doing so to prepare for a career. Indeed, 88% surveyed thought it would be "not too" or "not at all" easy to get a job if they didn't complete college.

However, the new realities of the American economy and labor market reflect the importance of skills, credentials, and the willingness to learn, not just college degrees. According to the U.S. Department of Labor, 80 % of newly created jobs in the U.S. do not require a baccalaureate degree. What's more, a majority of employers cite the lack of skilled workers and sufficient workforce training as leading barriers to growth. According to analyst Richard Judy, 60% of future jobs will require training that only 20% of present workers possess. In New Jersey, the reality of these trends could not be more apparent; employers in several key industries, such as construction, finance, and health care cite the need for more skilled workers in their industries.2

Adding to the problem is the fact that today's students, teachers, and parents place a low value on education that directly prepares students for a career out of high school.³ While the emphasis on "college for all" is a worthy goal, the realities of the labor market are such that many good jobs that pay high wages do not require a college education. Of course, it is also true that regardless of the jobs available, some kids do nor want to attend college.

Equally important, few students have a clear understanding of how they can make the most of their post-secondary education to prepare them for successful careers. Since nearly one-third (32%) of students enrolled in a 2- or 4-year post-secondary educational institution leave within three academic years without a degree or

Taking the Next Step: High School Students, College, and Careers

¹ Judy, Richard. "Workforce 2020: Work and Workers in the 21st Century." www.hudson.org, The Hudson Institute.

² Based on employer interviews and industry focus groups held throughout New Jersey from March 2003 to July 2003.

³ Ibid

credential, this lack of knowledge about the connection between educational preparation and careers is even more troubling.⁴

Our survey results show that there is a major disconnect between students' knowledge and assumptions regarding how to best prepare themselves for the workplace, and the realities of the labor market. Further, our results suggest that the way our public school system prepares young people for the work force has not kept pace with today's global economy. In this report we suggest several areas of major inquiry for changing the public education system to reflect these new labor market realities, and for creating a system that serves students, workers, and families more effectively.

These issues will be explored and discussed in this report and during a statewide conference to be held in October 2003 at the Heldrich Center.

A Note on Methodology

With support from the Fund for New Jersey, The Heldrich Center conducted a phone survey of 881 New Jersey high school juniors and seniors in April 2003, with a particular focus on students who attend schools located in low-income "Abbott" school districts. The Center obtained permission from the students' parents or guardian before beginning the interview. The methodology consisted of a combination of a listed sample drawn from households known to have high school students and a targeted random digit dialing (RRD), in census tracks that showed a higher than average high school age population. We also performed an over sampling of high school students living in Abbott school districts in an effort to obtain a representative sample of New Jersey students. However, due to calling patterns, it is likely that our sample is not fully representative of all high school students in the state.

⁴ Education Statistics Quarterly, National Center for Educational Statistics. "Short-term Enrollment in Postsecondary Education: Student Background and Institutional Differences in Reasons for Early Departure, 1996-98."

Findings

2. Beyond High School: Juniors and Seniors Choose College

The survey findings underscore the importance that high schools place on preparing students for college, to the exclusion of other options such as the military or job training programs. The overwhelming majority (93%) of high school juniors and seniors surveyed indicate that they plan to go to college after graduating from high school. Few students say that they plan to enlist in the Armed Forces, find a job and work, or enroll in a job training program. An over sample of students from less economically advantaged school districts did not change this outcome (see Appendix A for study methodology).

Among those planning to attend college after high school, nearly all students report that they plan to do so full-time, and more than half of these college-bound students indicate that they have already applied to colleges and universities. Some students seem to be more motivated than others in completing their applications. For example, girls are more likely than boys to say that they have already applied to colleges and

universities (57% and 49%, respectively), as are African-American students compared to white students (62% and 51%, respectively). Interestingly, students with part-time jobs are significantly more likely than those who do not work to say they have already applied to college (61% and 46%, respectively).

Nearly all (96%) students told us that they want to attend college to prepare for a career. However, there is less unanimity among students regarding what type of college they want to attend.

Among those surveyed, more than one-third (40%) report that they plan to attend a four-year college in New Jersey, while 39% want to attend a four-year out-of-state college. Only 7% say they want to attend a two-year college, while 14% say they do not yet know what type of college they want to attend. Students of different races express varying opinions as to what type of school they would like to go to, with white students the most likely to say they will attend a four-year out-of-state college, and students of other races more likely to say they will attend college in NJ.

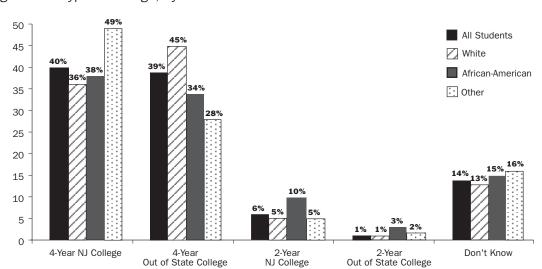


Figure 2.1: Type of College, by Race

While nearly all of New Jersey's high school juniors and seniors say they plan to attend college after high school, less than half (43%) of these students report that they feel that they will be very prepared for it. Slightly more than half (51%) believe they will be only somewhat prepared, while 6% believe that they will not be too or not at all prepared for college upon graduating from high school. Confidence in their preparedness varies among students of different schools and of different races. For example, students attending private high school are far more likely than public school students to say they will be very prepared for college after graduating (66% and 39%, respectively). In contrast, among African-American students, 34% say that they believe they will be very prepared for college, compared to 44% of white students and students of other races, respectively. Notably, students who have a part-time job are less likely than those who do not to say that high school is leaving them very prepared for college (37% and 48%, respectively). It may be that they

believe their job is taking time from college preparation.

Heldrich Center interviewers asked students to name the people who most influenced their decision to attend college right after high school. Nearly two-thirds (63%) of students cite their parents or guardian as the most important. In stark contrast, only 10% mention a school guidance counselor, 7% cite a teacher, 5% say a friend or sibling, while 8% state that no one helped them to make this decision. Private school students are more likely than public school students to say that their parents were the most helpful in making the decision to attend college right after high school (71% and 62%, respectively).

High school students receive a lot of information about college from a variety of sources, including friends, parents, siblings, teachers and school guidance counselors. For example, less than one in five (16%) told us they received a lot of advice from

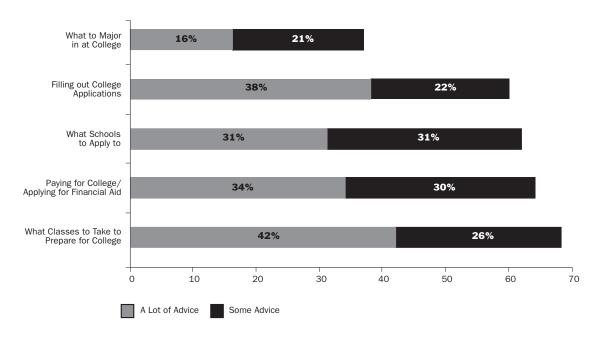


Figure 2.2: Advice Students Receive From Their High School

their high school about what to major in at college. Similarly, less than one-third (31%) say that they received a lot of advice from their school regarding what schools to apply to, and 34% report receiving a lot of advice about paying for college or applying for financial aid. In contrast, high schools appear to be doing a better job of assisting students with selecting their classes and applying to schools. Nearly one in two (42%) students say that they received a lot of advice from their school on what classes they should take in high school to be prepared for college, and 38% say they received a lot of advice about filling out college applications (see Fig. 2.2).

Many students say they did not receive any advice from their high school regarding various aspects of college preparation and admission. One in five students (20%) report that they did not receive any advice about filling out their college applications. At the same time, 14% of students told us that they did not receive any information from their high school regarding either classes that will prepare them for college or advice about paying for college/applying for financial aid. Finally, a significant number of students say they were not advised regarding what schools to apply to or what to major in at college (15% and 32%, respectively).

The survey findings suggest that private schools are providing more information and advice to their students about certain aspects of college than are public schools, with private school students more likely than public school students to say they received helpful advice from their high school. Similarly, students of different races have different experiences and perceptions regarding the advice they are receiving from their high schools throughout the college application process. For example, among African-American juniors and seniors, 43% say that the advice they received on what schools to apply to helped them a lot, compared to 26% of white students and 36% of students of other races who say the same (see Fig. 2.4).

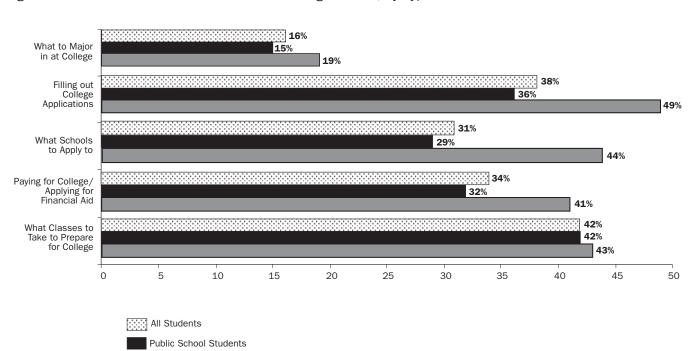


Figure 2.3: Advice Students Receive From Their High School, by Type of School

Private School Students

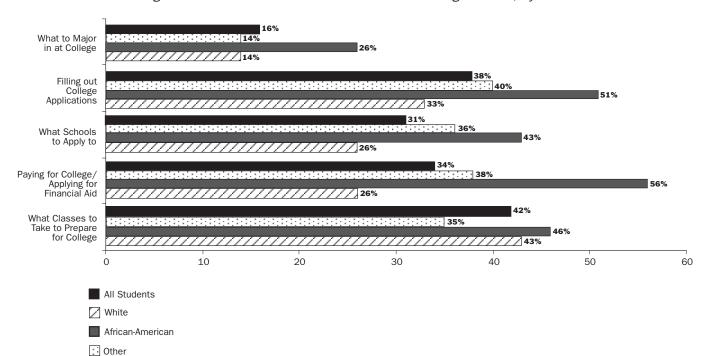


Figure 2.4: Advice Students Receive From Their High School, by Race

Interestingly, juniors are more likely than seniors to say they received advice from their high school about what classes to take to prepare for college that helped a lot (46% and 38%, respectively), as well as about what major to select in college (20% and 12%, respectively). Conversely, seniors

are more likely than juniors to say the advice they received from school on filling out college applications helped them a lot (42% and 33%, respectively), probably due to the fact that seniors are more heavily involved in the application process than juniors.

3. After College: Students Contemplate the Workplace

Taking the Next Step asked students to think about jobs and careers after they graduate from college and complete their formal education. The survey finds that when students think about work, the first thing that comes to mind is the potential income from the job. More than one in four (27%) high school juniors and seniors say that salary will be the most important factor to consider when looking for a full-time job, whereas 25% of students cite challenging and rewarding work. Students are less likely to value as most important factors such things as doing something they enjoy or having a flexible work schedule (12% and 6%, respectively), and only 3% of students cite benefits. It's worth noting that boys are more likely than girls to cite salary (31% and 23%, respectively), while African-American students are more than twice as likely as white students to say the same (28% and 12%, respectively).

Students express a range of interests regarding the types of industry where they might like to work upon completing their formal education. For example, 16% say that they would like to work in business or financial services, while 18% express interest in the medical/healthcare industry. One in ten (11%) tell us that education is their area of interest, while 7% cite law. Among students, 14% say that they do not yet know which field they would most like to work in when they complete their education (see Fig. 3.1).

Only 10% of students say that they are extremely familiar with the types of jobs available in the field in which they express an interest. Slightly more than one-third (36%) say they are very familiar with jobs in these fields, while 37% say they are only somewhat familiar.

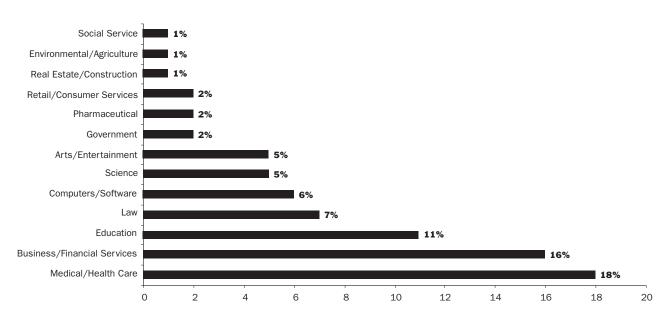


Figure 3.1: Industries Where Students Would Like to Work After Graduation

When asked about how much money they are likely to earn, more than one-third (36%) of students admit that they have no idea what their yearly salary at their first full-time job will be. For those who offered a guess about salary, expectations appear fairly reasonable, with approximately 23% of students offering estimates of yearly salary in the \$20,000-\$40,000 range. However, approximately 18% are expecting significantly higher pay, ranging from \$50,000 up to \$150,000 a year.

The survey findings demonstrate that few students are aware of what level of education is needed to prepare them for various careers in the labor market. Even though many high-paying jobs do not require a baccalaureate degree, most high school juniors and seniors assert that it will be difficult for them to find a good job without a college education. Only 1% say it would be very easy, and 11% say it would be somewhat easy to get a good job without a BA. In stark contrast, 88% say it would be not too or not at all easy to get a good job if they do not complete college. The message that those same jobs that do not require a fouryear college degree require specialized or specific job training, is even less familiar to New Jersey's high school students. Many students believe acquiring more education will be a more effective strategy for securing work than building their work skills.

4. Preparing for College and the Workplace

Taking the Next Step finds that students are optimistic about their prospects for the future. Most students (79%) believe that they will have better career and economic opportunities than their parents did, while 16% say that they will have about the same. Only 2% say that they will have less. Nonwhite students are particularly optimistic. For example, among African-American students, 90% say they will have greater opportunities than their parents did, compared to 74% of white students, and 87% of students of other races.

In thinking about those skills a person needs to succeed at work, students are more likely to cite as very important non-specific job skills such as responsibility and having a good work ethic, as opposed to specific job skills or computer skills. For example, students are most likely to say that being responsible at work is a skill they will need to get a full-time job, with 94% saying this skill is very important. Similarly, 93% of students say that being able to write, speak and

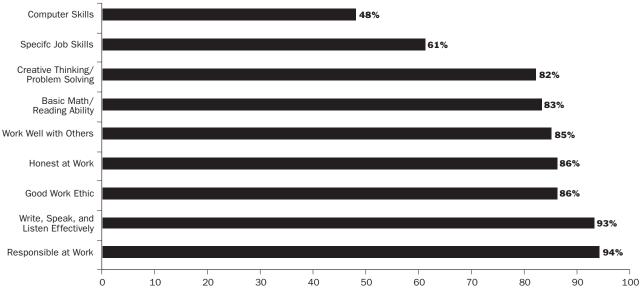
listen to others effectively is very important to securing full-time work. In contrast, less than half (48%) of students tell us that computer skills will be very important to them in their effort to secure full-time employment (see Fig. 4.1).

Despite ranking computer skills rela-

tively low in importance in finding a good job, today's high school juniors and seniors have a great deal of computer expertise, and are required to use a variety of computer skills and programs in their classes. For example, 84% say that they were required to learn and use Microsoft Word, and 83% say the same about using the Internet. The majority (79%) say that some of their classes required them to learn keyboarding/typing, while 66% say the same about Microsoft Excel. Fewer students cite the need to learn Microsoft Access or HTML programming (41% and 27%, respectively), while 26% say they had to learn other advanced programming languages. Boys and girls are almost equally likely to say they learned computer skills such as Microsoft Word, Excel, and keyboarding; however, girls are less likely than boys to say they learned HTML (24% and 31%, respectively) or other advanced programming languages (22% and 32%,



Fig. 4.1: Skills Students Say They Need to Succeed at Work



respectively). While the majority of students expressed satisfaction with the computer and technology courses offered by their high schools, a number of students indicate that there are other computer and technology classes that they would like to have available at their high school, including graphic design, website development and design, and computer repair. A few students indicate an interest in learning advanced programming, such as C++ and Java.

Nearly all (94%) of New Jersey's high school juniors and seniors have taken science courses that require or include time in the lab. At the same time, nearly all (98%) of all New Jersey high schools offer their students at least one Advanced Placement (AP) course. Yet more than one-third (38%) of all seniors say that they have not taken any AP courses. In particular, African-American seniors are more likely than white seniors to say they have not taken any AP courses (54% and 35%, respectively).

More than half (59%) of all students say they do not plan to take any AP courses before graduating. Perhaps because of the time constraints imposed by juggling school and work, students who work part-time are more likely than non-working students to say that they do not plan to take any AP courses before graduating (66% and 52%, respectively).

Nearly half of the surveyed high school students work during the school year and during the summer. Among these students, 43% say they work up to five hours per week, while only 10% say they work 5-10 hours per week. However, a significant percentage of students report working ten or more hours per week, with 24% working 10-20 hours, 10% working 20-30, and 3% working more than 30 hours per week.

Despite the fact that nearly half of high school juniors and seniors work, only 9% indicate that they participated in an internship program with an employer while in high school. At the same time, parents believe it is very important for high school students to have opportunities such as internships to learn in a workplace setting and that employers should provide students with learning opportunities. Among students who participated in an internship program, 56% say that their internship helped them a lot in deciding about what to do after completing high school, while 22% say it helped some.

In thinking about those skills that may be important for today's students to learn in school, students identify several that they think are very important. For example, 92% of juniors and seniors say it is very impor-

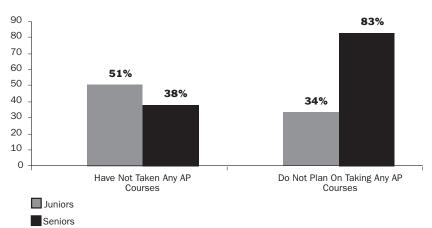


Fig. 4.2: Completion of AP Courses, by Year

tant for students to be able to write, speak, and listen to others effectively, while 90% say that being responsible is very important. Similarly, students recognize how critical good math and reading skills are, with 87% saying that these are very important for today's students. As when identifying skills that are important to succeed in the workplace, students are less likely to say that specific skills such as computer skills and job occupational skills are very important (54% and 52%, respectively), and more likely to identify such "soft skills" as working well with others and having a good work ethic as very important (83% and 82%, respectively) (see Fig. 4.3)

The manner in which students ranked the importance of computer skills is interesting. In general, students of all demographics ranked the importance of these skills similarly. The exception to this is computer skills. For example, girls are more likely than boys to say that it is very important for today's students to learn computer skills (58% and 48%, respectively). Students who work part-time are more likely to say that computer skills are very important, compared to those that do not (59% and 49%). Finally, African-American students are more likely than white students to say computer skills are very important (59% and 46%, respectively).

Demographic Profile

Among the students surveyed for this report, 84% attend public school. Among the 16% who attend private school, 75% attend schools that have a religious affiliation. In New Jersey, 30 districts—or 5%—among approximately 592 are Abbott school districts: 11% of students in our sample live in these districts. More than three-fourths (78%) live in a two-parent household, while 17% live with their mother and 2% live with their father or with a relative or other guardian. Nearly all (96%) of students in our sample have access to a computer both at school and at home and have Internet access both at school and at home. Nearly half (46%) currently have a part-time job. Approximately 21% of these students live in Central New Jersey, while 25% live in the southern portion of the state and 54% live in North Jersey.

Among those surveyed, 46% are male. More than half (59%) of our respondents are white, while 14% are black, 10% are Hispanic, 9% are Asian, and 5% are bi-racial or of other races. Half (50%) of our sample is age 17, while 25% are 18 years of age and 23% are 16 years of age.

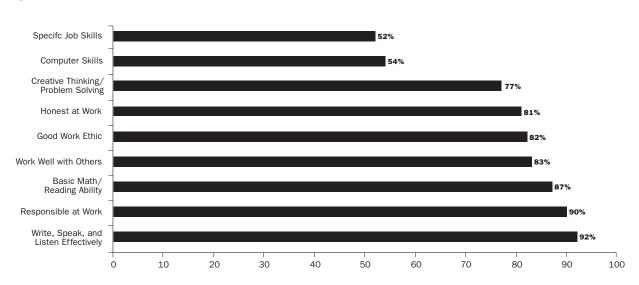


Figure 4.3: Skills Students Say They Need to Learn

Conclusions and Issues for Discussion

New Jersey's high school students face a number of challenges as they approach graduation. They must make crucial decisions regarding their future education and career, decide what college or university they want to attend, and negotiate their way through the oftentimes complicated college application and financial aid process. Other students must make decisions regarding entering the military or joining the labor force upon graduation day. Students cite their parents as a major influence in helping them decide what they want for their future. At the same time, high school guidance staff lack the skills and resources to educate students about the various combinations of lifelong learning options that could help prepare them for today's labor market. Not surprisingly, students indicate that they feel unprepared for life after high school and need more assistance to make the transition.

New Jersey's employers also face difficult challenges in meeting their current and future labor and skill needs. Employers tell us that many of today's students and job seekers do not have the necessary qualifications to succeed at work.5 In fact, many New Jersey employers are highly critical of the workforce preparedness of today's younger workers and cite a lack of basic math and literacy skills and unfamiliarity with expected workplace behavior (punctuality, responsibility, a strong work ethic) as serious impediments to finding enough qualified employees.6 Moreover, not enough students and job seekers are aware of the many career options that do not necessarily require a four-year degree. The majority of students surveyed believe that a four-year

degree is essential in securing a good job and appear unaware of or uninterested in other options.

If we are to improve career advice and preparation for New Jersey's young people, the public education system must be changed to reflect wider economic imperatives. To create a system that serves students, workers, and families effectively, decision makers need to know more about the career aspirations, awareness, and knowledge of high school students. In addition, more needs to be known about the influence that others, such as parents, have on student decision-making. Armed with this knowledge, educators and policy makers can begin to develop strategies to improve and increase the career education and workforce preparation of New Jersey's high school students.

Rather than provide specific recommendations, the Heldrich Center believes it is more valuable to raise key issues for consideration by policy makers, educators, business leaders, students, and parents. We will explore these issues more in-depth at a statewide conference on October 3, 2003 and through additional research, analysis, and discussion. As a beginning point, we have identified several important questions:

- 1. How can educators most effectively strengthen career education?
 - At what point in a child's education should it begin?
 - How do we better equip educators to fulfill this function?

16

⁵ Based on employer interviews and industry focus groups held by the Heldrich Center throughout New Jersey from March 2003 to July 2003.

⁶ Ibid

- How can business leaders become engaged in schools?
- 2. What are the most effective strategies for integrating school-based and work-based learning?

Internships and academically connected cooperative education are widely recognized as highly effective career exploration and contextual learning experiences. Among students who participated in an internship program, nearly six in ten tell us it helped them a lot in deciding about their post-high school plans. Unfortunately, only one in ten students participated in a formal internship program with an employer while in high school even though more than half of high school juniors and seniors work part-time. This raises questions such as:

- How can we expand internship opportunities for young people in the context of current educational requirements? What changes are necessary to enable students to participate in internships?
- Where in the educational system should we place the responsibility for enhancing these opportunities?
- 3. How can educational institutions and businesses most effectively establish partnerships with each other?
 - What kinds of models are the most successful partnerships? What are their key goals and components?
 - What roles are played by the department of education, the county, school district, teachers, business leaders, and industry associations?
 - What types of businesses make the best partners? What sort of funding options exist?

- 4. How can educators most effectively help students connect career goals with their education?
 - How can we achieve a better balance between the "college for all" goal, and the realities of the labor market, where many entry-level good jobs that pay high wages do not require a college education?
 - How can we best help young people and their parents and advisors determine how post-secondary education can be most helpful in preparing them for the careers of their choice?
- 5. How can the state best develop and distribute timely and reliable information about the knowledge, skills, and abilities required in various sectors of the New Jersey workforce?
 - What are the appropriate roles for the state departments of labor and education?
 - What are the best methods for disseminating this information?
- 6. How can schools most effectively provide enriched professional development opportunities for teachers, principals, and guidance counselors?

Upon conclusion of the October conference, the Center will analyze the notes and discussion from the event, and incorporate those findings into a new document outlining potential program and policy directions to address these questions.

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Appendix A: Methodology

Braun Research Incorporated completed 881 interviews with New Jersey high school juniors and seniors from April 1, 2003 through May 10, 2003. Interviews were conducted only after having received permission from the student's parent or guardian. Students were selected from a combination of a listed sample drawn from households known to have high school students and a targeted random digit dial (RRD) sample within census tracks that contain more than average numbers of people in the high

school age group. In addition, Braun completed an over sample of 81 students living in Abbott school districts to increase the representation of lower-income students in the sample. However, due to calling patterns, it is likely that the sample is not fully representative of lower-income high school students.

The sample error is +/- 4.38% at the 95% confidence level.

Appendix B: Survey Responses

John J. Heldrich Center for Workforce Development Bloustein School of Planning and Public Policy Fund for New Jersey High School Survey

Questions for the High School Survey (Juniors & Seniors)

Parental Consent:					
Hello, my name isstatewide survey about what New would like to get the opinions of t strictly voluntary, and all response approximately ten minutes to comschool junior or senior about thes mission)	Jerse the pe es will aplete	erson in this household who is a j l remain confidential and reporte . Would it be okay for us to spea	ut schoo unior or d only i k with y	ol and their plans for work on senior in high school. Partion the aggregate. This survey your son or daughter who is a	college. I cipation is will take high
High School student:					
Hello, my name isstatewide survey about what New This survey will take approximate	Jerse		ut schoo	ol and their plans for work or	
D1. Are you currently a junior or senior in high school? N=881		QUESTIONS FOR COLLEGE- BOUND STUDENTS:	-	Q4. Have you applied to co and universities yet? N	olleges =818
<i>y</i>	0% 0% er-	Q2. Do you currently plan to a college full-time or part-time in ately following high school? N=81	nmedi-	Yes No, but I am planning on applying Don't know	53% 47% 0%
SPLIT-SAMPLE QUESTION:		Full-time Part time	96% 3%	Q5. What type of college do	
Q1. What do you plan to doing af graduating from high school? N=881	fter	Don't know Q3. Why do you want to attend college?	1%	4 year college in New Jersey 2 year college in New Jersey 4-year college out of state	40% 6% 39%
Go to college full or part time (Go to Q2) Enlist in the Armed Forces (Army,	3%	(Open-end, Pre-coded, Select all that apply) N=81 To prepare me for a career	8 96%	2-year college out of state Don't know what type of colleg I will attend	1% ge 14%
Find a job and work (Go to Q20)	1% 1%	My parents want me to attend college All of my friends are attending college	1% 1%	Q6. How well do you think school is preparing you for Do you feel you will be: N	college?
Enroll in a job training or job skill program (vocational school, computer programming course) (Go to Q32)	1%	I want to live away from home I don't know what else to do after high school	1% 0% 1%	Very prepared Somewhat prepared Not too prepared	43% 51% 5%
I don't know what I'm going to do after I graduate from high	40/	I don't know why I want to attend college	2%	Not at all prepared Don't know	1% 1%

school (Go to Q43)

4%

Q7. Who was the most helpful to
you in making the decision to attend
college right after high school?

(Open Ended—Pre-Coded)

N = 818

School guidance counselor	10%
Parent(s) or guardian	63%
Teacher	7%
Friends or sibling	5%
Other	2%
No one	8%
Myself	3%
Don't know	3%

Q8. High school students receive a lot of information about college. For each type listed below, please tell me whether you received advice from your high school and if so, how helpful was it (did it help a lot, some, a little, or not at all)

A. Advice on what schools to apply to N=818

10	14=010
A lot	31%
Some	31%
A little	17%
None at all	6%
Did not receive advice from	
high school	15%

B. Advice on what classes I should take in high school to be prepare for college N=818

A lot	42%
Some	26%
A little	12%
None at all	6%
Did not receive advice from	
high school	14%

C. Advice about filling out my college applications N=81

A lot	38%
Some	22%
A little	13%
None at all	8%
Did not receive advice from	
high school	20%

D. Advice	about	what	to	major	in	at
college				N = 81	8	

A lot	16%
Some	21%
A little	18%
None at all	14%
Did not receive advice from	
high school	32%

E. Advice about paying for college/applying for financial aid N=818

34%
30%
16%
6%
14%

F. Did you receive any other advice from your high school about college? N=818

Yes	18%
No	82%
Don't know	0%

G. How helpful did you find this advice? N=149

A lot	64%
Some	27%
A little	7%
None at all	2%

Now I would like to ask you some questions about the work you expect to do after completing your formal education

Q9. What is the most important factor to you when considering a full-time job? (open-ended, pre-coded) (Accept two responses)

N=818

Challenging and rewarding work	25%
Salary	27%
Benefits, such as health care	3%
Flexible work schedule/Ability to	
balance work and personal life	6%
Opportunities for career	
advancement	3%
Retirement/pension plan	0%
Other	9%

Doing something I enjoy	12%
Don't know	8%

Q. 9a What is the second most important factor? N=818

important factor?	N=818
Challenging and rewarding	work 9%
Salary	37%
Benefits, such as health care	6%
Flexible work schedule/Abili	ity
to balance work and persone	ıl life 7%
Opportunities for career	
advancement	4%
Retirement/pension plan	0%
Other	9%
Doing something I enjoy	4%
Location	6%
Don't know	12%

Q10. What industry would you most like to work in after completing your education? (open-ended, pre-coded) N=818

Non-profit or social service	
organization	1%
Business or Financial Services	16%
Science	5%
Education	11%
Computers and Software	6%
Environment/Natural	
Resources/Agriculture	1%
Medical/Healthcare	18%
Internet development/web design	0%
Law	7%
Arts or Entertainment	5%
Government	2%
Pharmaceutical	2%
Real Estate and Construction	1%
Retail/Consumer Services	2%
Other	8%
Don't know	14%

Q11. How familiar are you of the types of jobs available in this field?

N=818

Extremely familiar	10%
Very familiar	36%
Somewhat familiar	37%
Not very familiar	7%
Not at all familiar	1%
Don't know	10%

Q12. What do you estimate your yearly salary at your first full-time job will be? (Verbatim Response)

Don't know

Q13. How easy do you think it will be for you to get a good job if you do not complete college? Will it be very easy, somewhat easy, not too easy or not at all easy?

N=818

Very easy	1%
Somewhat easy	11%
Not too easy	38%
Not at all easy	50%
Don't know	1%

Q14.If you cannot find a good job after completing college, what do you think you will do? N=818

Go back to school for more	
education	42%
Get job training in a particular s	skill
or occupation	10%
Continue to look for a good job	while
working at a lesser job	24%
Move to an area where you think	2
jobs are more plentiful	11%
Other	5%
Don't know	8%

QUESTIONS FOR MILITARY-BOUND STUDENTS

Q15. What branch of the armed forces are you planning on joining?

N=9

Army	44%
Navy	22%
Air Force	11%
Marines	22%
Coast Guard	0%
Don't know	0%

Q16. Why do you want to join the armed forces? (Open-Ended Precoded)

N=9

My parent (s) are members of the	
armed forces	0%
To earn money for college	22%
To learn new skills/train for a	
career	22%
I want to serve my country	33%
I want to travel	0%
I don't yet know what else I want	
to do	22%

Q17. Who was the most helpful to you in making the decision to join the armed forces? (Open-ended, Pre-coded)

N=9

A parent or guardian	33%
A teacher	0%
A guidance counselor	0%
A sibling or other relative	0%
A friend	11%
Other (please specify)	11%
No one helped me make this	
decision	44%
Don't know	

Q18. How prepared do you think you are for a military life? Are you very prepared, somewhat prepared, not very prepared, or not at all prepared? N=9

Very prepared	56%
Somewhat prepared	44%
Not very prepared	0%
Not at all prepared	0%
Don't know	0%

Q19. Do you plan to attend college after completing your military service? N=9

Yes	89%
No	0%
Don't know	11%

QUESTIONS FOR JOB-BOUND STUDENTS

Q20. Why do you want to find a job and work after high school? (Open-ended, Pre-coded)

N=9

I don't need to go to college to get	
the job I want	11%
I do not want to go to college	11%
I cannot afford to go to college	22%
None of my friends are going to	
college	0%
My parents want me to get a job a	nd
work after high school	0%
I don't know	56%

Q21. Who was the most helpful to you in making the decision to find a job and work after high school? (Open-ended, Pre-coded)

	N=9
A parent or guardian	33%
A teacher	0%
A guidance counselor	0%
A sibling or other relative	0%
A friend	11%
Other (please specify)	0%
No one helped me make this	
decision	33%
Don't know	22%

Q22. What type of job do you plan to looking for after graduating from high school?

[Verbatim response and code later]

Q23. How well do you think your high school education is preparing you for a job after graduation? Do you feel you will be:

	N=9
Very prepared	11%
Somewhat prepared	78%
Not too prepared	11%
Not at all prepared	0%
Don't know	0%

Q24. How easy do you think it will
be for you to get a good job after
high school? Do you think it will be:
N=9

Very easy	22%
Somewhat easy	22%
Not too easy	33%
Not at all easy	11%
Don't know	11%

Q25. Did you get advice from your high school on any of these topics? If yes, did it help a lot, some, a little, or not at all?

a. Advice on assessing my interests and abilities

	N=9	
A lot	11%	
Some		22%
A little		11%
Not at all		22%
Did not receive advice		33%
Don't know		0%

b. Advice on developing a career plan

	N=9
A lot	11%
Some	33%
A little	22%
Not at all	0%
Did not receive advice	33%
Don't know	0%

c. Advice on salary, working conditions, and future outlook of various occupations

	N=9
A lot	11%
Some	33%
A little	11%
Not at all	11%
Did not receive advice	33%
Don't know	0%

d. Advice on job search techniques, such as, where to look for jobs, resume writing and interviewing tips. N=9

A lot	22%
Some	11%
A little	11%
Not at all	22%
Did not receive advice	33%
Don't know	0%

Q26. Do you plan to attend college sometime in the future?

	N=9
Yes	78%
No	11%
Don't know	11%

Now I would like to ask you some questions about the work you expect to do after completing your formal education

Q27a. What is the most important factor to you when considering a full-time job? (open-ended, precoded) (Accept two responses)

N=	9
Challenging and rewarding work	k 11%
Salary	11%
Benefits, such as health care	0%
Ability to balance work and	
personal life	11%
Opportunities for career	
advancement	0%
Retirement/pension plan	0%
Other	0%
Don't know	11%
Doing something I enjoy	56%

Q27b. What is the second most important factor?

Salary	56%
Benefits, such as health care	33%
Don't know	11%

N=9

Q28. What industry would you most like to work in after completing your education?

(Open-ended, pre-coded)

N=9	
Non-profit or social service	
organization	0%
Business or Financial Services	0%
Science	0%
Computers and Software	22%
Environment/Natural	
Resources/Agriculture	0%
Medical/Healthcare	0%
Internet development/web design	0%
Law	0%
Arts or Entertainment	11%
Government	0%
Pharmaceutical	0%
Real Estate and Construction	11%
Retail/Consumer Services	0%
Other	33%
Don't know	22%

Q29. How familiar are you of the types of jobs available in this field? N=9

Extremely familiar	11%
Very familiar	33%
Somewhat familiar	11%
Not very familiar	11%
Not at all familiar	11%
Don't know	22%

Q30. What do you estimate your yearly salary at your first full-time job will be? (Verbatim Response)

Don't know

Q31. If you cannot find a good job after completing high school, what do you think you will do?

N=9

Go back to school for more	
education	33%
Get job training in a particular	
skill or occupation	11%
Continue to look for a good job	
while working at a lesser job	33%
Move to an area where you think	
jobs are more plentiful	0%
Other	0%
Don't know	22%

QUESTIONS FOR STUDENTS PLANNING TO ENROLL IN A JOB TRAINING OR JOB SKILL PROGRAM

Q32. Why are you planning to enroll in job training or skill program after high school?

(Pre-code, open ended)

N=9

I know what kind of training I need to get the job I want 78% I do not want to go to college or join the military 0% My parents want me to enroll in a job training or skill program after high school 11% My friends are enrolling in a job training or skill program after high school 0% I don't know why I want to enroll in a job training or skill program

Q33. What type of job training or job skill program do you plan to receiving after completing high school?

(Verbatim response)

Q34. Where do you anticipate you will get this training?

N=9	
	11%
	56%
	0%
	22%
	11%
	N=9

Q35. Did you get advice from your high school on any of these topics? If yes, did it help a lot, some, a little, or not at all?

a. Advice on assessing my interests and abilities

	N=9	
A lot		11%
Some		22%
A little		22%
Not at all		0%
Did not receive any advice		44%
Don't know		0%

b. Advice on developing a career plan

•	N=9
A lot	44%
Some	11%
A little	0%
Not at all	11%
Did not receive any advice	33%
Don't know	0%

c. Advice on salary, working conditions, and future outlook of various occupations

	N=9
A lot	11%
Some	33%
A little	11%
Not at all	0%
Did not receive any advice	44%
Don't know	0%

d. Advice on job search techniques, such as, where to look for jobs, resume writing and interviewing tips. N=9

A lot	22%
Some	11%
A little	22%
Not at all	0%
Did not receive any advice	44%
Don't know	0%

Q36. How easy do you think it will be for you to get a good job after completing your training? Do you think it will be:

	N=9
Very easy	11%
Somewhat easy	67%
Not too easy	22%
Not at all easy	0%
Don't know	0%

Now I would like to ask you some questions about the work you expect to do after completing your education and training.

Q37. What is the most important factor to you when considering a full-time job? (Open-ended, pre-coded) (Accept two responses)

22%
33%
22%
11%
0%
0%
0%
11%

Q38. What industry would you most like to work in after completing your training?

(Open-ended, pre-coded)

N=9

Non-profit or social service	
organization	0%
Business or Financial Services	22%
Science	0%
Computers and Software	11%
Environment/Natural	
Resources/Agriculture	0%
Medical/Healthcare	11%
Internet development/web design	0%
Law	0%
Arts or Entertainment	0%
Government	0%
Pharmaceutical	0%
Real Estate and Construction	0%
Retail/Consumer Services	0%
Other	44%
Don't know	11%

Q39. How familiar are you of the types of jobs available in this field? N=9

Extremely familiar	22%
Very familiar	11%
Somewhat familiar	33%
Not very familiar	33%
Not at all familiar	0%
Don't know	0%

Q40. What do you estimate your yearly salary at your first full-time job will be?

(Verbatim Response)

Don't know

Q41. How easy do you think it will be to find a good job after completing your training? Do you think it will be:

	N=9	
Very easy		22%
Somewhat easy		67%
Not too easy		11%
Not at all easy		0%
Don't know		0%

Q42. If you cannot find a good job after completing your training, what do you think you will do?

N=9

NT O

Go back to school for more	
education	44%
Get job training in a particular	
skill or occupation	0%
Continue to look for a good job	
while working at a lesser job	33%
Move to an area where you think	
jobs are more plentiful	11%
Other	0%
Don't know	11%

QUESTIONS FOR ALL STUDENTS

Q43. Do you believe you will have greater career and economic opportunities than your parents did?

N = 881

Greater	79%
About the same	16%
Less	2%
Don't know	3%

Q44. I am going to read you a list of skills that people say they may need to perform their jobs well. For each one, please tell me how important you think these skills will be to you when you get a full-time job: very important, somewhat important, not too important, not at all important.

a. Being able to write, speak, and listen to others effectively

N=881

NI_QQ1

Very important	93%
Somewhat important	7%
Not too important	1%
Not at all important	0%
Don't know	0%

b. Having basic math and reading ability

	N=001
Very important	83%
Somewhat important	16%
Not too important	1%
Not at all important	0%
Don't know	0%

c. Being able to thing creatively, make decisions and solve problems N=881

Very important	82%
Somewhat important	18%
Not too important	0%
Not at all important	0%
Don't know	0%

d. Specific job/occupational skills N=881

Very important	61%
Somewhat important	37%
Not too important	2%
Not at all important	0%
Don't know	0%

e. Computer skills

	N=881	
Very important	48%	
Somewhat important	47%	
Not too important	5%	
Not at all important	0%	
Don't know	0%	

f. Being able to work well with others

	N=881	
Very important	85%	
Somewhat important	14%	
Not too important	1%	
Not at all important	0%	
Don't know	0%	

g. Having a good work ethic N=881

Very important	86%
Somewhat important	13%
Not too important	0%
Not at all important	0%
Don't know	0%

h. Being responsible at work

N=881

Very important	94%
Somewhat important	6%
Not too important	0%
Not at all important	0%
Don't know	0%

i. Being honest at work

N=881

Very important	86%
Somewhat important	13%
Not too important	1%
Not at all important	0%
Don't know	0%

Now I'm going to ask you some questions about your educational experiences. In this section I will ask you some questions about the classes you have taken in high school or are planning to take before you graduate.

Q45. Did any of the classes you took in high school require you to learn to use any of the following programs or tools?

a. Keyboarding/typing

	N=881
Yes	79%
No	21%
Don't Know	0%

b. Microsoft Word	N=881	Q48. Have you taken any Advanced Placement (AP) classes? If yes, in		Q52. I am going to read you a list of skills that may be important for	
Yes	84%	what subjects?		today's student's to lea	
No	16%	N=8	81	For each one, please to	
Don't Know	0%	Natural Sciences	24%	important you believe to today's students: ve	
		Math	15%	somewhat important,	
c. Microsoft Access		English	19%	tant, not at all importa	
	N=881	History/social sciences	25%	,	
Yes	41%	Foreign Languages	11%	a. Being able to write	
No	59%	I have not taken any AP courses	45%	listen to others effective	•
Don't Know	0%	My high school does not offer any	,		N=881
1 M: A E 1		AP courses (Go to Q46)	1%	Very important	92%
d. Microsoft Excel	N=881	Don't know	5%	Somewhat important	7%
			- , ,	Not too important	0%
Yes	66%	Q49. Do you intend to take a		Not at all important	0%
No	34%	classes before graduating from	n high	Don't know	0%
Don't Know	0%	school? If yes, which ones?			- 7.0
a HTMI maamamin	~	N=8	81	b. Having basic math	and reading
e. HTML programming	g N=881	Natural Sciences	16%	ability	
**		Math	12%		N=881
Yes	27%	English	13%	Very important	87%
No	73%	History/social sciences	11%	Somewhat important	13%
Don't Know	0%	Foreign Language	4%	Not too important	0%
f. Other advanced pro	orammino	I do not plan to taking any AP		Not at all important	0%
languages	8.4	courses before graduating	59%	Don't know	0%
	N=881	My high school does not offer any	,		
Yes	26%	AP courses	1%	c. Being able to thing	
No	74%	Don't know	10%	make decisions and so	_
Don't Know	0%	OFO D:1			N=881
Don't Know	0 /0	Q50. Did you participate in a		Very important	77%
g. How to use the Inte	ernet	internship program with an employer while in high school? N=881		Somewhat important	21%
	N=881			Not too important	1%
Yes	83%	Yes	9%	Not at all important	0%
No	17%	No (Go to Q48)	91%	Don't know	0%
Don't Know	0%	• •		1 6 '6 '1/	1 1 111
		Don't know (Go to Q48)	0%	d. Specific job/occupa	N=881
		Q51. How much do you think	k that		
Q46. Are there other	_	internship helped you in deciding		Very important	52%
technology classes that		about what to do after comple		Somewhat important	38%
like to have available a	t your high	high school? Did it help a lot	, some,	Not too important	9%
school? (Verbatim response)		a little, or not at all?	_	Not at all important	2%
(verbatiiii response)		N=7	9	Don't know	0%
Q47. Have you taken	any science	A lot	56%	. Commuton alvilla	
courses that require/inc	-	Some	22%	e. Computer skills	N=881
the lab?		A little	13%		
	N=881	Not at all	10%	Very important	54%
Yes	94%	Don't know	0%	Somewhat important	42%
No	6%			Not too important	4%
Don't know	0%			Not at all important	0%
	0,0			Don't know	0%

f. Working well with others		DEMOGRAPHIC QUESTIONS:		D6. How old are you		
	N=881	D1. What type of high school do you			N=881	
Very important	83%	attend?		16	23%	
Somewhat important	16%		N=881		17	50%
Not too important	1%	Public school (Go to QD2)	8	34%	18	25%
Not at all important	0%	Private school (Go to QD1)		6%	19	1%
Don't know	0%	Don't know (Go to QD2)	*	0%	Other	1%
g. Having a good work	c ethic N=881	D1a. If you attend a private school,		D7. Do you live with:	N=881	
		is it affiliated with any re			~ 1 1 1	
Very important	82%		N=137		Father and mother	78%
Somewhat important	16%	Yes	7	75%	Mother	17%
Not too important	2%	No	2	25%	Father	2%
Not at all important	0%	Don't know		0%	Relative or other guardian	2%
Don't know	0%				Don't know	1%
h. Being responsible		D2. What town in New	Jersey do)	D8. What does your (see above	
•	N=881	you live in?			response) do for a living	
Very important	90%	(Verbatim response)			(Verbatim response)	
Somewhat important	9%	D3. Do you currently ha	ave a par	t-	D0 D 1	
Not too important	2%	time job?			D9. Do you have access puter at home, at school	
Not at all important	0%		N=881		puter at nome, at senoor	N=881
Don't know	0%	Yes	4	16%	School	2%
		No	5	54%	Ноте	2 % 1%
i. Being honest	** 004	Don't know		0%	Both school and home	96%
	N=881				Neither	90%
Very important	81%	D4. How many hours pe		_	Don't know	0%
Somewhat important	17%	you normally work durin			Don t know	0 %
Not too important	2%	year?	ig the ser	1001	D10. Do you have acces	ss to the
Not at all important	1%	•	N=881		Internet at home, at scho	
Don't know	0%	0-5	4	13%		N=881
		5-10	1	0%	Home	2%
		10-20	2	24%	School	3%
		20-30	1	0%	Both home and school	94%
		More than 30		3%	Neither	0%
		Don't know		1%	Don't know	0%
		D5. Are you black, white, Hispanic, Asian, Native American or some-		D10. Record gender by observation: N=881		
		thing else?	or some		Male	46%
		o .	N=881		Female	54%
		Black	1	4%		
		White	5	59%		
		Hispanic		0%		
		Asian		9%		
		Native American		1%		
		Biracial		2%		
		Other		2%		
		Don't know		2%		
		-				