Drop Survey

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Overview

- Survey is presented to students immediately after drop or withdraw inside student portal
  - Why did they drop or withdraw from the class?

- Understand the students' mindsets when they drop a class

- Instant feedback

Relevance

- Opportunity to further understand academic and **non-academic** barriers
  - Integrated Plan Goal
  - Student Equity and Achievement Plan

- Gives directions to how the college can improve student success through academic and student services
  - Completion
  - Persistence
  - Retention

The Survey

- 3 Questions
  - Please indicate all of the reasons you are dropping or withdrawing from your class

  - If the time the course was scheduled was a problem for you, which of the following would have helped you to remain in the course?

  - Which of these services would have helped you complete the course?

- Students can select multiple check boxes, including "other," which allows them to type their answer

Please indicate all of the reasons you are dropping or withdrawing from your class

- Withdrawing from all my classes
- Moving from the area
- Changing colleges
- Reliable transportation
- Inadequate childcare
- Obtained a job and could no longer take the class
- Work hours increased/changed
- I did not need the course
- Got too far behind in the course

- Financial costs associated with the course were too high
- My financial aid was late
- Wanted a different class format (online, hybrid), time, or instructor
- My life is too stressful at this time
- Unforeseen emergency or illness occurred
- Other

If the time the course was scheduled was a problem for you, which of the following would have helped you to remain in the course?

- Early morning (before 9:00am)
- Morning (before noon)
- Afternoon (noon – 5pm)
- Evening (after 5:00pm)
- Once a week class
- Friday class
- Saturday class
- Sunday class

- Online class
- Hybrid class (a mixture of on campus and online)
- Accelerated class (shorter, with more hours/week)
- Other

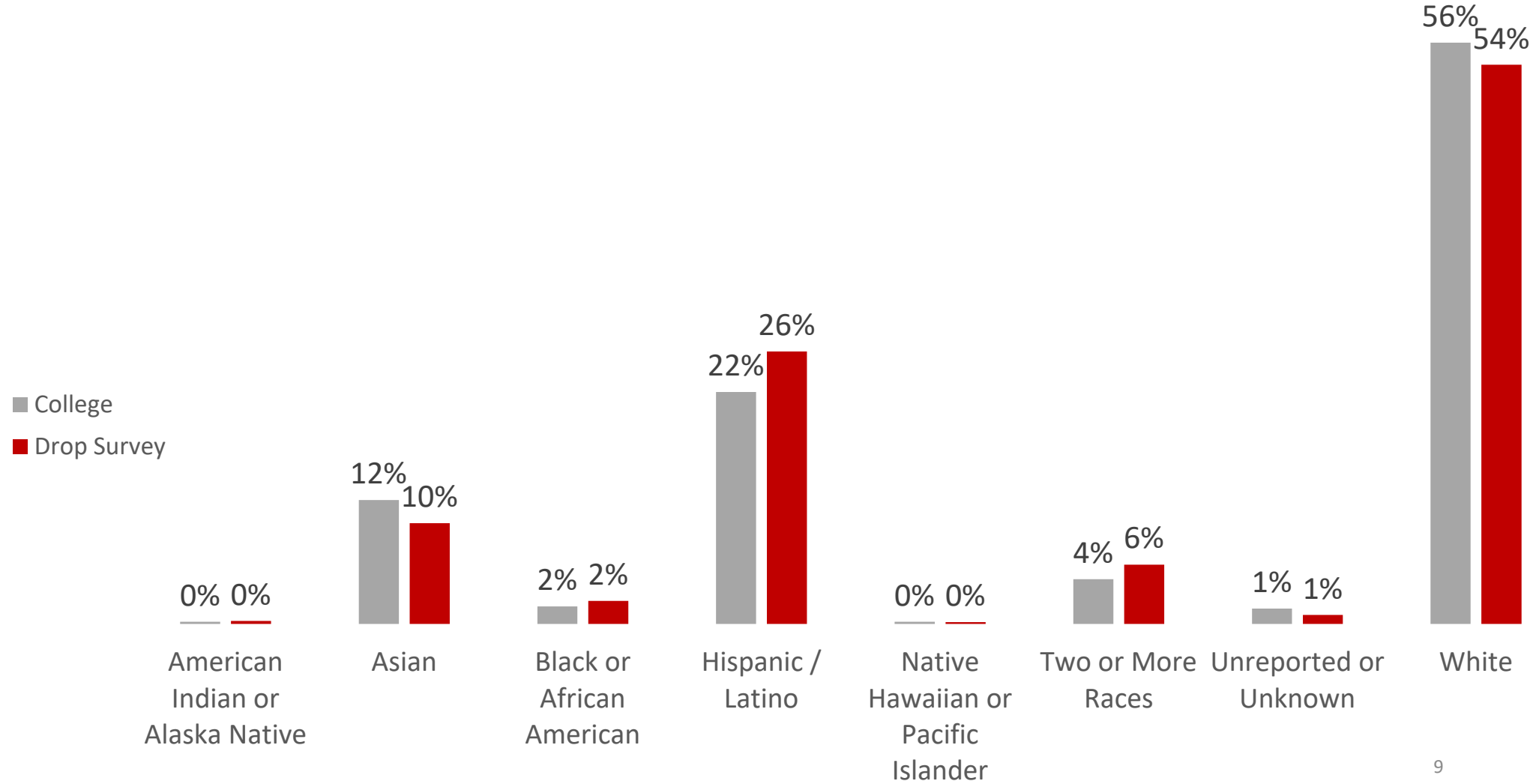# Which of these services would have helped you complete the course?

- Tutoring
- Financial aid
- Counseling
- Disability services
- Technical assistance in online classes
- Access to computers on campus
- Different schedule

- Book loan program
- Other

Spring 16 – Spring 19
Term Averages

24,170
Sections Dropped

6,097
Drop Survey Responses

25%
Response Rate

Survey respondents' ethnicities are representative of the college

■ College
■ Drop Survey

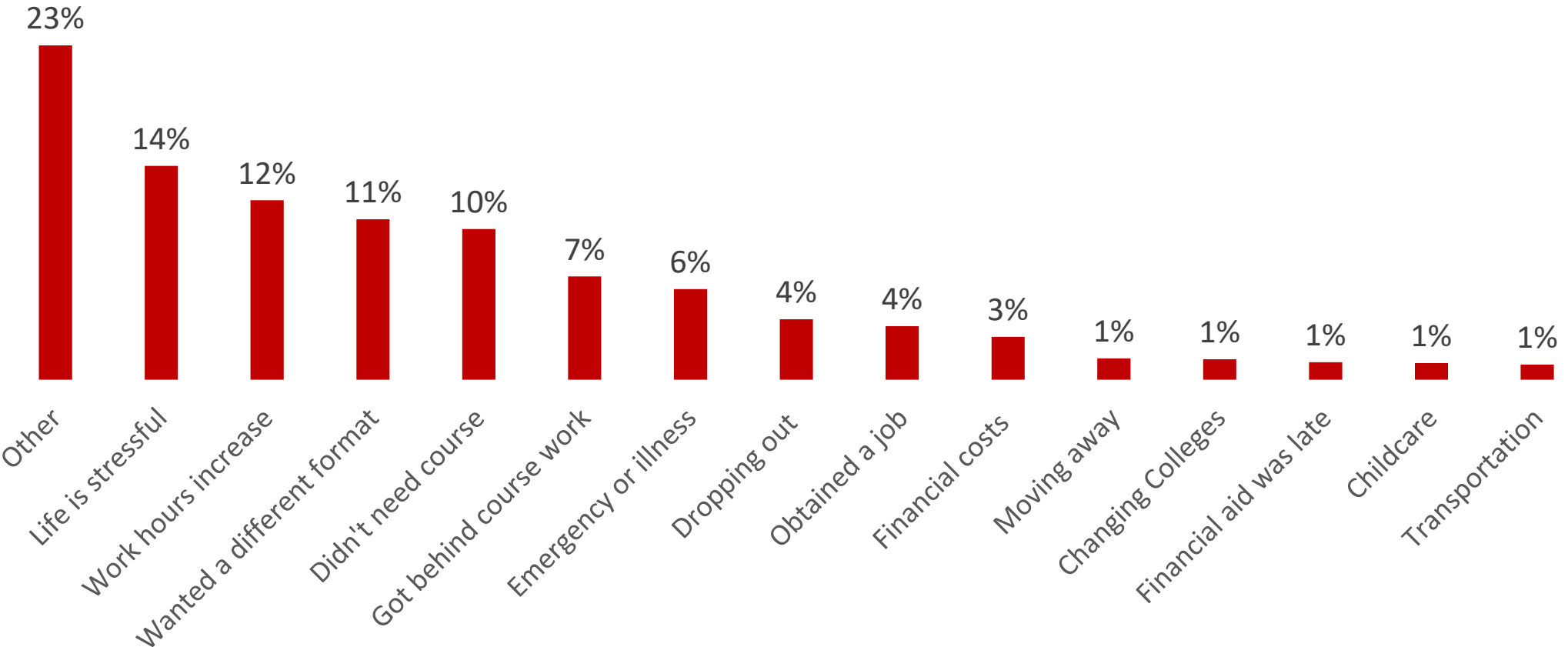|	American Indian or Alaska Native	Asian	Black or African American	Hispanic / Latino	Native Hawaiian or Pacific Islander	Two or More Races	Unreported or Unknown	White
College	0%	12%	2%	22%	0%	4%	1%	56%
Drop Survey	0%	10%	2%	26%	0%	6%	1%	54%

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Survey Results

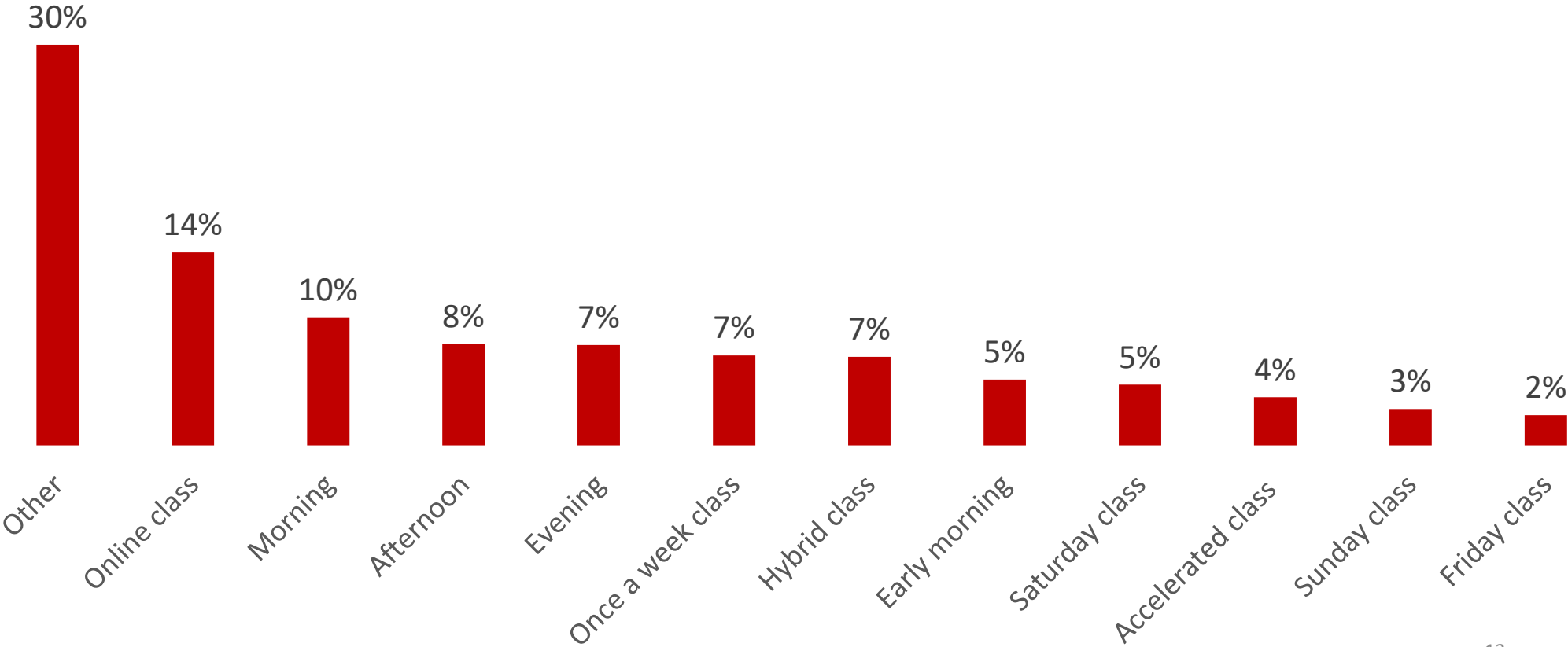# Please indicate the reasons you are dropping from your class:

Spring 16 – Spring 19

n = 30,617 Responses

Which of the following times/format would have helped you to remain in the course?
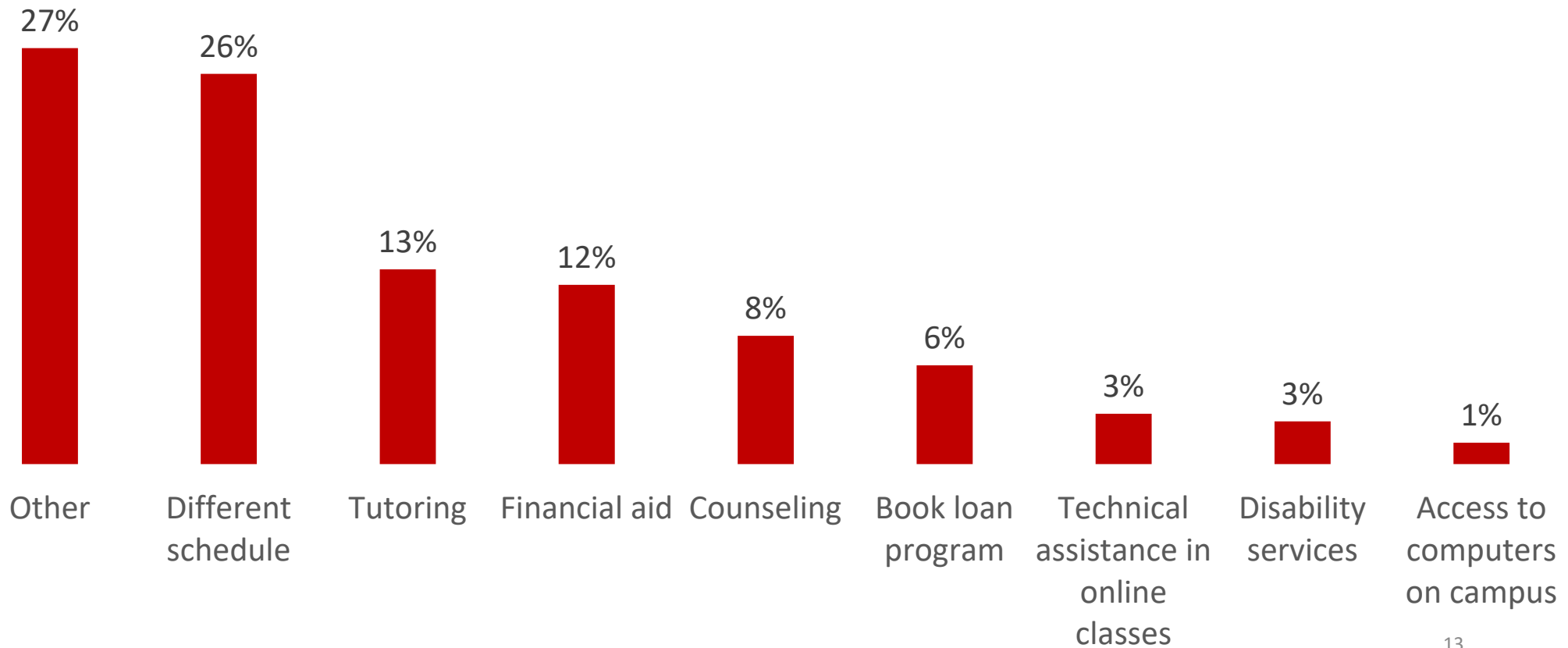
Spring 16 – Spring 19

30% Other
14% Online class
10% Morning
8% Afternoon
7% Evening
7% Once a week class
7% Hybrid class
5% Early morning
5% Saturday class
4% Accelerated class
3% Sunday class
2% Friday class

n = 17,486 Responses

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Which services would have helped you complete the course?
Spring 16 – Spring 19

Other	27%
Different schedule	26%
Tutoring	13%
Financial aid	12%
Counseling	8%
Book loan program	6%
Technical assistance in online classes	3%
Disability services	3%
Access to computers on campus	1%

n = 18,112 Responses

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What is "other?"

Challenges with "Other" Responses

- Approximately 22% of respondents only select "other"

- Open text responses
  - Many possibilities and reasons

- Large (enough) sample size
  - 24,645 open responses
  - Not sustainable to manually read each response and make actionable decisions
    - Won't be able to intervene quickly to help students

Natural Language Processing and Topic Modeling

- Natural language processing (NLP)
    - The process of helping computers understand natural language such as speech and text.

- Topic modeling
    - Statistical modeling that discovers topics among collection of texts

Text Processing

- Remove stop words
  - "the", "a", "an", "in", etc.

- Remove punctuation

- Lemmatize
  - Convert words to lemma form (dictionary form)
    - Run, running, ran, runs -> run

- Packages: Python – NLTK (Natural Language Took Kit)

Topic Modeling

- Latent Dirichlet Allocation (LDA)

    - Popular model for topic modeling

        - Assigns words used in responses to latent topics

        - Gives each open response probabilities of being in topic "n" based on words used

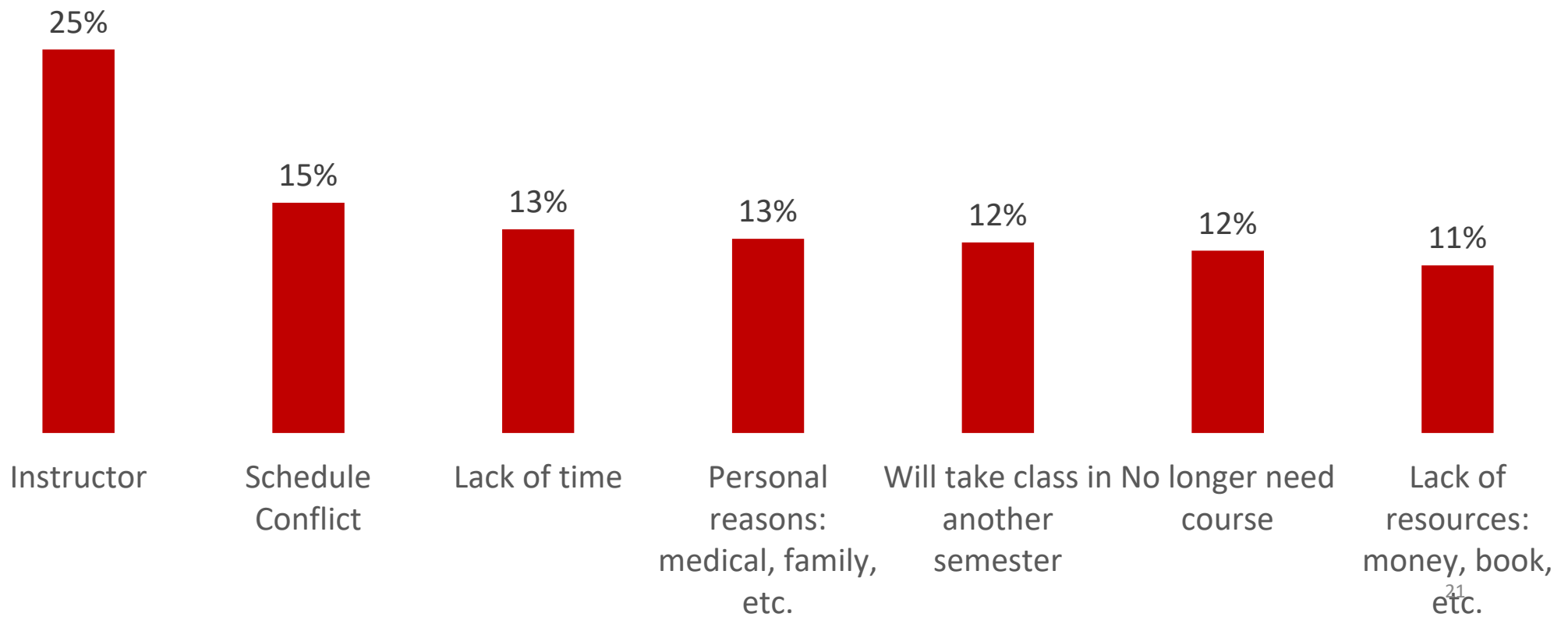- Packages: scikit-learn, lda, gensim

Example of LDA Output

Topic 0: instructor wa student did assignment help grade doe email
Topic 1: time work week hour wa online day able attend
Topic 2: semester taking summer time fall unit want decided instead
Topic 3: need math school wa did high level requirement needed
Topic 4: time schedule conflict different changed work change better major
Topic 5: instructor wa like online learning learn hard did really
Topic 6: time family need work issue semester health ha care
Topic 7: book wa online time didnt afford financial required work
Topic 8: wa wrong got different instructor cancelled enrolled wanted dropped
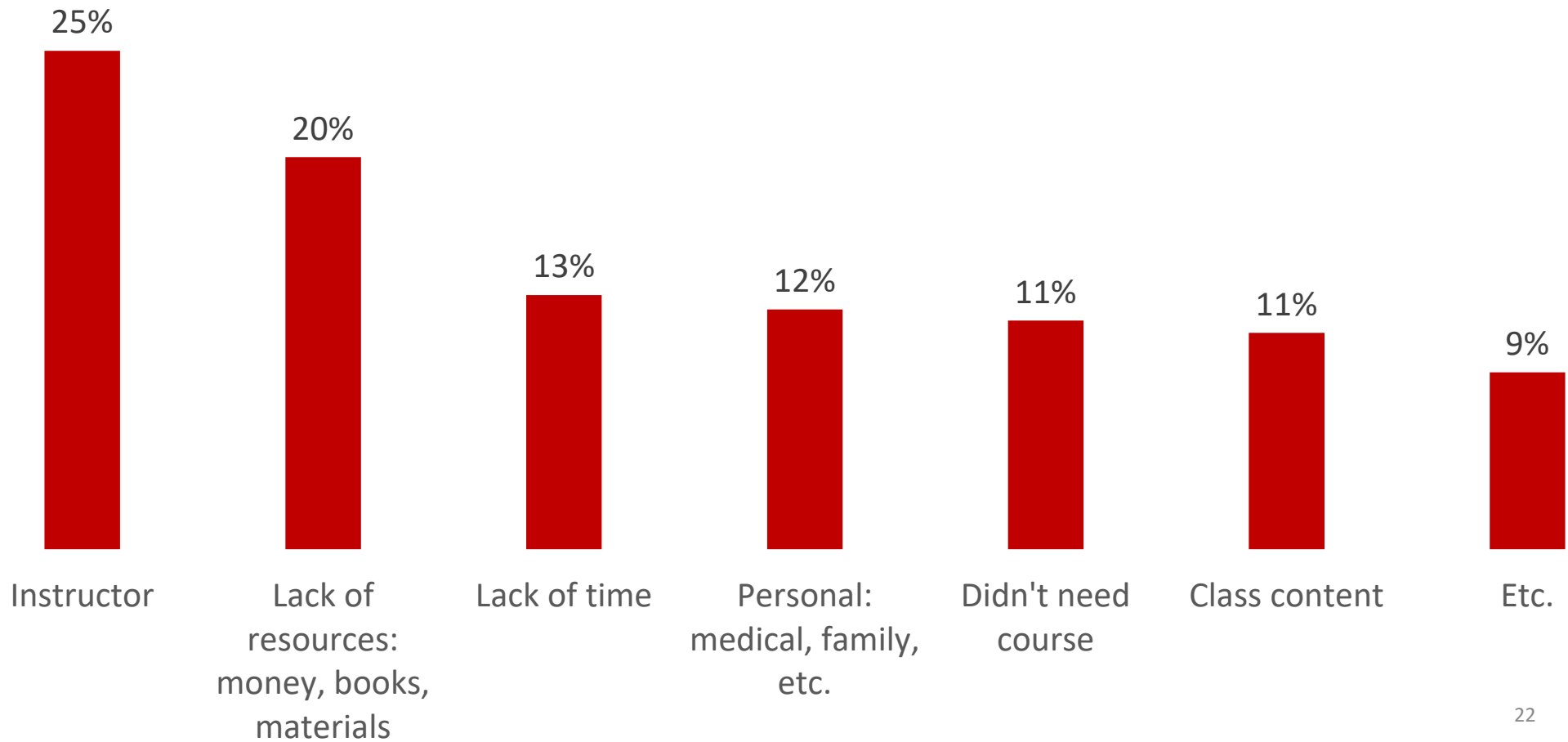
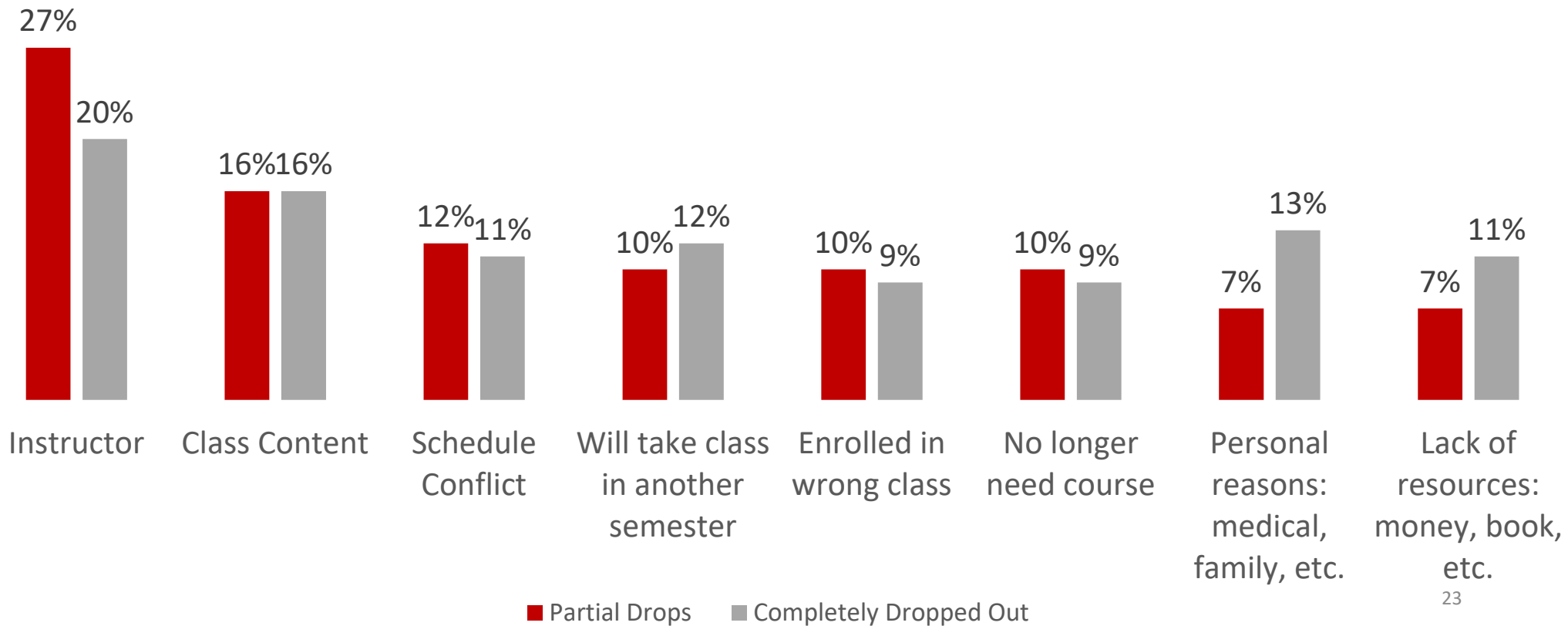| Response	"this class shouldnt cost the student $200 out of pocket i realize you wanna make money but im struggling over here to eat twice today."								
Topic Probability	Topic 0: 2%	Topic 1: 2%	Topic 2: 2%	Topic 3: 0%	Topic 4: 2%	Topic 5: 2%	Topic 6: 23%	Topic 7: 65%	Topic 8: 2%

Other: Please indicate all of the reasons you are dropping or withdrawing from your class
Spring 16 - Spring 19

25%	15%	13%	13%	12%	12%	11%
Instructor	Schedule Conflict	Lack of time	Personal reasons: medical, family, etc.	Will take class in another semester	No longer need course	Lack of resources: money, book, etc.

Other: Which services would have helped you complete the course? Spring 16 - Spring 19

25% Instructor
20% Lack of resources: money, books, materials
13% Lack of time
12% Personal: medical, family, etc.
11% Didn't need course
11% Class content
9% Etc.

Other: Please indicate all of the reasons you are dropping or withdrawing from your class - Partial drop vs Completely dropped out

Instructor — 27% (Partial Drops), 20% (Completely Dropped Out)
Class Content — 16%, 16%
Schedule Conflict — 12%, 11%
Will take class in another semester — 10%, 12%
Enrolled in wrong class — 10%, 9%
No longer need course — 10%, 9%
Personal reasons: medical, family, etc. — 7%, 13%
Lack of resources: money, book, etc. — 7%, 11%

■ Partial Drops   ■ Completely Dropped Out

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Advantages of "Other"

- Provides us richer data
  - Students respond with more detail
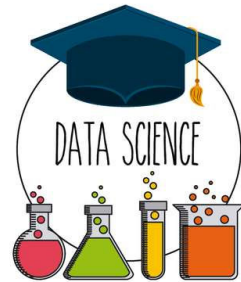   - Example: Financial costs (check box) vs Text book is too expensive (open text)

Actionable Insights

Case Management

Drop Survey Responses → NLP → Financial Aid / Counseling / Textbook Vouchers or ZTC

Interventions

- Grocery and gas cards, text book vouchers, laptop loans, etc.

- Targeted financial aid advisement

- Offering technical support

- Academic advising
  - Schedule development

- Other services

Next steps

- Case management
  - Target equity gaps and disproportionately impacted groups

- Raise awareness of services through faculty

- Modify the survey questions and choices
  - "My life is too stressful"

- Improve topic model
  - Will improve with more data/responses

- Use drop survey responses as predictors in classification models for retention and persistence
  - Decision tree, random forest, etc.

Questions