

Contextual Inquiry

Select Users

For the contextual inquiry portion of this project, we have decided to focus on the undergraduate student population of Carnegie Mellon. We are interested in looking at students who walk home from campus at night, and have decided on three different participants that live in different directions from each other.

Prepare Interview Materials

Plan:

Person	User ID	Meeting Point	User Profile & Significance to Research Goal	Plan
Josh	R1	CFA	CMU undergraduate student who walks home — a common way of getting there, will be exportable to other students.	Meet at CFA after user evening class lets out at 9:30. Walk home with them.
Candia	R2	Campus	CMU undergraduate student who walks home, main stakeholder when it comes to campus safety	Go to wherever the student is leaving from campus to home and ask questions. 4/5/19
Amru	R3	North Dithridge at Centre Avenue	CMU undergraduate student	Go to her place, walk to the closest shuttle stop and go to school together
Amru	R4	Tepper	CMU undergraduate student	Meet at Tepper Quad and walk together to his place

Consent Form:

The students taking the course User Center Research Evaluation in the Human Computer Interaction program require your work processes and participation to analyze and design the necessary data collected. A student will observe, record and interview the participant which will take about an hour only with your consent.

The students will not be evaluating the participant nor his/her actions. Confidentiality and anonymity of this project will be kept and not appear in any circumstances outside of the course. The focus of this project is pointed towards improving the procedure and not the participant.

The students will ask few simple question that will not judge the participant's performance. Occasionally, they might ask you questions like "Why did you do that?" Participants may leave anytime they want.

Your participation may improve on the quality of lifestyle for everyone. Thank you!

Please sign here to indicate your consent to be interviewed, observed and recorded.

Introduction:

Hello! Thank you so much for giving up some of your precious time to help us with this project. My name is _____, and I am one of the students in a User Research course this semester. In the class, we are working on a project to understand the current state of transportation on campus and eventually design solutions that improve services for students, based on our findings. Specifically, we want to observe how students view their safety within the current system. We hope you will have much to tell us about this topic!

Confidentiality/Anonymity of recording

- Participants can stop/leave anytime during the interview
- Ask permission to record video/audio the whole contextual inquiry procedure
- Inform the confidentiality/anonymity of this project and that the collected data will only be used for this class project purposes and only within the class.
- Reassure the focus is not on the performance of the user, but the quality of the system to reduce the user's pressure (if they have any)

Goal:

- Understand at what points during their time at CMU they feel unsafe
- Pinpoint triggers that cause the feeling of unsafety
- Identify students reactions to feeling unsafe, and which of those reactions include utilizing CMU offered services

- Recognize in which ways CMU offered services can be enhanced to help students feel more safe

Semi-Structured Interview Questions:

1. *(General) Who are you?*
 - a. *How do you normally get to and from school?*
 - b. *How far away do you live from campus? How long does it take you to get to and from school?*
 - c. *What times do you normally leave campus? What's the latest time during the week that you do?*
2. *What makes you feel safe/unsafe way when going to/from campus?*
 - a. *Have you ever felt unsafe travelling home from campus? If so, what time of day was it and where were you?*
 - b. *How important is safety to your choice of transportation? Why?*
 - c. *How much does safety determine the time you leave the school to go home?*
 - d. *How much walking do you do on your way home?*
 - e. *Do you ever think about your safety at other points in your day, like when you're at home, or at school? What aspects of those places, or those points of your day, help you feel more safe?*
3. *How were each of the aspects of the system (blue light, shuttle/escort, police escort, etc.) made aware to you?*
 - a. *Have you ever called campus police for a reason of safety or an emergency?*
 - b. *Do you remember when/if you learned about when you can call campus police for help? When was that? What did you learn?*
 - c. *Have you ever ridden the escort or shuttle? (If yes) How did you hear about it?*
 - d. *Do you see blue lights on your way home?*
 - e. *Which services, if any, help you feel more safe while travelling home from campus?*

Interpretation Sessions

Josh:

Note Num	Description	Profile
R1		Age: 20
R1-01	Usually walks home because the CMU shuttle takes about the same amount of time to take her home	Gender: Female
R1-02	Usually walks home alone because she has no one else leaving campus at the same	Major: Art

	time that lives nearby	
R1-03	Usually walks home alone because her roommates don't want to coordinate going home with her	Years in Pittsburgh: 3
R1-04	Her roommate who sometimes leaves at a similar time as R1 chooses to bike instead of walk with R1 because its faster	
R1-05	Failed to arrange times to walk home with her roommates because they're on different schedules or prefer different means of transportation	
R1-06	Sometimes she catches the shuttle or a bus on her way home to try to save some time or energy	
R1-07	Only knows when she can catch the shuttle at night by actually seeing it parked and waiting	
R1-08	Knows the daytime shuttle schedule because it appears more regular (4:30, 5:30...)	
R1-09	May take PAT busses running two different routes because they save the same amount of time or energy	
R1-10	Usually walks home because the CMU shuttle isn't always leaving when she gets out of class so she doesn't take it	
R1-11	Walks straight down Morewood, the road ending at campus, so she can pass the most streets (Fifth and Center) with busses on it as early in the walk as possible	
R1-12	Doesn't walk in a diagonal route home, even though it could save time	
R1-13	Doesn't walk in a diagonal route home, even though she indicates that more parts of it are better lit	
R1-14	Leaves the school after her evening classes at variable times because she may have social or work reasons to stay a little later	
R1-15	On her walk, checks on her phone if any busses are coming so she can save some time	
R1-16	She uses the Transit app because she finds it reliable	
R1-17	A bus was coming in only two minutes, so she waited at the stop to catch it	
R1-18	A bus wasn't coming on the first possible street passed in a while, so she crossed the street and walked on	
R1-19	Feels like her walk home is unsafe because the streets around her house are poorly lit	
R1-20	Feels like her neighborhood is sketchy and unsafe because there have been 3 muggings nearby this past Winter	
R1-21	She notices no Blue Lights on her walk home, even though she passes several Freshman dorms	
R1-22	Was notified about the muggings by a CMU alert email so that she could exercise caution going home	
R1-23	After the muggings in her neighborhood, she would Uber/Lyft to her boyfriend's house at night (<10min walk)	
R1-24	After the muggings in her neighborhood, she would avoid going outside at night as	

	much as possible	
R1-25	When the weather's bad, she waits for the shuttle to take her home	
R1-26	The shuttle takes a while to take her home because it has to travel the long way around its route	
R1-27	She walked home with a friend once after the muggings for extra safety	
R1-28	Chose her housing far from campus because she needed to accomodate 5 people and has few other options	
R1-29	Finds that being far away from campus at least means she's near the Giant Eagle grocery store, and that's a plus	
R1-30	Finds her neighborhood sketchy because she once saw a drug dealer on her walk home	
R1-31	Finds her neighborhood sketchy because while it seems dingey, there is also play equipment on her walk home	
R1-32	She always feels a little unsafe going home, because she always walks through poorly lit areas for a little while	
R1-33	Finds her neighborhood sketchy because there are no college students living nearby	
R1-34	Will feel safer living closer to more other college students next year because she'll have people she can call on	
R1-35	Will feel safer walking home next year because many students will be walking down the same street as her	
R1-36	She carries pepper spray with her for protection	
R1-37	Her mother gave her the pepper spray at the start of Freshman year for protection	
R1-38	Her parents encourage her to Uber/Lyft home at night because it's safer	
R1-39	Thinks her parents might be so wary of her safety because they lived in a city in the past	
R1-40	Hasn't carried pepper spray around recently because she got out of the habit	
R1-41	Found it easy to carry and easy to access her pepper spray from her coat pocket in the Winter	
R1-42	Finds it cumbersome to access her pepper spray from her backpack in the Spring	
R1-43	Seems alarmed at the prospect of having to call campus police; has never called them	
R1-44	Says she has to worry about walking home safely because she's a female	
R1-45	Didn't tell her parents about the muggings so she wouldn't alarm them	
R1-46	She has only caught the escort once, by chance that it was coming her way	
R1-47	Doesn't know the escort pickup times or locations, so has never considered riding it	
R1-48	Finds the Transit app reliable because an icon indicates if its arrival times are live or not	

R1-49	Waits for the walk signal to cross the street if it's a major street	
R1-50	Crosses the major street Forbes without a signal because other students are crossing then	
R1-51	Thanks the bus driver when disembarking to be friendly	
R1-52	Moves further to the back of the bus to make room for others, even though she's only travelling a short distance	
R1-53	It feels safer in her neighborhood now that time has passed since the muggings	
R1-54	Takes the shuttle to school because it takes the shorter portion of its route and so is faster than walking	
R1-55	Finds her neighborhood sketchy because its near the train tracks and the bus high-speed route	
R1-56	Would have to look up the campus police phone number because she doesn't have it all memorized	
R1-57	Considers safety her top priority when travelling home at night, but not as much during the day	
R1-58	The existence of Blue Lights makes her feel more safe	
R1-59	Will Uber/Lyft if going out again late at night	

Candia:

Note Num	Description	Profile
R2-1	Leaving from Baker Hall at around 4:45pm right after she's done with classes	Age: 20
R2-2	Lives in Morewood Gardens	Gender: Female
R2-3	Walks to/from school	Major: Psychology
R2-4	Decent weather outside	Years in Pittsburgh: 3
R2-5	Lives around 0.1 miles away from school (100 feet)	
R2-6	Takes 5 mins to get to school	
R2-7	Leaves campus at around 4:30 from Baker Hall	
R2-8	Latest time she leaves campus is also around 4:30	
R2-9	Rushes across crossroad through the road between tepper and nsh, while the timer is going down	
R2-10	Usually has to press button to cross the road	

R2-11	Jaywalks sometimes, if no cars are coming	
R2-12	Somewhat unsafe to cross the road	
R2-13	Sometimes button is not pressed, but people are waiting at the stop assume that someone has already pressed it	
R2-14	Has never felt unsafe while traveling home from school	
R2-15	Safety is very important to student (around 8/10)	
R2-16	Always feels safe on campus, so does not consider safety when traveling home	
R2-17	Feels safe because of the blue lights	
R2-18	Feels safe because she always see campus police nearby	
R2-19	Thinks about safety when going downtown, but not so much on campus	
R2-20	Does not think about safety on campus or at the dorm because she assumes she's safe	
R2-21	Too close to use any other transportation mode	
R2-22	Feels safe because well-lit (on route from campus to home)	
R2-23	Has called campus police when felt sick one time	
R2-24	Experience was reliable and reassuring	
R2-25	Learned about campus police during freshman orientation	
R2-26	Does not know number by heart, but knows that you can google to find it	
R2-27	Sees around 2 blue lights on her way home	
R2-28	Chose to live in morewood gardens out of convenience and safety	
R2-29	Walks home alone based on her own schedule	
R2-30	Did not consider using escort or shuttle for safety reasons because she live too close	
R2-31	Arrives at Morewood	

AMRU:

Note Num	Description	Profile
R3	Is a sophomore on campus and felt that she should stay on campus for atleast two years	Age: 19

R3-01	Feels that campus is safe and therefore chose to live on campus	Gender: Female
R3-02	Feels that campus is convenient and therefore chose to live on campus	Major: Business
R3-03	Is currently walking to webster because that is where she lives	Years in Pittsburgh: 2
R3-04	Usually leaves campus around midnight due to a heavy workload	
R3-05	Usually arrives on campus at 9am	
R3-06	Currently lives in webster but was considering living in Fairfax	
R3-07	The latest she has ever left campus has been 5am	
R3-08		
R3-09	Usually walks home and generally feels safe	
R3-10	Feels that some routes home are safer than others	
R3-11	Walks to campus in the morning unless she is in a rush or has to carry something heavy	
R3-12	Always feels safe in the morning because there's a lot of people around	
R3-13	Doesn't always feel safe at night because there aren't as many people around	
R3-14	Feels safe in the morning also because it is light out	
R3-15	Knows a little bit about the blue light system on campus	
R3-16	Has never felt the need to use the blue light system	
R3-17	Feels safest going home while taking the bus or CMU shuttle	
R3-18	CMU Shuttle feels safe because you scan id and are surrounded by CMU students	
R3-19	Feels safer taking CMU shuttle than walking home at night	
R3-20	Feels unsafe on campus sometimes because there can be suspicious individuals on Craig	
R3-21	Feels that suspicious individuals on craig street often linger and walk too close to passerbys	
R3-22	Can not recall many experiences where she has felt very unsafe	
R3-23	Most experiences she felt unsafe during occurred late at night and on Craig Street	
R3-24	Was once walking back from tepper and was glared at by a man standing on the corner of Craig and Fifth avenue	
R3-25	Should have taken the shuttle but at the time didn't know how to use it and was stubborn when it came to learning how to use it	
R3-26	Was too stubborn because at the time she didn't want to learn how to use the shuttle as it seemed like a hassle	

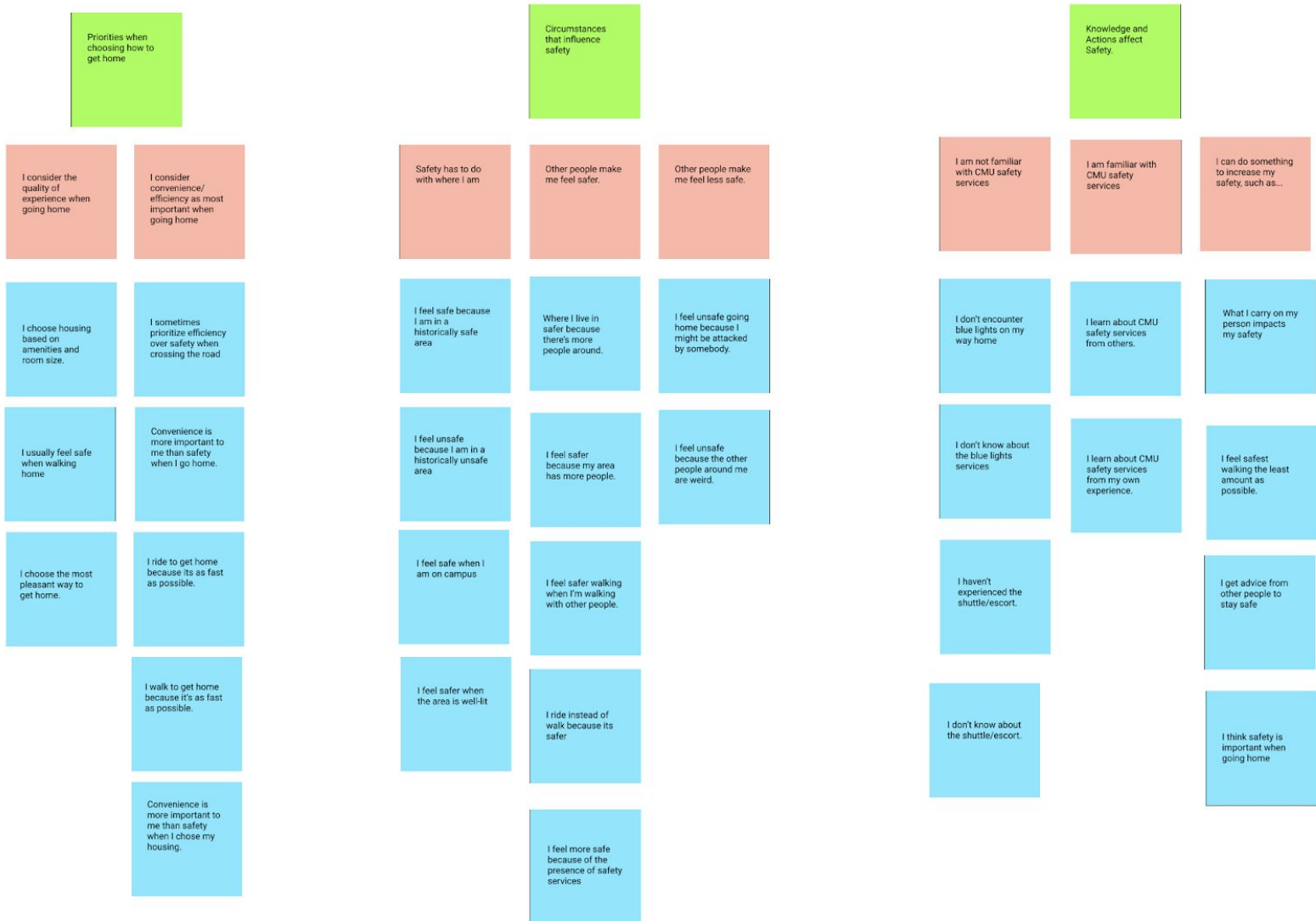
R3-27	Realized it was a safer way to get home and decided she needed to learn how to use it	
R3-28	Eventually learned how to use the shuttle by riding it with a friend who was familiar with the system	
R3-29	Now feels the shuttle is very easy and convenient to use	
R3-30	Lived in mudge freshman year and felt more safe walking to mudge than walking to webster	
R3-31	Feels that walking in groups makes her feel safer	
R3-33	Feels that places where there is less light on her walk home make her feel more on edge	
R3-34	Usually walks home with friends she is studying with	
R3-35	Has only walked home alone 3 or 4 times because she gets scared easily	
R3-36	Feels the cmu shuttle is safest because you have to scan your id	
R3-37	Feels that the cmu shuttle is safest because you are surrounded by other cmu students	
R3-38	Feels that bussing and taking the shuttle are safer than walking	
R3-39	Usually feels unsafe between 12am-5pm when walking home due to lack of people on streets during that time	
R3-40	When feeling unsafe walks fast towards destination	
R3-41	When feeling unsafe also makes sure to not wear headphones and be aware of surroundings	

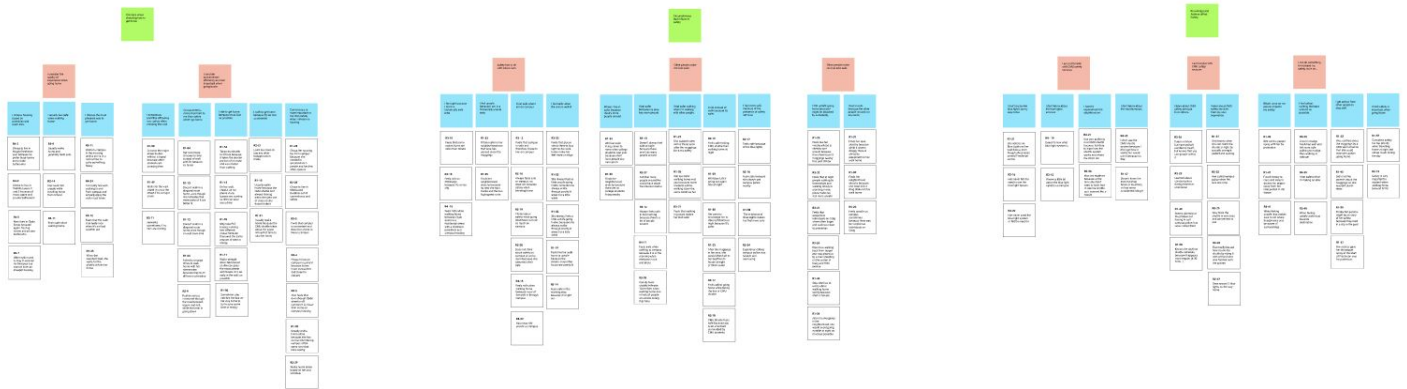
AMRU 2:

Note Num	Description	Profile
R4		Age: 19
R4-01	Has lives on campus for three years and off campus for one year	Gender: Female
R4-02	Chose to live in Mugde freshman year because he prefer large rooms and private bathrooms	Major: Business
R4-03	Chose to live in Webster years 2 and 3 because of more space and private bathrooms	Years in Pittsburgh: 2
R4-04	Chose to live on campus in general because it was more convenient and closer to classes	
R4-05	Now lives in Clyde Street because again, has big rooms and private bathrooms	
R4-06	Also feels that even though Clyde street is off campus it is closer than some on campus housing	

R4-07	Feels that Clyde Street is safe because it is a residential area and has a children's preschool	
R4-08	Feels that Clyde Street is safe because it is surrounded by on campus buildings	
R4-09	Feels that the walk back to Clyde Street Apartments is safe because it is mostly through campus	
R4-10	Has never uberred or lyfted to campus	
R4-11	Feels safe when walking home	
R4-12	Feels that the walk is actually nice when it's not bad weather out	
R4-13	Enjoys listening to music on the way to campus	
R4-14	Always walks because walking to campus only takes 4-7 minutes while bussing from Clyde to the Morewood and Forbes bus stop takes at least 15 minutes.	
R4-15	Feels safe when walking home because most of the walk is through campus	
R4-16	Feels safe when walking home because Clyde street is a residential street with a children's preschool and campus housing	
R4-17	Feels safe when walking to campus because it is in the morning when everyone is out and about	
R4-18	Feels safe in Pittsburgh because it's a nice city	
R4-19	Doesn't know what blue light system is	
R4-20	Has never used the blue light system or felt the need to	
R4-21	Use port authority over CMU shuttle because he's lazy to learn how the shuttle system works and where the stops are	
R4-22	Feels safer while riding the PAT bus then while walking	
R4-23	Feels safest when I'm taking an uber	
R4-24	Is totally fine with walking to and from campus and actually enjoy the walk most times	
R4-25	Doesn't use the CMU shuttle system because I don't get how it works but would use it because its free	
R4-26		
R4-27		
R4-28		

Affinity Diagram





Summary Findings

1. Students feel safest around other students.
2. There is a threshold for the number of people on the street that conveys a sense of safety; students feel safe with many people on the street, but they feel very unsafe with only one or two on the street.
3. Students' reasons to ride the shuttle or bus may change based on time of day: At night, they may ride for safety, but during the day they ride because it's faster.
4. Students' reasons for their perceived goals for their mode of transportation may also depend on the time of day: For example, students may want to get home as fast as possible during the day because it's more efficient, but may want to do so at night because it's the most safe way.
5. Blue Lights both indicate the presence of people and establish a safe area—the two major factors by which students gauged their safety. (Light was also important to students.)
6. Students often gauge their safety based on the circumstances around them rather than their own agency in responding to unsafe situations.
7. Students often measure safety by their risk of being attacked by another person, as opposed to risk of injury from weather, being inebriated, or jaywalking.
8. Students will alter their mode of transportation in response to risks to their safety, despite cost or efficiency factors.
9. CMU and parents encourage students to take action for their own safety (in the short-term), while students gauge their safety more so based on their circumstances.
10. Not all campus safety features are visible to everyone.

Survey

Abstract:

Our research is focused on investigating the undergraduate student safety on CMU campus (especially on the way home from campus) through the usage and awareness of various services provided such as the blue lights, CMU Shuttle/Escort services and CMU police as well external circumstances that could cause students to feel unsafe when traveling back home from campus. From this investigation, we hope to gain insights on the current status of student safety en route from campus to home to especially learn of any pain points that students may be facing.

Research Goals:

Our goal for our survey is to (1) get a better understanding of how students feel safe and unsafe traveling to and from campus, and (2) how they were made aware of different aspects of existing safety measures. We are also interested in which variables affect how safe/unsafe they feel, whether it be time leaving from campus, residing neighborhood, etc.

Survey Population:

We are interested in surveying undergraduate students who take any method of transportation home from campus at night. This can include people who walk home, take escort, rideshare systems, PAT buses, etc. This population has a direct interaction with on-campus safety features, and because of the time constraint, we believe is probably more cognizant of risks to their safety while going home and more aware of all measures that secure their safety.

Distribution Method:

We decided to post on the Facebook CMU groups (of undergrads) that we were affiliated with so as to reach a wider audience of students. We also reached out to our peers individually so as to increase our responses further. To prevent skewing of the data when sending out to peers because of similar backgrounds/living conditions, we attempted to vary the population that we were sending out individual requests to.

Effectiveness:

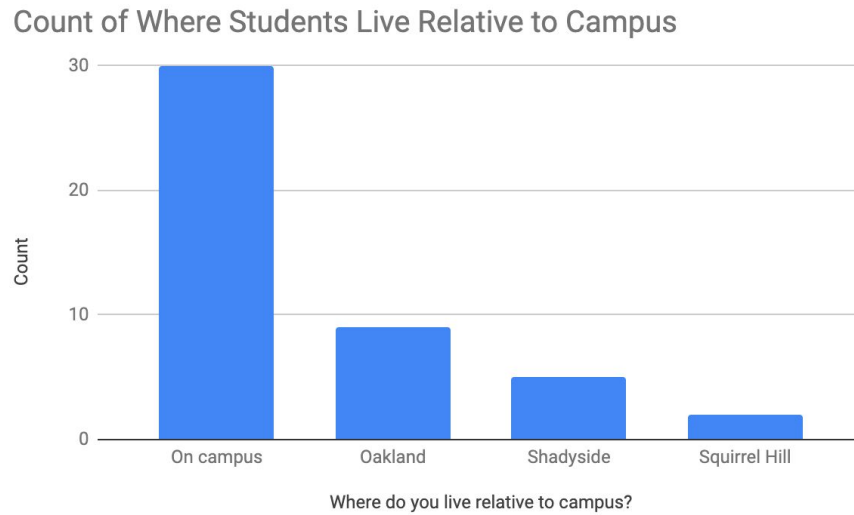
We received responses from 44 individual students over a variety of different groups of CMU university students.

Results:

Graphs for each question:

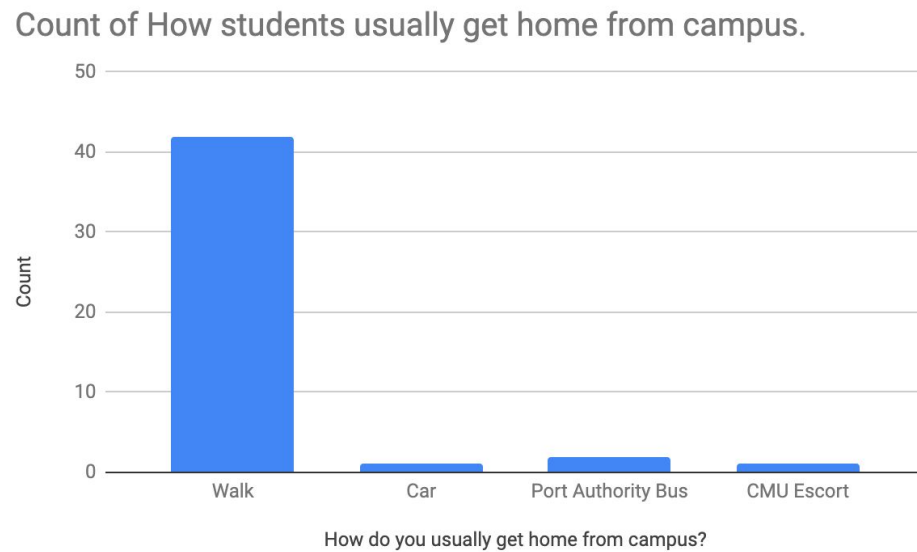
1. Where do you live relative to campus?

a. Graph



2. How do you usually get home from campus?

a. Graph

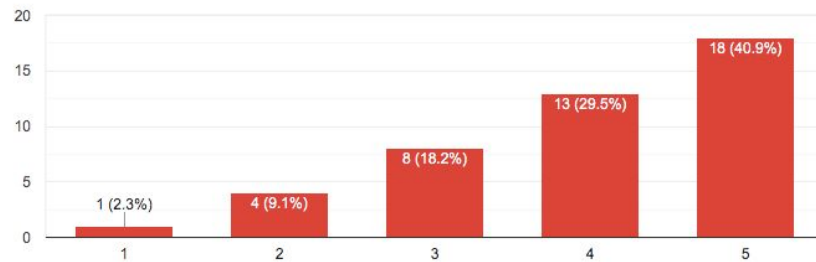


3. How important is safety to you in your choice of transportation?

a. Graph

How important is safety to you in your choice of transportation?

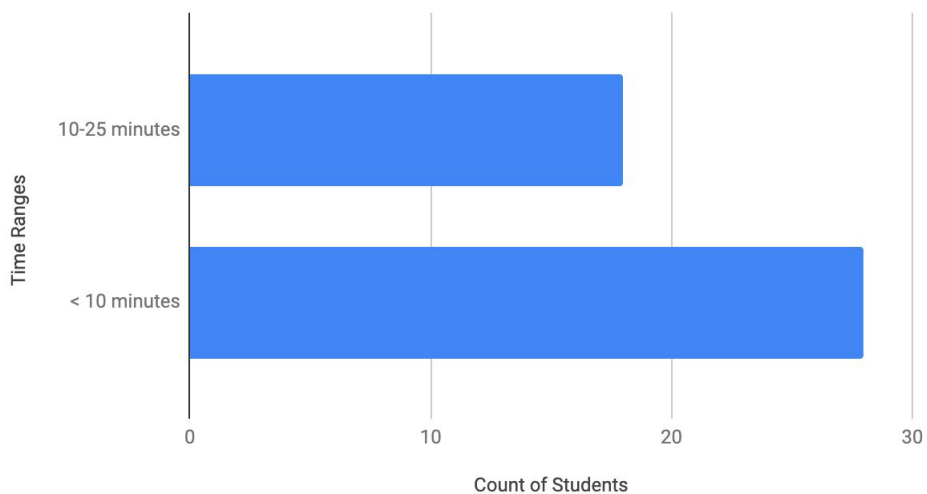
44 responses



4. How long does it take for you to get home using your method of transportation?

a. Graph

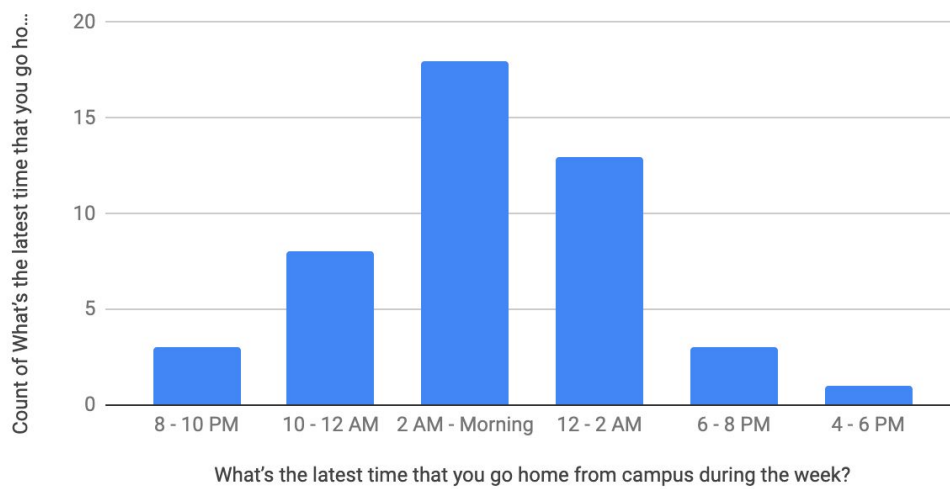
Count of How Long Students Take to Get Home



5. What's the latest time that you usually go home from campus?

a. Graph

Count of What's the latest time that you go home from campus during the week?



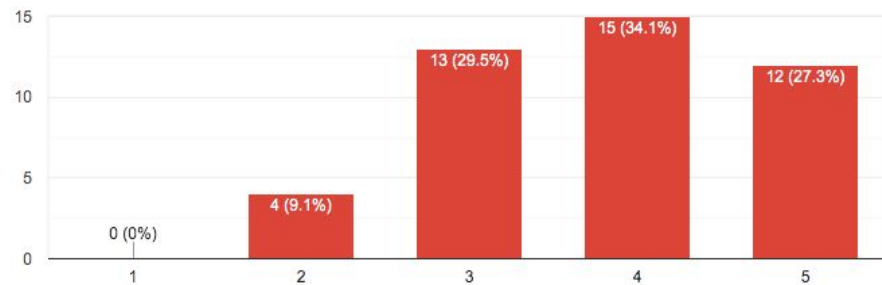
6. How safe do you usually feel using your method of transportation?

a. Graph

How safe do you usually feel using your method of transportation?

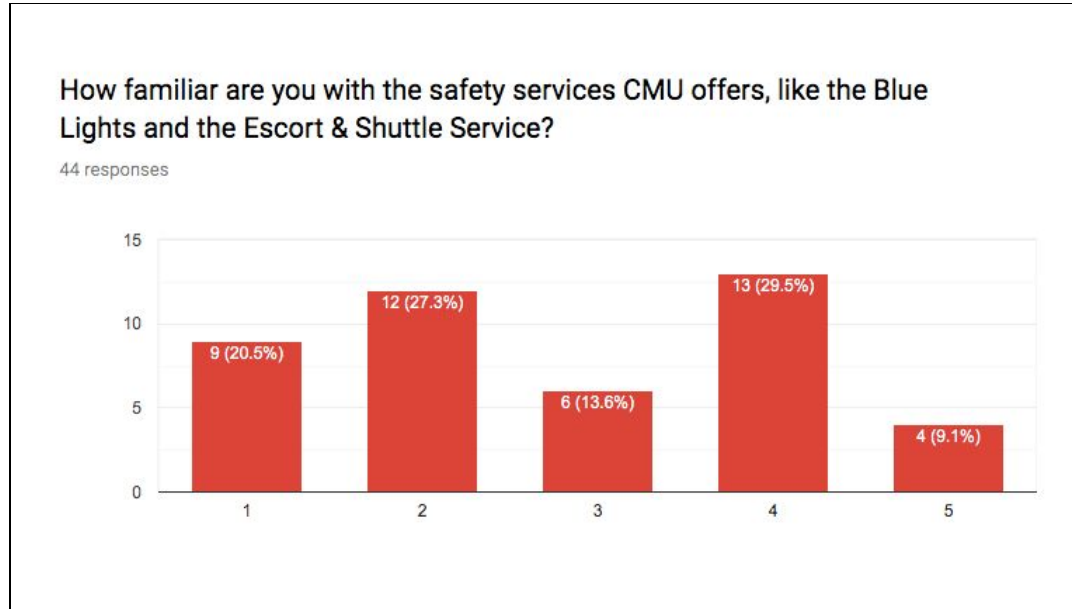


44 responses



7. How familiar are you with the safety services CMU offers (blue light, police escort)?

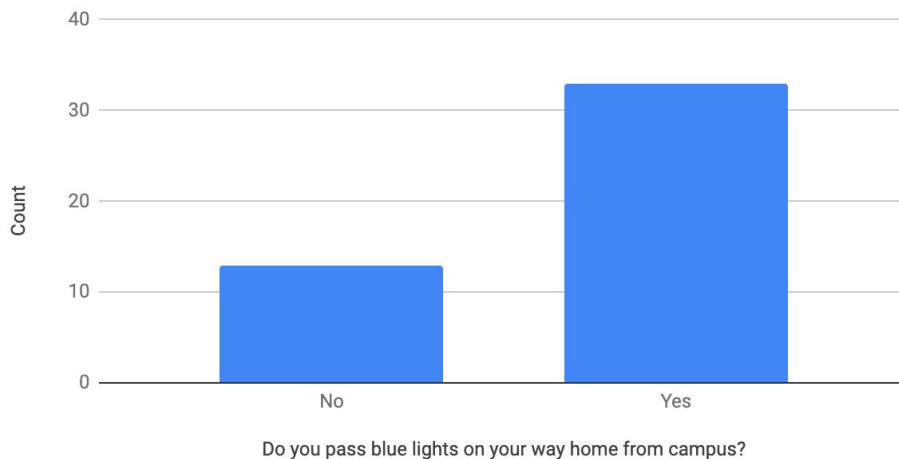
a. Graph



8. Do you pass blue lights on your way home from campus?

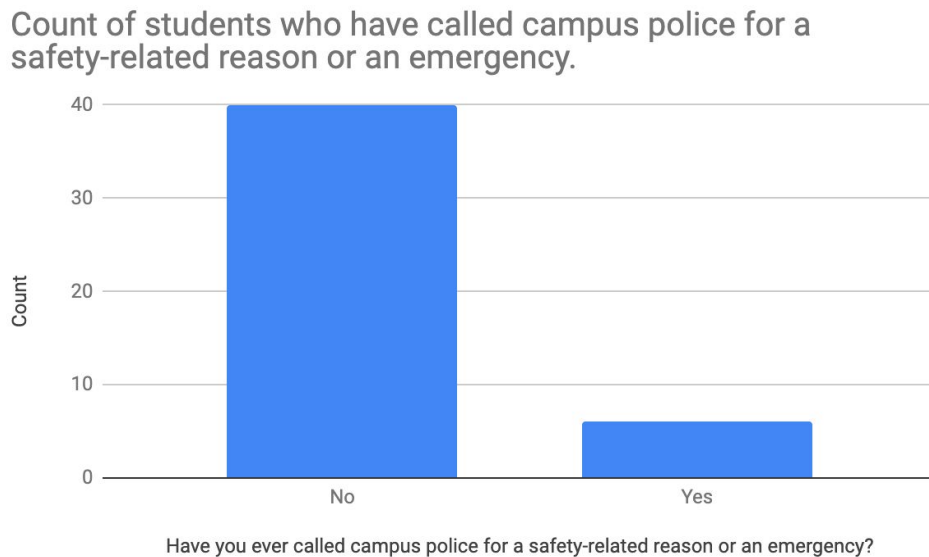
a. Graph

Count of Students who pass Blue Lights on their way home from campus.



9. Have you ever called campus police for a safety-related reason or an emergency?

a. Graph



Insights based off graphs:

- (1) Although most students surveyed lived on campus and have a short walk to their home, they still rate their feeling of safety as not perfectly complete. This could be because many are leaving late at night, indicating that time of day is a major factor contributing to students' sense of safety.
- (2) Not all students pass or are aware of Blue Lights on campus. Since Blue Lights should be visible as even those accessing other modes of transportation travel home, this indicates that Blue-Light visibility could be increased.
- (3) While students report more often that they feel safe, student awareness of on-campus safety services is relatively mixed with students indicating equally that they are aware and unaware of safety services. This indicates that while more student report feeling safe, their awareness of safety services provided by CMU might not be a relevant or important factor in helping them feel safe.
- (4) Most students report walking as their method of transportation to and from campus, and those same students also more often report that they feel safe using their method of transportation. This point needs to be further explored because in our contextual inquiries we found across the board that students felt safest in ubers, buses, or shuttles, not walking.
- (5) Most students live on campus or in Oakland and report having transportation times of less than 10 minutes. The same students often report walking as their method of

transportation. Based off of this we can draw the insight that for the majority of students who live on campus housing and in Oakland, bussing isn't even a possibility for students who live on campus or really close by in Oakland housing, because they live so closeby.

Conclusions:

Based off of our contextual inquiries and survey results, we were able to pinpoint some key insights as listed above. The first conclusion we reached is that awareness of safety services provided by CMU can definitely be increased. Awareness of the blue light system is minimal and students often avoid the shuttle system because they find it harder to use than the PAT buses. Features our application could include to specifically target this lack of awareness is a "what's there where I am" feature that highlights all the safety services available at a certain time and location.

The second conclusion we reached is that students feel safer when it is lighter out and there are more people out. To solve this issue, we can build features into the application that can provide more light or connect the user with another person who is walking home at the same time so he or she doesn't feel a lack of human presence as clearly.

The third conclusion we reached is that students sometimes prioritize convenience over safety or prioritize safety over convenience. Essentially, sometimes students get too scared and sometimes they're not scared when they maybe should be. The application could try and bridge the gap between perceived threat and real threat to users by assuring them they are safe and reminding them to still be careful and aware of their surroundings. For example, the application can stop music that is playing on a device and into a users headphones if it's past the hour of 2am, or the like, in order to help the user stay aware.

All in all, our first round of research has already helped us identify multiple useful features for our application that would help us not just help students feel safer, but more effectively utilize campus resources.

Appendix

Survey:

Introduction:

We're conducting research on safety at CMU for our course User Center Research Evaluation in the Human Computer Interaction program. We'd love to hear from you about your experience with safety on campus and on your way home --- this will help us gather data to analyze to improve the current safety infrastructure at CMU. The survey should only take 5 minutes, and your responses are completely anonymous.

We really appreciate your input!

Survey Link: <https://forms.gle/BsLxiGYBfc2V1kS68>

Survey Questions:

Where do you live relative to campus?

- a. On campus
- b. Squirrel Hill
- c. Shadyside
- d. East Liberty
- e. Oakland
- f. Downtown
- g. Other: _____

How do you usually get home from campus?

- a. Walk
- b. CMU Shuttle
- c. CMU Escort
- d. Port Authority Bus
- e. Car
- f. Ridesharing Service like Uber or Lyft
- g. Other

How important is safety to you in your choice of transportation?

(Not important at all, not very important, neutral, important, very important)

How long does it take for you to get home using your method of transportation?

- a. < 10 minutes
- b. 10-25 minutes
- c. 25+ minutes

What's the latest time that you go home from campus during the week?

- a. 4 - 6pm
- b. 6 - 8 pm
- c. 8 - 10 pm
- d. 10 - 12am
- e. 12 - 2am
- f. 2am - morning

How safe do you usually feel using your method of transportation?

- a. very unsafe
- b. unsafe
- c. neutral
- d. safe
- e. very safe

How familiar are you with the safety services CMU offers, like the Blue Lights and the Escort & Shuttle Service?

- a. very unfamiliar
- b. unfamiliar
- c. neutral
- d. familiar
- e. very familiar

Do you pass blue lights on your way home from campus? [Insert pic]

- a. Yes
- b. No

Have you ever called campus police for a safety-related reason or an emergency?

- a. Yes
- b. No

Analysis Plan:

Note: The following numbered responses under each research questions correlate with the following questions.

1. *What you hope to learn from it*
2. *Technique for analyzing it*
3. *How data will be presented*

Where do you live relative to campus?

1. We hope to learn about how where one lives has an effect on how safe they feel.
2. We are interested in looking at this question in relation to how safe users feel as well as try and gain understanding to which neighborhoods are serviced by blue lights.
3. The data will be presented as a bar graph to easily visualize where there are fewer students living, and where there are more.

How do you usually get home from campus?

1. We are hoping to learn about the popularity of different methods of transportation
2. We are interested in finding correlations between method of transportation and comparing this answer to how safe people feel and how much people prioritize safety.
3. The data will be presented as a bar graph. This will allow easy comparison of the counts of students for each category across categories.

How important is safety to you in your choice of transportation?

1. We are interested in learning about where safety lies in terms of students' priorities regarding transportation.
2. We are interested in pinpointing the how important CMU students view their safety and seeing if there is a correlation between that and what method of transportation they end up using.
3. The data will be presented as a bar graph. This is because there are numerical values assigned to each answer choice as opposed to a qualitative answer. A bar graph will help us compare which numerical choices were more popular amongst participants in the survey.

How long does it take for you to get home using your method of transportation?

1. We are interested in looking at how the time people take to get home may relate to how safe they feel. We are also interested in looking at how far people live in relation to the areas/neighborhoods that they live in.
2. We want to gain insight as to where CMU students live and if that has an impact on what method they use to get to and from campus. We also want to see if there is any correlation between being further off campus and feeling more unsafe when walking home.

3. The data will be presented as a bar graph, with three different bars representing the three different options. This representation makes the most sense because there are three distinct groups which students may fall into and we want to see how many students fall into each group.

What's the latest time that you usually go home from campus?

1. We want to know more about how time leaving campus influences how safe people feel, especially as we are considering narrowing down our scope to specific times in the night.
2. We are interested in comparing how late people leave from campus with how safe they feel, to see if there is any sort of correlation with the results.
3. We will be utilizing a bar graph because there are different categories of times within which students can fall under. We want to be able to get an overall sense of which time is the most popular for students to leave campus and go home during.

How safe do you usually feel using your method of transportation?

1. We want to look at how safe people feel and how the variables of location/time/etc. affect this statistic.
2. We want to see how safe different methods of transportation, on average, feel from the students' perspective.
3. We plan to present the data in a bar graph because once again students are asked to answer with a numerical value and it is most useful to us to see how many students fall within which numerical group.

How familiar are you with the safety services CMU offers (blue light, police escort)?

1. We want to gauge the awareness of the safety services that CMU offers so that we can determine if the lack of knowledge is a potential pain point when it comes to safety on campus.
2. We are interested in knowing this data so that we can determine student priority when it comes to safety and observe how much of the student population is knowledgeable about these services.
3. Once again, it is a numerical value scale, off of which students select a level of familiarity. As such it makes the most sense to group students by their level of familiarity and gain insight as to where most students fall on the scale.

Do you pass blue lights on your way home from campus? [Insert pic]

1. We hope to learn how widespread blue lights actually are on campus in relation to the path the student use to travel home and whether there might be a correlation with the lack of knowledge of the bluelight service with the sparseness of the service itself.

2. We will analyse this data by observing the distribution of people who do pass by and those who do not and observing whether a majority do/do not pass by the light to potentially determine potential sparseness in blue light distribution.
3. As this is a simple yes or no question, we just need to present a bar graph with two bars, one with students who answered yes and one with students who answered no.

Have you ever called campus police for a safety-related reason or an emergency?

4. From gaining this information, we want to learn how much campus police services are actually used to determine its significance in the CMU community.
5. We will analyze this data by determining if the majority of students actually use this service. We will also keep in mind that just because the service is not used, does not mean that CMU police is less significant, as their presence also provides a sense of security.
6. As this is a simple yes or no question, we just need to present a bar graph with two bars, one with students who answered yes and one with students who answered no.