

APPENDIX I

Entry Survey advertisement

Curb

Life is what happens when you put
down your phone.

Do you find
yourself
spending
too much
time on your
cell phone?



Curb will
encourage &
motivate
you to put
down your
phone and
focus on the
real world.

We are currently recruiting
user study participants

Take a quick survey at: tinyurl.com/CurbCornell

Entry Survey

1. Graduation Year
2. Degree type (BA, BS, M.Eng, etc.)
3. Major(s)
4. Minor(s)
5. Do you own an Android smartphone?
 - a. Yes
 - b. No, but own a different smartphone
 - c. No, don't own a smartphone
6. Do you use your phone on a daily basis? If yes, what activities do you usually do on your phone?
7. Do you consider your phone one of the major distractions when at times when you need concentration?
8. If yes, can you describe how your phone acts as a distraction (what do you do on your phone? How many times do you check it?)? If no, why not? What do you consider the major distractions?
9. How many times do you surf your phone for longer than 10 minutes each day?
10. Are there any particular times of the day that you do this?
11. Have you ever used a productivity/time management application? If yes, which one(s)?
12. Would you be interested in an application that tracks your phone usage and reminds you when you spend too much time on your phone? Why or why not?
13. How would you feel about an application that reminded you that you shouldn't look at your phone while in class?
 - a. 1 – Strongly Dislike
 - b. 2
 - c. 3
 - d. 4
 - e. 5 – Strongly Like
14. If such application existed, rank the below reminder notifications from most pleasing to you (1) to least pleasing (5)
 1. Hey [your name], you should get off your phone!
 2. Hey [your name], you've been using your phone for 10 minutes, you should get off!
 3. Hey [your name], just letting you know, you've been on your phone for 10 minutes!
 4. 10 minutes have been spent on phone.
 5. Personalized message.
15. Can you explain what led you to chose the most pleasing?
16. Would you be interested in participating in a 2-week research study that tracks your phone usage habits?

APPENDIX II

Mid-Study Habits Survey

- *Part I – To what extent to you agree with the following statements?*
- 1. I frequently check my phone to see if I have received any messages, emails, text messages, etc.
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
- 2. I experience phantom vibration symptom. (Phantom vibration symptom is the sensation and false belief that one can feel one's mobile phone vibrating or hear it ringing, when in fact the telephone is not doing so.)
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
- 3. I experience anxiety if my phone is not on me, it has run out of battery, or I do not have access to it or an internet/Wi-Fi connection.
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
- 4. I experience a sense of satisfaction after using my phone.
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
- 5. I experience a sense of guilt after using my phone.
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
- 6. I try to reduce or limit the amount of time I am on my phone.
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
- 7. I have experienced failure when attempting to not use my phone for a given period of time.
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
- 8. I frequently use my phone when engaged in a social setting. (i.e. social gatherings, family gatherings, at dinner, in restaurants, etc.)
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always

9. I carry a phone charger with me.
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
10. I get annoyed or angry when somebody interrupts me while I am actively engaged on my phone.
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
11. I pretend to be making a phone call, texting, writing an email, etc. to avoid interacting with people or to avoid certain situations.
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
12. I have had family members and/or friends approach me with concerns about the amount of time I spend on my phone.
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
13. I choose to spend time on my phone over spending time with friends.
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
14. Cell phone use/overuse has undermined my academic or work performance, either in the classroom or while studying.
 - a. Strongly Agree
 - b. Disagree
 - c. Neither Agree nor Disagree
 - d. Agree
 - e. Strongly Agree
15. Cell phone use/overuse has negatively affected my physical health or fitness level/performance.
 - a. Strongly Agree
 - b. Disagree
 - c. Neither Agree nor Disagree
 - d. Agree
 - e. Strongly Agree
16. I choose to spend time on my phone over physical activity. (i.e. going outside, spending time outdoors, going to the gym, working out, etc.)
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
17. I choose to spend time on my phone over socializing. (i.e. participating in social activities/gatherings, going out, etc.)
 - a. Never
 - b. Rarely

- c. Sometimes
- d. Often
- e. Always

- *Part 2 – List the top 5 applications you use on your phone and provide an estimate on the amount of times you go on each app and the total amount of time you spend on each app in one day.*

1. Application 1
 - a. App name
 - b. Amount of times app is used
 - c. Total amount of time spent on app
2. Application 2
 - a. App name
 - b. Amount of times app is used
 - c. Total amount of time spent on app
3. Application 3
 - a. App name
 - b. Amount of times app is used
 - c. Total amount of time spent on app
4. Application 4
 - a. App name
 - b. Amount of times app is used
 - c. Total amount of time spent on app
5. Application 5
 - a. App name
 - b. Amount of times app is used
 - c. Total amount of time spent on app

APPENDIX III

Exit Interview

- **Introduction**

1. Tell us about how the app worked for you.
2. How often did you receive notifications?
3. Did you ever see clouds? When?
4. Any other strange/buggy things that happened?

- **Discuss data collected and compare to control study**

1. Did your phone usage decrease?
2. Did you feel that the app was effective?
3. Did you feel a conscious decrease in usage?
4. Do you feel that you became more aware of the time you spent on your phone?
5. Did your need for the app to remind you decrease over time?
6. Do you feel that you are now better able to predict how long you have spent on your phone?

- **Tell us about the Background notifications.**

1. How many times do you estimate these notifications appeared for you per day?
2. How many times did they appear per sitting?
3. Did these notifications affect your mood?
4. Did you feel that they were effective?
5. Did it surprise you when the notifications appeared?
 - Did you know you had already spent 10 minutes on your phone?
6. Do you feel that the period of 10 minutes is appropriate?
7. If you received notifications in smaller periods than 10 minutes, what do you think is an appropriate period for notifications?
8. Any other suggestions for the Background notifications?

- **Tell us about Curb mode.**

1. When did you usually use the Curb mode, if at all? If never, why not?
2. Did you feel that the notifications were intrusive/bothersome?
3. Did they affect your mood?
4. Did you feel that they were effective/needed?
5. If possible, would you change the message displayed? How?
6. Any other suggestions for Curb mode?

- **Tell us about the Clouds.**

1. How did you feel about this animation in general?
2. Did the change in animations throughout the day affect your mood at all?
3. Did you find the animation intrusive? Effective?
4. How often did you check the Clouds at the end of the day?
5. After seeing the animation, did you go into the app to see your exact usage time for that day?
6. Any other suggestions for the Clouds?

- **Tell us about your overall opinions/experience with the application.**

1. How did the interface feel?
2. Were you confused by anything?
3. Was there any function/page you rarely/never used?
4. Would you continue using this app in the future? (Assuming fully functional)
5. General suggestions?

- **Final steps**

1. Delete RescueTime and Curb

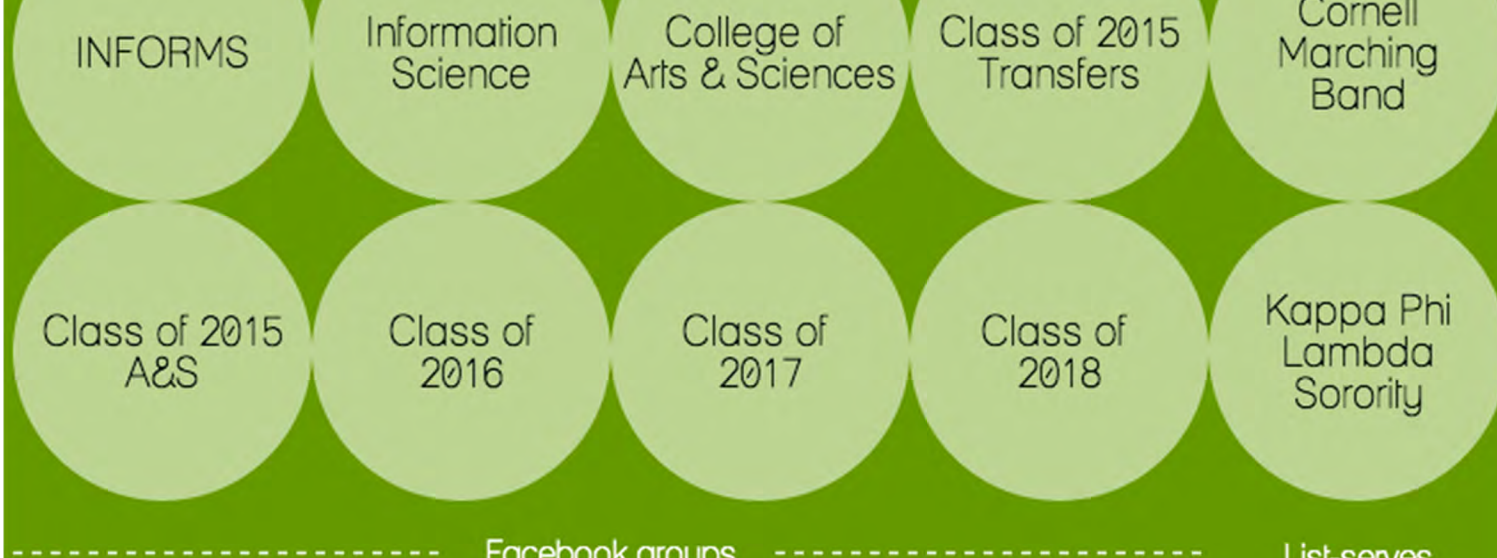


Entry Survey Data Analysis

tinyurl.com/CurbCornell

Electronic survey with the purpose of gaining a sense of smart phone app usage among Cornell students and to gather participants for the user study. Must be a Cornell student to complete the survey.

advertised to:



Facebook groups

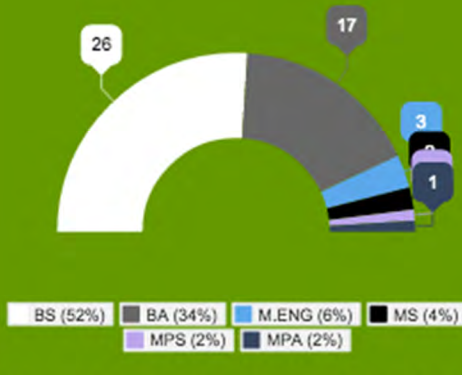
List-serves

Survey Results

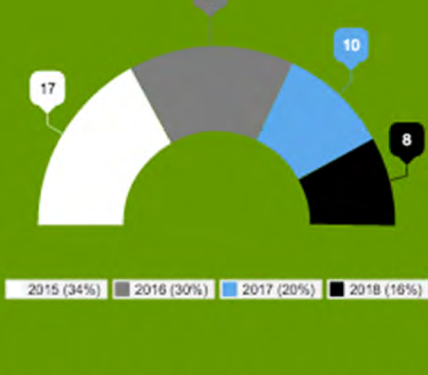
50* total responses
50 say "I use my phone on a daily basis"

Demographics

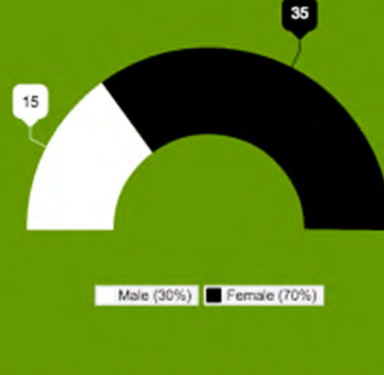
Degree Type



Graduation Year

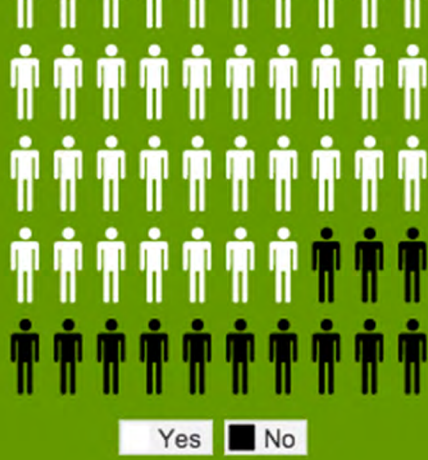


Gender



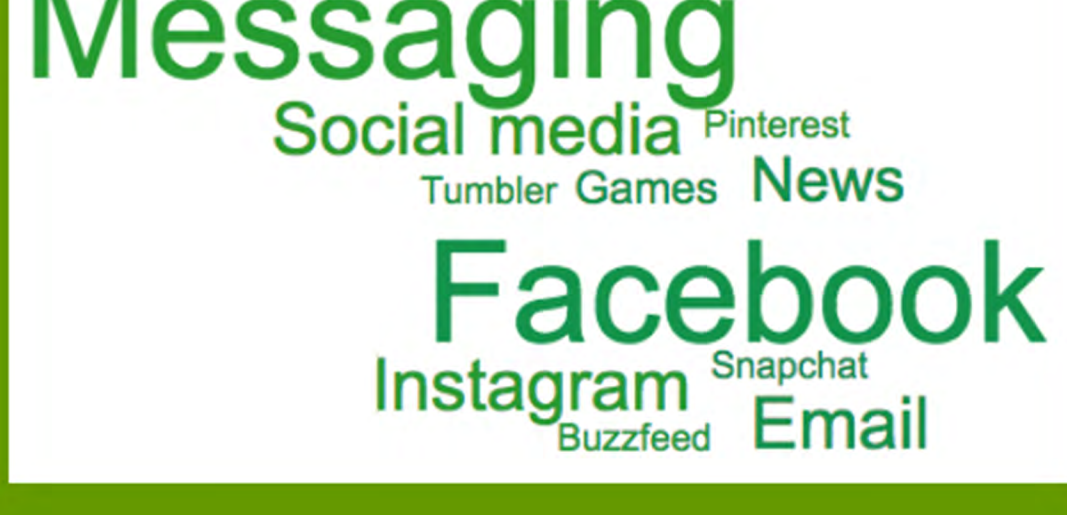
Is your phone a major distraction when you need concentration?

"Easy to stealthily use in class..."
"Great when I'm bored or procrastinating."
"Easy to scroll through apps, adding."
"Don't want to miss important emails...or texts, or notifications."
"It's relaxing."
"More interesting than my classes!"

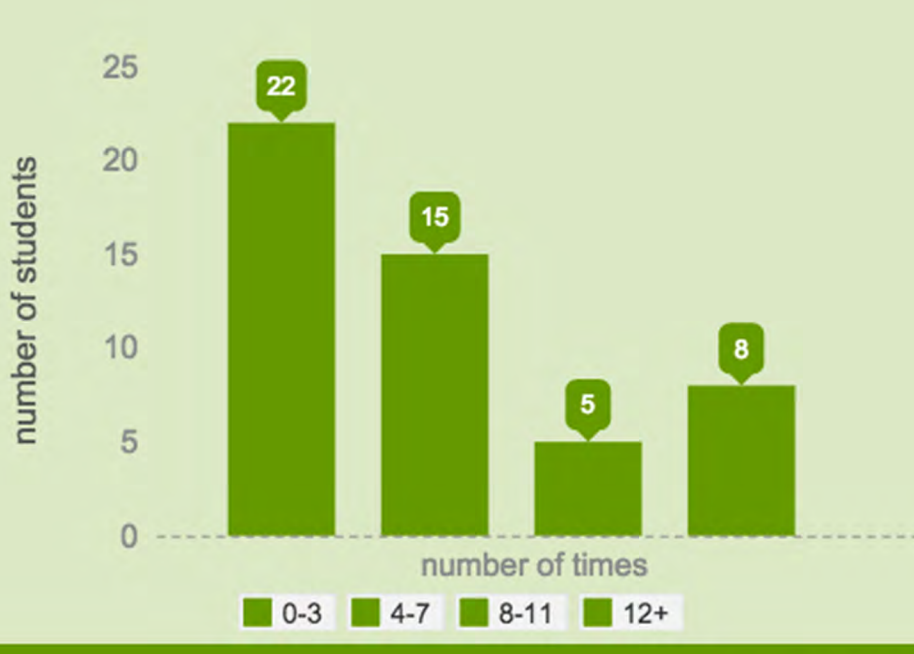


"I only use it when bored or need a break."
"There are other bigger distractions: computer, books, people talking."
"I actively put away/ ignore/ silence my phone when working."
"The real world is more interesting."
"It's rude!"

What are the most distracting apps?



I use my phone for longer than 10 minutes...

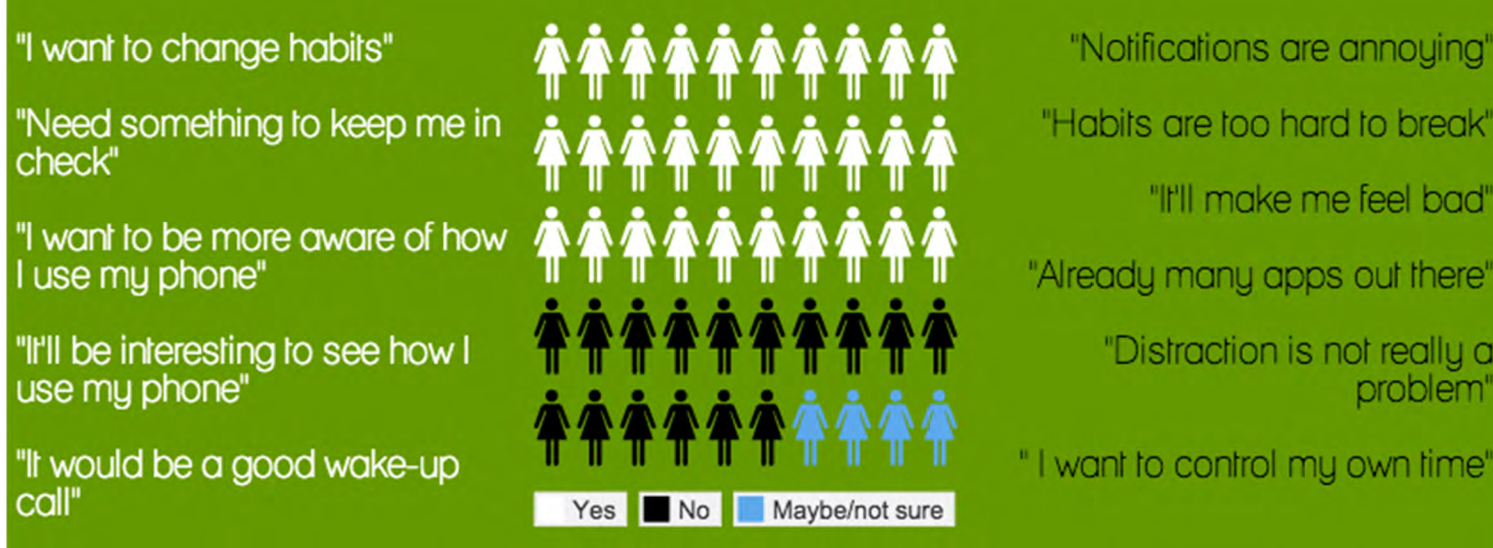


...times every day.



(#) = number of students

I am interested in an app that tracks my phone usage and reminds me when I spend too much time on my phone.



Take-aways

Most students agree that their smart phones are distracting. They recognize that too much usage distracts them from their everyday lives, and would like to try to fix their habits. Therefore there is a space available for Curb to meet the needs of its target market.

Keep in mind during the user study:

A large number of students surf their phone first thing in the morning or right before bed at night. Can background reminders from Curb help students go to sleep and start their days earlier?

Some students don't believe smart phones are distracting because they can control themselves and ignore their phones when doing important activities. Over time, can Curb train students to use their phone less without the help of notifications?

A trending problem unique to students is phone usage during class. Will students be motivated enough to turn on Curb mode in class? How will turning on Curb mode affect students' attitudes towards their in-coming notifications and messages during class? In turn, how will the presence of these messages affect the students' views toward Curb mode?

Some students expressed negative opinions towards usage tracking apps because knowing the data would make them feel bad about their habits. Will the cloud wallpaper, which lightly punishes over-usage, have this affect on the users?

After the close of the Entry Survey, 14 participants were selected and have continued with the User Study.

*Total 53 responses, but 3 did not own Smartphones and were therefore directed to the end of the survey after filling out basic demographic information.

APPENDIX V

Mid-Study Habits Survey Results (N = 11)

Part 1

Statement	Never	Rarely	Sometimes	Often	Always
I frequently check my phone to see if I have received messages, emails, text messages, etc.	0	0	3	6	2
I experience phantom vibration symptom.	1	4	4	2	0
I experience anxiety if my phone is not on me, it has run out of battery, or I do not have access to it or an internet/Wi-Fi connection.	1	4	4	2	0
I experience a sense of satisfaction after using my phone.	1	3	6	1	0
I experience a sense of guilt after using my phone.	1	1	6	2	1
I try to reduce or limit the amount of time I am on my phone.	0	2	7	0	2
I have experienced failure when attempting to not use my phone for a given period of time.	2	4	2	3	0
I frequently use my phone when engaged in a social setting.	1	6	3	1	0
I carry a phone charger with me.	3	3	3	1	1
I get annoyed or angry when somebody interrupts me while I am actively engaged on my phone.	7	3	1	0	0
I pretend to be making a phone call, texting, writing an email, etc. to avoid interacting with people or to avoid certain situations.	2	3	4	1	1
I have had family members and/or friends approach me with concerns about the amount of time I spend on my phone.	7	0	0	0	0
I choose to spend time on my phone over spending time with friends.	9	2	0	0	0
I choose to spend time on my phone over physical activity.	7	4	0	0	0
I choose to spend time on my phone over socializing.	7	4	0	0	0
Statement	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Cell phone use/overuse has undermined my academic or work performance, either in the classroom or while studying.	2	4	1	3	1
Cell phone use/overuse has negatively affected my physical health or fitness level/performance.	4	5	1	1	0

Part 2

App Name	Estimated time spent in one day (minutes)	Actual time recorded (minutes)	% Difference
Brower	180	55.6	69.11
Buzzfeed	60	7	88.33
Chrome	30	7.1	76.33
Facebook	60	21.4	64.33
Facebook	180	50	72.22
Facebook	30	6.8	77.33
Facebook	60	57.3	4.50
Facebook	30	21.9	27
Facebook	15	19	-26.67
Facebook Messenger	10	0.3	97
Facebook Messenger	30	8	73.33
Facebook Messenger	10	0.1	99
Gmail	90	9.3	89.67
Gmail	20	1.2	94
Gmail	30	0.9	97
Gmail	60	5.2	91.33
Gmail	30	7.7	74.33
GroupMe	60	4.8	92
Instagram	60	4.2	93
Instagram	30	26.1	13
Internet	15	2.5	83.33
Kakaotalk	10	2.2	78
Melon	90	60	33.33
Music	120	6.8	94.33
Reddit	30	43.7	-45.67
SMS	30	24	20
SMS	30	0.6	98
SMS	60	10	83.33
Text	10	3.8	62
YouTube	30	7.5	75
Average	50	15.83	64.93