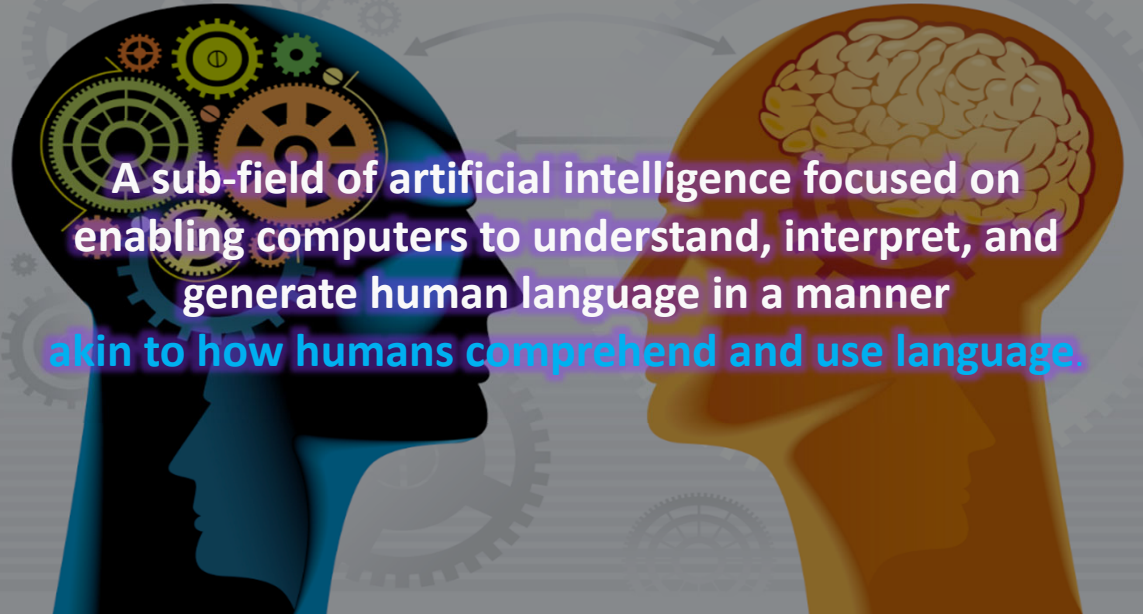


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## What is Natural Language Processing?



A sub-field of artificial intelligence focused on enabling computers to understand, interpret, and generate human language in a manner akin to how humans comprehend and use language.

3



Fall 2023  
Non-Registrants

WE ASKED. THE STUDENTS TOLD US WHY.

4

## METHODOLOGY

- ▶ EAC CORE determined the need to investigate why students didn't register for Fall 2023.
- ▶ A data file pull was requested from EIS team for students who were viable to re-enroll but had not.
- ▶ A three-question survey was sent via text to cell phone numbers on record. Data was encoded to allow the institution to know which student responded to support interventions and follow ups.
- ▶ Survey was open for 72 hours and generated 927 responses.
- ▶ Students who indicated they were graduating were omitted from result set (87).
- ▶ Survey responses were scrubbed for any institutional identifying data, personal data, and/or specific office names.
- ▶ Themes analyzed via ChatGPT and results validated by researcher.
- ▶ In some cases, identified themes were combined by researcher if similar (e.g. financial aid, Fin. Aid, etc.).
- ▶ Perata graphs were produced. Perata graphs highlight themes that are most impactful on a given challenge. Typically, Perata graphs isolate and highlight those themes that constitute 80% of all feedback and underscores important places to start focus.
- ▶ Data was then further validated using individual response review by the researcher and evaluation of visible word clouds designed to summarize major word patterns.
- ▶ Sample quotes were then processed by Adobe Firefly (beta) to produce AI developed images based on the verbatim student quote
- ▶ Questions on methodology? Email Jason.Simon@unt.edu

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## Methodology: Chat GPT Scripts



You are a senior level institutional researcher with 30+ years of qualitative research experience at a major Research University. You are familiar with best practices with qualitative theme analysis and theme categorization. You have special abilities in being able to develop patterns from seemingly diverse views. You are familiar with the works of Lincoln & Guba's work on criteria for establishing the overall trustworthiness of qualitative research results.

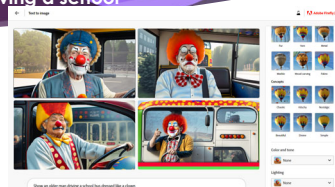


Your institution conducted a short three item survey of students who have not registered for the next semester at your institution in the Fall term. Leveraging your background and experience scan the following list of verbatim responses. Once I submit the list of reasons the students indicated in my next block of text, I want you to analyze this specific list and create a table with two columns, in the first column indicate the name of the theme and in column 2 how many times words, phrases, or responses apply to this general theme across all comments. Follow up if needed: I want you to analyze this specific list and create a table with two columns, in the first column indicate the name of the theme and in column 2 three to five verbatim quotes that support your process.

### CHAT GPT RESPONSE AFTER CONDUCTING THEME ANALYSIS:

Overall, the responses suggest that students are facing a range of challenges related to their studies, and require assistance with registration, advising, and other aspects of the program to successfully continue with their studies.

Adobe Firefly Sample screen (Beta) "Show an older man driving a school bus dressed like a clown"



6



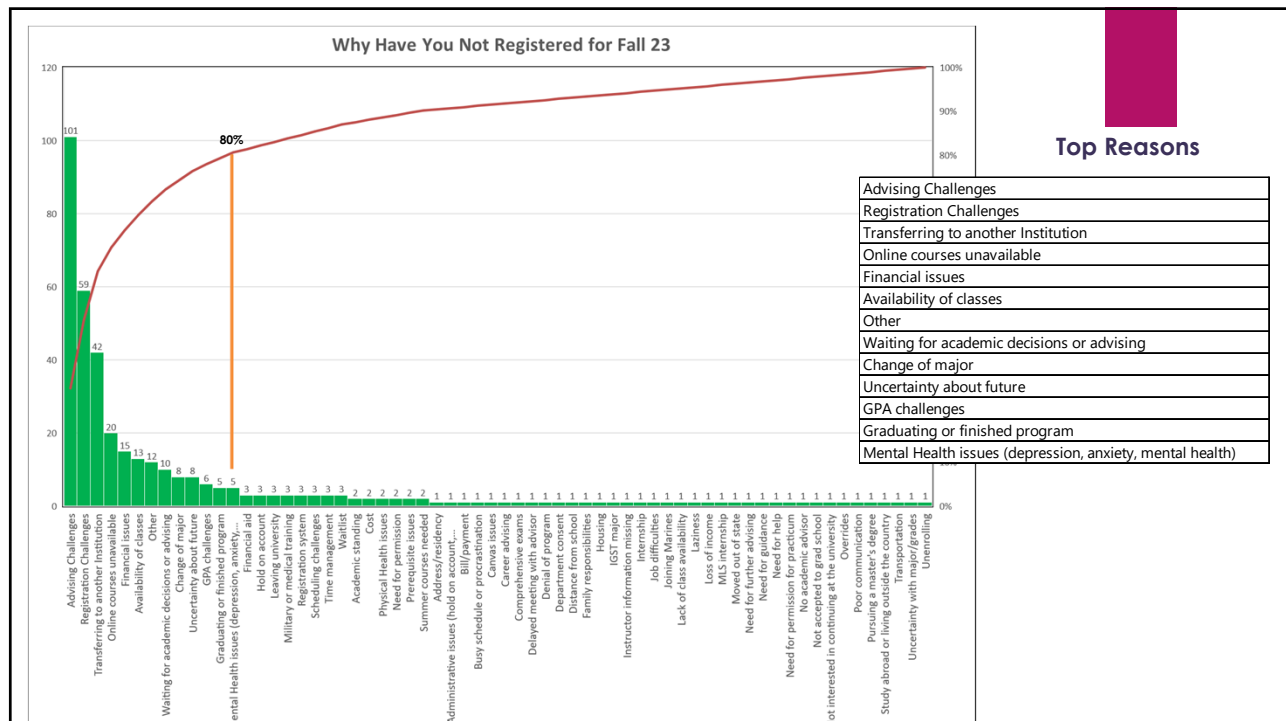
## Don't Be Afraid to Challenge the Process...

**You**  
Can you describe the process you used to assign these themes?

**ChatGPT**  
Certainly! Assigning themes to qualitative data involves a systematic process of identifying patterns, recurring topics, or concepts within the dataset. Here's a general outline of the process I used to assign themes to the verbatim responses provided:

- 1. Data Familiarization:** Initially, I familiarized myself with the dataset by reading through all the verbatim responses. This step helps in understanding the overall content and context of the data.
- 2. Open Coding:** I started by conducting open coding, which involves breaking down the data into smaller, meaningful segments. Each response was examined to identify specific words, phrases, or concepts that could represent underlying themes. This process was iterative and involved coding each response independently.
- 3. Creating Initial Categories:** Based on the open coding process, I grouped similar codes together to form initial categories or themes. These initial categories were broad and aimed to capture the main topics emerging from the data.
- 4. Axial Coding:** After creating initial categories, I conducted axial coding to further refine and organize the data. This involved examining relationships between different codes and identifying sub-themes or sub-categories within each main category.
- 5. Review and Refinement:** I reviewed the coded data to ensure consistency and accuracy in theme assignment. This step also involved refining the categories based on the content of the responses and making adjustments as needed.
- 6. Theme Naming:** Once the categories were finalized, I assigned descriptive names to each theme that accurately represented the content captured within it. These names were chosen to clearly convey the essence of each theme.
- 7. Quantitative Analysis:** Finally, I tabulated the frequency of each theme by counting how many times words, phrases, or responses were coded under each theme. This quantitative analysis helps in understanding the prevalence of different themes within the dataset.

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No classes work with my 8-5 full time job and no more online options.

Advising appointments are limited and only available online for my college

Administration hasn't fixed the education schedule for me to sign up for fall classes! Very disappointed.

I would love to register for fall 2023. However, I am taking Spanish classes in succession and the registration system will not allow me to register beyond the immediate next term. I am taking Spanish 1 now. I registered for Spanish 2 for Summer 1. I cannot register for Spanish 3 (Summer 2) or Spanish 4 (Fall 2023) until I finish Spanish 2. It's unfortunate for me.

Lack of online options for courses that are required of me. I have a baby coming in June and need to be home to keep up with her when she's born.

The psychology department is refusing to let non majors take their classes for interdisciplinary degrees.

The only issue in me getting my classes in is getting a academic advisor appointment.

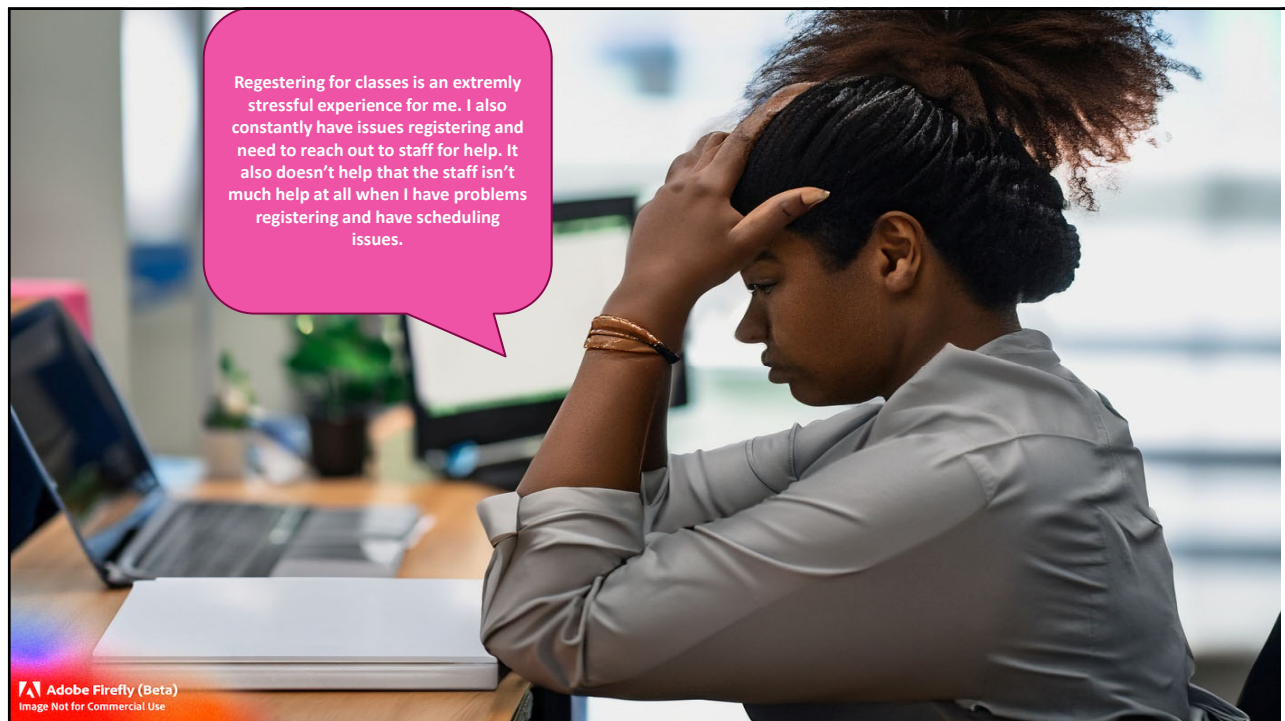
Need to speak with an advisor, plan to do that asap. I have 2 remaining courses on my degree, one only has an evening Thursday course which conflicts with my work schedule. The other is not listed at all under the course catalog. I will speak with an advisor on options.

Regestering for classes is an extremely stressful experience for me. I also constantly have issues registering and need to reach out to staff for help. It also doesn't help that the staff isn't much help at all when I have problems registering and have scheduling issues.

I will likely transfer to UTD for the next semester because all of the core courses in the M.A. in Interaction Design (IxD) program were moved from the Frisco campus to the Denton campus. This approximately doubled my commute time, extended my anticipated graduation date by a full year, and created additional burdens for completing the degree while also working full time. I did not expect this to happen and have trialed the commute this semester, but am not confident I can maintain a healthy life balance over the next year and a half if I need to commute from East Dallas to Denton regularly.

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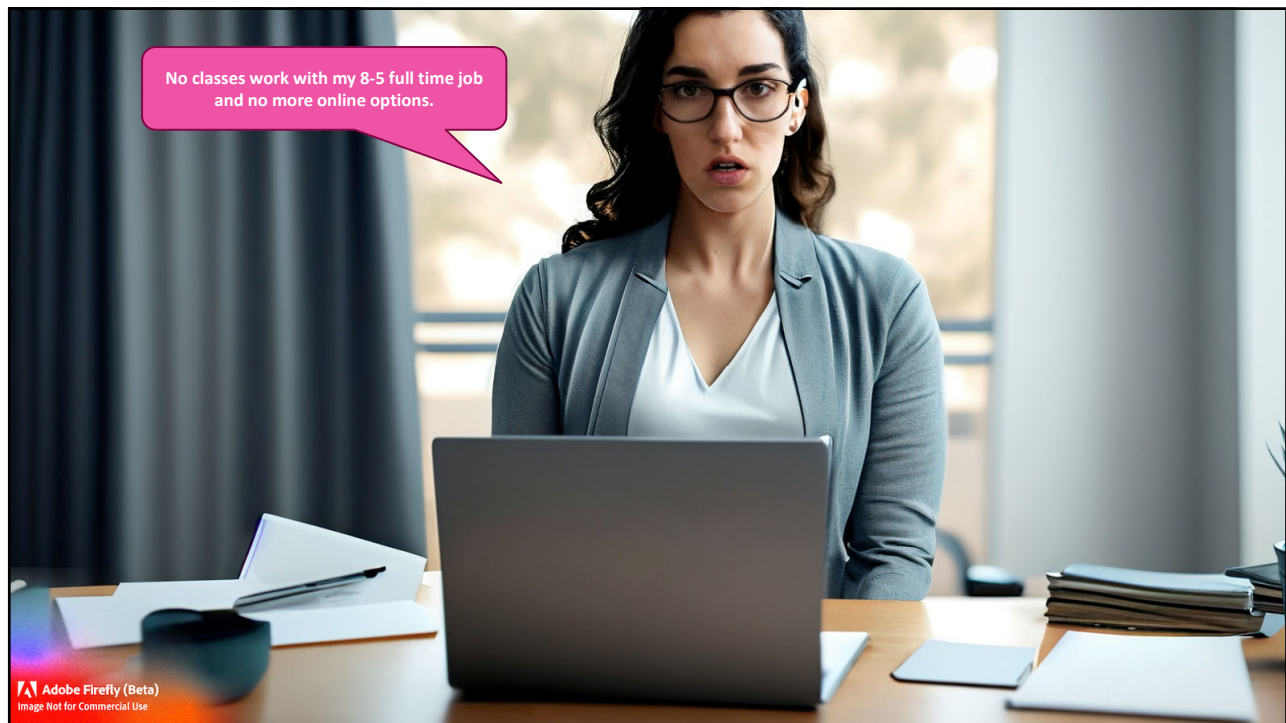


Adobe Firefly (Beta)  
Image Not for Commercial Use

10



11



12





13



14

## FIVE MAIN OVERARCHING THEMES Worthy of OUR follow up

Address Advisor  
Availability and  
Infrastructure

Address Online  
Course  
Availability &  
Class Scheduling

Support for  
Mental and  
Physical Wellness

Better and  
Proactive  
Communication

Investigate  
Academic  
Performance  
Supports

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## Prompt Engineering Tips for NLP Visual Creations

Be specific using  
descriptors,  
subject, and  
keywords

Be descriptive and  
translate your  
vision into words –  
be imaginative

Be original,  
indicate feeling,  
mood, style,  
lighting, etc.

Be empathetic,  
indicate warmth or  
strength, use  
emotional context

### Adobe Firefly Tips

**Subject:**  
Most heavily  
weighted aspect of  
prompt goes first

**Details/Surrounding:**  
Describe the  
surroundings and  
mood

**Stylistic Choices:**  
Give examples to set  
context (Art Deco,  
Studio Ghibli,  
closeup)

**Set Parameters:**  
State expectations:  
(Aspect ratio, focal  
length of lens, F-stop,  
lighting choices, etc.)

### Midjourney Tips

**SOURCES:** <https://helpx.adobe.com/firefly/using/tips-and-tricks.html>  
<https://spyscape.com/article/midjourney-v5-power-user-tips>

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