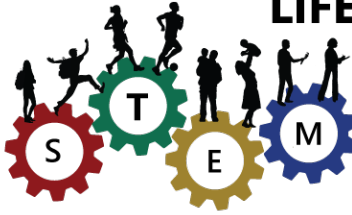


# PathTech

LIFE



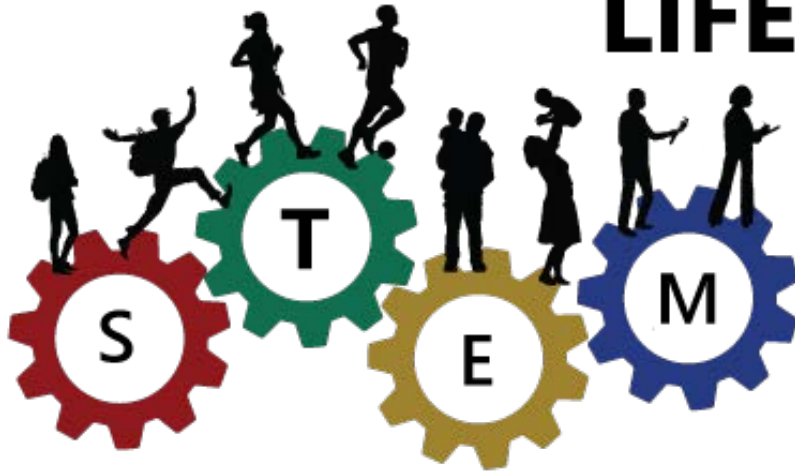
Understanding **pathways** in advanced **technologies**.

Final Report  
Attachment 2

Annual Findings Reports

**Annual Findings Reports:** Year 2 (based on Round 1 Survey)  
Year 2 Qualitative Findings Report  
Year 3 (preliminary analyses)  
Final Report with College Level Charts

# PathTech LIFE



Understanding **pathways** in advanced **technologies**.

## FINDINGS REPORT 2017



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# PROJECT OVERVIEW

- National Science Foundation (NSF) funded Advanced Technological Education (ATE) Targeted Research in Technician Education
- Partnership between University of South Florida, Florida Advanced Technological Education Center (FLATE) at Hillsborough Community College and national ATE Center Partners
- National survey of community college students in advanced technology fields in collaboration with a national network of colleges.
- PathTech LIFE seeks to understand how learning, interests, family, and employment (LIFE) experiences of two-year college students impact their decisions to enroll, return for further coursework, and/or pursue a certificate or degree.

## BACKGROUND – PathTech Tampa Bay

- Successful Academic and Employment Pathways in Advanced Technologies (NSF #1104214)
- \$1.2 million over 4 years (2011-2015)
- Examination of educational and employment pathways through interviews and observation in local high schools, community colleges, and industry

# TIMELINE

|                                      |  |
|--------------------------------------|--|
| <b>September 2015 – January 2016</b> | Drafted initial survey   |
| <b>February – April 2016</b>         | Received input from panel of experts made up of two people from each ATE Center using Delphi technique (three iterative rounds)                                  |
| <b>April 2016</b>                    | Completed survey revisions<br>Completed IRB modification   |
| <b>April – May 2016</b>              | Distributed Wave 1 pilot survey to students at six colleges (97 respondents)   |
| <b>June – August 2016</b>            | Analyzed data<br>Revised survey based on findings  |
| <b>September 2016</b>                | Conducted one-on-one interviews with four students while taking survey   |
| <b>October 2016</b>                  | Completed survey revisions<br>Completed IRB modification   |
| <b>November – December 2016</b>      | Distributed Wave 2 pilot survey to students at 18 colleges (147 respondents)   |
| <b>January – March 2017</b>          | Shortened survey from 25 to 15 minutes<br>Revised distribution plan to include direct communication with colleges<br>Completed IRB modification                  |
| <b>April 2017</b>                    | Distributed Wave 1 national survey to students at 26 colleges (534 respondents)  |
| <b>May – August 2017</b>             | Analyze Wave 1 national data, prepare reports, publications and presentations  |
| <b>September 2017 – August 2018</b>  | Distribute Wave 2 (Fall 2017) and Wave 3 (Spring 2018, tentative) national surveys<br>Conduct ongoing analyses, prepare reports, publications, and presentations |

## SURVEY TOPICS

- Academic Background
- College Experiences
- Employment Background
- Employment Status
- Motivation for Enrollment
- Program Evaluation
- Academic Goals
- Career Goals
- Demographics

## RECRUITING

- Recruited colleges through ATE Centers
- Offered colleges \$250 + findings report for their college if they delivered a 70% response rate
- All student respondents received \$25
- Survey took 15 minutes

# SURVEY INFORMATION

## SURVEY LOGISTICS

**Opened:** April 3, 2017

**Closed:** May 2, 2017

**Send to:** 26 Colleges

**Total Respondents:** 528 students

## SAMPLE SIZE

**387** students

**14** colleges

Total survey responses included 528 students at 26 institutions. The representative sample of 387 is based on students colleges that had a response rate of 50% or higher.

## PROGRAM SELECTION

Programs who participated as identified by students\*:



ENGINEERING  
TECHNOLOGY  
(58%)



ENERGY AND  
ENVIRONMENTAL  
TECHNOLOGY (28%)



ADVANCED  
MANUFACTURING  
(14%)



MICRO AND NANO  
TECHNOLOGY  
(2%)

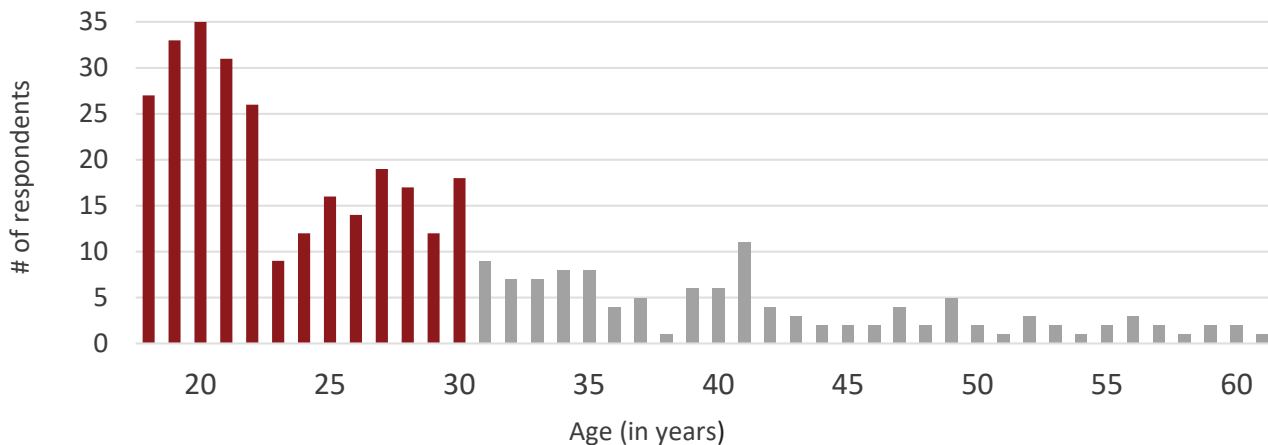


NONE OF  
THE ABOVE  
(13%)

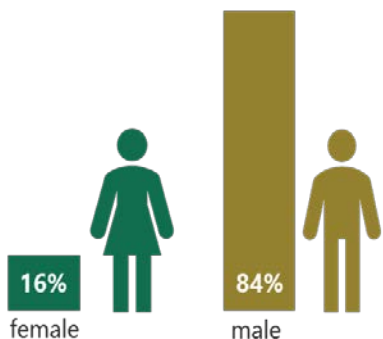
\*Students selected all that apply therefore percentages add up to more than 100%

# DEMOGRAPHICS

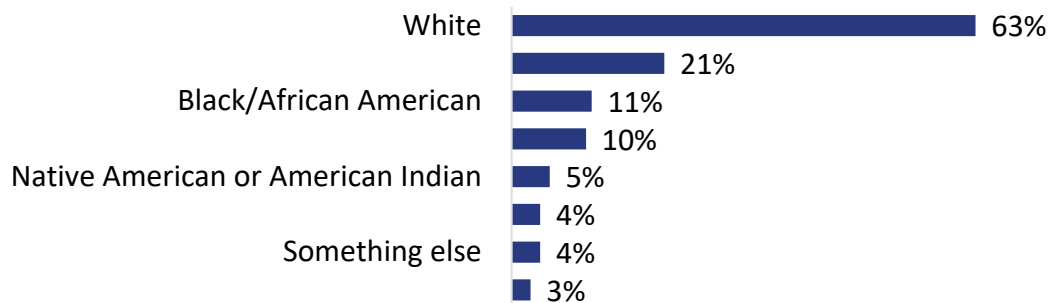
THE MAJORITY OF THE 387 RESPONDENTS WERE BETWEEN THE **AGES OF 18-30**.



**84%** OF THE 385 RESPONDENTS WERE **MALE**.



243 (63%) OF THE 387 RESPONDENTS INDICATED THAT THEY WERE WHITE.\*



\*Students selected all that apply therefore percentages add up to more than 100%

# ENROLLMENT/EMPLOYMENT/JOB STATUS

More full-time students are employed part-time, and more part-time students are employed full-time. Only **34% of full-time students** have jobs related to their field, compared to **48% of part-time students**.

|                        |                              | Full-Time Student | Part-Time Student |
|------------------------|------------------------------|-------------------|-------------------|
| Employment Status      | Full-Time Employed (>35 hr.) | 23%               | 28%               |
|                        | Part-Time Employed (<35 hr.) | 39%               | 36%               |
|                        | Not Employed                 | 34%               | 30%               |
| Job related to program | Yes                          | <b>34%</b>        | <b>48%</b>        |
|                        | No                           | 66%               | 52%               |

\*Table does not include seasonal workers, or military.

n=387



# MOTIVATION FOR ENROLLING

**Q: WHICH FACTOR WOULD YOU SAY IS THE MOST IMPORTANT REASON WHY YOU CHOSE TO ENROLL THIS SEMESTER?**

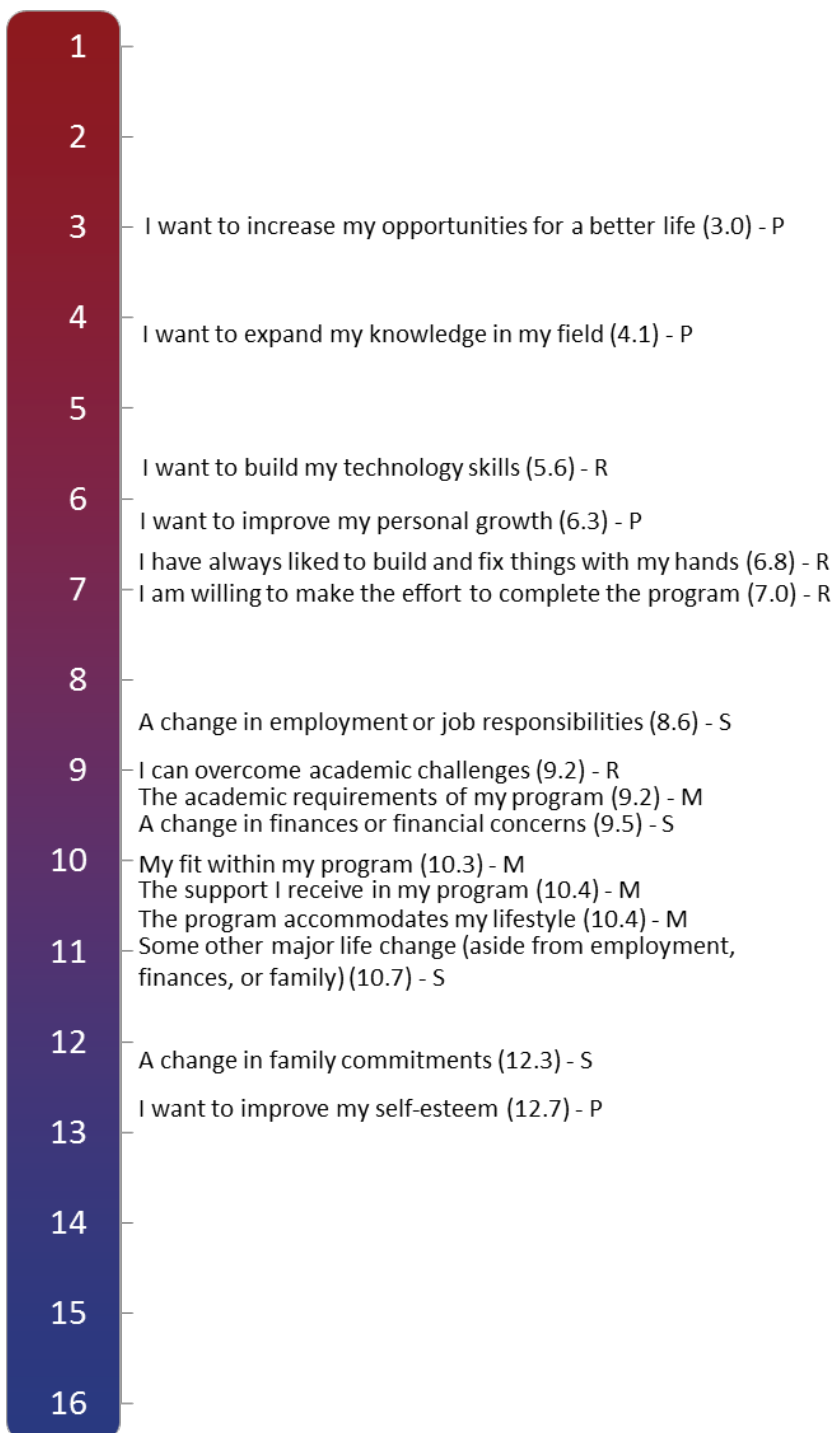
## **PRISM Decision Model for Adult Enrollment** (Stein & Wanstreet, 2006):

**Pathway to a Better Life** - adults' assessments of the extent to which their own cognitive and economic conditions might be enhanced as a result of participation in a higher education program.

**Reflective Learner** - how students attempt to evaluate their own academic abilities and academic readiness to pursue a degree.

**Synchronizing Learning, Earning, and Living** - emphasis on their particular life stage as well as their abilities to balance learning, earning, and living as critical determinants in their decisions to pursue enrollment in higher education.

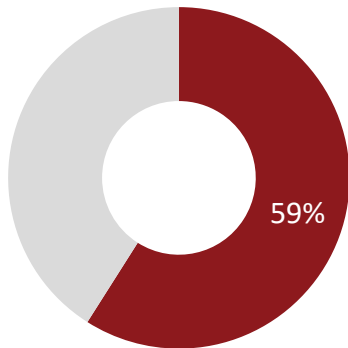
**Match with an Academic Life** - importance of adults seeking a fit with the academic program's curriculum, policies, requirements, support, and accommodation with adult learners.



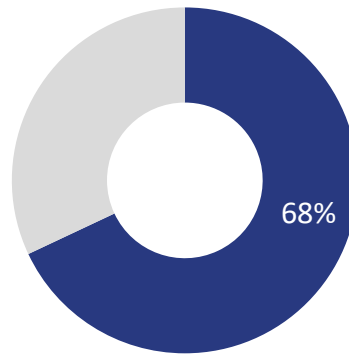
# EMPLOYMENT STATUS AND GPA

Among students with a job related to their field, a higher percentage of students with **part-time jobs (68%)** have GPAs 3.5 and above compared to those students who have **full-time jobs (59%)** related to their field.

Full-time Job



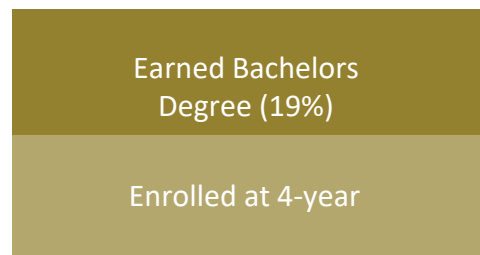
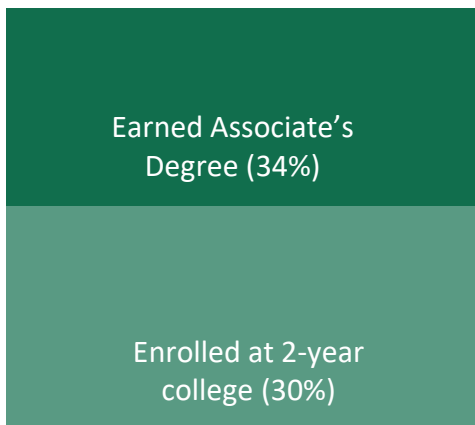
Part-time Job



Highlighted includes students with GPAs 3.5 and above.

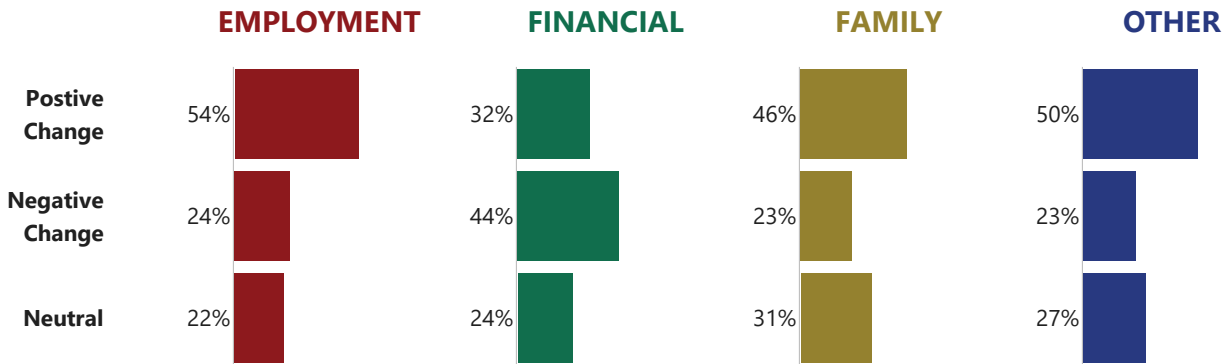
# EDUCATIONAL BACKGROUND

Prior to beginning the program, 51% of students had not enrolled in a 2-year or 4-year institution. More students had previously enrolled at a **2-year college (34%)** compared to those who enrolled in at a **4-year college (19%)**. Five percent of students had enrolled in both. Among the 113 students who had enrolled in a 2-year college, **39% had earned an associate degree**. Among the 73 students who had enrolled in a 4-year university, **half earned a bachelors degree**. Six students had earned an associate's and bachelors.



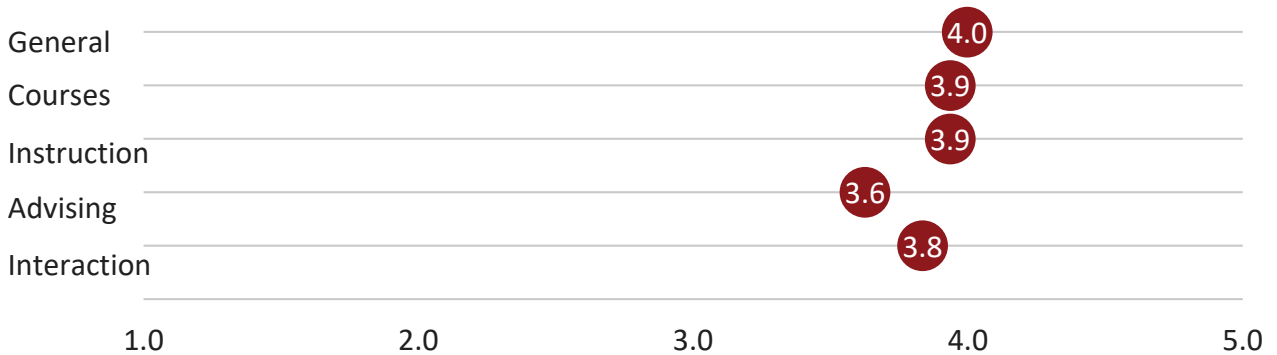
# LIFE CHANGES

The majority of students experienced a **positive change** on **employment** and **other major life events** in the 12 months before enrolling in the program. Fewer than 25% of students experienced a negative change in **employment**, **family**, and **other major life events**. Though, **44% of students** reported experiencing a **negative change** in their **financial situation** before enrolling.



# SATISFACTION & PROGRAM ACCOMODATIONS

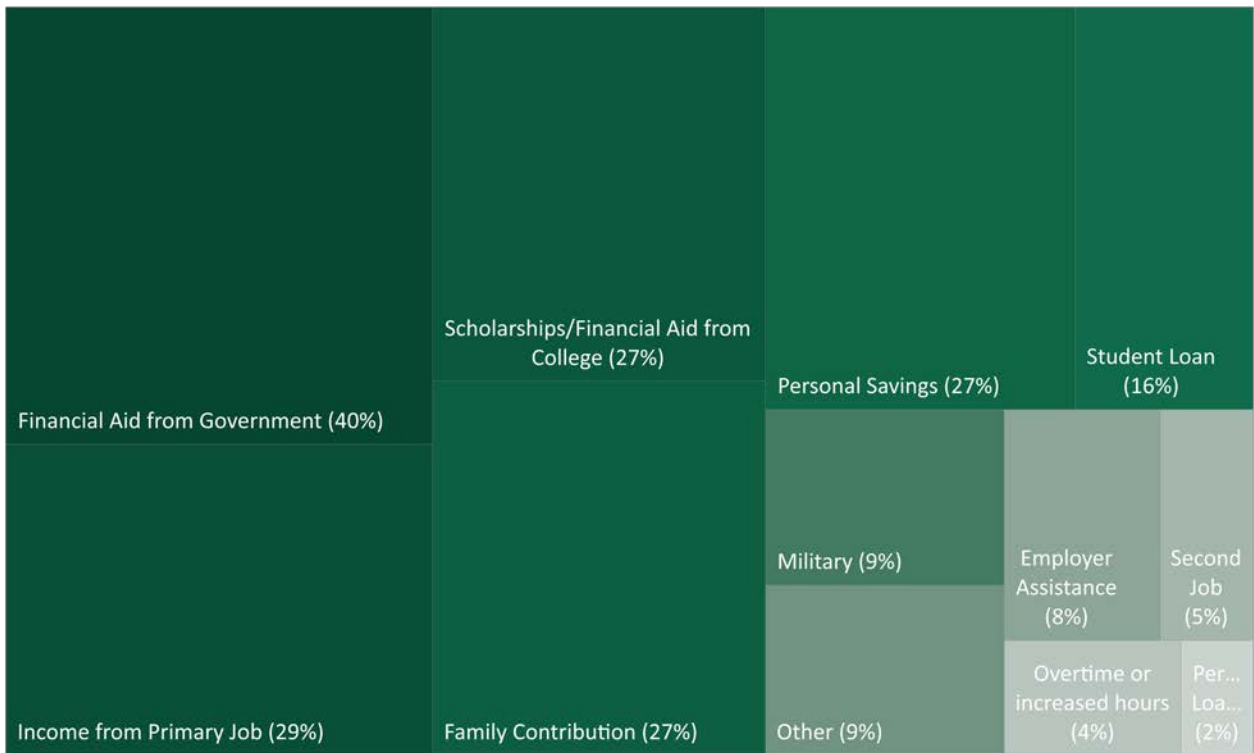
Students were very satisfied with their programs. Overall the average for all categories was 3.84 out of 5. Advising was scored the lowest at 3.6 and general received the highest satisfaction at 4.0 out of 5.



Over half of the students reported that the program accommodated their work schedule and lifestyle choices very or extremely well. Only 3% indicated that the program was not accommodating in these areas.



# HOW STUDENTS PAY FOR COLLEGE



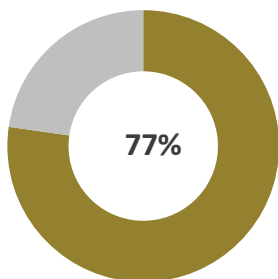
Percentages represent average response, not total count.

n=387

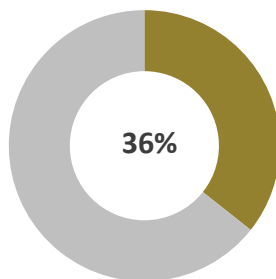
# TARGET CREDENTIALS

Most students were planning to obtain a **associate's degree**. Only 12% were aiming to get **continuing credit** or **other** credentials.

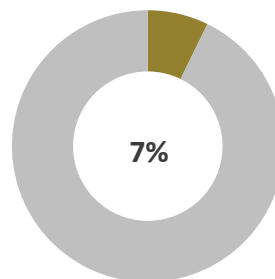
Associate's Degree



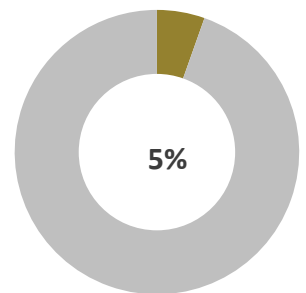
Certificate



Continuing Credit

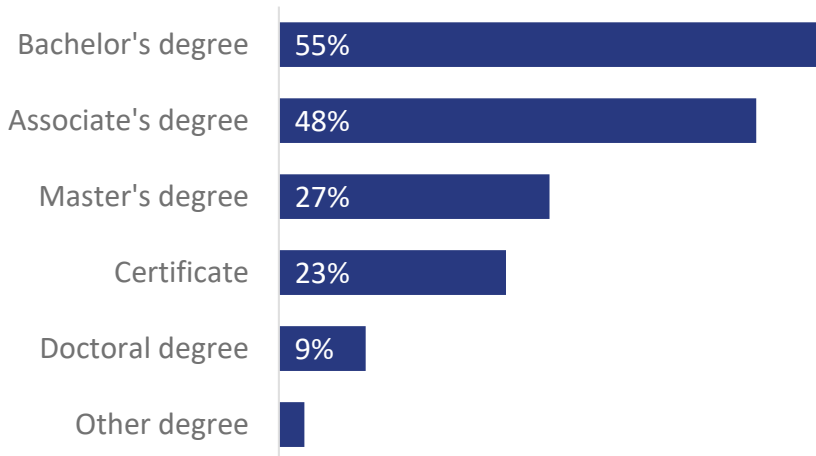


Other



# LONG-TERM GOALS

55% of students reported that their goal was to obtain a bachelor's degree. 48% planned to earn an associate's degree. Nine percent of students indicated their goal was to get a doctoral degree.



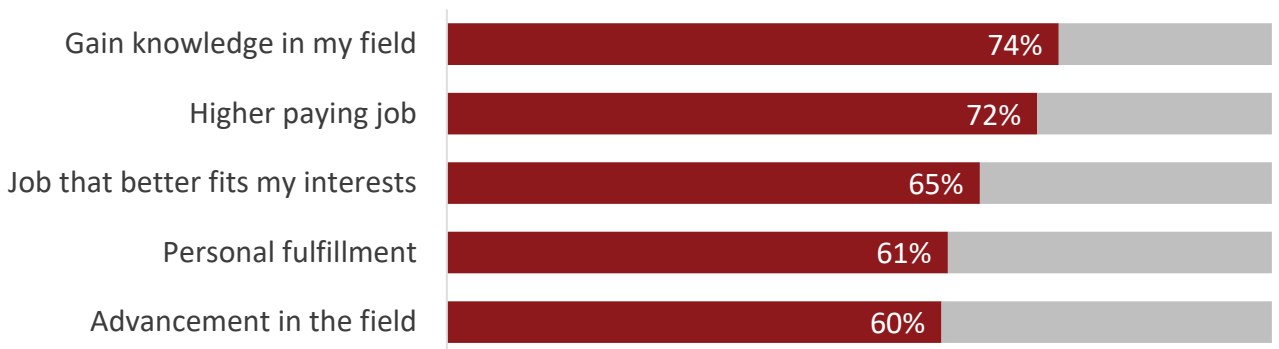
# CAREER COMMITMENT AND CONTRIBUTION TO FUTURE

Most students are very committed to pursuing a career related to what they are studying in their ATE program.



On a scale of 1-5, 1 being the least committed and 5 being the most.

74% of students indicated that gaining knowledge in their field was the biggest contribution the program could have on their career.



Students ranked their top five selections, the five items above were the top ranking among students. "Gain respect from my colleagues" and "Some other way" were the lowest ranked and are not represented above.

# MOTIVATION FOR ENROLLING

## FIVE REASONS STUDENTS ENROLLED

Factor analyses identified five sets of reasons students enrolled scaled from 1-10:

- 1 PERSONAL WELL-BEING
- 2 ACADEMIC EFFORT
- 3 SKILL BUILDING
- 4 JOB AND FINANCIAL CONCERNS
- 5 FAMILY AND OTHER CONCERNS

### 1 PERSONAL WELL-BEING

**4.7 out of 10** (mean score)

- No demographic differences
- Less important for part-time workers compared to full-time workers



“I want to improve my self-esteem”

“I want to improve my personal growth”

# MOTIVATION FOR ENROLLING

## 2 ACADEMIC EFFORT

**5.6 out of 10** (mean score)

- More important for younger students
- Less important for Black students
- Less important for married students than single students
- Less important for students with Bachelor's degrees compared to students with no two-year or four-year college enrollments



"I can overcome academic challenges"

"I am willing to make the effort to complete the program"

## 3 SKILL BUILDING

**6.9 out of 10** (mean score)

- Less important for women than men
- Less important for Black students compared to White students
- Less important for married students than single students
- Less important for seasonal workers than full-time workers



"I have always liked to build and fix things with my hands"

"I want to build my technology skills"

# MOTIVATION FOR ENROLLING

## 4 JOB AND FINANCIAL CONCERNS

**4.9 out of 10** (mean score)

- Less important for women than men
- Less important for Black students compared to White students
- More important for students in relationships (married, separated, or cohabitating) than single and divorced students
- More important for part-time workers overall, but less important for part-time and full-time workers in jobs not related to their major field
- More important for students with a bachelor's degree



“A change in employment or job responsibilities”

“A change in finances or financial concerns ”

## 5 FAMILY AND OTHER CONCERNS

**3.3 out of 10** (mean score)

- More important for older students
- More important for men
- More important for Black and Asian students
- Less important for Other race students
- Less important for students who are unemployed but not looking compared to full-time students



“A change in family commitments”

“Some other major life change (aside from employment, finances, or family)”



# MOTIVATION BY DEMOGRAPHIC FACTORS

## AGE AND FAMILY

- Older students are more motivated by family changes and less motivated by the desire to face academic challenges.
- Married students are less likely to report enrolling to face academic challenges and to build technical skills, but more likely to enroll due to job and financial changes or family changes. In addition, cohabitating and separated students rate job and finances as reasons to enroll higher than single students. We find no effects due to having children or number of children or household income.

## GENDER AND RACE

- Men are more motivated by skill building, job and financial changes, and family changes than women.
- Black students are less likely to report enrolling to face academic challenges and to build technical skills. Black and Asian student are more likely to enroll due to job and financial changes.

## EDUCATION AND EMPLOYMENT

- There were no differences in motivation based on enrollment.
- Students with **bachelor's degrees (9%)** were less likely to list willingness to overcome academic challenges as a reason to enroll compared to students with **no enrollment (46%)**. They were far more likely to list financial concerns as a reason.
- Part-time workers are less likely to express personal growth as a reason for enrolling compared to full-time workers. Part-time workers are more likely to be motivated by financial concerns; however, this effect is countered by a negative association for those in a job not related to their major field.
  - This indicates that part-time workers in a related job were more likely to be motivated by financial concerns and full-time workers in an unrelated job were less likely.

# NEXT STEPS

## FALL 2017

- Webinar | August 30, 2017
  - Programs interested in participating in PathTech LIFE Fall 2017 Survey
- Fall 2017 Survey
  - Available in mid-to-late September
- Updated 2017 Findings Reports
  - Distributed in January 2018

## SPRING 2018

- Publications will continue through Summer 2018

# ACKNOWLEDGEMENTS

PathTech LIFE would like to acknowledge the following people/organizations for their contribution to this work:

- Impact Allies for External Communications services, including this report and the visually represented data by Emma Perk and the survey outreach and coordination by Ben Reid.
- Marilyn Barger at FLATE
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- 26 Community Colleges



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## **PathTech LIFE Qualitative Analysis of the Open-Ended Survey Questions**

Chrystal Smith, Ph.D.  
Department of Anthropology  
University of Connecticut

Of the 528 respondents to the PathTech Life survey, 408 (77%) responded to the open-ended question, “What life changes, if any, did you make when you began your program? This includes your work schedule, family obligations, friendships and dating relationships?” Of these 408 respondents, 277 (68%) reported that they had made a life change before beginning their program, while 131 (32%) reported that they had made no life changes or they were not applicable. The responses that indicated a life change was made before beginning their program were analyzed using thematic analysis. Themes were identified based on frequency and/or patterned nature emerging from the responses to this question. Themes identified sought to address the research question, “how do ET students navigate community college and cycle between their classes, work, family, personal and social experiences, and possibly other schooling? The themes are discussed and illustrative excerpts are identified to demonstrate salient points captured by the theme.

Respondents reported making the following life changes both prior to and after enrolling in their ET program so that they could be successful. The primary themes identified about these life changes included 1) addressing school-work-life balance (e.g., time management, family responsibilities) 2) changing employment status (e.g., reducing work schedule, getting a job with flexible hours, quitting their job, obtaining a new job/internship or pursuing a new career, separating from the military, getting fired), 3) Relocating (e.g., moving in with family or across country), 4) family support and changes (e.g., birth of a child, marital disintegration), and 5) overcoming personal obstacles (e.g., recovering from health problems). While these themes were related to each, respondents emphasized different aspects in their responses.

## **School-Work-Life Balance**

Life changes related to school-work-life balance were identified most frequently (n=219, 79%). Despite their determination to succeed in their program, respondents found it difficult to find time to study given the demands on their time from work and family responsibilities. A 35 year old Black man confessed, "I am struggling to balance work, school. I enjoy going to school but it is stressful as an adult." Respondents sought to improve their time management by identifying specific times during the day that they could devote to studying and adhering to this schedule. A 24 year-old White man stated:

I shifted my study time to earlier in the day, to include allotting time during work to study, in order to accommodate family needs. I employed new study habits and time management in order to get enough study time... including [sic] taking my textbook with me into the facilities.

Similarly, 35 year old White man stated:

I went to school and treated it like a job while I was there, and when I got home I tried to spend that time with my family and other obligations. Later in the evening I would work on school work when my kids would go to bed.

Obtaining family support and reliable childcare was critical to freeing up time to attend class and study. A 44 year-old White women stated, "I tried to teach my family (husband and kids) to take more responsibility for household chores/their contribution and paid for childcare." A 44 year-old Hispanic man explained, "I was able to enroll my child into an after-school care program. This allowed me to dedicate more time to studying and learning." These respondents viewed developing effective time management skills as a key life change as they sought to persist in their ET programs, while meeting their work and family responsibilities.

Some respondents admitted that their commitment to succeeding in their ET programs meant prioritizing studying and completing assignments over spending time with family and friends. A 21 year-old White man stated, "I spent more time studying and less time messing

around with my friends and family on the lake.” Respondents also gave up hobbies and entertainment to have more time to dedicate to school. A 30 year-old Black man concurred, “I had to stop all the partying and focus more on completing to school to end up providing a better life for my family.”

Respondents reported feeling a sense of pride and accomplishment when their time management allowed them to meet their academic goals despite having less time to spend with family and friends. A 26 year-old man Asian described his efforts to improve his time management:

When I began my program at my school, I first was struggling to fit everything into my day, but having classwork as an obligation caused me to buckle down and commit to more of a daily schedule. I now find myself feeling more accomplished when I finish all of my tasks earlier than expected.

Overall, respondents made life changes related to school-work-life balance after they enrolled in their programs and discovered that they had to dedicate additional time to study and complete assignments if they were to be successful.

### **Change in Employment Status**

Respondents identified changing employment status was the second most frequently occurring life change (n=87, 31%). The change in employment status included the decision to reduce their work schedule, get a job with flexible hours or make their work schedule more flexible, quit their job, and obtain a new job/internship or pursue a new career or separate from the military.

Of these 87 respondents, 31 (36%) reported that they reduced their work schedule so that they had more time to attend class and study. A 33 year-old Hispanic man explained why he started working part-time, “In order for me to be able to go back to school or complete my program I had to quit my full time job and get a part time so that I can graduate faster and have

better job opportunities.” A 22 year-old Asian woman stated, “I worked two jobs and because I wanted to better my education I had to leave one job to accommodate my school studies.” A 26 year-old White man shared, “I left my off-season job (construction maintenance) in order to take classes. At the same time, I returned to my seasonal job, working part-time in the off-season.”

These respondents believed that to succeed in their ET program that they had to reduce the number of hours that they worked so they could have time to attend class and devote more time studying.

Motivated by the desire to succeed in their ET programs, 21 (24%) of these 87 respondents reported that they quit their job. A 26 year-old White man explained, “I was in a career that was not fulfilling me on any level besides financial. Leaving that job and starting my education towards my new career gave allowed me to dig myself out of the rut I had made. I was able to rearrange all of those life items into the "balance" that I preferred.” Similarly, a 24 year-old White man offered, “I quit my job as a car salesman and started working part time at Costco. I recently quit my job at Costco to strictly focus on school.” A 23 year-old White explained the reason that he quit his job, “I worked part-time for the first few years of college, but wasn't meeting my own expectations. Because I want to pay for my own education, I took a gap year and saved up enough so that when I quit, I had enough to get my bachelor's on my own dime.’ Yet some respondents found it difficult to be unemployed for a long period of time. A 22 year-old American Indian man described his current financial situation, “I was able to quit working, but at the expense of my personal income. I am now in debt for several months of rent. But, I do have a lot of time to study now that I am not employed.” Respondents found that quitting their job gave them the time to focus on their ET program.

Of these 87 respondents, 10 (11%) respondents reported that they had either found new jobs with flexible hours or they changed their work schedule so that it more flexible so that they could attend classes regularly. A 40 year-old White man described his decision to change jobs, “I removed myself from a negative job experience, and took a position with more flexible hours

working with more positive people which helped with the transition to school after 20 years working in the industry.” Similarly, a 22 year-old Black man stated, “When I first began my program I worked in assembly line at a busy company. It consumed a lot of my time that I did not have enough time to do my school work everyday. This forced me to change my work so I started at [sic] as a direct support profession where I had enough time to balance my school, family and other social and personal obligations.” A 18 year-old White man stated, “I took on different shifts so that I can take classes in the days and work in the evening, I started thinking more about the importance of the education.” For these respondents having flexible jobs allowed them to prioritize their education.

For 10 (11%) of the 87 respondents getting an internship or a new full-time job was the life change that provide them with the financial support to pursue their ET program. A 21 year-old White man stated, “my life change is recent and was a requirement for my degree, which was an internship. The internship that I have gotten was for a job in my industry and now they wish to keep me on as long as they can.” Some of these respondents reported that their new job increased their interest in pursuing a career in ET. A 40 year-old White man shared, “I happened to get a new (better) job that makes the program even more valuable.” For a 29 year-old White man who separated from the military explained, “it is very hard to obtain an engineering degree in the Navy.”

While the decision to change employment status was a choice for most of the 87 respondents, 7 (8%) respondents getting fired from their previous job was a major life changing event that led them to reassess their priorities and led to their decision to enroll in their ET program. A 32 year-old White woman explained:

I was laid off from my job. I reevaluated my employment opportunities and life style. My husband and I took the time to look at our finances and found that we were able to live on 1 salary for an extended amount of time. I took the time of unemployment to make myself more valuable in the field that I was perusing for new employment.

In the various ways described above, changing employment status was a major life change for respondents.

### **Relocation**

Respondents (n=25, 9%) identified relocation as the next most frequent life change that they made before and after enrolling in their ET program. Respondents moved for a variety of reasons including, moving in with family, moving away from family, moving locally to be close to college, moving across country for college, moving internationally to the U.S. or to another country. A 33 year-old White man explained, "I moved to [sic] because commuting 90 miles one way wasn't an option. With the move, I found a job closer to school and made new friends to help with the balance of my life." A 24 year-old White woman described her decision to move back to a southern city, "I moved back to [unidentified]. I was living in my hometown with family, trying to save money as a barista. I knew that I was unhappy with my current job prospects with my BA in Linguistics and after a year of thinking, I moved back to the city in order to be a part of a program that would train me for real jobs in environmental technology. Now I live alone and work full-time to support my studies." In contrast, a 26 year old White man explained that he moved to start a new life, "I moved across the country from my horribly abusive family. Addiction is taking over Mississippi, and I chose not to be a part of any of it."

### **Family Support and Changes**

Respondents (n=24, 9%) also cited family support and changes such as the birth of a child and marital disintegration, before and after they enrolled in their ET program. A 32 year-old White man offered, "moving in with my in-laws. This both reduced our financial obligations and provided extra support for our kids." A 34 year-old White man explained, "my son was born and that is what really drove me to better myself. That was 6 years ago and I started school



about 4 or 5 years ago.” A 29 year-old Hispanic man stated, “My wife left me before enrolling, and financially it was difficult to continue, but I did anyway with help from family.”

### **Overcoming Personal Obstacles**

Respondents (n=9, 3%) also described how they overcame number of personal obstacles prior to beginning their ET programs. These obstacles include health problems, homelessness, and addiction. A 32 year-old White woman explained, “I fell at work and now am on workmen comp. That has made it possible to return to school and better myself.” A 30 year-old White man stated, “I was homeless and had no other way to acquire money that's why I started going to school.” A 27 year-old White man offered, “quit doing drugs, got a stable living environment i had been homeless prior to quitting drugs.”

## **PathTech LIFE Year 3 Report Tables: Learning, Interests, Family, and Employment**

### **Learning**

- Coursework Experiences and Achievement
  - Coursework difficulty
  - Hours spent on homework
  - GPA (estimated)
- Program Satisfaction
- Paying for College
- Resources Available at College

### **Interests**

- Motivations for Enrolling

### **Family and Personal**

- Gender and Race
- Gender and LGBT Identity
- Race, Citizenship, Residency, Primary Language
- Age and Disability
- Parents' Education
- Family Status
- Median Household Income
- Influences on Decision to Enroll

### **Employment and Educational Background and Future**

- Employment status
- Contribution to future and commitment to career related to studies
- Prior education background
- High school experiences (Grades, Advice, and CTE enrollment)
- Future degree aspirations

Findings presented in these tables are from a national survey of 3214 students enrolled technician education programs at 96 community colleges through the United States in three rounds in Spring 2017, Fall 2017, and Spring 2018.

## Learning

- Coursework Experiences and Achievement
  - Coursework difficulty
  - Hours spent on homework
  - GPA (estimated)
- Program Satisfaction
- Paying for College
- Resources Available at College

| Coursework Experiences and Achievement |                       |                         |                         |                      |
|--|-----------------------|-------------------------|-------------------------|----------------------|
| Full-time students                     |                       |                         |                         |                      |
| Courses taken in last year             | Coursework difficulty | Hours spent on homework | High GPA (3.5 or above) | Mean GPA (estimated) |
| 1-4                                    | 2.8                   | 2.2                     | 37%                     | 3.22                 |
| 5-7                                    | 2.8                   | 2.1                     | 38%                     | 3.26                 |
| 8-10                                   | 3                     | 2.3                     | 45%                     | 3.35                 |
| 11+                                    | 2.9                   | 2.4                     | 54%                     | 3.43                 |

| Part-time students         |                       |                         |                         |                      |
|----------------------------|-----------------------|-------------------------|-------------------------|----------------------|
| Courses taken in last year | Coursework difficulty | Hours spent on homework | High GPA (3.5 or above) | Mean GPA (estimated) |
| 1-4                        | 2.6                   | 1.7                     | 42%                     | 3.28                 |
| 5-7                        | 2.8                   | 1.9                     | 40%                     | 3.22                 |
| 8-10                       | 2.9                   | 2                       | 42%                     | 3.29                 |
| 11+                        | 2.8                   | 2.2                     | 47%                     | 3.34                 |

Students rated their coursework difficulty on a scale of 1 to 5 in which 1 = “not difficult at all” and 5 = “extremely difficult.” There was little difference based on the number of courses taken in the last 12 months and current full-time or part-time status. Full-time students spent more time working outside of class although all students centered around “6 to 10 hours” per week, or 2 on a scale of 1 to 4 in which 1 = “0 to 5 hours per week” and 4 = “16 or more hours per week.”

Part-time students were more likely to have a high GPA with the exception of full-time students who took 11 or more classes in the last 12 months.

| Program Satisfaction      | Enrollment status |           |
|---------------------------|-------------------|-----------|
|                           | Full-time         | Part-time |
| General satisfaction      | 4.1               | 4.1       |
| Satisfaction with courses | 4.0               | 4.0       |

|                                       |     |     |    |
|---------------------------------------|-----|-----|----|
| Satisfaction with instruction         | 4.1 | 4.0 |    |
| Satisfaction with advising            | 3.8 | 3.8 |    |
| Satisfaction with student interaction | 3.9 | 3.8 | ** |

Students were asked about their general satisfaction in the program, as well as more specifically about their satisfaction with their courses, with instruction, with advising, and with student interaction. Overall, the ratings were generally quite high with the vast majority of students clustering around the “Very Satisfied” mark across all categories. This held true for both full-time and part-time students. One statistically significant result was slightly lower satisfaction amongst part-time students in comparison to full-time students when it came to their satisfaction with student interaction. This may be related to their part-time status and not having as much contact with school community as part-time students. It could also serve as a reflection of a different set of classroom dynamics during evening classes when more part-time students may be taking classes in comparison to full-time students.

| Methods of Paying for College                  | Enrollment status |           |     |
|--|-------------------|-----------|-----|
|  | Full-time         | Part-time |     |
| Student loans (public or private)              | 25%               | 15%       | *** |
| Financial aid from state or federal government | 51%               | 31%       | *** |
| Scholarships or financial aid from college     | 33%               | 16%       | *** |
| Employer assistance                            | 4%                | 17%       | *** |
| Income from primary job                        | 32%               | 43%       | *** |
| Family contribution                            | 29%               | 19%       | *** |
| Military assistance                            | 9%                | 4%        | *** |
| Personal loans                                 | 3%                | 2%        |     |
| Personal savings                               | 28%               | 24%       | *   |
| Overtime or additional work hours pay          | 6%                | 11%       | *** |
| Income from a second job                       | 5%                | 5%        |     |
| Other  | 6%                | 6%        |     |

In analyzing how students pay for their schooling, it became quickly apparent that students utilize many sources of funding, including student loans, federal/state financial aid, scholarships, employer assistance, primary income, family contributions, military assistance, personal loans, personal savings, overtime pay, secondary income, as well as other sources. In addition, there were statistically-significant differences in how full-time and part-time students fund their education. Full-time students were more likely to utilize student loans, state/federal financial aid, scholarships, family contributions, military assistance, and personal savings. In contrast, part-time students were more likely to pay for their schooling with employer assistance, primary income, and overtime pay.

| Resources Available at Colleges  |                   |           |     |
|--|-------------------|-----------|-----|
|  | Enrollment status |           |     |
|  | Full-time         | Part-time |     |
| Flexible courses/schedules   | 55%               | 50%       | **  |
| Online courses   | 63%               | 58%       | **  |
| Hybrid courses   | 49%               | 40%       | *** |
| Online textbooks   | 54%               | 46%       | *** |
| Advising   | 66%               | 58%       | *** |
| Tutoring services (i.e. writing center)  | 61%               | 54%       | *** |
| Mentoring  | 43%               | 39%       | *   |
| Career/job placement services  | 52%               | 50%       |     |
| Internship opportunities   | 54%               | 47%       | *** |
| Mental health services/counseling  | 40%               | 34%       | *** |
| Student resources centers (i.e. multicultural center, veterans center, women's center) | 51%               | 46%       | *   |
| Disability services  | 44%               | 36%       | *** |
| Food pantry  | 35%               | 30%       | **  |
| Childcare  | 32%               | 27%       | **  |
| Financial support  | 60%               | 54%       | **  |

In our survey, we asked students about their awareness of various resources available at their community colleges, such as: flexible course schedules, online and hybrid classes, online textbooks, advising, tutoring, mentoring, career services, internship opportunities, mental health services, disability services, food pantries, childcare and financial support.

The majority of full-time students were aware of the possibility for flexible course schedule, online courses, online textbooks, advising, tutoring, career services, internships, and financial support. Less than half of full-time students were aware of hybrid courses, mentoring, mental health services, disability services, food pantries and child care.

In contrast, the majority of part-time students were only aware of a subset of campus resources available, including flexible scheduling, online courses, advising, tutoring, career services, and financial support. Less than half of part-time students were aware of resources such as hybrid courses, online textbooks, mentoring, internships, mental health services, disability services, and food pantries.

When comparing full-time and part-time students, there were clear statistical differences, and full-time students appear more aware of campus resources in comparison to their peers enrolled part-time. Full-time students were likely to be aware of flexible scheduling, online and hybrid courses, online textbooks, advising, mentoring,

tutoring, internships, mental health services, disability services, food pantries, child care, and financial assistance.

### Interests

- Motivations for Enrolling

| Motivations for Enrolling   | Enrollment status |           |     |
|---|-------------------|-----------|-----|
|   | Full-time         | Part-time |     |
| I want to improve my self-esteem  | 2.3               | 2.3       |     |
| I want to expand my knowledge in my field                                 | 3.6               | 3.5       | **  |
| I want to improve my personal growth                                      | 3.3               | 3.3       |     |
| I want to increase my opportunities for a better life                     | 3.7               | 3.6       | **  |
| I can overcome academic challenges  | 3.1               | 2.9       | *** |
| I am willing to make the effort to complete the program                   | 3.6               | 3.5       | *** |
| I have always liked to build and fix things with my hands                 | 3.3               | 3.2       |     |
| I want to build my technology skills                                      | 3.4               | 3.4       |     |
| A change in employment or job responsibilities                            | 3.0               | 3.0       |     |
| A change in finances or financial concerns                                | 3.1               | 3.1       |     |
| A change in family commitments  | 2.4               | 2.4       |     |
| Some other major life change (aside from employment, finances, or family) | 2.4               | 2.3       |     |
| The support I receive in my program                                       | 2.8               | 2.7       | *** |
| My fit within my program  | 3.0               | 2.8       | *** |
| The academic requirements of my program                                   | 3.0               | 2.9       | *   |
| The program accommodates my lifestyle                                     | 3.0               | 3.0       |     |

Respondents rated the importance of the above factors in their decision to enroll ranging from 1 = “Not important” to 4 = “Extremely important.”

Students were primary motivated to increase their opportunities, knowledge, skills, and personal growth, largely personal and academic reasons. Less important to students were life changes or fit within the program although these reasons were rated “somewhat important” or “very important.”

### Family and Personal

- Gender and Race
- Gender and LGBT Identity
- Race, Citizenship, Residency, Primary Language
- Age and Disability
- Parents’ Education
- Family Status
- Median Household Income



|                                     |     |     |    |     |    |     |
|-------------------------------------|-----|-----|----|-----|----|-----|
| White                               | 96% | 2%  | 1% | 1%  | 0% | 0%  |
| Hispanic/Latino                     | 69% | 16% | 3% | 6%  | 1% | 5%  |
| Black/African American              | 83% | 5%  | 4% | 6%  | 0% | 2%  |
| Asian                               | 55% | 13% | 4% | 12% | 1% | 14% |
| Native American or American Indian  | 94% | 3%  | 2% | 0%  | 0% | 1%  |
| Middle Eastern or North African     | 62% | 9%  | 0% | 11% | 0% | 18% |
| Native Hawaiian or Pacific Islander | 73% | 9%  | 1% | 8%  | 0% | 9%  |
| Something else, please specify      | 83% | 5%  | 1% | 5%  | 2% | 3%  |
| Total                               | 85% | 6%  | 2% | 3%  | 0% | 3%  |

The majority of students (91%) report being US Citizens and 6% of respondents reported being US citizens that English was not their first language. Students from a variety of backgrounds reported not being US citizens. A third of these students were Asian and 27% were Hispanic/Latino.

| Ages  | No Disability | Disability | Prefer not to say |
|-------|---------------|------------|-------------------|
| 18-19 | 88%           | 9%         | 3%                |
| 20-21 | 90%           | 7%         | 3%                |
| 22-26 | 85%           | 10%        | 5%                |
| 27-33 | 84%           | 11%        | 5%                |
| 34+   | 81%           | 13%        | 5%                |
| Total | 85%           | 10%        | 4%                |

About 10% of students reported having a disability, and fairly evenly distributed across age with about 9% of 18-19 year-olds reporting having a disability, to 13% of students who are 34 years old and up.

| Parents' Education |            |            |         |            |            |
|--------------------|------------|------------|---------|------------|------------|
| Ages               | No College | College    | College | College    | Don't Know |
|                    | No College | No College | College | Don't Know | Don't Know |
| 18-19              | 18%        | 25%        | 47%     | 5%         | 5%         |
| 20-21              | 23%        | 29%        | 44%     | 3%         | 2%         |
| 22-26              | 24%        | 28%        | 41%     | 4%         | 3%         |
| 27-33              | 27%        | 28%        | 40%     | 4%         | 2%         |
| 34+                | 38%        | 26%        | 32%     | 2%         | 2%         |
| Total              | 26%        | 27%        | 41%     | 3%         | 3%         |

About 41% of students said both of their parents had college degrees, 26% said neither parent went to college, while 27% said that one parent went to college and the other parent did not. A small percentage of students were not sure of the parents' educational



backgrounds. Taken together, the majority of students in the sample and within each age quintile came from homes where one or both parents attended college.

| Family Status |         |         |        |         |          |           |         |         |
|---------------|---------|---------|--------|---------|----------|-----------|---------|---------|
| Ages          | Parents | Single  |        |         |          |           |         |         |
|               |         | Parents | Single | Widowed | Divorced | Separated | Cohabit | Married |
| 18-19         | 68%     | 65%     | 94%    | 0%      | 0%       | 0%        | 4%      | 1%      |
| 20-21         | 51%     | 48%     | 92%    | 0%      | 0%       | 0%        | 5%      | 2%      |
| 22-26         | 35%     | 24%     | 73%    | 0%      | 1%       | 1%        | 15%     | 10%     |
| 27-33         | 39%     | 10%     | 48%    | 0%      | 5%       | 1%        | 14%     | 32%     |
| 34+           | 63%     | 8%      | 24%    | 1%      | 9%       | 2%        | 10%     | 54%     |
| Total         | 52%     | 31%     | 66%    | 0%      | 3%       | 1%        | 10%     | 20%     |

Perhaps one of the most surprising findings in the study, more than half of all students in the sample are parents (52%). When we look more closely at the sample by age and parenting, we see that 68% of 18-19 year-olds are parents, 51% of 20-21 year olds, 35% of 22-26 year-olds, 39% of 27-33 year-olds, and 63% of students aged 34 years and older. The largest group of parents attending technician education classes at community colleges in our study were 18-19 year olds, followed by the older students aged 34 and up. These findings suggest that traditional age students with children may be more likely to enroll in technician education programs compared to their age group peers without children.

| Median Household Income on 0 to 10 Scale |        |             |                       |             |         |             |
|--|--------|-------------|-----------------------|-------------|---------|-------------|
|  | Single |             | Living with a partner |             | Married |             |
|  | Parent | No Children | Parent                | No Children | Parent  | No Children |
| 18-19                                    | 5.0    | 4.0         | 1.0                   | 2.5         | 6.0     | 4.0         |
| 20-21                                    | 4.0    | 3.0         | 3.0                   | 1.5         | 4.0     | 5.0         |
| 22-26                                    | 3.0    | 2.0         | 2.0                   | 3.0         | 3.0     | 6.0         |
| 27-33                                    | 2.0    | 2.0         | 4.0                   | 4.0         | 5.0     | 5.0         |
| 34+                                      | 2.0    | 2.0         | 3.0                   | 5.0         | 5.0     | 4.0         |
| Total                                    | 4.0    | 2.0         | 3.0                   | 3.0         | 5.0     | 5.0         |

Respondents reported their household income on a scale of 0 to 10 by tens of thousands in which 0 = \$0 to \$9,999 and 10 = \$100,000 or above. The median household income in the study was in the \$30,000 to \$39,999 range. The families with the lowest income were single with no children while the families with the highest incomes were married.

Single parents' median household income was around \$40,000 to \$49,999 and single students with no children was \$20,000 to \$29,999. This is likely a sign that younger single parents were still living with their parents given that younger single students had higher household incomes.

Students who were cohabiting (but not married) with their partners were in the \$30,000 to \$39,999 range including those with children and those with no children. For married couples with children and with no children the mean household income was around \$50,000 to \$59,999, around the national median household income.

Around 10 percent of all respondents reported a household income of \$100,000 or higher.

| Influences on Decision to Enroll |            |           |     |               |       |       |       |      |     |
|----------------------------------|------------|-----------|-----|---------------|-------|-------|-------|------|-----|
|                                  | Enrollment |           |     | Age Quintiles |       |       |       |      |     |
|                                  | Full-time  | Part-time |     | 18-19         | 20-21 | 22-26 | 27-33 | 34+  |     |
| Parent                           | 48%        | 36%       | *** | 67%           | 60%   | 44%   | 29%   | 14%  | *** |
| Sibling                          | 13%        | 14%       |     | 18%           | 16%   | 14%   | 11%   | 6%   | *** |
| Partner/significant other        | 19%        | 23%       | *   | 9%            | 12%   | 22%   | 35%   | 28%  | *** |
| Friend                           | 27%        | 26%       |     | 33%           | 28%   | 27%   | 25%   | 20%  | *** |
| Employer or manager              | 10%        | 18%       | *** | 11%           | 12%   | 13%   | 16%   | 15%  | *   |
| Co-worker                        | 6%         | 14%       | *** | 7%            | 6%    | 10%   | 12%   | 10%  | **  |
| Military recruiter               | 1%         | 0%        |     | 0%            | 0%    | 1%    | 1%    | 1%   |     |
| College recruiter                | 2%         | 2%        |     | 6%            | 2%    | 1%    | 1%    | 1%   | *** |
| College administrator            | 5%         | 3%        | *** | 7%            | 6%    | 3%    | 3%    | 3%   | *** |
| Academic advisor                 | 11%        | 10%       |     | 17%           | 13%   | 10%   | 7%    | 5%   | *** |
| High school teacher              | 17%        | 10%       | *** | 39%           | 22%   | 6%    | 1%    | 1%   | *** |
| College instructor               | 11%        | 9%        |     | 13%           | 13%   | 10%   | 6%    | 8%   | *** |
| Total Influences                 | 1.71       | 1.63      |     | 2.27          | 1.90  | 1.60  | 1.45  | 1.09 | *** |

In this table we show the various sources of influence on students' decision to enroll in community college technician programs, including people such as parents, siblings, partner/significant other, friends, employer or manager, co-workers, military recruiter, college recruiter college administrator, academic advisor, high school teachers, and college instructors.

When comparing full-time and part-time students, there are some statistically-significant results as well. Full-time students were more likely to be influenced by their parents, a college administrator, or their high school teachers. In contrast, part-time students were more likely to be influenced by their employer or manager or their co-workers in comparison to students who are enrolled full-time.

When comparing age groups, younger students were more likely to be influenced to enroll by their parents, siblings, friends, college recruiter, college administrator,

academic advisor, high school teacher, and college instructor. In contrast, older students were more influenced to enroll by their partner/significant other, employer or manager, and co-workers.

### Employment and Educational Background and Future

- Employment status
- Contribution to future and commitment to career related to studies
- Prior education background
- High school experiences (Grades, Advice, and CTE enrollment)
- Future degree aspirations

| Employment Status/Job Related to Studies |            |         |          |          |               |         |               |         |
|--|------------|---------|----------|----------|---------------|---------|---------------|---------|
| Ages                                     | Unemployed |         |          |          | Part-time Job |         | Full-time Job |         |
|  | Looking    | Looking | Military | Seasonal | Unrelated     | Related | Unrelated     | Related |
| 18-19                                    | 14%        | 18%     | 0%       | 6%       | 41%           | 12%     | 6%            | 4%      |
| 20-21                                    | 12%        | 12%     | 0%       | 5%       | 34%           | 18%     | 9%            | 10%     |
| 22-26                                    | 8%         | 10%     | 0%       | 4%       | 27%           | 13%     | 18%           | 20%     |
| 27-33                                    | 10%        | 10%     | 0%       | 2%       | 19%           | 9%      | 21%           | 29%     |
| 34+                                      | 16%        | 14%     | 0%       | 2%       | 12%           | 6%      | 18%           | 32%     |
| Total                                    | 12%        | 13%     | 0%       | 4%       | 27%           | 12%     | 14%           | 19%     |

We asked students about their work experience also. They were asked to choose from the following categories:

- not currently employed and not looking (12%)
- not currently employed but looking for employment (13%)
- in the military (< 0.5%)
- employed seasonally (4%)
- employed part-time in job unrelated to studies (27%)
- employed part-time in job related to studies (12%)
- employed full-time in job unrelated to studies (14%)
- employed full-time in job related to studies (19%)

In examining employment status and job by age, we see that the majority of younger people are employed part-time while enrolled in their programs while the majority of older students are employed full-time. Younger students are more likely to be employed in jobs that are not related to their field of study while older students are more likely to be employed in fields that are related to their studies. It is also worth noting that 32% of students aged 18-19 years-old and 30% of students aged 34 years-old and up are not employed at all, in comparison to 18-24% of students in the middle age band (20-33 years old). Finally, there were only 10 students reporting military jobs in this sample and only a small percentage with seasonal jobs.

Commitment to field and contribution of field to future

|                                   | Age Quintiles |       |       |       |      |
|-----------------------------------|---------------|-------|-------|-------|------|
|                                   | 18-19         | 20-21 | 22-26 | 27-33 | 34+  |
| Commitment to field (1-5 scale)   | 4.27          | 4.32  | 4.43  | 4.55  | 4.44 |
| Job that better fits my interests | 73%           | 75%   | 73%   | 72%   | 62%  |
| Gain knowledge in my field        | 80%           | 81%   | 82%   | 77%   | 71%  |
| Higher paying job                 | 81%           | 80%   | 81%   | 83%   | 71%  |
| Advancement in the field          | 69%           | 66%   | 69%   | 68%   | 57%  |
| Gain respect from my colleagues   | 39%           | 38%   | 39%   | 36%   | 26%  |
| Personal fulfillment              | 66%           | 66%   | 74%   | 71%   | 64%  |

Respondents reported their commitment to pursuing a career related to their current field of study using a scale in which 1 = “not committed at all” to 5 = “extremely committed.” Students of all ages generally rated their commitment around “very” to “extremely committed.”

Students primarily believed their studies would result in a gaining knowledge in their field and a higher paying job and/or a job that better fits their own interests. Fewer students thought their studies would result in personal fulfillment or advancement in their field in the future. There were few differences by age among traditional and non-traditional students. Students age 34 and older did not think their studies would contribute as much to their lives as younger students.

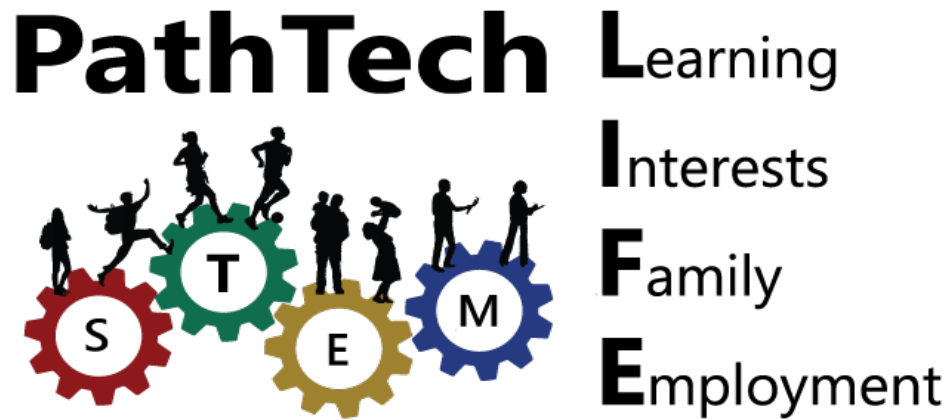
| Prior Education by Age |                |                |              |                    |             |
|------------------------|----------------|----------------|--------------|--------------------|-------------|
| Ages                   | Never enrolled | Enrolled in CC | Earned       |                    | Earned      |
|                        |                |                | Assoc degree | Enrolled in 4 Year | Bach degree |
| 18-19                  | 91%            | 6%             | 1%           | 1%                 | 1%          |
| 20-21                  | 76%            | 12%            | 3%           | 8%                 | 1%          |
| 22-26                  | 48%            | 20%            | 9%           | 16%                | 7%          |
| 27-33                  | 36%            | 24%            | 11%          | 14%                | 14%         |
| 34+                    | 37%            | 24%            | 14%          | 12%                | 13%         |
| Total                  | 58%            | 17%            | 8%           | 10%                | 7%          |

When we look at the overall sample, it appears that the majority of students had never enrolled prior to their current experience. However, when breaking down prior educational experience by age, we see that there is an inverse relationship between prior experience in higher education and age. The younger the students are, the less likely they are to have had any experience in higher education prior to their current enrollment. Starting as young as age 22, the majority of students had enrolled in a community college or four-year university before starting their current program, including 23% of 22-26 year olds who had enrolled in a four-year university or already earned a bachelor’s degree. Overall, around 14% of students 27 and above had earned a bachelor’s degree before enrolling in their current community college program and an additional 13% had enrolled in a four-year university. Overall, these non-traditional

students generally had considerable experience in higher education. About 37% had enrolled in a different community college program including 13% with a prior associate's degree. The remaining 37% had never enrolled in college.

| Highest Future Degree |      |            |           |         |     |       |
|-----------------------|------|------------|-----------|---------|-----|-------|
| Ages                  | None | Associates | Bachelors | Masters | PhD | Total |
| 18-19                 | 5%   | 17%        | 17%       | 16%     | 5%  | 702   |
| 20-21                 | 4%   | 16%        | 27%       | 14%     | 6%  | 557   |
| 22-26                 | 7%   | 19%        | 30%       | 16%     | 7%  | 675   |
| 27-33                 | 7%   | 21%        | 41%       | 16%     | 5%  | 602   |
| 34+                   | 12%  | 27%        | 34%       | 12%     | 3%  | 678   |
| Total                 | 7%   | 20%        | 29%       | 15%     | 5%  | 3214  |

Student varied considerably in their future educational aspirations. The large majority aspired to eventually earn a bachelor's degrees or above (63%) including 20% who aspired to earn a post-graduate Masters or PhD. Among the oldest quintile, 55% of students sought to earn a bachelor's or above. This includes students who had already earned bachelor's degrees as indicated above. Only 7 percent of the sample did not have or aspire to earn any degree. Aspirations vary little by age.



A national survey of LIFE experiences influencing **pathways** in advanced **technologies**.

## **PathTech LIFE All Respondents**

2018 Report

## Introduction

The findings in this report reflect the students who participated in the 2018 PathTech LIFE Survey. This is a college level report and only includes findings from the stated community college. This report is not intended to report out on the overall findings from the PathTech LIFE project. To view the full report or to find out more about the PathTech LIFE project, email [pathtech@usf.edu](mailto:pathtech@usf.edu).



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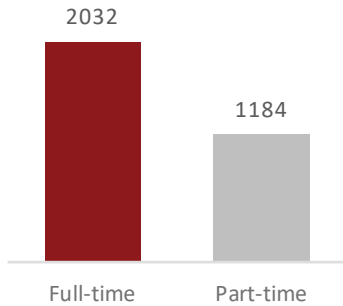
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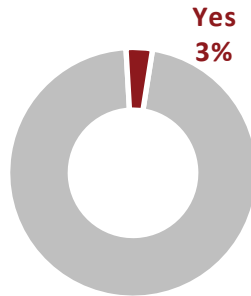
PathTech LIFE is supported by the National Science Foundation under Grant No. 1501999. Any opinions, findings, and conclusions or recommendations expressed on this site are those of the authors and do not necessarily reflect the views of the National Science Foundation. USF IRB: Pro00021314

# Learning: Coursework Experiences and Achievements

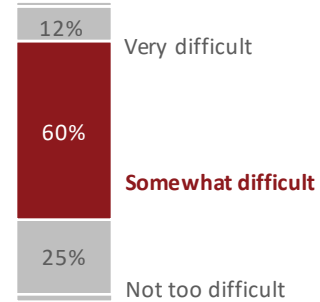
**Student Enrollment Status**



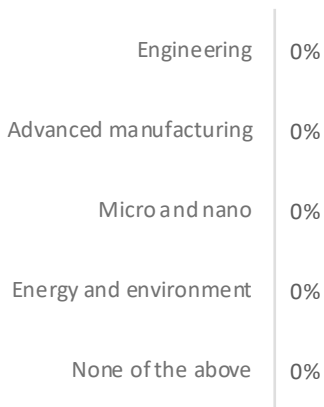
**Attending other college**



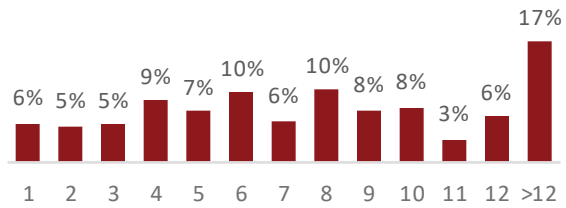
**Coursework difficulty**



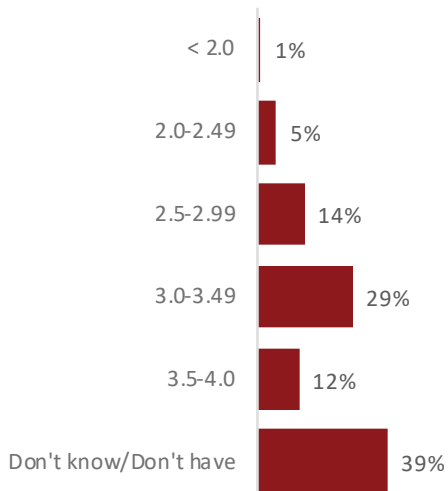
**Program Areas\***



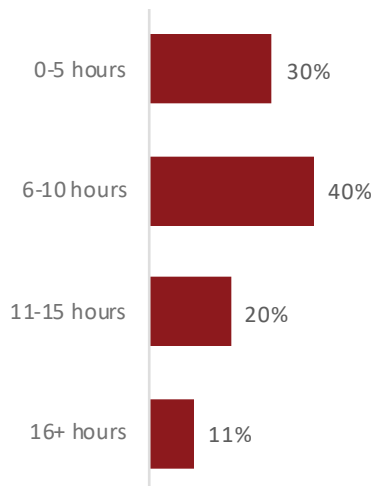
**Number of courses in 12 months**



**Grade Point Average (GPA)**



**Hours spent on homework**

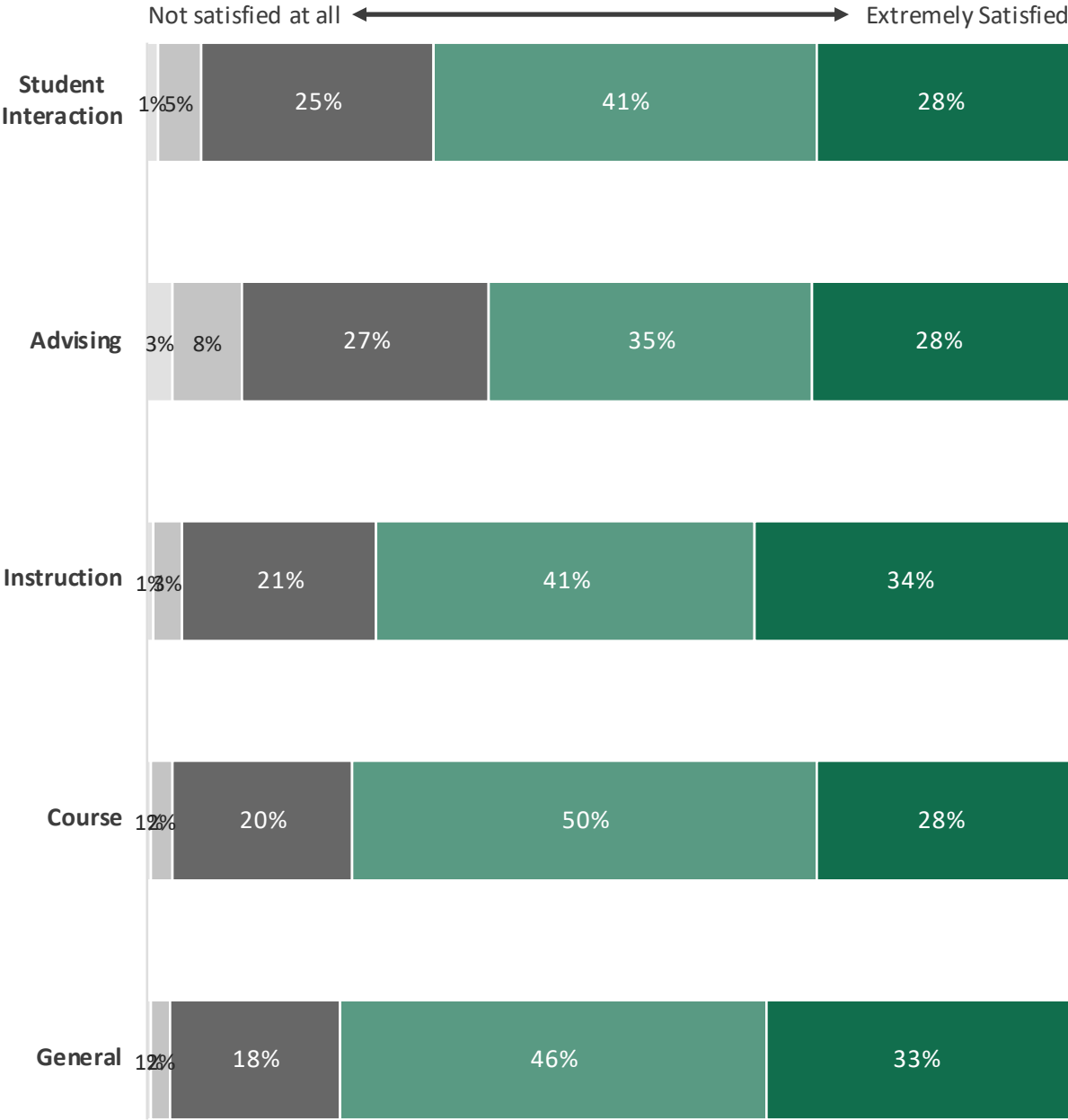


\*Responses are check all that apply.



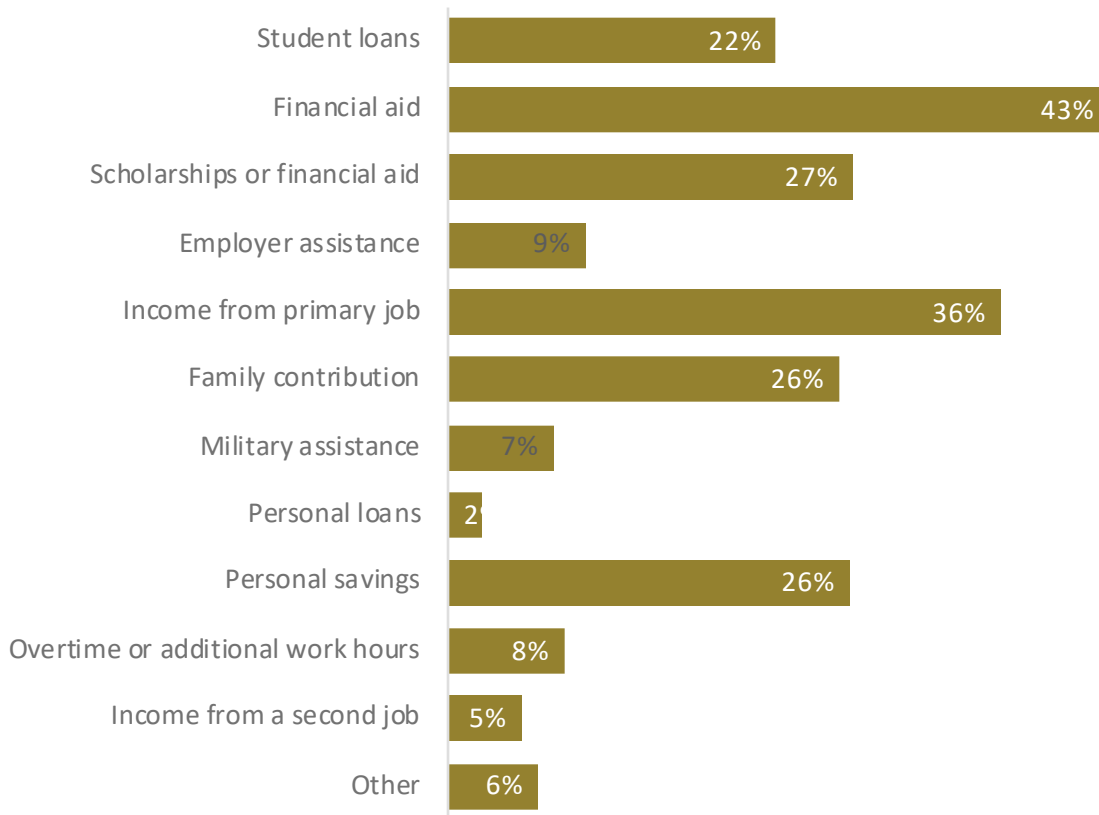
# Learning: Program Satisfaction

Student satisfaction by area



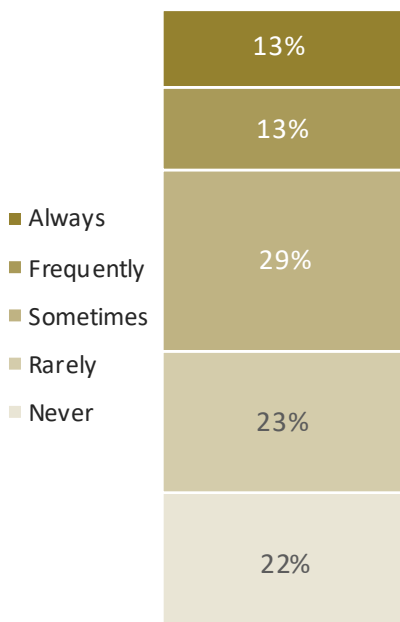
# Learning: Finances and Resources

## How Students Pay for College\*



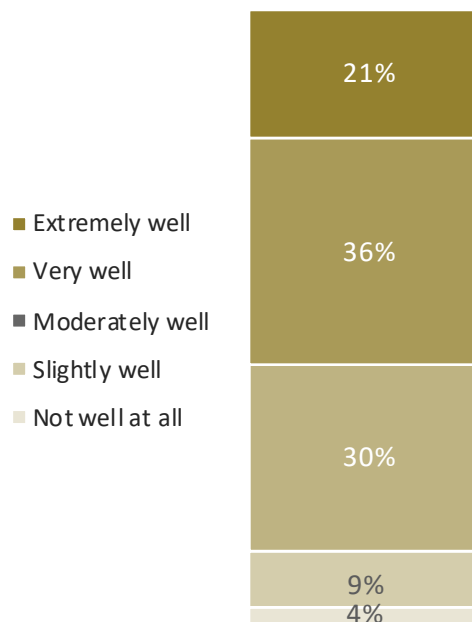
## Student Financial Challenges

How often do you face financial challenges when attempting to enroll in courses?



## Student Accommodations

How well does your program accommodate



\*Responses are check all that apply.

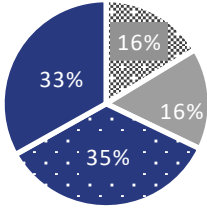
# Learning: Finances and Resources

## Resource Availability and Use

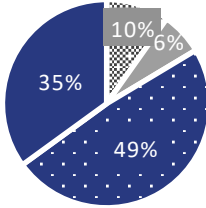
"Are the following resources available at your college?"  
 "Do you utilize them or would you utilize them if they were available?"

- Available, do use
- Available, do not use
- Not Available, would use
- Not Available, would not use

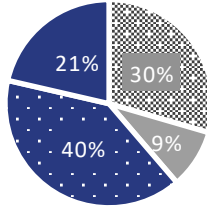
Flexible courses/schedules



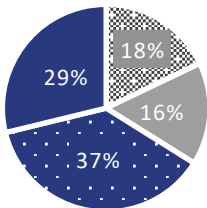
Online courses



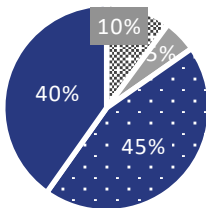
Hybrid courses



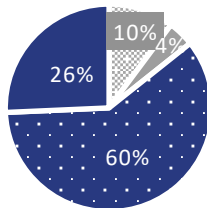
Online textbooks



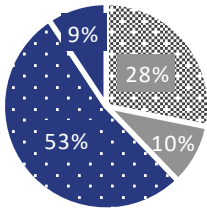
Advising



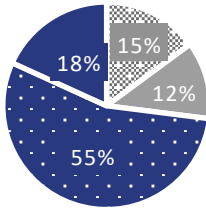
Tutoring services



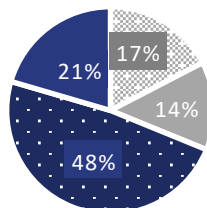
Mentoring



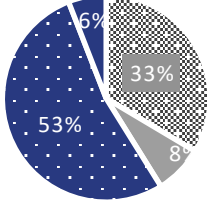
Career/job placement



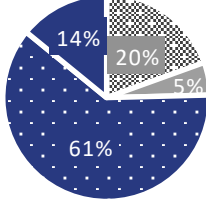
Internship opportunities



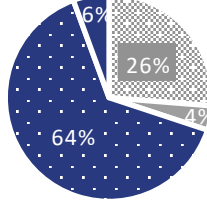
Mental health services



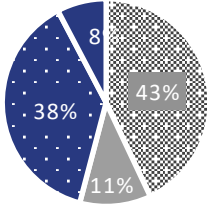
Student resources centers



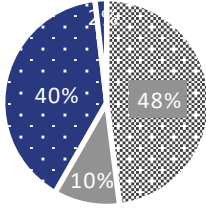
Disability services



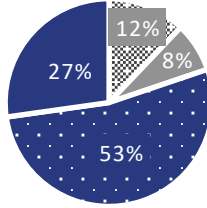
Food pantry



Child Care

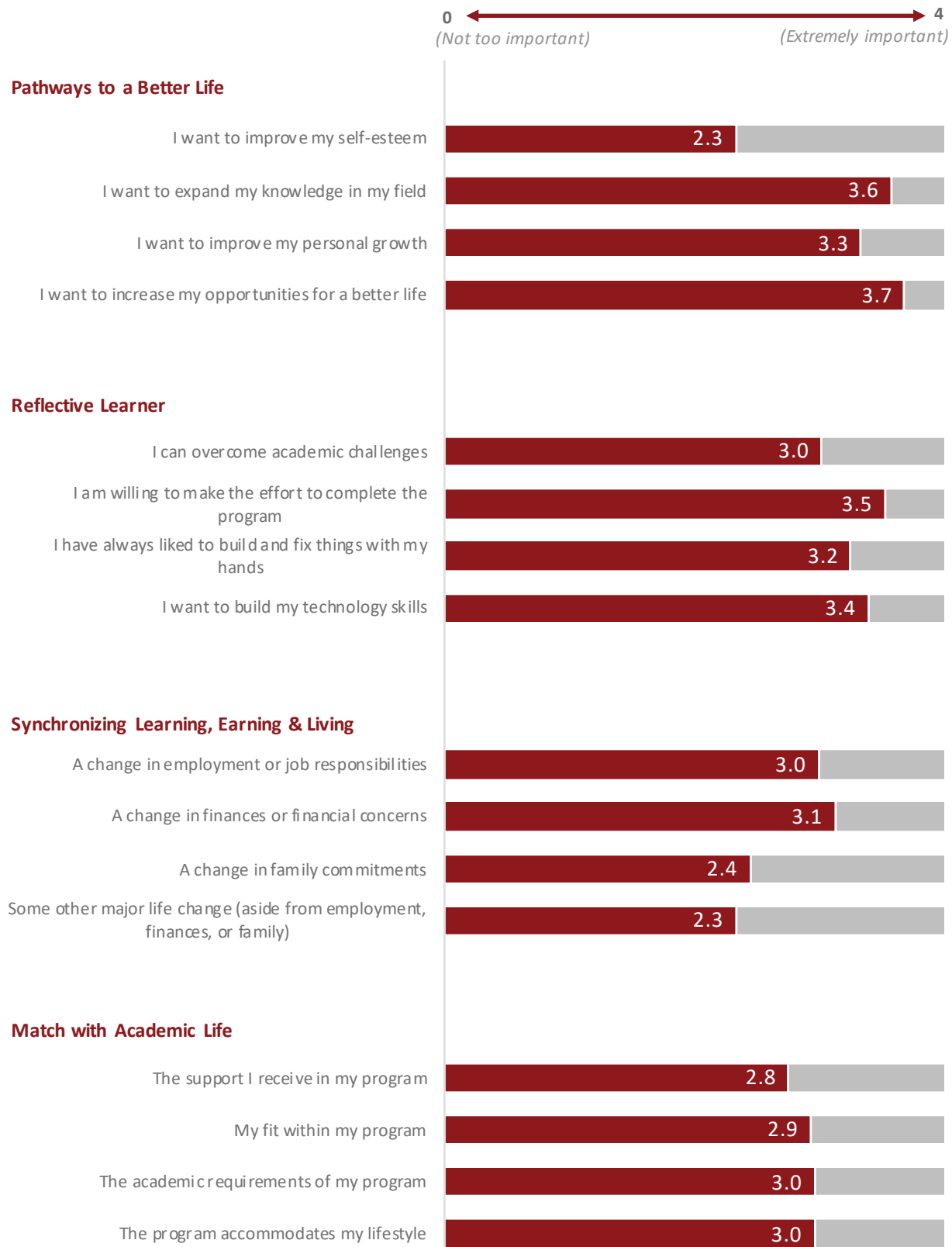


Financial support



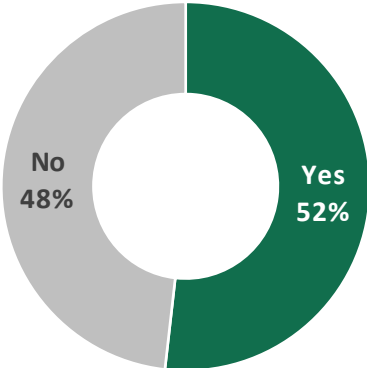
# Interests: Motivations for Enrolling

## Importance by Area

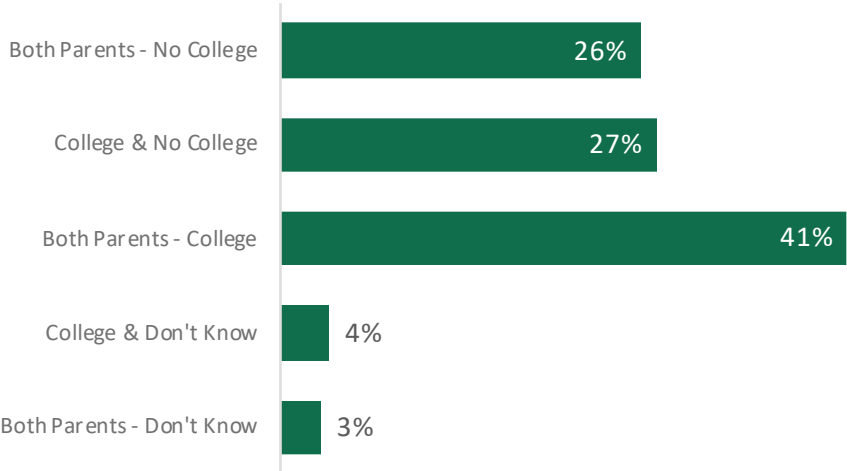


# Family and Personal

## Percentage of Students with Children in Household (may include siblings for students living with parents)

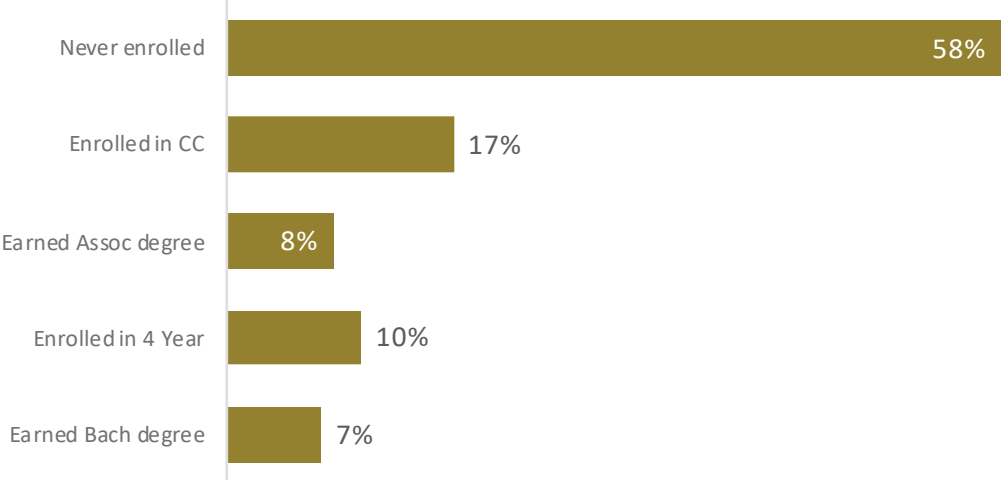


## Parents' educational background

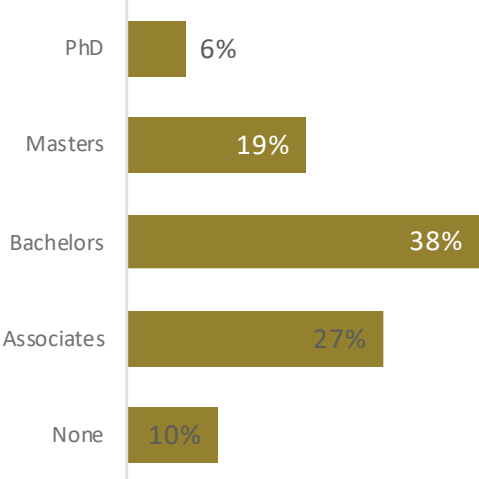


# Educational Background

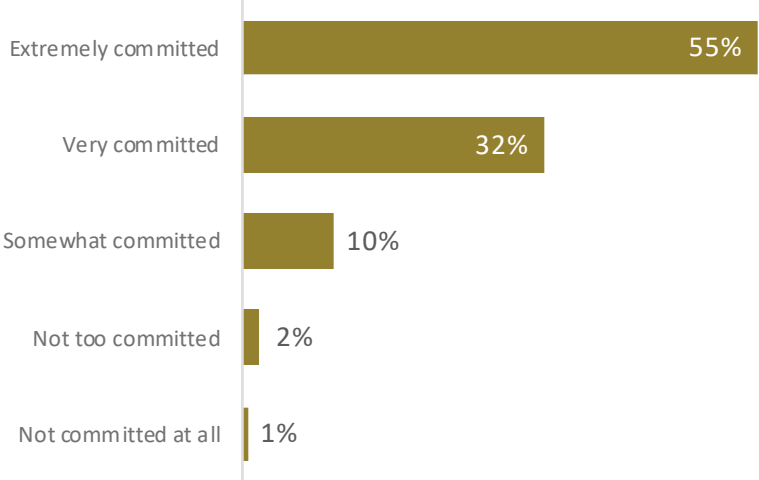
## Prior Education



## Aspiring Highest Degree



## Commitment to Field



# ACKNOWLEDGMENTS

PathTech LIFE would like to acknowledge the following people/organizations for their contribution to this work:

- Marilyn Barger, Principal Investigator, Florida Advanced Technological Education Center for Manufacturing (FLATE)
- Eight National Science Foundation Advanced Technological Education Centers:
  - Consortium for Alabama Regional Center for Automotive Manufacturing (CARCAM)
  - Center for Renewable Energy Advanced Technological Education (CREATE)
  - Florida Advanced Technological Education Center for Manufacturing (FLATE)
  - MatEdU: National Resource Center for Materials Technology Education
  - Midwest Photonics Education Center (MPEC)
  - Northeast Advanced Technological Education Center (NEATEC)
  - Regional Center for Nuclear Education and Training (RCNET)
  - Regional Center for Next Generation Manufacturing (RCNGM)
- 96 Community Colleges
- Impact Allies for External Communications services, including



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# PathTech LIFE



Understanding **pathways** in advanced **technologies**.

## PathTech LIFE Report College Level Findings





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PathTech LIFE is supported by the National Science Foundation under Grant No. 1501999. PathTech LISTEN is supported by the National Science Foundation under Grant No. 1801163. Any opinions, findings, and conclusions or recommendations expressed on this site are those of the authors and do not necessarily reflect the views of the National Science Foundation. USF IRB: Pro00021314

# PathTech LIFE



Understanding **pathways** in advanced **technologies**.

## Survey Findings Report



## PROJECT OVERVIEW

- National Science Foundation (NSF) funded Advanced Technological Education (ATE) Targeted Research in Technician Education
- Partnership between University of South Florida, Florida Advanced Technological Education Center (FLATE) at Hillsborough Community College and national ATE Center Partners
- National survey of community college students in advanced technology fields in collaboration with a national network of colleges.
- PathTech LIFE seeks to understand how learning, interests, family, and employment (LIFE) experiences of two-year college students impact their decisions to enroll, return for further coursework, and/or pursue a certificate or degree.



# TIMELINE

|                                      |   |
|--------------------------------------|---|
| <b>September 2015 – January 2016</b> | Drafted initial survey  |
| <b>February – April 2016</b>         | Received input from panel of experts made up of two people from each ATE Center using Delphi technique (three iterative rounds)             |
| <b>April 2016</b>                    | Completed survey revisions; Completed IRB modification  |
| <b>April – May 2016</b>              | Distributed Round 1 pilot survey to students at six colleges (97 respondents)   |
| <b>June – August 2016</b>            | Analyzed data 1 <sup>st</sup> pilot survey data, revised survey based on findings   |
| <b>September 2016</b>                | Conducted one-on-one interviews with four students while taking survey  |
| <b>October 2016</b>                  | Completed survey revisions; Completed IRB modification  |
| <b>November – December 2016</b>      | Distributed 2 <sup>nd</sup> pilot survey to students at 18 colleges (147 respondents)   |
| <b>January – March 2017</b>          | Shortened survey from 25 to 15 minutes; Revised distribution plan to include direct communication with colleges; Completed IRB modification |
| <b>April 2017 – May 2017</b>         | Distributed 1 <sup>st</sup> round national survey to students at 25 colleges (528 respondents)  |
| <b>May – September 2017</b>          | Analyzed Round 1 <sup>st</sup> round national data, prepared reports, publications, and presentations                                       |
| <b>October – December 2017</b>       | Distributed 2 <sup>nd</sup> round national survey to students at 59 colleges (1344 respondents)   |
| <b>January – February 2018</b>       | Analyzed 2 <sup>nd</sup> round national data, prepared reports, publications, and presentations   |
| <b>March – June 2018</b>             | Distributed 3 <sup>rd</sup> round national survey to 65 colleges (1443 respondents)   |
| <b>June 2018 / February 2019</b>     | Received supplemental funding and no-cost extension to extend project to December 2019  |
| <b>June 2018 – December 2019</b>     | Analyze all data, prepare reports, publications, and presentations  |



# PROGRAM SELECTION



ENGINEERING  
TECHNOLOGY



ENERGY AND  
ENVIRONMENTAL  
TECHNOLOGY



ADVANCED  
MANUFACTURING



MICRO AND NANO  
TECHNOLOGY



## SURVEY TOPICS

- Academic Background
- College Experiences
- Employment Background
- Employment Status
- Motivation for Enrollment
- Program Evaluation
- Academic Goals
- Career Goals
- Demographics

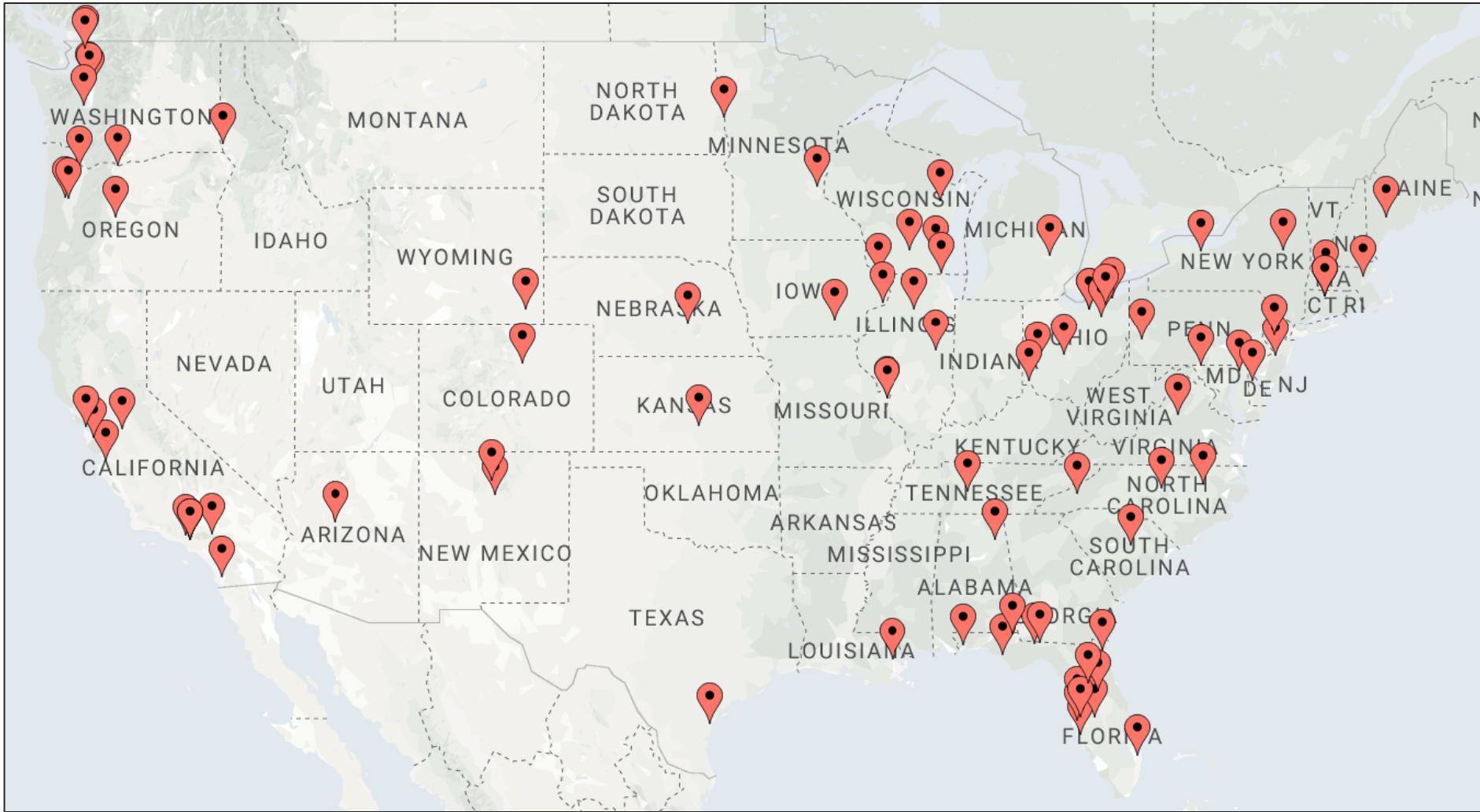


# SURVEY RESULTS



# SURVEY RESPONDENTS across US

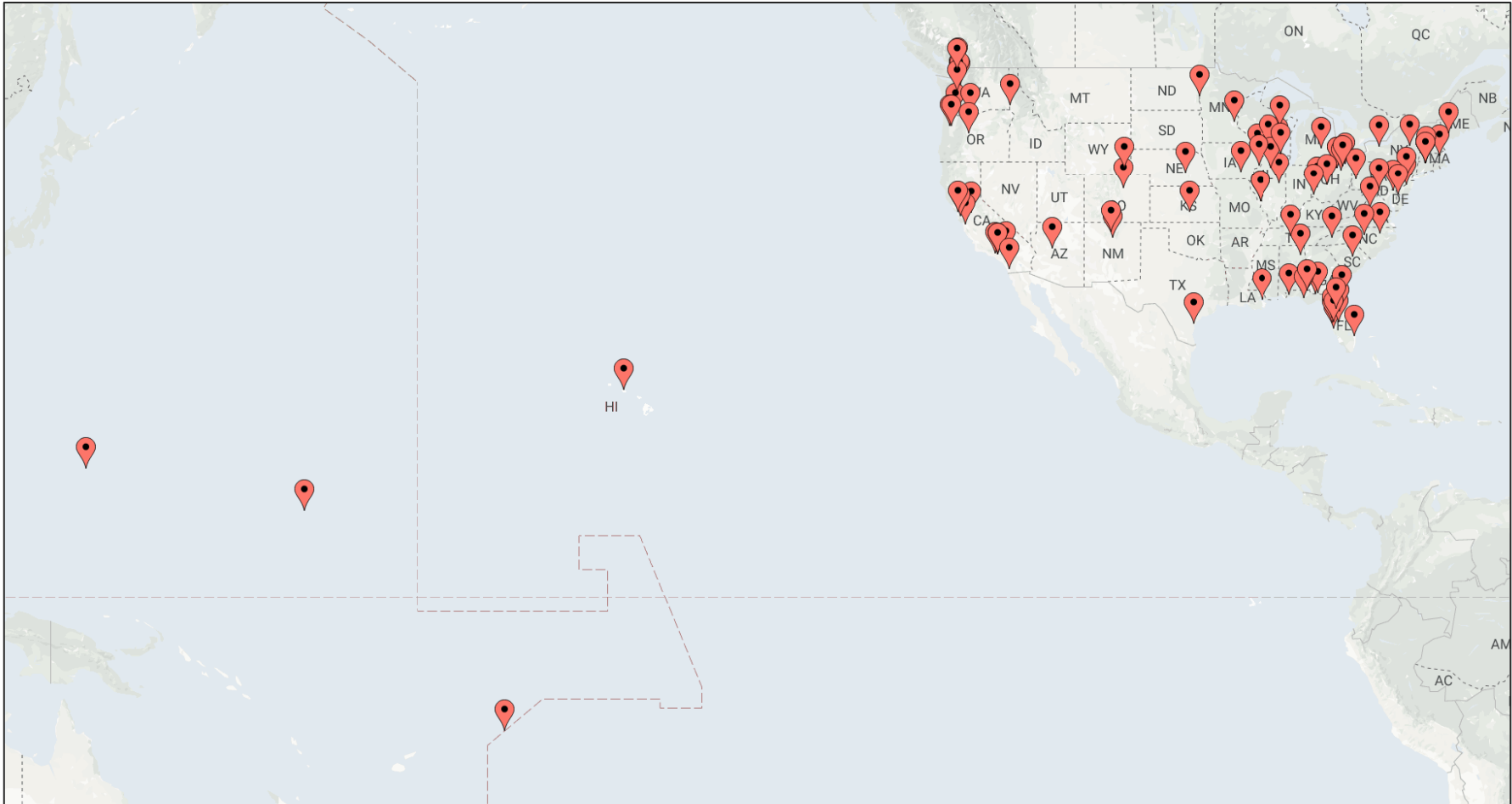
(3,216 students from 96 colleges in 38 states...)





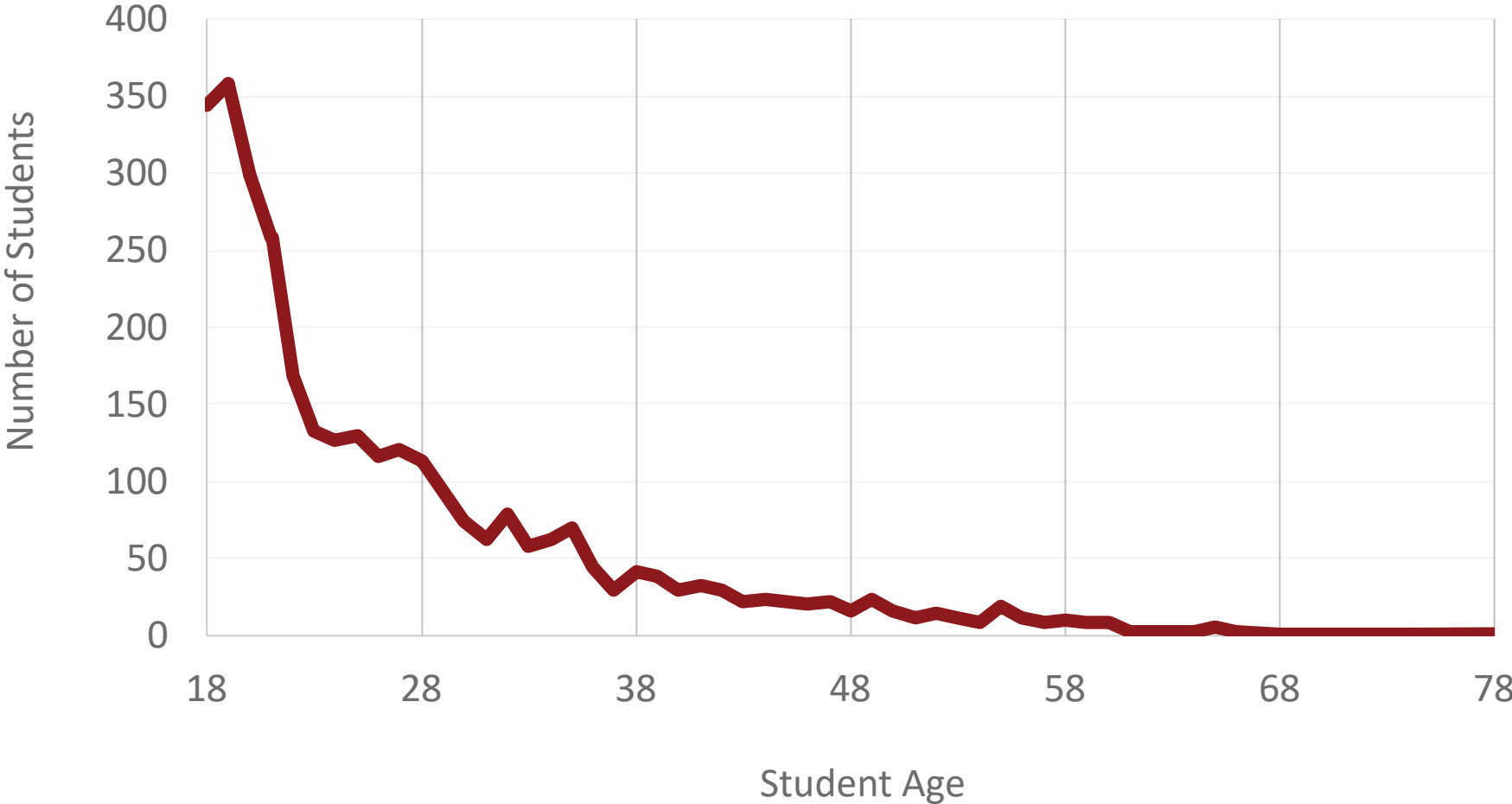


# SURVEY RESPONDENTS across US ...and 3 territories)



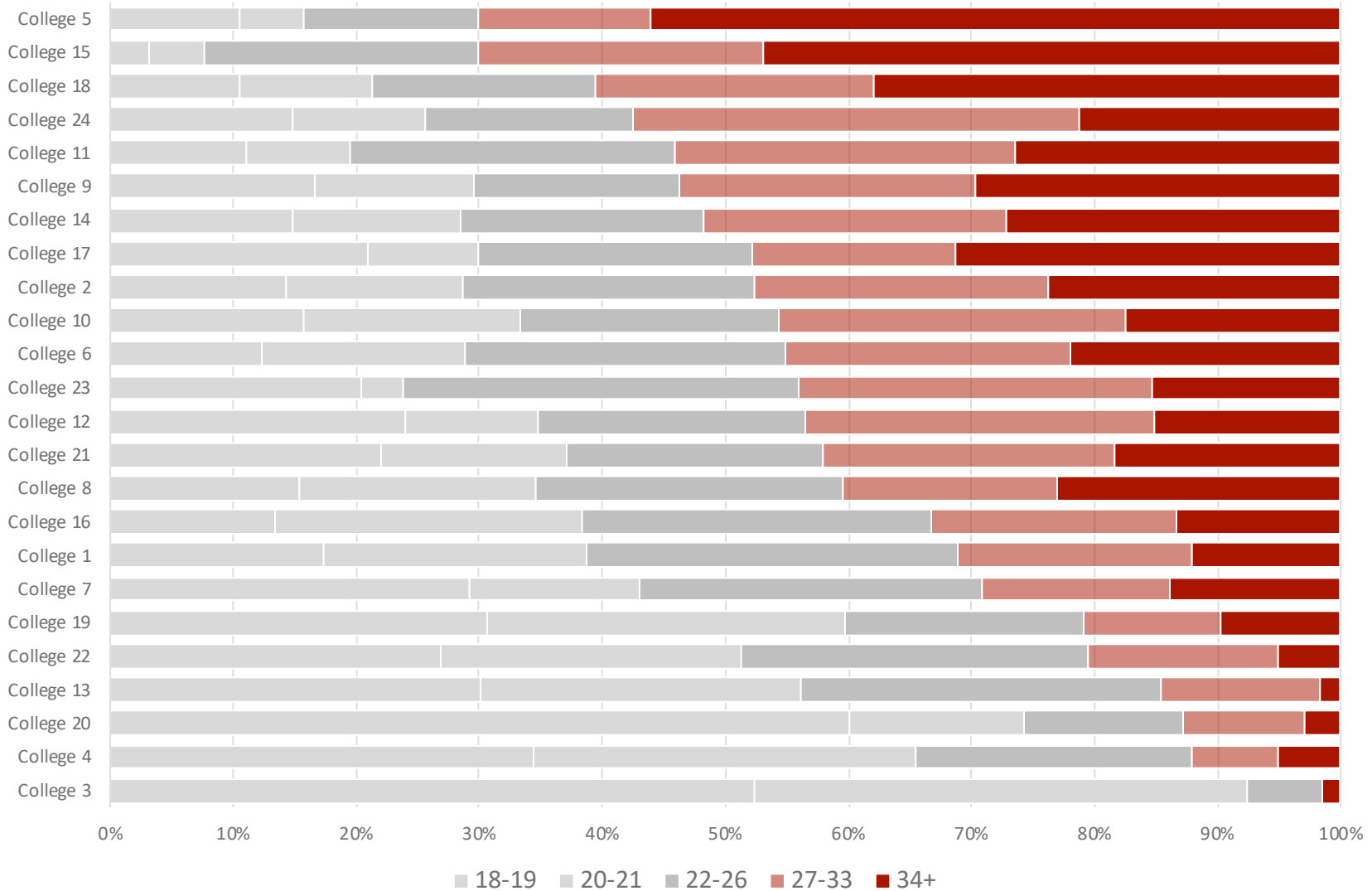


# Age



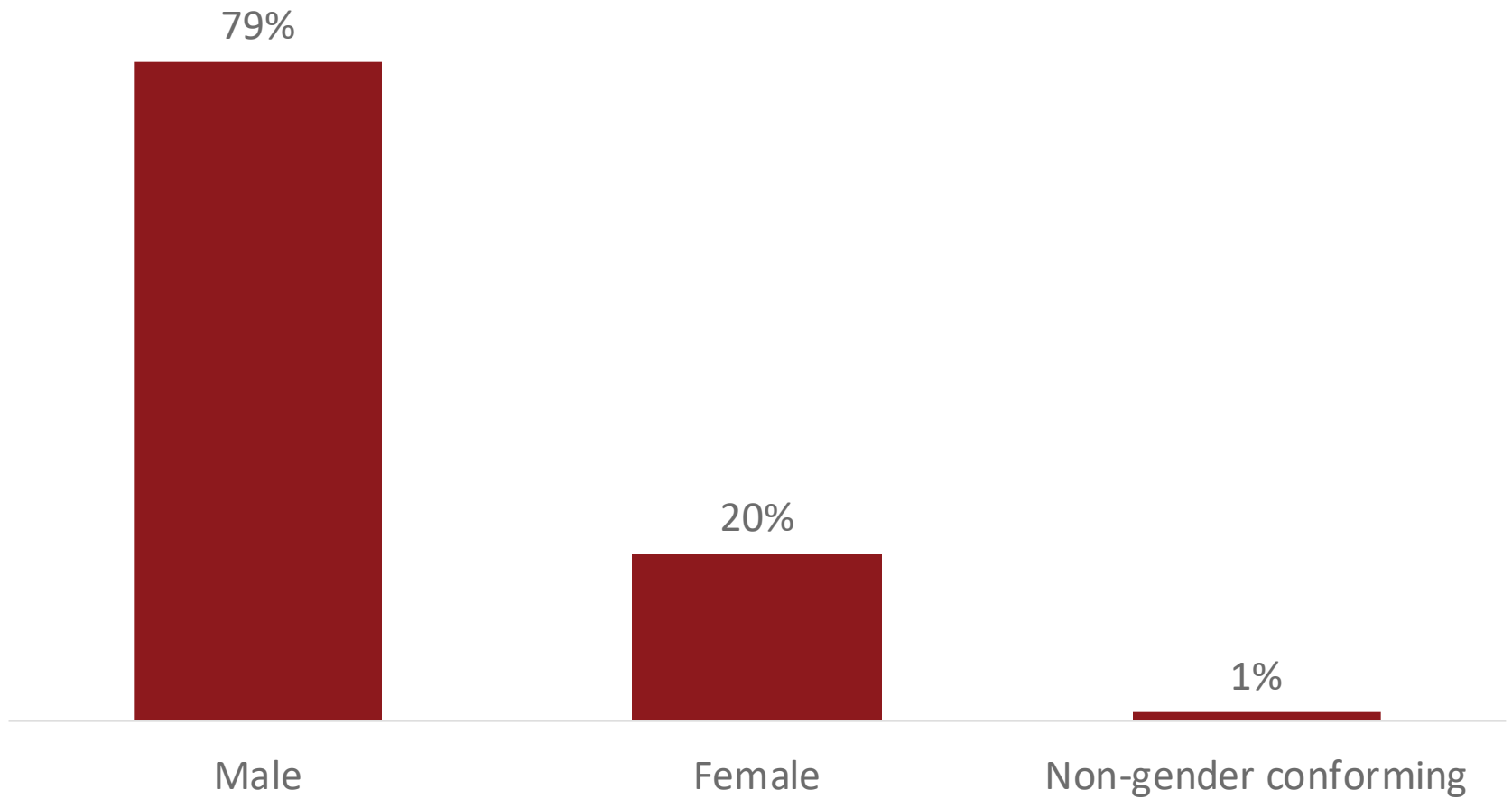


# Age Quintiles by College (colleges with over 50 respondents)





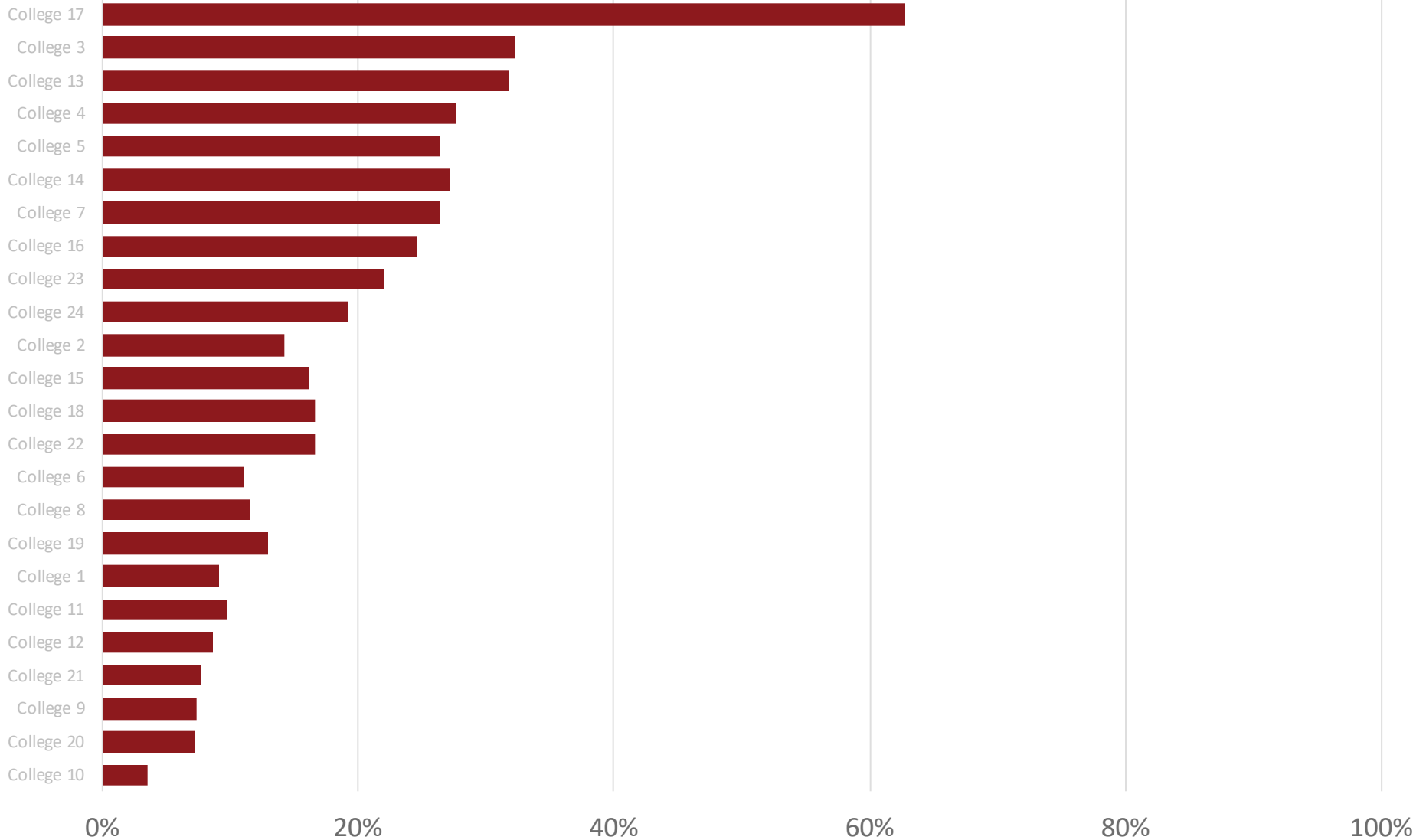
# Gender



n=3,216

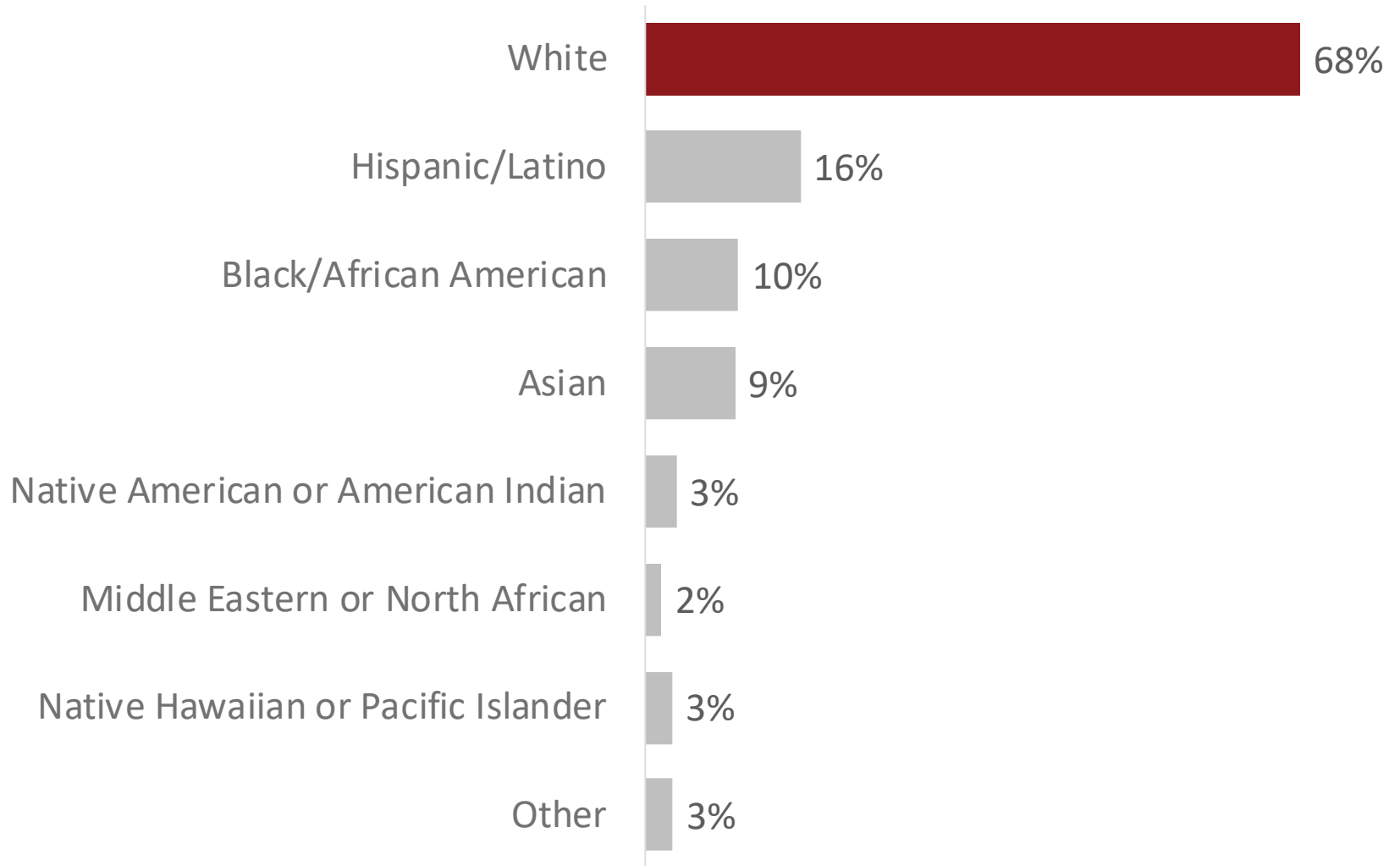


# College Comparisons: Women Students



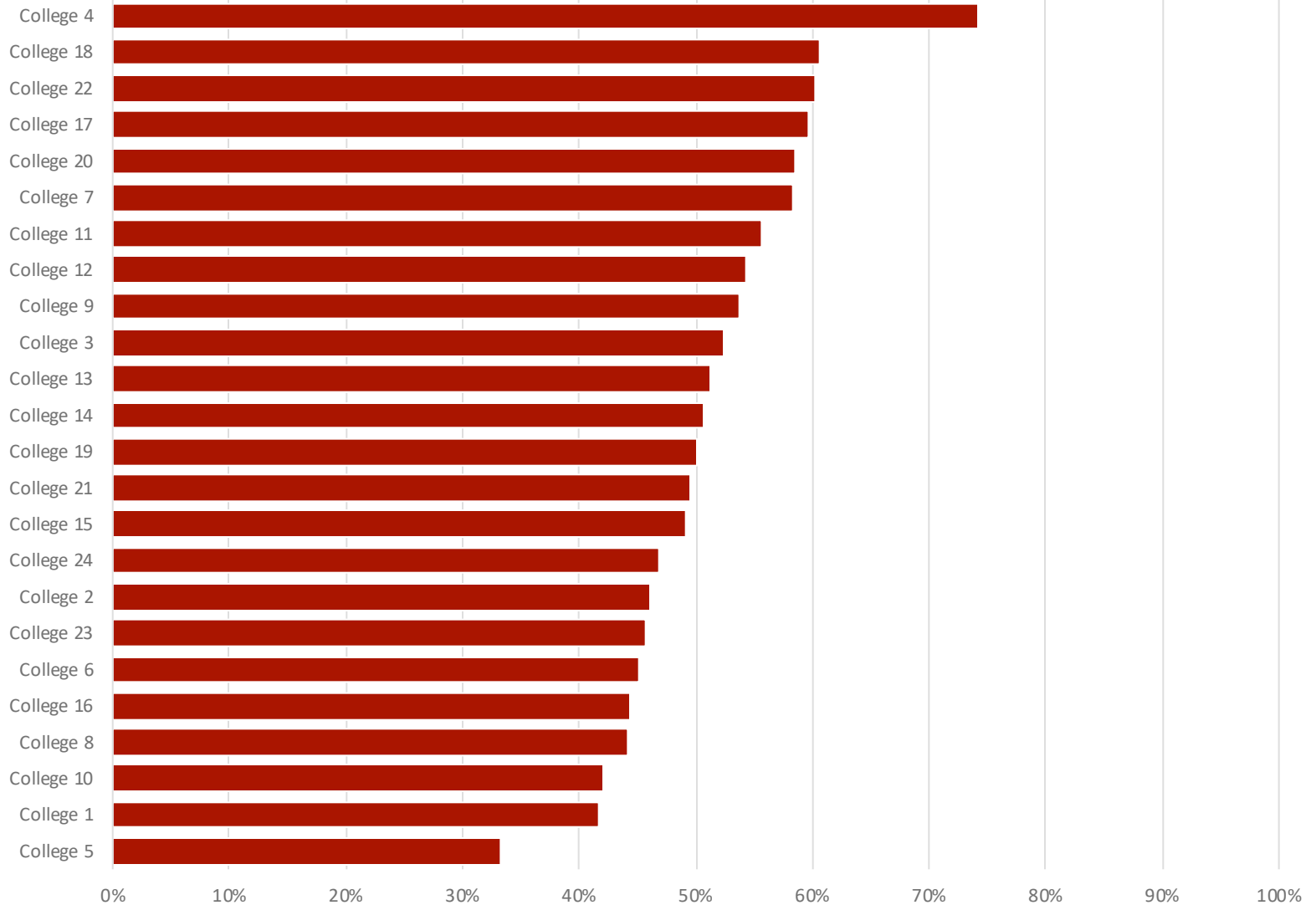


# Race and Ethnicity



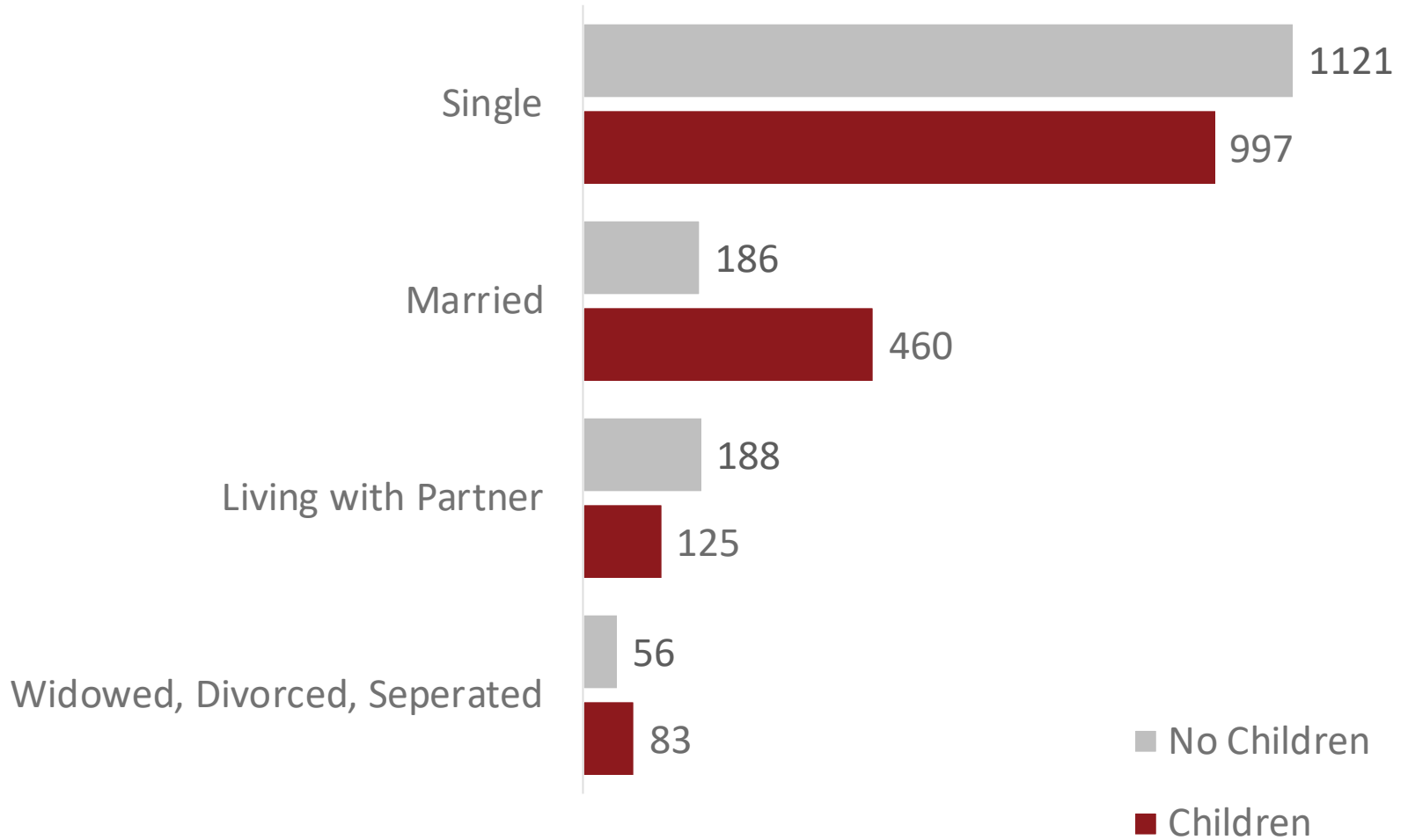


# Percentage with Children in Household





# Family Status

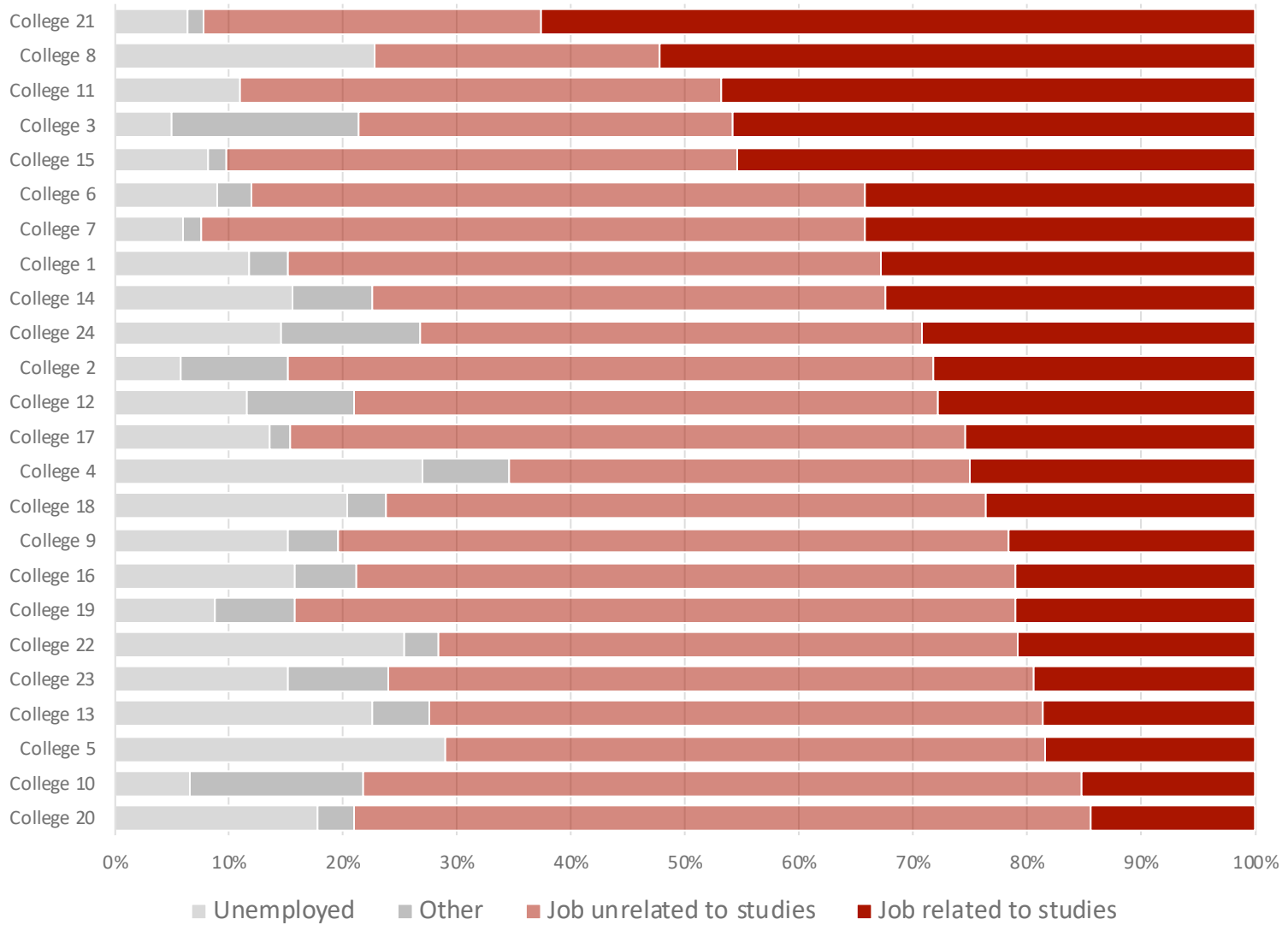


n=3,216





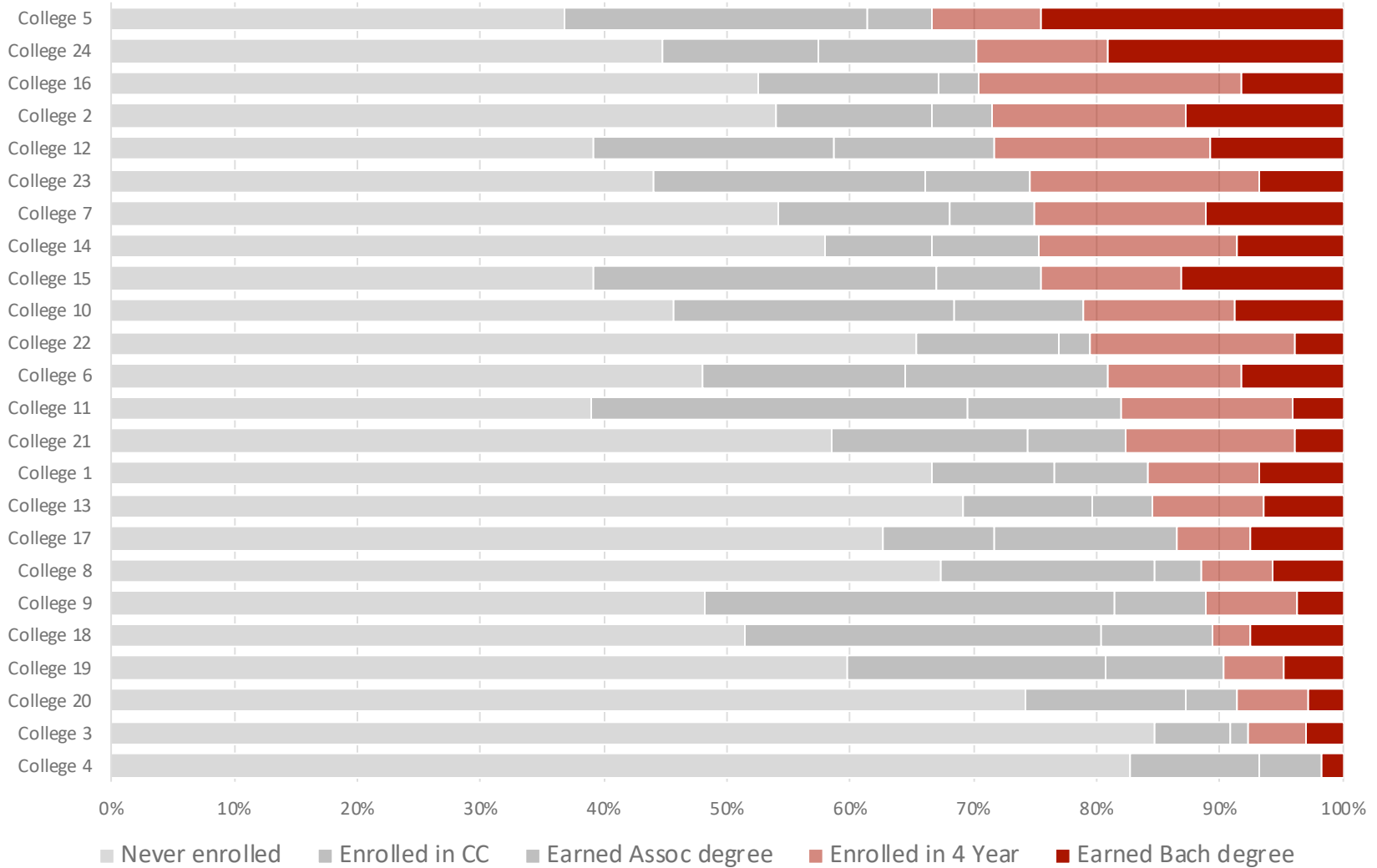
# Employment Status





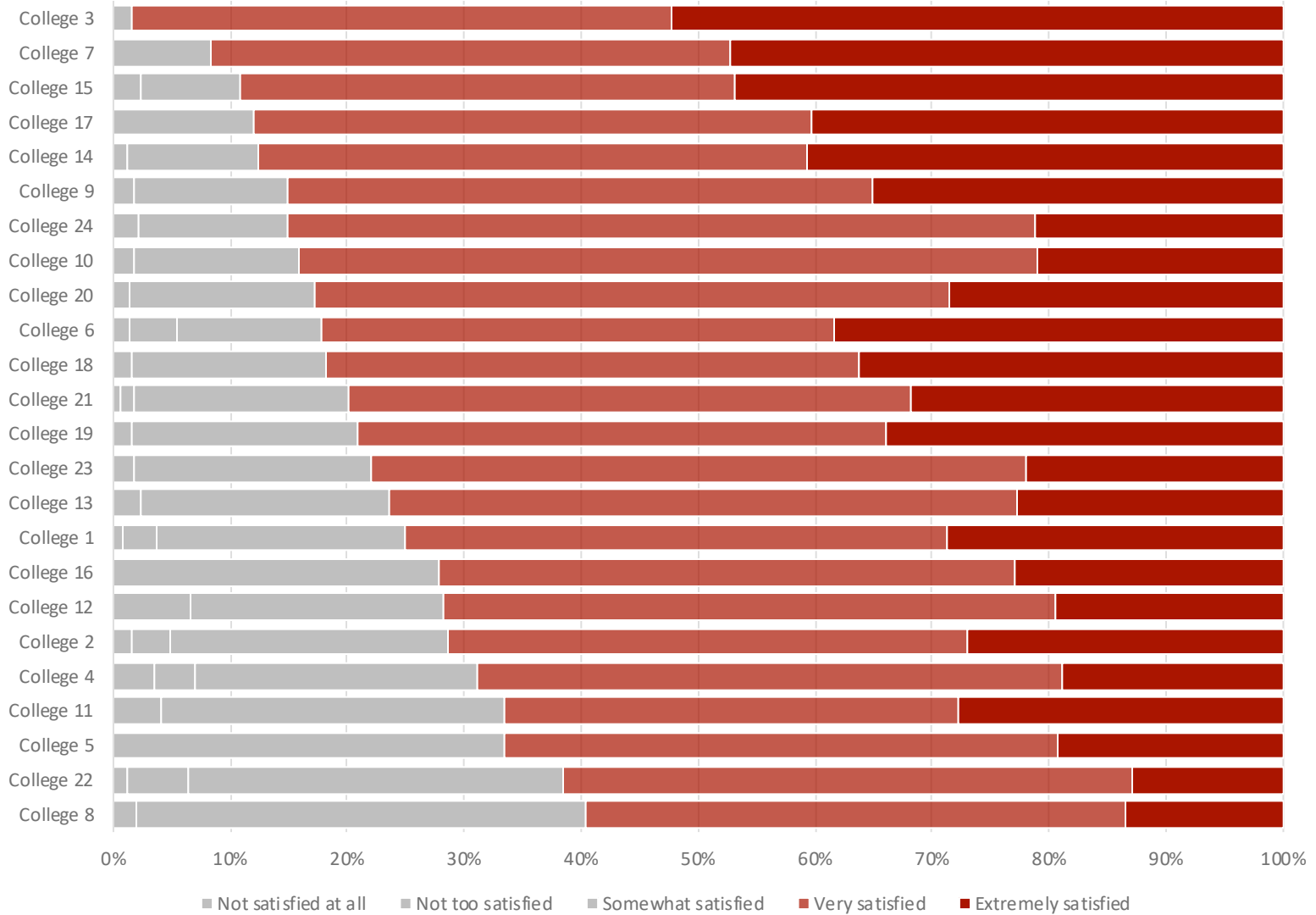
# Educational Background

Prior Educational Background





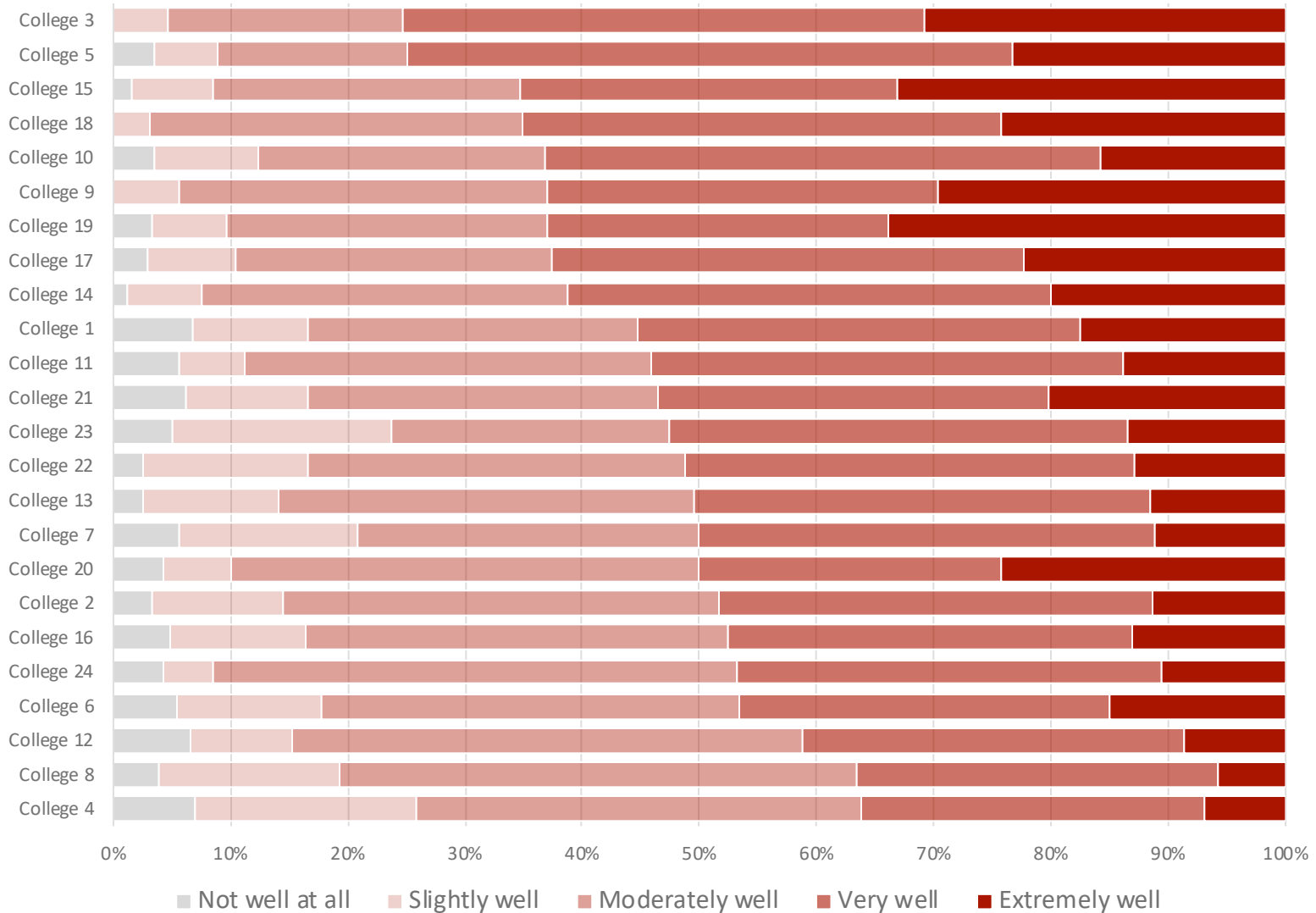
# Program Satisfaction: General Satisfaction by College





# Student Accommodations

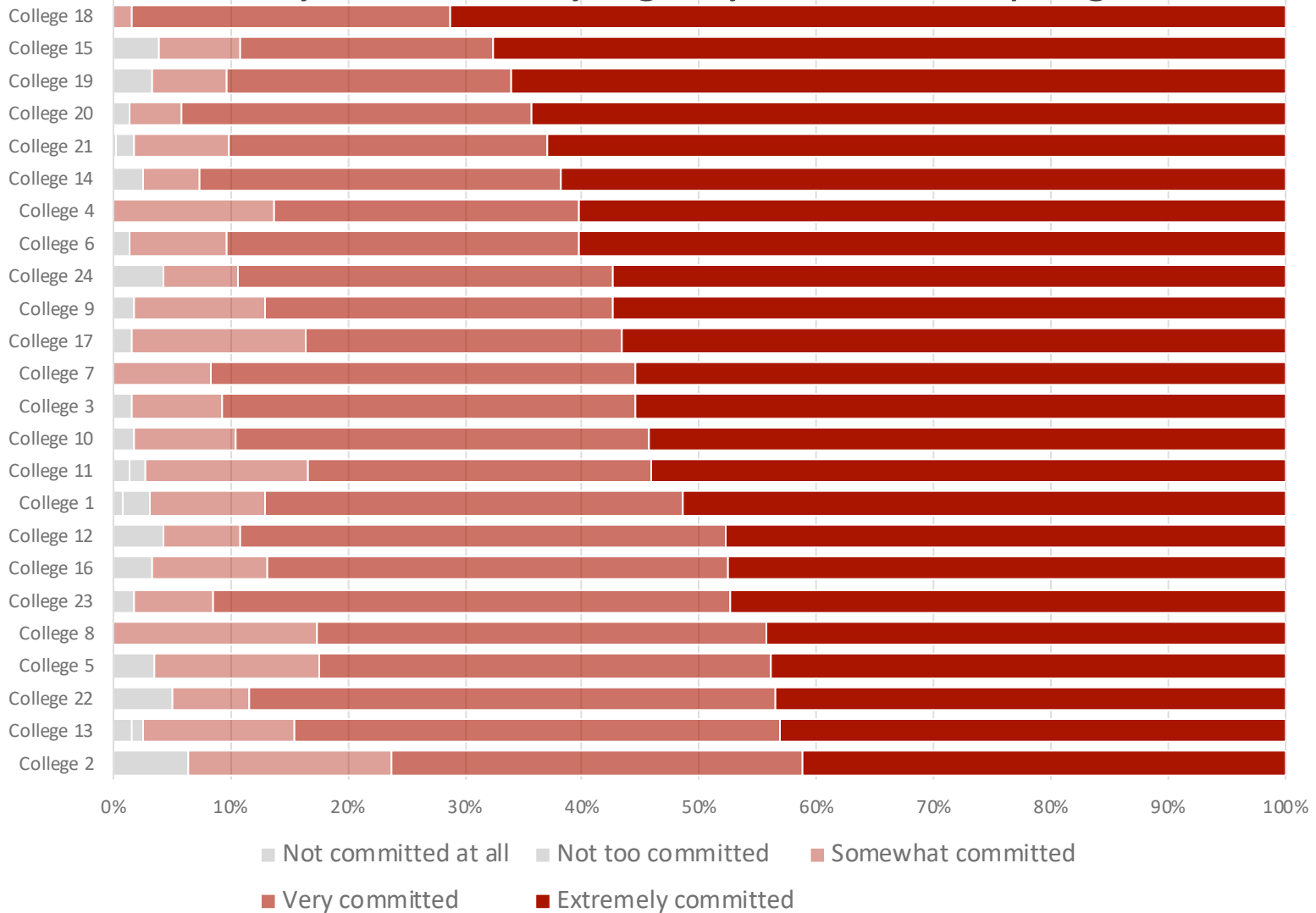
*How well does your program accommodate your work schedule and lifestyle?*

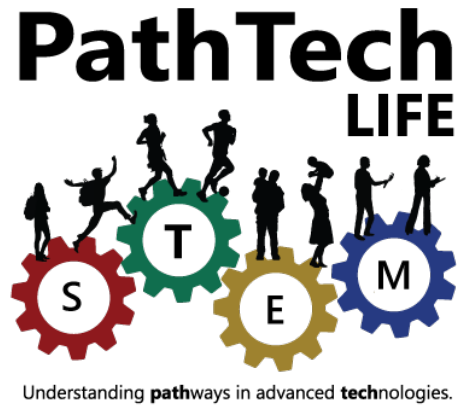




# Commitment to Field

*How committed are you to pursuing a career related to what you are studying in your current program?*





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Principal Investigator  
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