

Teen Views on Tech Careers

A RESEARCH SURVEY
CONDUCTED BY THE CREATING
IT FUTURES FOUNDATION

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The Philanthropic Arm of CompTIA





IT FUTURES LABS

What do low- to middle-income urban African American and Hispanic teens and parents think about information technology (IT) jobs, college and future careers? IT Futures Labs, a signature initiative of the Creating IT Futures Foundation, sought out the answers to that question.

In its research, three types of jobs in computer technology ranked in the top ten of teens' career interests, and teens believed that with hard work and/or innate talent, they could be successful in IT careers. This research will help parents and educators understand how to inform and motivate youth to choose a path toward well-paying tech careers.

IT Futures Labs researches, develops, tests and launches innovative non-profit programs tailored for the IT sector that help women, ethnic minorities and displaced or under-employed individuals secure sustainable careers in IT.

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Introduction

In its first survey on teen views of tech careers, the Creating IT Futures Foundation gained several insights into how a large segment of low- to middle-income urban African American and Hispanic teens, as well as parents, regard information technology (IT) jobs, college and future careers.

The surveyed teens were all B and C students in good standing in their junior or senior year of high school. The teens overwhelmingly indicated college was a high priority and that they wanted a career they love—one that also allowed them to help their parents financially. Three types of jobs in computer technology ranked in the top ten of career interests. The teens believed that with hard work and/or innate talent they could be successful in IT careers. In terms of advice on college and careers, teens reportedly look to parents 2-to-1 over any other source. The survey results should help parents, schools, nonprofit STEM organizations, businesses, and government agencies better understand how to inform and motivate youth to choose a path toward well-paying tech careers.



Motivation and Methodology

As part of its IT Futures Labs initiative, Creating IT Futures wanted to gain strategic insight on how young people think about their own futures and to what extent an IT career fits into those plans. Youths are often most comfortable with new technology and are theoretically very likely to be attracted to well-paying tech careers.

However, in 2014, the number of job listings nationally for IT jobs stood at nearly 600,000, a number that included approximately 135,000 ads for software developer jobs¹. The unemployment rate for computer occupations dipped to just 2.4 percent for December 2014². Meanwhile, the unemployment rate of youth ages 16 to 24 is more than twice the overall national average (14.3 percent³ compared to 6.2 percent⁴ as of July 2014) and the number of adults who live in economic insecurity has risen substantially since the Great Recession, from 37 percent to 45 percent⁵. Today's youth need jobs that lead to careers, and companies need tech workers. How can more teens be steered in the direction of well-paying and secure tech jobs for their adult careers?

Programs that work to help youths succeed typically target at-risk youth in danger of dropping out of high school (the lowest-achieving students), while STEM programs typically focus on enrolling the highest-achieving youth into various high-level science, robotics and math efforts. Often left out of the equation are the students in the middle—those whose grades may not identify them as standouts for high-profile STEM tracks (e.g., engineer, physician, mathematician) but who can still achieve success in the practical, hands-on world of information technology.

As a first step toward understanding tech career interest among this large subgroup of teens, the Creating IT Futures Foundation conducted qualitative, ethnographic research in 2013 among a limited number of Chicago area teens and parents. That ethnographic research helped inform the questions for a follow-up 2014 quantitative national survey of over 300 eleventh- and twelfth-graders and an equivalent number of adults who parent at least one eleventh- or twelfth-grader.

Subjects of the survey fell within the following demographics:

- **We focused on two populations under-represented in the IT field: African-Americans and Hispanics. Though the two ethnic groups together represent 27 percent of the working population, they only represent about 12 percent of the IT workforce.⁶**
- **In addition, the study centered on individuals most in need of the opportunities offered by well-paying tech careers—that is, students and parents from families in the lower half of annual household income (\$65,000 or less).**
- **The survey of teens included similar numbers of boys and girls, but parents were not targeted with a 50/50 gender mix in mind. None of the students had ever been expelled from school, and they all self-reported as earning mostly B's and/or C's.**
- **Finally, the *Survey of Teen Views on Tech Careers* polled youth and parents who live in urban areas across the U.S. as these are the places with the largest untapped talent pools as well as where the most IT jobs are likely to be available.**

Before supporting or launching programs that target this vast middle group of teenagers (some estimates put the B and C students as 70% of the student population), the Creating IT Futures Foundation wanted to know more about how the teens get their information about careers, how college fits into their career plans, and what drives their specific job-field interests. Additionally, we wanted to know whether parents facilitate career thinking and to what extent teens invite parents into their decision-making process. Finally, we wanted to discover where an IT career ranked in the students' list of options and why.

General questions of college, jobs, and careers were explored in both the qualitative and quantitative research. For the qualitative research, students and their parents were interviewed in their homes, in person and via Skype; for the online surveys, the parent and the student groups were recruited separately and were therefore unlikely to be related to one another.

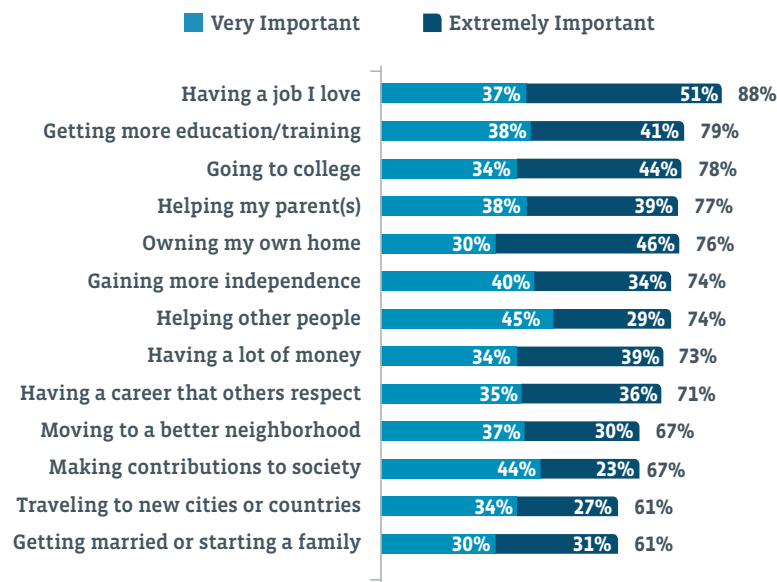
The survey mainly found similarities between the different demographic subgroups. In order to explore statistically significant differences, see the section “Diving Deeper” on page 14.

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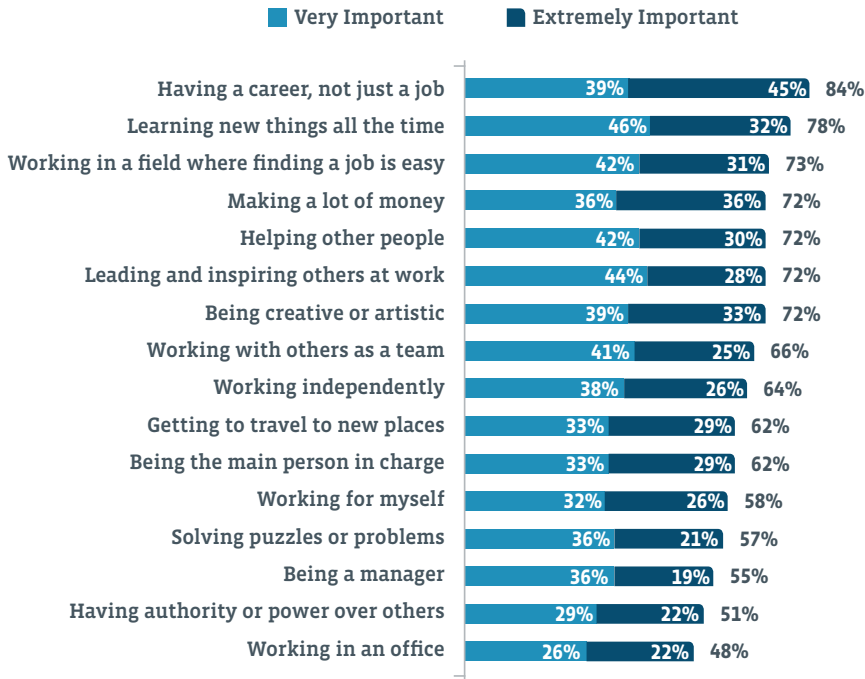
Number One Goal: “Having a Job I Love”

Teens want to feel connected to a career—not just punch a clock. “Having a job I love” was ranked number one by teens in terms of goals to accomplish over the next decade. Furthermore, it is interesting to learn what other qualities in a career are desirable to teens. Altruistic aspirations such as contributing money or housing to parents or “helping other people” tended to rank just as high as or even higher than, “having a lot of money,” “owning my own home,” or “moving into a better neighborhood.” It’s likely that motivational messaging targeted at urban minority teens have missed out on this altruism angle.



What features of careers stand out as most attractive to urban minority teens? Across the board, the teens clearly value jobs that lead to careers, as well as jobs that afford them the opportunity for continual learning. Making a lot of money and helping other people also rank high, as does landing in a career field in which finding a job is not too difficult. Although leading and inspiring others at work ranks as important, that didn’t mean the teens felt they needed to be in positions of authority. For example, being the CEO, being a manager, or having authority/power over others ranked relatively low on the desirability scale of our survey. Working in an office also landed near the bottom of desired features in a career. **The fact that many IT professionals are out in the field or work from home could be important messages to share.**

IMPORTANT ASPECTS OF FUTURE CAREER



The survey drilled further into specific careers and career categories, giving the teens 60 careers from which to choose their top three. Somewhat surprisingly, the computers/technology category was at the very top of the teens' interests, besting even such high-profile career categories as business & retail, law, music and sports. Furthermore, three of the top ten careers were computer-related (software programmer, computer technician and computer design engineer). Software programmer in particular won out over career paths that receive much more exposure in our media and culture, such as nurse/doctor, lawyer and architect.

TOP 10 CAREERS OF INTEREST

Business owner	18%	Computer Technician	11%
Software Programmer	17%	Military Job	11%
Nurse or Doctor	16%	Computer Design Engineer	11%
Civil Engineer	15%	Architect	7%
Lawyer	12%	Engineer	7%

Clearly, urban minority teens have a strong affinity for technology and a desire to work directly with technology in a career. That said, what isn't clear is how much young people are aware of their top career interests in terms of pathways to success and barriers they would have to overcome to reach their goals. For example, do the respondents really know what a civil engineer does or is there something appealing about the title or perception of what that job might entail? The high placement of "business owner" as an interest may be partly the result of high-profile entertainers and professional athletes who have parlayed their original careers (and dollars) into becoming business moguls.

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Learning the Way Forward

How do youth currently get to know more about a career of interest? According to the teens, personal research on the Internet is the most popular single way (43 percent), but they also acquire career info in their high school classrooms, through career fairs, and through television. Interestingly, nearly 80 percent of youth report having at least one role model in their career(s) of interest—most likely someone they know (57 percent), but potentially also a famous person (22 percent) or a character from TV shows or movies (11 percent). What’s not clear, though, is how accurate or readily available that career information is.

How the teens matched their self-perceived skills to careers is another area the survey explored. When the teens were asked to rank the skills and subjects they thought they were good at, appearing at the top were customer-service skills—for example, being friendly, being creative, being a good listener, accepting responsibility, and listening to others. About a third considered themselves good at math, thinking logically, working with technology, and solving problems. Also, a quarter of the teens considered themselves strong in computer science, while a fifth believed themselves to be strong in science in general. This provided hope that a sizable number of urban minority students who earn passing, but not outstanding, grades could see careers in tech as open to them.

SELF-IDENTIFIED STRONG SKILLS / SCHOOL SUBJECTS

Being friendly	54%	Writing	24%
Being creative	51%	Organizing things/information	24%
Being a good listener	47%	Developing & sticking to goals	23%
Accepting responsibility	40%	Counseling others	23%
Listening to others	39%	History and social sciences	23%
Art	34%	Meeting deadlines	21%
Math	34%	Leading others	20%
Working with my hands	33%	Science	20%
Thinking logically	32%	Drama	19%
Music	31%	Researching information	18%
Working with technology	31%	Reading & analyzing literature	16%
Solving problems	30%	Planning events	15%
Managing money	29%	Editing others’ writing	15%
Developing relationships	28%	Foreign languages	14%
Computer science	27%	Selling ideas and products	14%
Motivating others	24%	Public speaking	13%

“To Know IT Is to Like IT”

The information technology field is typically referred to by its acronym, IT. This may present an awareness problem for urban minority teens and their parents. As a matter of fact, only 21 percent of teens and 30 percent of parents surveyed felt they definitely knew what IT stood for, although a majority of teens and adults thought they “might” know or were “pretty sure” what it meant.

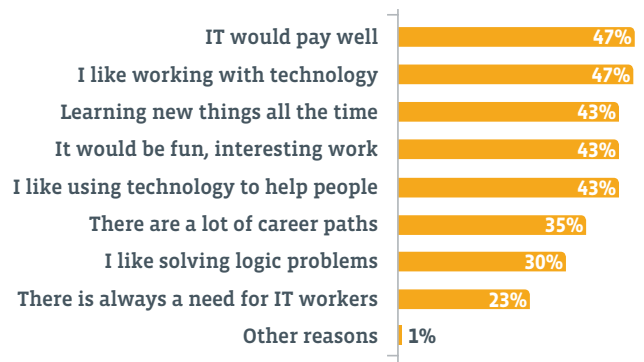
Once it was explained to each group that IT stands for information technology, a significant proportion of each group recognized people in their lives or in popular media who work in the field. It turns out that IT benefits from a number of positive perceptions. A lot of teens and parents viewed IT careers as paying well, offering a way to help people, while providing fun and interesting work. A smaller number held negative attitudes of IT careers, such as feeling that a job in IT would mean working alone in front of a computer all day, be difficult and complicated, be too competitive, be “just for geeks”, or be boring.

When the types of work that fall under IT were described in more detail, there was a huge jump in enthusiasm, with 70 percent of the teens denoting at least some interest in IT. Specific IT jobs drawing the most interest were writing software (83 percent), computer build-install-repair (78 percent), and technology consulting (78 percent).

Because the IT function is present in virtually all companies in every industry, the survey asked if the possibility of obtaining an IT job within another chosen field would make the teen more eager to work in IT. Four out of five teens said they would be somewhat or a lot more interested in IT if the job aligned with another area of focus.

Some of the top draws to the IT field for those who specified an interest were good pay, enjoyment of working with technology, the opportunity to constantly learn new things, and a goal of using technology to help people. More than a fifth of the surveyed teens also selected reasons such as having a career that allows them to grow, getting to solve logic problems, and high demand for workers in the IT field. Refreshingly, most teens and almost all parents were unaffected by several of the popular misconceptions surrounding IT, such as the myth that most IT jobs are being offshored.

REASONS DRIVING CAREER INTERESTS IN IT



The 30 percent who specified a lack of interest in the IT field gave several reasons why. **Unfortunately, most teens and more than a third of parents mistakenly indicated that IT jobs require a four-year degree or more; nearly all the teens and parents (again, inaccurately) believed that being successful at an IT job necessarily required doing really well in math and science courses.** Lack of knowledge about IT jobs, lack of math and science talent, and lack of a personality fit were the top reasons given by the teens who did not feel drawn to an IT career. Those reasons were followed by distaste for desk jobs and the perception that IT jobs were too boring or too difficult.

Teens Look to Parents for Career Guidance

Do teens look most to teachers and school administrators, to parents, or to peers for college and career guidance? According to our survey, teens clearly rely on parents the most for advice on what to do after high school, the teen's strengths and interests, and different types of jobs and careers. In fact, teens in the survey identified parents as their most significant influencers by a factor of 2-to-1 or greater compared to teachers, guidance counselors, peers, and coaches.

WHO DO YOU RELY ON MOST TO TALK ABOUT...

	...what you will do after high school?	...what you might be good at and enjoy doing?	...different types of jobs and careers?
A parent/guardian	77%	67%	68%
A teacher at school	32%	34%	29%
A friend	34%	33%	27%
Another family member	27%	26%	19%
School counselor/staff	25%	21%	25%
A coach	19%	15%	10%
Somebody else	1%	1%	1%
None of the above	2%	3%	2%

Parents seem to support teens in their efforts. Overwhelmingly, parents in the survey said they want their child to have a more successful job or career than they did, to make more money than they did, and to have the ability to do things the parents didn't get a chance to do. The question becomes: Do parents have enough information and knowledge to be good career guides for their children?

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Caveat: Communication Breakdown

For all the importance that teens place on hearing their parents' career advice, there exist a couple of important areas in which parents and children are clearly not communicating:

- **Parents aren't sharing their expectations for high-school graduation—or kids just aren't hearing the message.** More than 25 percent of the teens said their parents would feel it was “OK” if they dropped out of high school (especially if they got a decent job instead), but in actuality, only 4 percent of parents thought it was okay if their child didn't finish high school.
- **In addition, parents are much more likely than teens to say that they and their child talk “a lot” about jobs/careers and future plans.** Even if conversations about college and careers may be happening, according to teens those conversations aren't happening enough.

College Aspirations Come Up Against Reality

According to Pew Research Center, just over half of low-income high school graduates attend a 2- or 4-year college or university⁷. The *Survey of Teen Views on Tech Careers* revealed that the vast majority of low- to middle-income high school students desire and/or intend to do so. Nearly all report that going to college would make them feel proud, including those who would be the first generation to attend college. Parents are somewhat more hopeful than teens that their student will attend a 4-year institution (74 percent of parents versus 57 percent of teens). At the same time, more than half of parents agree that cost is a barrier to their teen attending college. As reported by the *Washington Post*, of students in the bottom quarter of income who were born in the 1980s, only 29 percent enrolled in college by age 19. Of those, only 32 percent graduated by age 25 with a bachelor's degree.⁸

Strictly speaking, college is not a requirement for an IT career, as the IT field is more hospitable to non-institutional learning than some other fields. Though many companies continue to list college degrees in their employment want-ads as non-negotiables, other hiring organizations focus entirely on acquired skills and relevant experience. In fact, most youth (and a third of parents) mistakenly think that a college degree is a requirement for success in the tech field. So it is no surprise that college specifically and general post-high-school education and training rank very high (3rd and 2nd respectively) in terms of what teens want to obtain and accomplish over the next five to ten years.

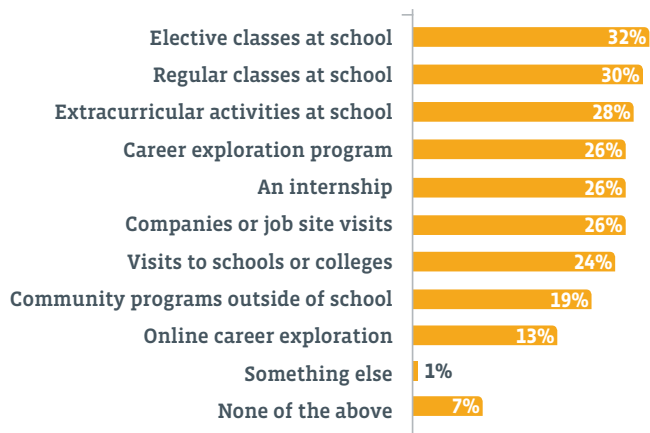
Countering Feelings of Discouragement

The survey of parents made it clear that they would overwhelmingly encourage their child toward a career in IT, and virtually none said they would discourage it. However, half of teens reported being told by a parent and/or a teacher that they are not good at math, science, engineering, or information technology. Despite feeling discouraged on some fronts, about a third of the teens felt they would be naturals at IT work, and—including those who believe they could achieve more through hard work than innate talent—the vast majority thought they could succeed in

the field. Parents, according to the survey, feel the same way. In fact, a large portion of teens reported being *encouraged* by a parent (41 percent) or by a teacher (39 percent).

Students who knew about the IT field reported learning about IT in a number of ways, including elective classes, regular classes, extracurricular activities, and career-exploration programs. Some had completed an internship that gave them some exposure to IT or had visited at least one company or job site where they saw IT professionals at work.

PLACES WHERE TEENS HAVE LEARNED ABOUT IT

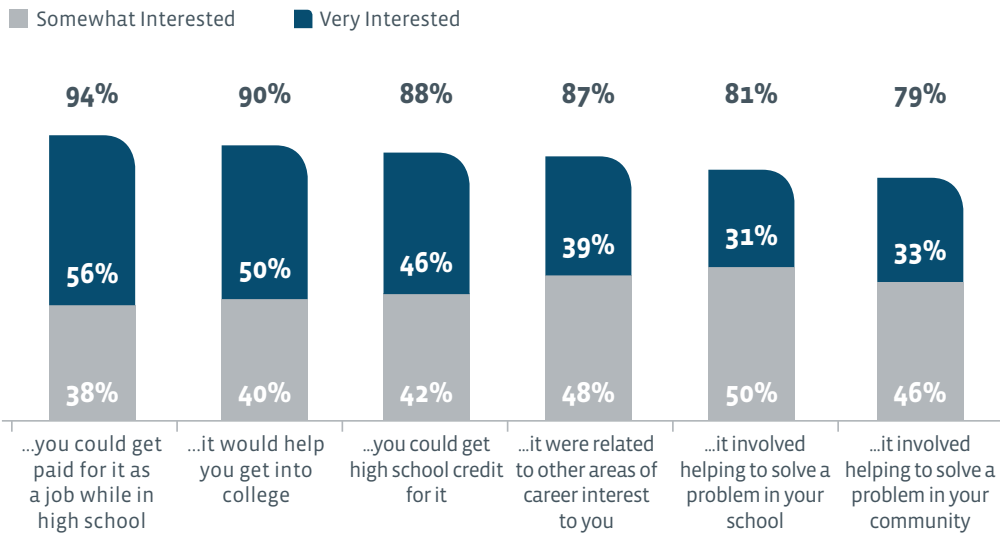


About half of teens—which certainly included a number of those who expressed low interest in IT to begin with—reported that they would be very interested in developing IT skills if they got paid, if they were awarded course credits, or if learning IT helped them get into college. And, almost all teens expressed at least some interest in these options.

One of the concerns of STEM proponents is that not enough schools offer the right courses. A majority of the surveyed teens (62 percent) report access to IT or computer science classes at school, though that figure skews well above the 10 percent of schools that are thought to have such courses nationally.⁹ About 39 percent of students report taking a class where they learned about IT (a full 30 percent specifically in either computer science or IT), while 26 percent report being involved in an after-school activity where they learned about IT. Of those who became involved in IT-related courses or activities, nearly two-thirds report becoming more interested in IT as a result.

Though courses increase interest, urban minority teens report greater preference for other methods of learning about IT. Job shadowing for up to a week, online career exploration, or working an internship are the students' preferred ways of learning about the field. In addition, there are a few extrinsic factors that could motivate young people to develop IT skills. About half of teens—which certainly included a number of those who expressed low interest in IT to begin with—reported that they would be very interested in developing IT skills if they got paid, if they were awarded course credits, or if learning IT helped them get into college. And, almost all teens expressed at least some interest in these options.

WOULD YOU BE INTERESTED IN LEARNING ABOUT IT PROGRAMS IF...



Diving Deeper

Up to this point we've been talking about overall trends for all the groups surveyed. Diving deeper into the demographics, it's possible to find a few (small, but still statistically significant) differences between some of the surveyed sub-groups:

- **African-American youth** were more likely than their Hispanic counterparts to say that their parents wouldn't mind if they didn't go to college, to rely on family members to talk about jobs and careers, to have an interest in science careers, and to see IT as a field that pays well. In addition, they were more likely to have an interest in business and retail careers, including owning a business.
- **African-American boys** surveyed were more likely than other groups to know what IT is; to value earning money; to look toward the military after high school; to rely on teachers to help them explore academic talents; and to cite regular classes as having sparked their interest in IT.
- Compared to the other groups, **African-American girls** were more likely to cite friends and community programs outside of school as helping them explore career interests, including IT. In addition, this group was more likely to value being able to work independently in their future job or career.
- **Hispanic teens** were more likely than their African-American counterparts to learn about jobs through TV or movies; to see IT as fun and interesting work; and to cite visits to schools/colleges as having sparked their interest in IT.
- Of all the groups, **Hispanic boys** reported the highest interest in IT careers and were more likely to say that IT classes sparked their IT interest. This group also reported stronger than average interest in law/military careers and highly valued being a

manager or having power and authority. More so than the other groups, they reported that getting married and having a family is important to them.

- **Hispanic girls** stood out in a number of ways, including wanting to have a job that they love; wanting to help parents with money or housing; reporting that their parents insist they finish high school; and feeling that parents are less involved in giving feedback on their academic strengths and what colleges or programs they should attend. Hispanic girls are as a rule less interested in IT careers than the other groups, being more likely to cite poor personality fit. They were more likely than the other groups to want to learn about careers through mentors, internships, or site visits.

Looking strictly at gender, the **boys** were more likely than girls to have an interest in careers that involve building and fixing things (engineers, architects, mechanics, carpenters, and electricians). Meanwhile, **girls** were more likely to cite the importance of attending higher education; to express an interest in traveling to new cities or countries; to have an interest in helping professions (nurse, doctor, teacher, childcare worker, social worker) and in music, art, or writing. They were also more likely to learn about specific jobs or what they might be good at through their friends or through personal Internet research; view IT as sitting alone in front of a computer all day; and more likely to say that they would struggle with IT or to state that they are just not interested in computers or technology.

Note that the differences between the groups were relatively small and don't negate the overall direction of the trends. For example, just because the girls surveyed were more likely than the boys to view IT as sitting alone in front of a computer all day isn't meant to imply that most of the girls felt this way.

Next Steps: Where Do We Go From Here?

We think there are a number of takeaways from the *Survey of Teen Views on Tech Careers* that are important to note:

- 1. Urban minority youth are attracted to IT careers, believe they can be successful, and have parents who believe they can be successful. For organizations that want to interest more youth in IT careers—especially youth most in need of opportunity—this should come as encouraging news.**
- 2. IT careers rank relatively high in attractiveness compared to other fields.**
- 3. Myths about the necessity of 4-year degrees and proficiency in high-level math and science still exist. Those misconceptions need to continue to be combatted by organizations that promote tech careers to the average student.**

In addition, we encourage various groups to take positive steps in promoting IT and other upwardly-mobile career tracks to urban minority teens.

PARENTS:

Recognize and capitalize on influence.

Even if parents are already talking about college and careers with their teen, they should not assume that messages about college and career are getting through. Parents should work to educate themselves more about college and career options and intentionally set aside more time than they are doing now to discuss these topics with their high-school-age child.

Educate yourselves about IT careers. Teens clearly look to their parents more so than other adults to gather information about careers. If your student indicates that a tech career is of interest, educate yourself so you can point

your student in the right direction. Learn more about IT careers at CompTIA.org/Roadmap.

Disavow yourself of career myths. A four-year degree, while potentially beneficial in the long run, is not the only way to get started in an IT career. Neither does a student have to be a top achiever in math and science to be successful. Many adults with successful IT careers self-identify as one-time average students who managed to turn their computer interest into a livelihood. Explore the IT training options at 2-year-degree institutions, non-profit training programs (such as IT-Ready), as well as on-the-job training opportunities with local employers. Become familiar with IT certifications offered by CompTIA, Cisco, Microsoft, and other certifying bodies. Certifications assure employers that a candidate has attained a particular skill level.

NONPROFIT PROGRAMS, SCHOOLS, AND CORPORATIONS:

Market tech careers differently. Promoting tech as a way to make a high salary or to attain a high position of authority may not be the right messages to lead with. Students also want to make an impact on their families and the greater world. Leverage their sense of responsibility and altruism in addition to their material goals.

Develop and promote hands-on tech learning programs. Programs that help a young person learn about IT careers and that compensate the teen in some way could be the most promising for bringing more urban minority youth into the field. Focus on hands-on approaches that get students learning about tech by doing the work of IT. Promote programs that don't require a college degree to get a foothold in a career. Teens clearly like job shadowing and "real-world" approaches to learning about tech careers.

Help the primary influencers of teens to provide career guidance. Our survey says it loud and clear: Parents are teens' most trusted source for college and career guidance. Emphasize to parents that they have permission from their teens to talk about college and careers more often than they are already doing. Find ways to put relevant information in the hands of parents, so they can give informed advice.

Clarify what IT means. Information technology is attractive as a career path—once that path is recognized. First, teens and parents need help picturing IT in their minds. Only then can they have a visible path to follow.

Leverage the Internet to inform about tech careers. The top place for urban minority youth to obtain information about careers is the Web, including YouTube. More good career resources (especially videos) need to be deployed to catch the attention of these teens and their parents.

Emphasize that entrepreneurs often started out as technologists. Teens who indicated “business owner” as a top career interest should be aware of the high number

of technologists who go on to start their own businesses in everything from tech service to cybersecurity to software design and app development.

Put math and science in their proper perspective, depending on the student. A future mathematician would find AP Calculus in high school indispensable, but it's rare that a network administrator, for example, would need high-level math to pass a crucial certification exam. Schools should take this wide variety of tech careers into account and not discourage a student from a technologist career pathway just because he or she isn't taking the most advanced math and science courses.

As a social service charity, the Creating IT Futures Foundation strives to be proactive in drawing more young people from lower income communities into the IT career pipeline. Demand for technology workers continues to grow as technology becomes more and more central to organizational sales and operations. It's important that we leave no stone unturned in finding the best ways to inform and motivate young people to give IT a try.



Photos in this report courtesy of Chicago Tech Academy, www.chitech.org

About the Creating IT Futures Foundation

The Creating IT Futures Foundation is a 501(c)(3) charity with the mission of helping populations under-represented in the information technology industry and individuals who are lacking in opportunity to prepare for, secure, and be successful in IT careers. Learn more at CreatingITFutures.org

ENDNOTES:

¹Burning Glass Technologies Labor Insights.

²Bureau of Labor Statistics, Current Population Survey.

³“Employment and Unemployment Among Youth Summary.” Bureau of Labor Statistics. U.S. Department of Labor. On the Internet at: <http://www.bls.gov/news.release/youth.nro.htm> (visited 5 Jan 2015).

⁴“Labor Force Statistics from the Current Population Survey.” Bureau of Labor Statistics. U.S. Department of Labor. On the Internet at: <http://data.bls.gov/timeseries/LNS14000000> (visited on 5 Jan 2015).

⁵“Living Below the Line: Economic Insecurity and America’s Families: 2013.” A Project of Wider Opportunities for Women’s Family Economic Security Program. On the Internet at: <http://www.wowonline.org/wp-content/uploads/2013/09/Living-Below-the-Line-Economic-Insecurity-and-Americas-Families-Fall-2013.pdf> (visited 5 Jan 2015).

⁶Swift, Mike. “Blacks, Latinos and Women Lose Ground at Silicon Valley Tech Companies.” San Jose Mercury News, 13 Feb 2010. On the Internet at http://www.mercurynews.com/ci_14383730 (visited on 8 Jan 2015).

⁷Desilver, Drew. “College enrollment among low-income students still trails richer groups.” Pew Research Center, 15 Jan 2014. On the Internet at <http://www.pewresearch.org/fact-tank/2014/01/15/college-enrollment-among-low-income-students-still-trails-richer-groups/> (visited on 12 Jan 2015).

⁸“Why poor kids don’t stay in college.” Washington Post, 20 Oct 2014. On the Internet at <http://www.washingtonpost.com/news/storyline/wp/2014/10/20/why-poor-kids-dont-stay-in-college/> (visited on 23 Jan 2015).

⁹“A Push To Boost Computer Science Learning, Even At An Early Age” NPR, February 17, 2014. On the Internet at <http://www.npr.org/blogs/alltechconsidered/2014/02/17/271151462/a-push-to-boost-computer-science-learning-even-at-an-early-age>.

Raw Data on How Teens Answered the Survey Questions:

<http://www.creatingitfutures.org/docs/default-source/PDFs/citff-survey-of-teens---2014-03-13.pdf?sfvrsn=2>

Raw Data on How California Teens Answered the Survey Questions:

<http://www.creatingitfutures.org/docs/default-source/pdfs/citffsurveyofteenscaliforniabreakouts.pdf?sfvrsn=2>

Raw Data on How Parents of Teens Answered the Survey Questions:

<http://www.creatingitfutures.org/docs/default-source/PDFs/citff-survey-of-parents---2014-03-14.pdf?sfvrsn=2>

Additional Graphs from the Study on Teen Views on Tech Careers:

<http://www.creatingitfutures.org/docs/default-source/pdfs/teentechcareerpptextradata.pdf?sfvrsn=2>



Creating IT Futures Foundation
The Philanthropic Arm of CompTIA
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