

# Qualitative Data Mining to Increase Graduation Rates



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## **Abstract**

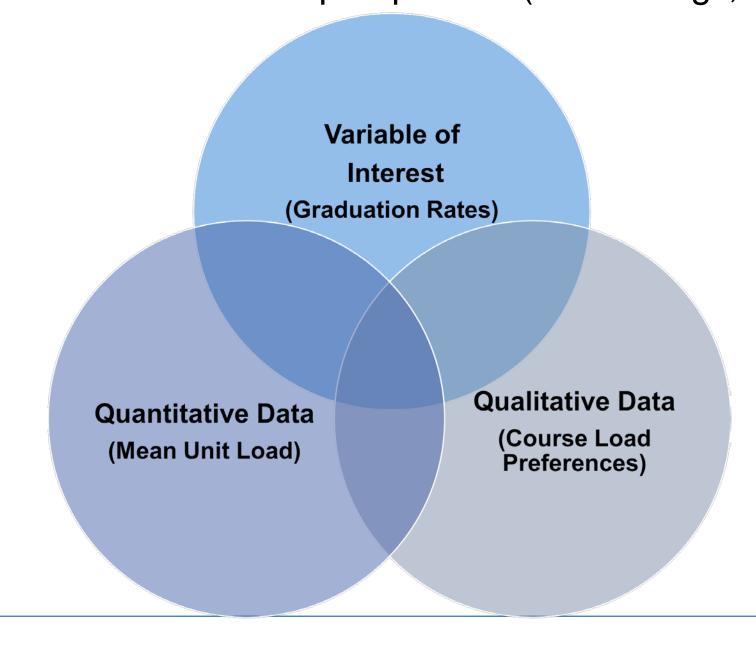
Although it is common practice to collect qualitative data via open-ended survey questions, emphasis is typically placed on quantitative responses. This ignores the rich contextual information that qualitative data can provide. This poster presentation outlines the methods for collecting, analyzing, and interpreting qualitative data in support of institutional effectiveness. Examples are drawn from a study on mean unit load (MUL) to highlight the ways in which qualitative data can be used to better understand and influence key metrics such as graduation rates.

# **Research Questions**

- Besides work, what factors influence students' course load preferences?
- Why don't more students attempt at least 15 units per term to stay on track to graduate in four years?
- How can qualitative data be used to better understand and address issues related to time to degree?

# Background

There are several potential barriers which have been identified to deter college students from taking on a higher course load, and thereby make it more difficult for them to accumulate enough units to graduate in four or even six years. According to Attewel and Monaghan (2016), many first-time freshmen do not receive adequate guidance prior to entering college and, therefore, may be unaware that 15 units is what is needed to graduate on-time. As such, the authors argue that the tendency for students to simply adopt the norm unit load (12 units) is a widespread issue adversely impacting graduation rates at most college campuses. For instance, although 75% of incoming freshmen at CSUSB express a desire to graduate in four years (CSUSB First-time Freshmen Survey, 2017), only about 50% of them actually attempt enough units per term to stay on track to graduate in four years. Integration and utilization of both quantitative and qualitative methods would allow researchers to explore key variables such as graduation rates from a more holistic perspective (Boz & Dagli, 2017).



## Methods

#### Sample

- 382 undergraduate students enrolled at least part-time
- 21% Freshmen, 11% Sophomore, 31% Juniors, 37% Seniors
- 78% female, 12% male, 75% PELL Grant recipients

#### **Survey Questions**

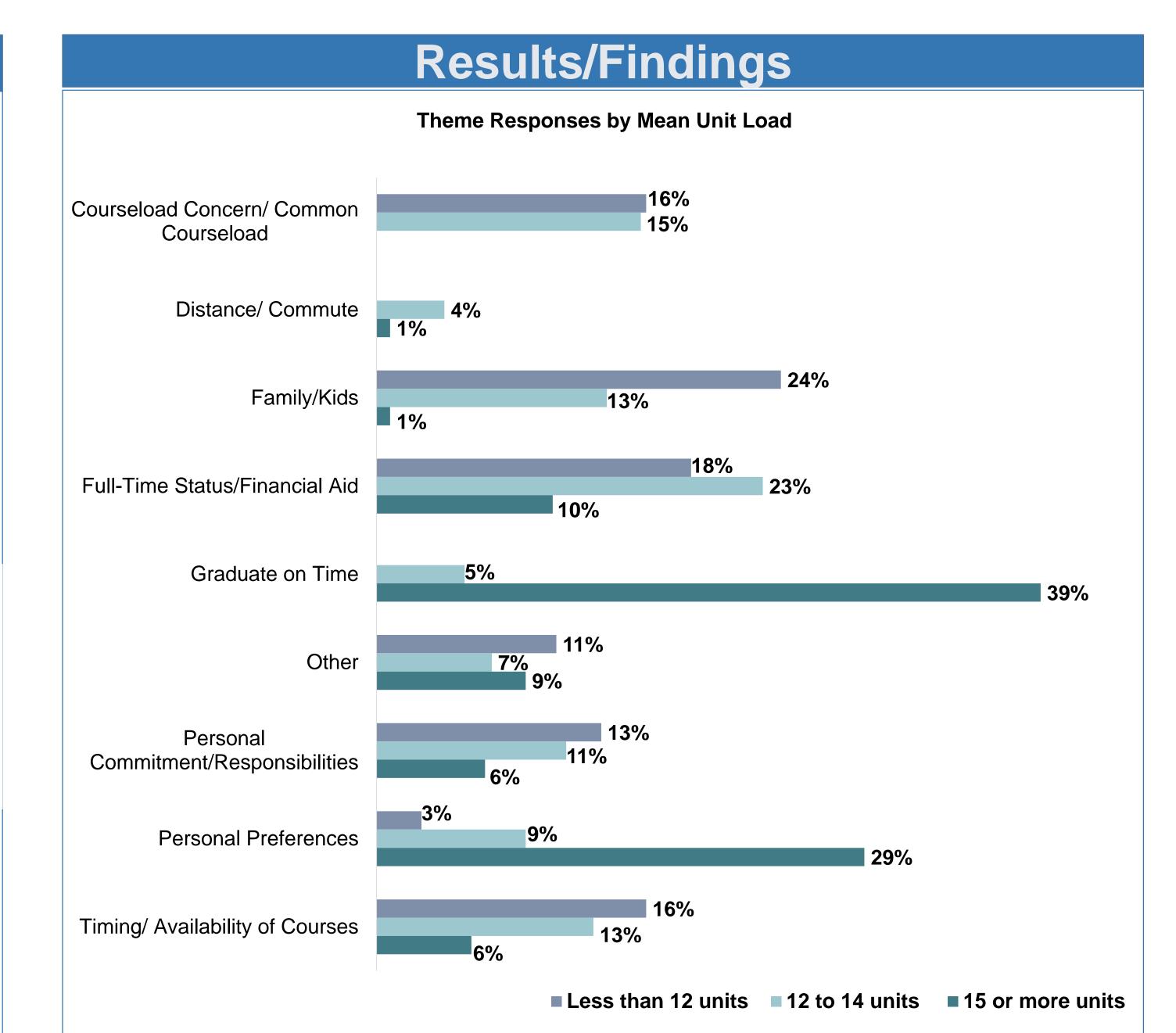
- How many courses do you typically take per term: 1-5
- Thinking about your answer to the previous question, why do you take that number of courses? (Please Explain)

#### **Qualitative Data Analysis**



Cohen's kappa can range from -1 to 1 (McHugh, 2012)

Theme	Definition	Keywords	Example	Cohen's Kappa
Full-Time Status/Financial Aid	Maintains 12 units to be considered full-time and/or to receive financial aid	full-time status, financial aid, pell grant, 12 units	"I must have 12 units to receive financial aid"	0.92
Graduate on Time	Desire to graduate in a certain timeframe	graduate, on-time, 4 year plan(pledge), finish, complete	"I want to graduate on time"	0.95
Personal Preferences	Desire to learn, challenge themselves, or an expressed preference for a heavier course load	prefer, want , free, spare time, preference, don't mind, challenge, learn	"I want to absorb, learn and prepare myself as much as possible before graduating "	0.94
Courseload Concern/ Common Courseload	Simply maintaining the usual or normal courseload- additional courses are believed to be too difficult to manage	Courseload, concern, common, average, normal, stress	"I think it's just the right amount of classes that I can handle per quarter"	0.93
Timing/ Availability of Courses	Courses not offered when desired or are not open/available	available, schedule, timing, courses, need, time of day	"Many classes are not offered in the evening when my schedule permits"	0.92
Family/Kids	Family and/or children	family, kids, children, parent, mother (mom), father (dad), baby	"I have 2 children"	1
Personal Commitment/Responsibilities	Takes certain amount of courses due to personal commitments/responsibilities NOT family related	work, job, extracurricular, responsibilities, sports, commitments, volunteer	"Involved in church and I also volunteer"	0.92
Other	Other reasons that may prevent them from taking more classes	double major, cost, medical	"Medical problems"	0.95
Distance/ Commute	Courseload is influenced by the time or distance from campus	distance, commute, transportation, drive, live far, carpool, bus	"I commute a long distance"	0.95



- The most common factors influencing MUL among students who averaged 14 or less units per term were family and/or children and the desire to be considered full-time for financial aid.
- The most common factors influencing MUL among students who averaged 15 or more units per term were the desire to graduate on time and a personal preference for a more challenging course load.

# Discussion

Overall, the findings of this study suggest that incoming freshmen need to be more informed about the four and six year graduation requirements via orientation, advising, registration/enrollment platforms, graduation campaigns, etc. Given that students who mentioned wanting to graduate on time also typically averaged 15 or more units per term, these students are likely well aware of, and committed to, the four year graduation track. Whereas, comments from students who averaged less than 15 units per term suggest that they default to the financial aid requirements (at least 12 units to be considered full-time). Furthermore, low unit earners also typically expressed concern about their ability to handle a higher course load. Accordingly, institutions should also identify students who have performed well at a lower unit level and encourage them to increase to 15 units (Attewel & Monagha 2016).

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# Keywords

qualitative data mean unit load graduation rates time to degree

### References

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