

College Preparedness: A Qualitative Study

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Abstract

The official 4-year graduation rate is almost half the 6-year graduation rate. The factors behind this difference should be studied in order to assist colleges and other organizations provide better assistance for students. This study tries to identify these factors by gauging how prepared students feel before, during, and after college.

A survey asking about these factors was distributed amongst peers, aimed at pinpointing which factors were most important. Each factor was then compared to feelings of preparedness, and then analyzed for whether a statistical correlation exists.

Our results showed on average, people felt more prepared to succeed in college as opposed to graduating in 4 years. Conclusively, there was little to no correlation between the factors we studied and feelings of college preparedness.

Introduction

In today's world, a college education is almost required to be successful. Universities also expect students to graduate in four years. However, the official 4-year graduation rate is only 33.3%, while the 6-year graduation rate is 57.6%. The factors behind the low rate of students graduating in 4-years should be studied in order to assist colleges and other organizations provide better assistance for students in order to achieve the plan of graduating in 4-years. This study tries to identify possible factors that may explain the difference in these rates by gauging how prepared students feel before, during, and after college.

To perform the study, a survey was distributed amongst peers, aimed at trying to figure out why students felt unprepared for college. Some of these factors included: income, expectations, mental health, and if they were a first generation US college student. Each factor

was then compared to feelings of preparedness, and then analyzed for whether a statistical correlation exists.

Similar studies focused on the quantitative analysis of college graduation rates to similar factors. This study hopes to measure feelings of unpreparedness in a more qualitative way, to understand the factors behind why students struggle to graduate in 4-years.

State-of-the-Art

While former research is closely related to the area of study discussed in this report, these studies mainly pertain to college graduation rates, degree attainment and student retention, rather than college preparedness itself. Prior work on this topic focused on the statistics and quantitative analysis of graduation rates, and not the inherent factors that may have contributed to what is normally considered a timely, i.e. 4-year to 6-year, graduation rate.

The National Center for Education Statistics possesses an archive on the quantitative data for the graduation rates over the course of the last eight years, from 2013 to 2020. These reports studied the distribution between private and public institutions, as well sex, age and gender. It was noted that the graduation rate had increased from 2010 to 2018, however the rates varied among universities (NCES 2020).

Another notable study conducted in 2011 by the Higher Education Research Institute (HERI) at UCLA assessed the graduation rates and degree attainment at four-year undergraduate institutions. This particular study analyzed a series of reports from the HERI, and combined these findings with the 2004 CIRP Freshman Survey and completion data from the National Student Clearinghouse, which recorded data and tracked individual students toward degree completion. The study reported degree completion rates at three varying rates: four,

five, and six years after entering college; the data was then narrowed down to the following socioeconomic factors: the type of institution, gender, first-generation [college] student status, and race/ethnicity (DeAngelo, et al. 2011). These socioeconomic factors served as a basis for the analysis completed in our study, and gave an insight into how little qualitative data exists on the factors contributing to college preparedness.

Data

The data was sourced from a Google Form survey distributed amongst peers. The survey consisted of approximately fifteen questions, with responses collected over the course of two weeks. The specific questions asked on the survey can be found in *Appendix A*. A total of 185 responses were collected at the end of the study, and were used for the analysis.

The aim of the analysis was to determine if there was a correlation between any socioeconomic factors and college preparedness.

Proposed Approach/Methods

Overall Approach

The overall approach used to determine the factors for college preparedness was first discussing and researching possible factors from previous related studies, and personal and peer experiences. After gaining enough possible factors, the survey was made by picking the most interesting factors and turning them into questions. The survey was then distributed amongst peers and two weeks were given for the collection of responses. The data would then be analyzed to determine whether each factor had a correlation to preparedness.

Methods

The correlation analysis between each factor and college preparedness was done by using box-plots. Box-plots were chosen for the

analysis given that many factors are qualitative, as well as each factor having an unknown weight in their relationship to each individual's feelings of college preparedness. The box-plot could then be analyzed to see if the factor correlated to feelings of unpreparedness.

Results

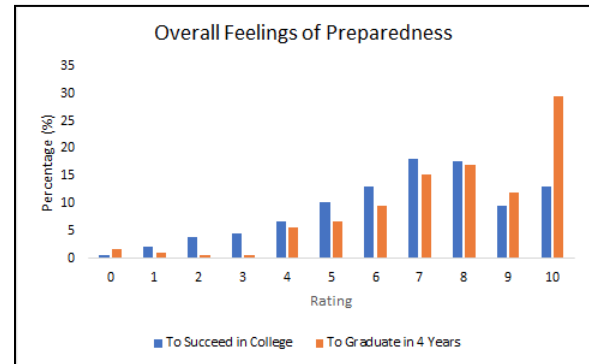


Figure 1: Overall Feelings of Preparedness

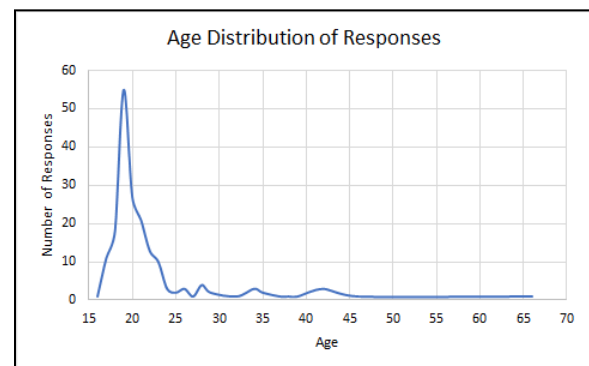


Figure 2: Age Distribution vs Number of Responses

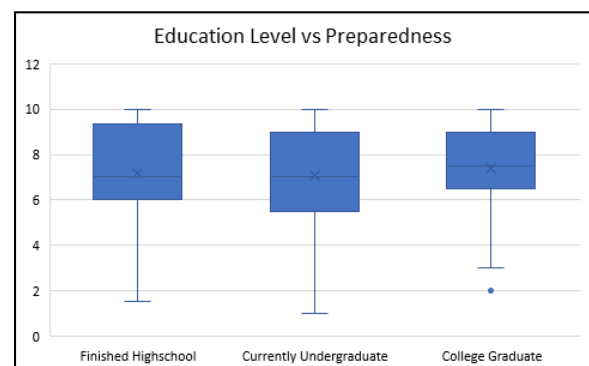


Figure 3: Education Level vs Preparedness

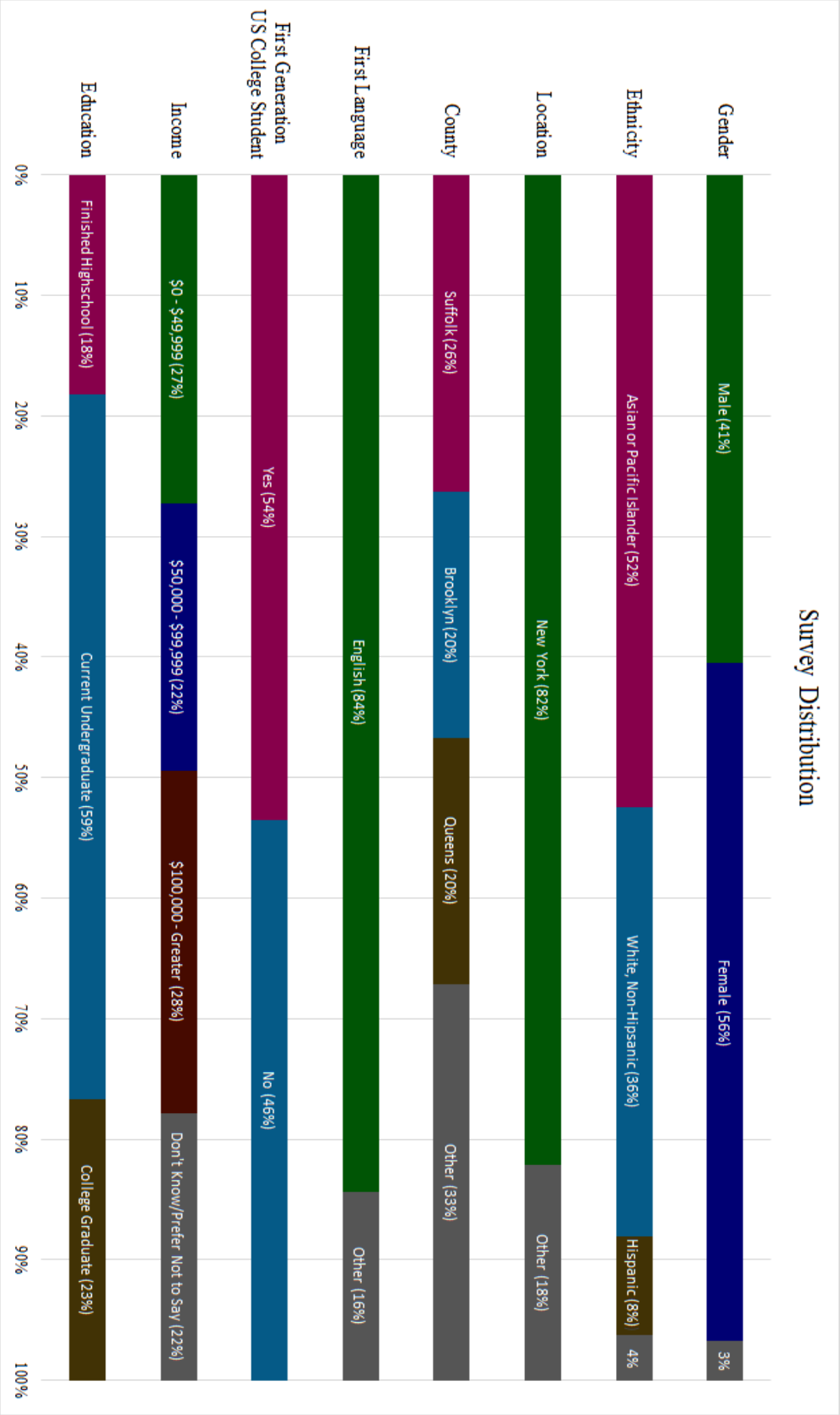


Figure 4: Survey Distribution

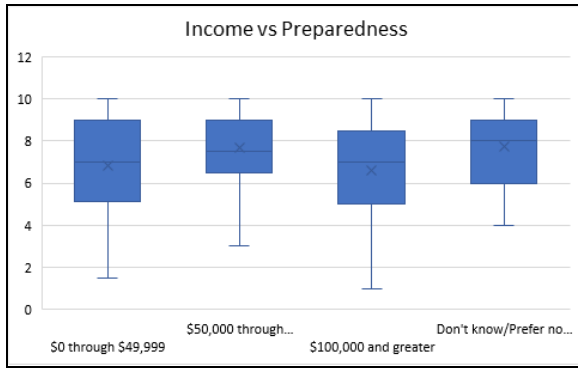


Figure 5: Preparedness vs Income

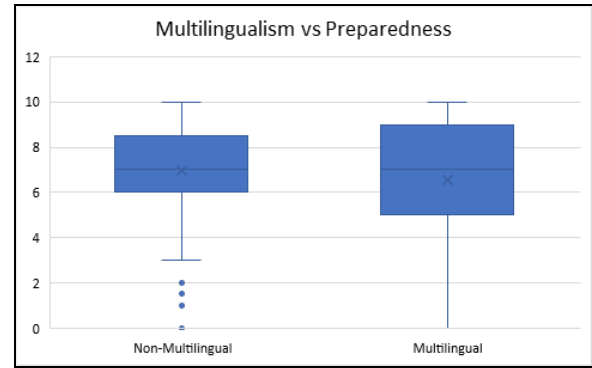


Figure 8: Multilingual vs Preparedness

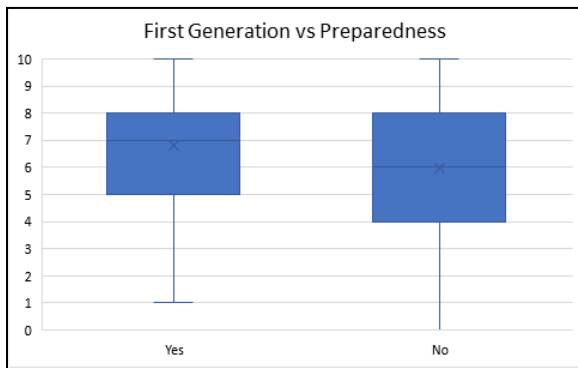


Figure 6: First Generation vs Preparedness

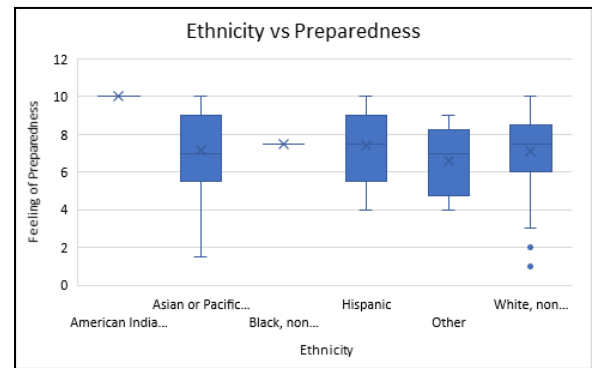


Figure 9: Preparedness vs Ethnicity

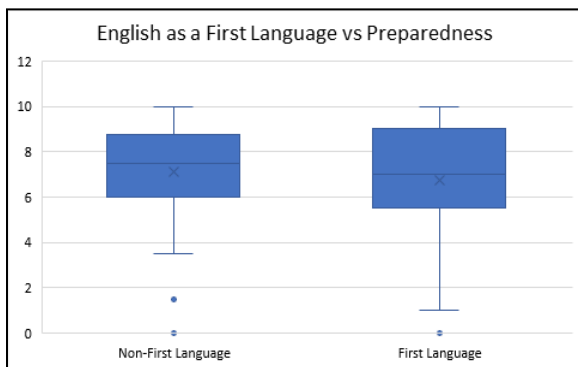


Figure 7: English as a First Language vs Preparedness

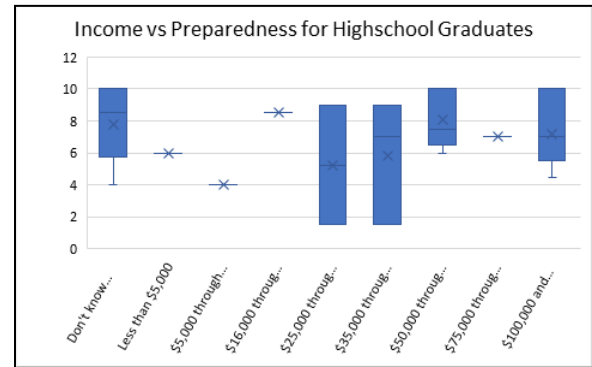


Figure 10: Income vs Preparedness for Highschool Graduates

Discussion

Figure 1 shows the overall results of the survey. The average rating for preparedness to succeed in college was 6.66, while the average rating for preparedness to graduate in 4 years was 7.65. This went against our original assumption that people would feel more prepared succeeding than graduating in 4 years.

Figure 2 shows the age distribution of our survey, and you can see that it vaguely resembles a normal distribution. We believe that if we collected a larger sample size for the survey, it would more closely resemble a normal distribution.

One of the other variables that we were interested in comparing with preparedness was the highest level of education received. In order to analyze the data properly, the responses from the survey for the education level, had to be grouped into three categories: finished highschool, currently attending college, and college graduate. The results were graphed in Figure 3.

Looking at Figure 3, we can draw a few conclusions from the data. The first conclusion is that college graduates have a smaller distribution of feeling prepared with the highest median and mode value. Visually, the smaller distribution is represented by a smaller sized box while the mean and median, represented by the "x" and line, are at higher values. Interpolating this information, it can be concluded that after graduating college and obtaining a degree, people feel more prepared about their college experience looking back as opposed to someone who is currently trying to earn a degree or someone who has just completed their highschool education. This conclusion is further supported by the fact that the feelings of preparedness for highschool graduates and current college students are essentially the same, having very similar distributions and almost identically sized box-plots. They have the same

median values and their mean values are just 0.2 units off.

Figure 4 shows the overall distribution of each category that we surveyed for. Although some categories such as gender, first generation US college student, and income had very even distributions, the other factors did not. For the unevenly distributed categories, it should be considered that our college preparedness results may be biased towards whichever sub-category provided the most responses.

Another variable that was compared against preparedness was income. Again, in order to properly analyze the data, the responses from the income section of the survey had to be grouped into four larger categories. The income was divided into people making less than 49k, 50k - 99k, greater than 100k, and don't know/prefer not to say. The results were graphed in Figure 5 using a box-plot.

Looking at the figure, there is no obvious correlation between preparedness and income. Surprisingly, the group with the smallest distribution was the group in the median income range, with an income of 50k - 99k. This group had the smallest sized box plot and the least amount of variation. The group with the highest median value of preparedness, with a value of 8, was the don't know/prefer not to say group. The other groups had median values of 7 for less than 49k, 7.5 for 50k-99k, and 7 for 100k and greater. The mean values for the four groups also did not show any correlation. The mean values are 6.8 for the less than 49k group, 7.8 for 50k - 99k, 6.6 for the greater than 100k group, and 7.8 for the don't know/prefer not to say group. The group with the highest mean and median for feelings of preparedness ends up being the don't know/prefer not to say group.

Another factor that was focused in the survey was language and ethnicity. Figures 6-9

shows the correlation between language/ethnicity and college preparedness.

In Figure 6, people who are and are not first generation college students had around the same range of preparedness. However, the mean and median for first generation college students was higher than non-first generation students.

Figure 7 shows a box-plot for English as a first language vs preparedness. The box-plot shows that people whose first language was English had a bigger range than those whose first language was not English. When comparing both box-plots, the median and mean for people who had English as their first language were lower than people who didn't have English as their first language.

In Figure 8, the box-plot shows that the mean for the non-multilingual graph was higher, however the median for both box-plots were the same (median of 7). This could've been affected by the outliers shown in the non-multilingual box plot.

Figure 9 shows the comparison of preparedness and different ethnicities that were included in the survey. The ethnicity that has the highest mean in preparedness is Hispanic. It is shown that Hispanics and Whites had the highest median. Due to the uneven distribution of the survey, American Indians and Blacks could not be analyzed by the graphs.

Figure 10 shows feelings of preparedness based on income, as well as the level of education received. The data collected was limited and therefore a thorough analysis could not be performed. In the box-plot, the categories that got just one response are represented by a line with an "x" going through it. Looking at the figure, four out of the nine categories only received one response. It would not be fair to say that people who earn 5k-12k feel the least prepared because the sample size is only one.

Conclusions and Future Work

In our study, in order to determine what factors affect students' feelings of preparedness and how, we distributed a survey aimed at answering those questions. The data was then analyzed and graphically represented by box-plots. The results were interpolated in order to determine whether any factors correlated with feelings of preparedness.

Overall, our results varied from our expectations. On average, people felt more prepared to succeed in college as opposed to graduating in 4 years. Variables such as income and education level also had unexpected results. The most educated and highest income groups didn't feel prepared, with our results not showing any kind of obvious correlation or patterns. Other factors such as ethnicity, first language, and whether a person is multilingual or not also did not provide us with any definitive correlation. However, non-multilingual people had a smaller distribution of preparedness which would fit the expected results.

The main limitation of our study was the sample size and sample variation. There were 185 respondents to the survey. This might seem like a high enough number, however in order to perform detailed analysis there was not enough data and not enough data variation within the survey responses.

The distribution of ethnicity was uneven as well. While giving a good representation for the White, Non-Hispanic ethnic group and Asian or Pacific Islander ethnic group, other ethnic groups were not well represented. Some groups only had one responded which would not be a good representation for the whole ethnic group. This gives a future opportunity to conduct more research on a more varied population sample.

The study was conducted in the NYC region therefore giving a bias distribution for the location. We were not able to study the effect location has on preparedness levels. This leaves

an opportunity for further research to be performed in other regions in order to determine whether location does in fact play a role in feelings of preparedness.

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Author's Contributions

Aguilar, Rheo: Presentation/ Powerpoint, Literature Review, Figures 1, 7 and 8

Chan, Bryan Yap Vee: Project Manager, Survey creation, distribution, QA/QC

Moy, Jennifer: Method/Proposed approach, discussion of figures 6,7,8,9

Yanovskiy, Ivan: Conclusion, Part of Discussion, Figures 3, 4, 9, and 10

Appendix A

1. Gender
 - a. Male
 - b. Female
 - c. Non-Binary
 - d. Prefer not to say
2. Age
3. Ethnicity
 - a. Black, non-Hispanic
 - b. American Indian or Alaskan Native
 - c. Asian or Pacific Islander
 - d. Hispanic
 - e. White, non-Hispanic
 - f. Other
4. Location
 - a. Which state do you currently reside in?
 - i. Choice of one of the 50 US states
5. If NY was chosen in the previous question:
 - a. Location (NY): Which county do you reside in?
 - i. Choice of one of NY's counties
6. Background
 - a. What is your first language?
 - b. What is your fluency in English? (Rated out of 5)
 - i. 0 - None
 - ii. 1 - Elementary Proficiency
 - iii. 2 - Limited Working Proficiency
 - iv. 3 - Professional Working Proficiency
 - v. 4 - Full Professional Proficiency
 - vi. 5 - Native/Bilingual Proficiency
 - c. Are you a first generation US college student?
 - i. Yes/No
 - d. What is your household income, before taxes and other deductions?
 - i. Less than \$5,000
 - ii. \$5,000 through \$11,999
 - iii. \$12,000 through \$15,999
 - iv. \$16,000 through \$24,999
 - v. \$25,000 through \$34,999
 - vi. \$35,000 through \$49,999
 - vii. \$50,000 through \$74,999
 - viii. \$75,000 through \$99,999
 - ix. \$100,000 or greater
 - x. Don't know/Prefer not to say
 - e. Which of the following best describes the highest level of education you have completed?
 - i. Didn't Finish High School
 - ii. Didn't Finish High School, but completed a technical/vocational program
 - iii. High School Graduate or GED (General Education Diploma) or any HSE
 - iv. Completed High School and a technical/vocational program
 - v. Less than 2 years of College
 - vi. 2+ Years of College or obtained Associates Degree or equivalent
 - vii. College Graduate (Bachelor's Degree, Master's Degree, or Doctoral Degree)
7. For College Graduates
 - a. How prepared did you feel to succeed in college?
 - i. Scale from 0 to 10
 - b. How prepared did you feel to graduate in 4 years?

- i. Scale from 0 to 10
- 8. For Current College Students
 - a. Are you a Part-time or Full-time student?
 - i. Full time
 - ii. Part time
 - iii. Not currently taking classes
 - b. How prepared do you feel currently to graduate in general?
 - i. Scale from 0 to 10
 - c. How prepared do you feel to graduate in 4 years?
 - i. Scale from 0 to 10
- 9. For High School/GED/HSE students
 - a. Have you ever heard of or taken AP classes/programs?
 - i. Yes/No
 - b. Do you want to go to college?
 - i. Yes/No/Maybe
 - c. How prepared do you feel to graduate college in general?
 - i. Scale from 0 to 10
 - d. How prepared do you feel to graduate college in 4 years?
 - i. Scale from 0 to 10
- 10. For those College or HS experience
 - a. What major are you currently or looking to pursue?
- 11. Resources
 - a. Are you aware of any resources for educational assistance? If so, which?
 - i. Adult Learning Centers
 - ii. Tutoring Centers
- 12. Unpreparedness Factors
 - a. Do any of these factors explain your feelings of unpreparedness?
 - i. Unsure about college application process/procedures
 - ii. Financial Stress
 - iii. Language Barrier
 - iv. Location/Commute difficulties
 - v. Familial Expectations/Pressures
 - vi. Pressure to Succeed
 - vii. Find Academics Challenging
 - viii. Emotional/Mental Health
 - ix. Physical Health
 - x. Other
- 13. Future Programs
 - a. Would you be interested in any of the following programs?
 - i. Resume Creation/Review
 - ii. Preparing for an Internship
 - iii. Job Finding (Part + Full time)
 - iv. Basic Technology Skills Lessons (Computers, Tablets, Microsoft Office, Google Suite, etc.)
 - v. How to Finance College
 - vi. College Application Process
 - vii. 4 Year Graduation Plan (Graduation Requirements, Transferring, etc.)
 - viii. Other