

The G.Y.S.T. (Get Yourself Together) App Presentation

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Executive Summary



- Product Description
 - The GYST App assists users with their everyday lives by providing them with an effective method to plan and schedule their lives on the go
 - Reasons for test
 - Evaluate competitors, build a more efficient app, as well as test the app for a positive user experience
-

Executive Summary - Methods

Methods Used:

- Personas
- Competitor Analysis
- Context Analysis
- Task Analysis: GOMS
- Heuristic Evaluation
- Qualitative/Quantitative User Testing
- Design Thinking
- Prototyping



Executive Summary - Results & Recommendations

Usability Problem	Recommendation	Severity
Difficulty locating progress page in Tick Tick	Make progress page part of the app's navigation bar	High
Irrelevant information in Chipper's progress page (fake money, challenges, etc.)	Use preferred information from Tick Tick progress page (graphs displaying progress, level system, etc.)	High
Difficult to navigate Tick Tick	Simple navigation bar. Pop up menus to add and change information with current page still in background	Medium
Default list view in Chipper is cluttered and too disconnected in Tick Tick.	Use calendar view with scrolling tasks at the bottom of page	Medium

Introduction



The goal of the app was to help users get more organized and stay motivated allowing them to better prioritize and manage their busy lives.

We were looking for something intuitive and easy to use with an attractive interface that allowed for personalization.

Project Description

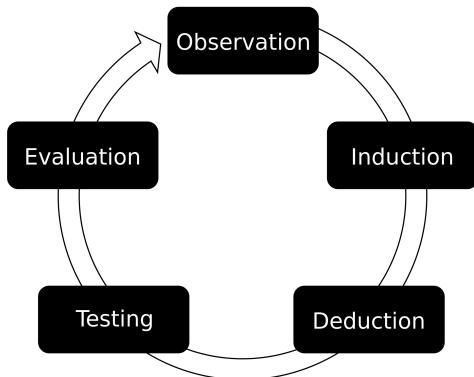
Scope of project:

- This report contains a series of methods used to evaluate ideas for developing the GYST app by examining competitor apps with expert and user evaluation methods and applying the findings to the development of an initial prototype. The goal is to provide users with easy, intuitive, efficient ways to plan, manage, prioritize and track their progress.

User Goals:

- Create tasks and events with customizable data entry
- View existing entries easily and edit quickly when needed
- Stay motivated to use the app with progress tracking and meaningful incentives

Methods & Results



- Personas
 - Competitor Analysis
 - Context Analysis
 - Task Analysis
 - Heuristic Evaluation
 - Qualitative/Quantitative User Testing
 - Design Thinking
 - Prototyping
-

Personas



Goals: To represent a target audience to effectively support the analysis of the applications

Meet the users



Kyle



Olivia



Niko

Olivia



Extrovert

Ambitious

Stubborn

Forgetful

Goals

- Olivia wants to keep track of classes, assignments, work, extracurriculars and social plans.
- She needs to be able to organize tasks at a pretty high level of detail and be able to easily interpret and add to her calendar.

Motivation

Olivia is so overwhelmed that she can't keep all her plans in post-it notes or notebooks anymore. She wants to be able to maintain organization through an app at a pretty high level of detail.

Description

Olivia is a full-time college student working part time at a call center to make extra money. This is her senior year of college so she's focusing on gaining work experience, getting good grades, being able to afford school, volunteering, and having an active social life. Lately, Olivia has been overwhelmed realizing how much she has on her plate and finds herself often misplacing her post-it notes or forgetting her planner. She wants to be able to track tasks and events at a very detailed level like she's able to do by hand so she doesn't mix anything up. She also wants to be able to quickly glance at her planner or add to it since she's always on the go. She loses focus easily and wants the most efficient and intuitive app possible providing high level of detail and high learnability and memorability.

Positives and Negatives

- Tech savvy and familiar with using apps
- Has a strong need for a planner app
- Overwhelmed, easily distracted, and forgetful

Age: 21

Location: Penn State University

Work: Full time student, part time call center technician

Kyle



Laid Back

Intelligent

Creative

Curious

Goals

- Keep track of work responsibilities and personal interests.
- Prioritize certain activities with the ability to change priorities.
- Keep track of his own ability to follow through with self determined goals and commitments.

Positives and Negatives

- Highly creative
- Motivated to try new things
- Doesn't always stick to unstructured commitments
- Loses motivation to complete tasks without encouragement

Motivation

- Kyle has not been able to enjoy all of his personal interests to the extent that he wants while also maintaining his work responsibilities and needs a way to organize his time.

Description

Kyle is 25 and lives with roommates that he has known since college. He works as a manager at a local department store and feels that his job is relatively undemanding aside from certain times of the year when he has more responsibility. This is an ideal job for Kyle because he lives a very rich personal life including many hobbies and social activities with multiple groups of friends. Lately, Kyle feels that he does not have enough time to devote to all of his interests. For example, when work becomes busy he doesn't have enough time to practice guitar for the band he plays in, which causes tension with his bandmates. His work performance also suffers because he procrastinates job responsibilities to attempt to make time for music without effectively using his time. With this and new interests that periodically appear and take up much of his time Kyle feels at a loss for how to maintain his lifestyle and is seeking a way to organize his time and stay motivated to maintain that organization.

Age: 25

Location: Northern Virginia

Work: Department Store Manager

Niko



Active

Persistent

Extrovert

Unorganized

Goals

- Keep track of class assignments, extracurriculars, familial responsibilities, & social plans with minimal loss.
- Have an incentive driven organizational method.
- Wants to be able to view his schedule on the go as well as progress monitoring to see how efficient he is being.

Motivation

- Does not currently have any method of organizing events, deadlines & responsibilities, is skeptical of organizational apps but is willing to try anything

Description

Nikolai is a young, first generation, athletic graduate student studying nuclear medicine at Harvard University. Most of his time is dedicated to his studies but when he isn't buried within the university library, or at home; he often enjoys working out, playing on his intramural soccer team as well as the hanging out with his friends. Niko is also the president of the medical student association at Harvard, while also holding office in the SGA (student government association). Niko also likes to help out with his family where he can, so he needs a way to keep all his events, tasks and responsibilities in track. For example, when things start falling through the cracks, Niko feels as though he is disappointing everyone and would like a way to help keep his head on straight.

Age: 22

Location: Harvard University

Work: President of student group,
& holds office in the SGA.

Positives and Negatives

- Tech savvy and familiar with using cellular applications
- Very skeptical of trying organizational apps, does not believe they help
- Is a little scatterbrained, so some events end up being missed

Competitor Analysis



Chipper



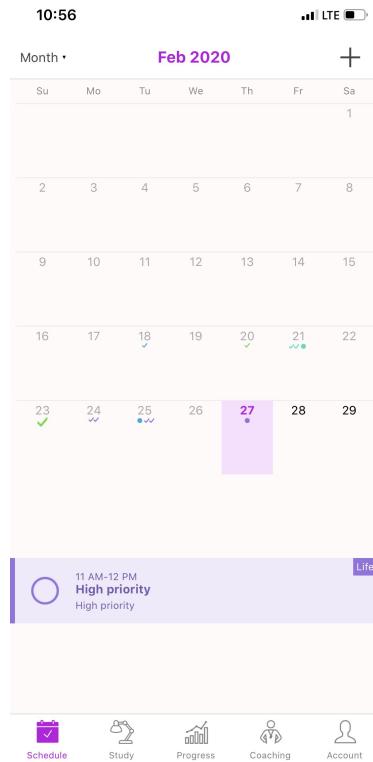
Planner Pro



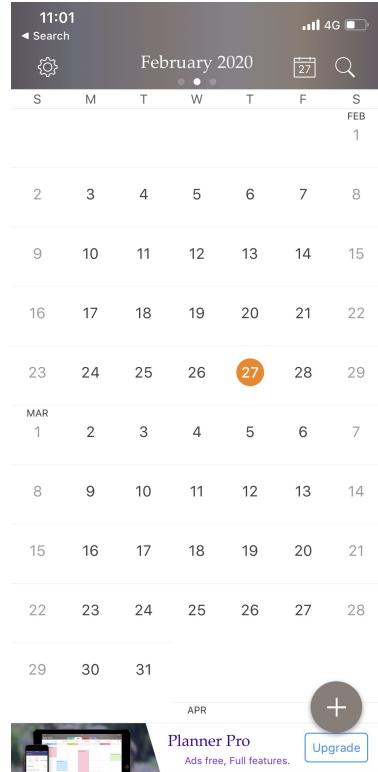
TickTick

Goals: Identify to what extent current systems meet user needs, highlight potential usability problems, as well as discover what aspect of current systems works best for the users

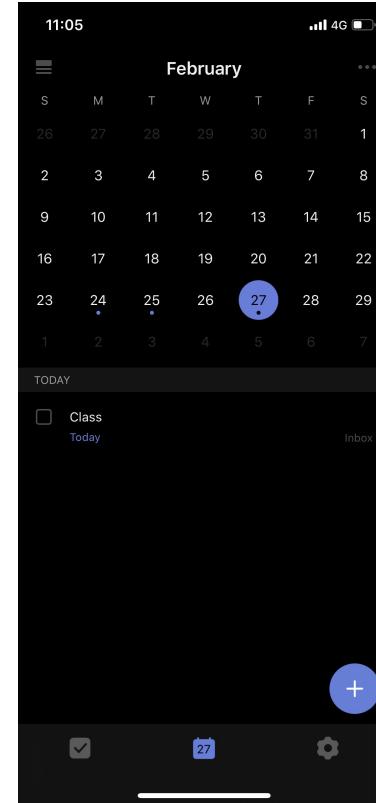
Home Screen



Chipper



Planner Pro

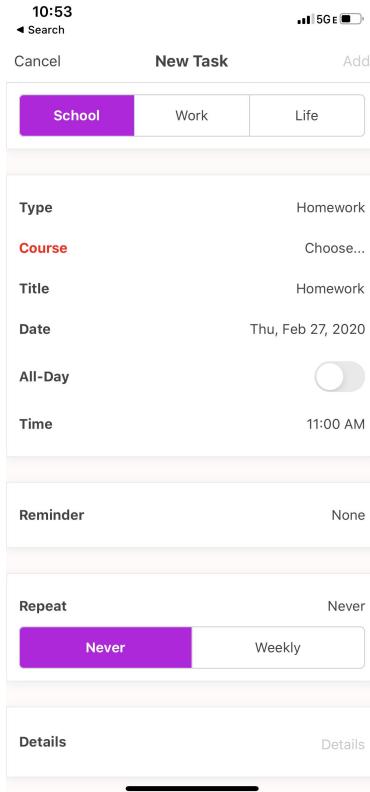


Tick Tick

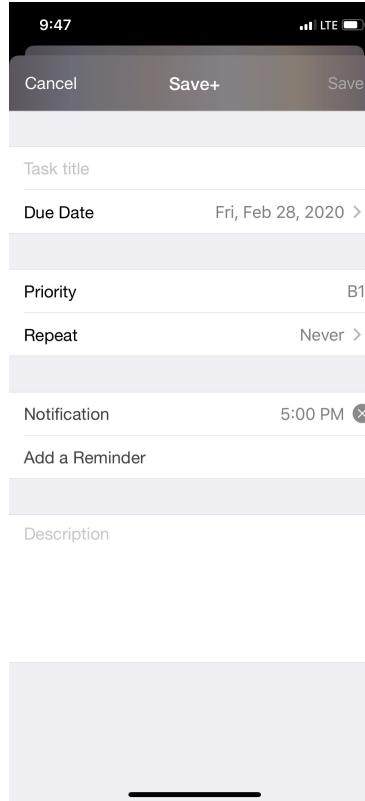
Chipper and Tick
Tick both had
attractive home
screens.

Planner pro starts
with a blank
calendar and
doesn't provide a
snapshot of your
day like the other
apps. It also doesn't
have any indication
if there's a
task/event on that
day at all.

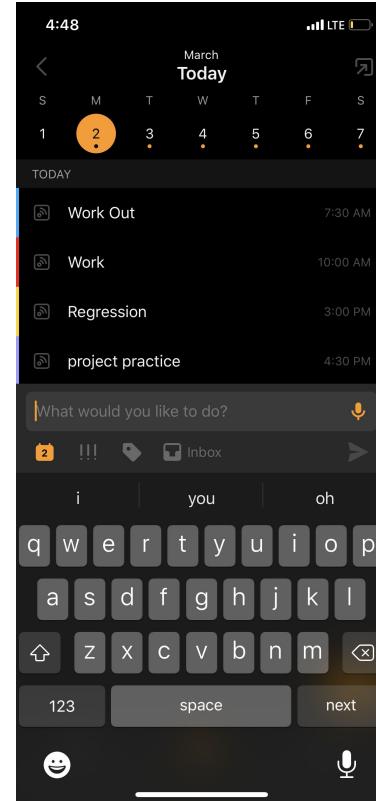
Data Entry - Task



Chipper



Planner Pro



Tick Tick

Chipper and Planner Pro are very straightforward when entering a task.

Tick Tick provides several ways to enter data as a "task", "event" or "inbox".

It's not intuitive to tag or prioritize and it brings users to a secondary screen to add time or switch dates.

Data Entry - Event

10:53
Search
Cancel New Task Add

School Work Life

Type Homework

Course Choose...

Title Homework

Date Thu, Feb 27, 2020

All-Day

Time 11:00 AM

Reminder None

Repeat Never

Never Weekly

Details Details

Chipper

9:47
LTE
Cancel Add Event Save

Title

Location

All-day

Starts Fri, Feb 28 10:00 AM

Ends Fri, Feb 28 11:00 AM

Repeat None >

Add a Reminder

Calendar School >

Description

Planner Pro

11:05
4G
Cancel New Event Add

Title

Location

All-day

Starts Feb 27, 2020 11:00 AM

Ends 12:00 PM

Repeat Never >

Travel Time None >

Alert None >

URL

Notes

Tick Tick

Tick Tick and Planner Pro are very straight forward when entering an event.

Chipper does not differentiate between task and event.

Data visualization - Chipper



5:29

Day • Mon, Mar 2 • +

12pm

1pm

2pm

3pm

4pm

5pm 4:30-5:30 PM Class PSYCH 101

6pm

7pm

8pm

Schedule Study Progress Coaching Account

This screenshot shows the 'Day' view of the Chipper app. At the top, it displays the time '5:29'. Below that are the date 'Mon, Mar 2' and a '+' button. The main area is a timeline from 12pm to 8pm. A red event bar for 'Class' at 4:30-5:30 PM on March 2nd is labeled 'PSYCH 101'. At the bottom are navigation icons for 'Schedule', 'Study', 'Progress', 'Coaching', and 'Account'.

5:15

List • Mar 1-7 • +

today, Mon, Mar 2

4:30-5:30 PM Class PSYCH 101

Tomorrow, Tue, Mar 3

9:30-11:30 PM Night Shift Work

Wed, Mar 4

4:30-5:30 PM Class PSYCH 101

Fri, Mar 6

9:30-10:30 PM Gig at Bar Life

Schedule Study Progress Coaching Account

This screenshot shows the 'List' view of the Chipper app. It displays a weekly summary from March 1-7. Under 'today, Mon, Mar 2', there is a red event 'Class' from 4:30-5:30 PM labeled 'PSYCH 101'. Under 'Tomorrow, Tue, Mar 3', there is a green event 'Night Shift' from 9:30-11:30 PM labeled 'Work'. Under 'Wed, Mar 4', there is another red event 'Class' from 4:30-5:30 PM labeled 'PSYCH 101'. Under 'Fri, Mar 6', there is a purple event 'Gig at Bar' from 9:30-10:30 PM labeled 'Life'. At the bottom are navigation icons for 'Schedule', 'Study', 'Progress', 'Coaching', and 'Account'.

5:30

Month • Mar 2020 • +

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

4:30-5:30 PM Class PSYCH 101

Schedule Study Progress Coaching Account

This screenshot shows the 'Month' view of the Chipper app. At the top, it displays the time '5:30' and the month 'Mar 2020'. Below is a monthly calendar grid. Red dots indicate events for March 2, 4, 6, 8, 16, 18, 23, and 30. A red event bar for 'Class' at 4:30-5:30 PM on March 30th is labeled 'PSYCH 101'. At the bottom are navigation icons for 'Schedule', 'Study', 'Progress', 'Coaching', and 'Account'.

Chipper does a great job allowing users to look at different views and seeing your information for the day.

Data visualization - Planner Pro



4:35 LTE 6 April 2020

Wednesday, Week 15

8

S M T W T F S

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Planner Pro Ads free, Full features. Upgrade

All-day Passover

7:30 AM Work Out

10:00 AM Work

3:00 PM Regression

5:30 PM Research Methods

+

5:35 LTE 6 March 2020

Mon 2 Sun 5

First Day of Women's History...
First Day of Women's History...
First Day of Women's History...
7:30 Work Out
10 Work
3P Regression
3P Project

2 Mon 4 Wed 5 Thu

7:30 Work Out
10 Work
3P Regression
4:30P project practice
Michael Sanabria's 23rd Birth...

3 Tue 6 Fri

Super Tuesday (regional hol...
Super Tuesday (regional hol...
Super Tuesday (regional hol...
7:30 Work Out
1:30P Cognitive Engineering
4:30P Usability

Colby Adkins's Birthday
Project 2 Due
7:30 Work Out
2:30P Regression Lab

7 Sat

7:30 Work Out
10 Edsall Work

+

5:34 LTE 6 February 2020

S M T W T F S

16	17	18	19	20	21	22
23	24	25	26	27	28	29
MAR	1	2	3	4	5	6
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

APR

1 2 3 4

5 6 7 8 9 10 11

12 13 14 15 16 17 18

Gram! Correct all grammar errors

INSTALL

+

Planner pro has unattractive lists and does not display the data well at a glance. Looking at the weekly view, the days read downwards instead of going across which adds a level of confusion.

Data visualization - Tick Tick

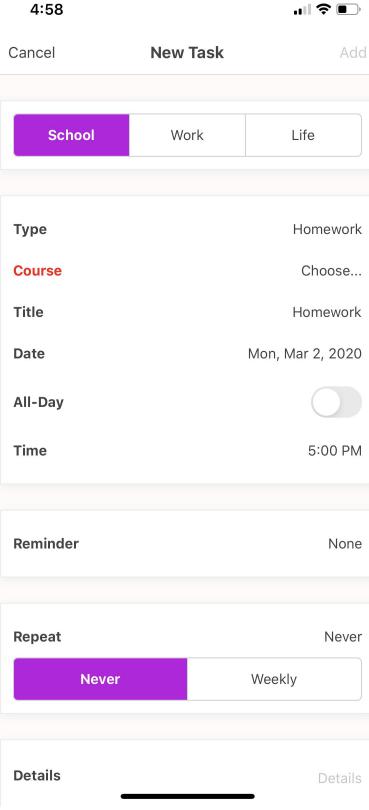


The image displays three screenshots of the Tick Tick app's interface. The first screenshot shows the calendar for March, with the 2nd highlighted in orange. The second screenshot shows the calendar for April, with the 6th highlighted in orange. The third screenshot shows a monthly calendar view for April, with the 6th highlighted in orange. Red arrows point from the March and April calendar screens towards the monthly calendar screen. Each screenshot also shows a list of tasks for 'TODAY' at the bottom, and a large orange '+' button in the bottom right corner.

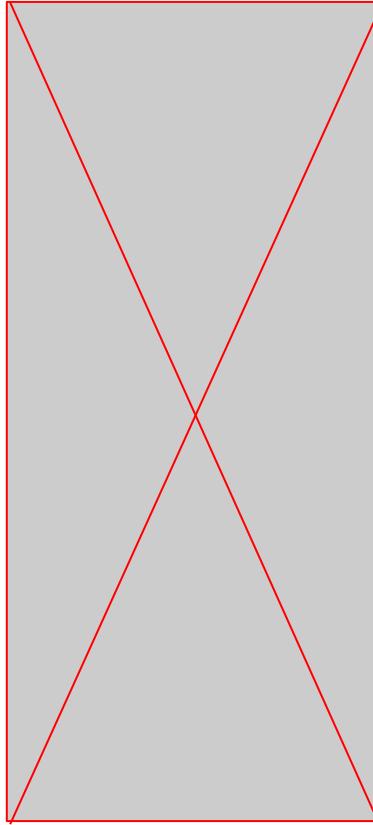
Date	Task	Time
Mar 2	Work Out	7:30 AM
Mar 3	Work	10:00 AM
Mar 4	Regression	3:00 PM
Mar 5	project practice	4:30 PM
Apr 6	Work Out	7:30 AM
Apr 7	Work	10:00 AM
Apr 8	Regression	3:00 PM

Tick Tick only allows weekly or monthly views. All of the dots signifying an event on the calendar are the same color, so users don't know what type of tasks are in each day. This may cause users to have to spend more time interpreting their day. Additionally, the colors for categories are not displayed well and are easy to miss entirely.

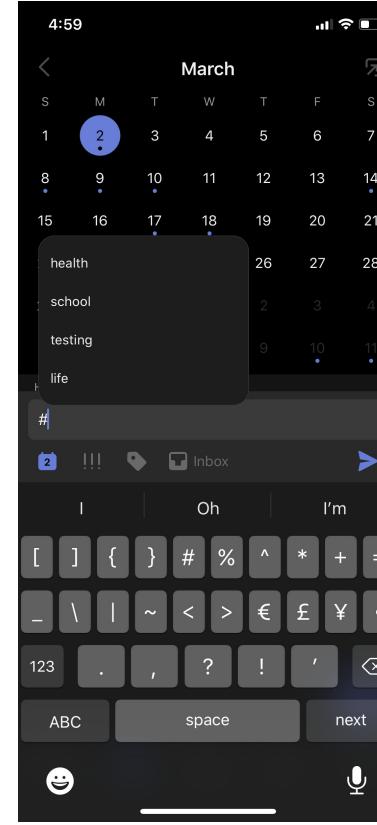
Categories



Chipper 



Planner Pro 

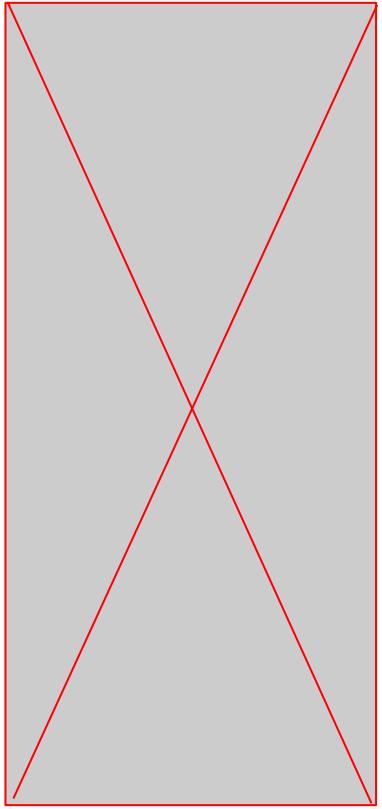


Tick Tick 

Chipper and Tick Tick provide a category option immediately when entering data.

Planner Pro does not have this feature.

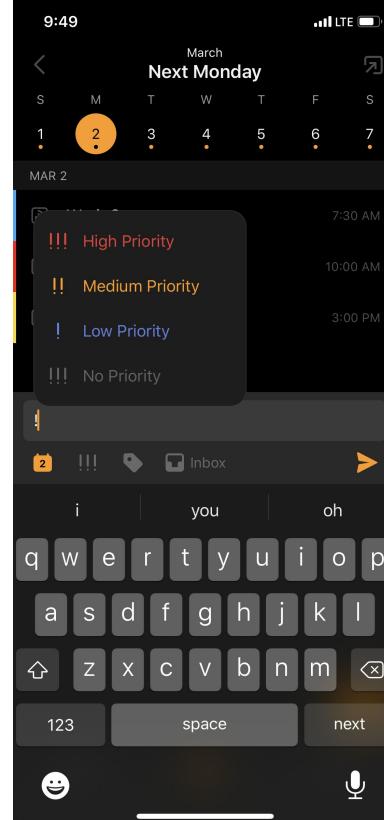
Prioritization



Chipper 



Planner Pro 



Tick Tick 

Tick Tick and Planner Pro provide a category option immediately when entering data.

Chipper does not have this feature.

Progress Monitoring - Chipper



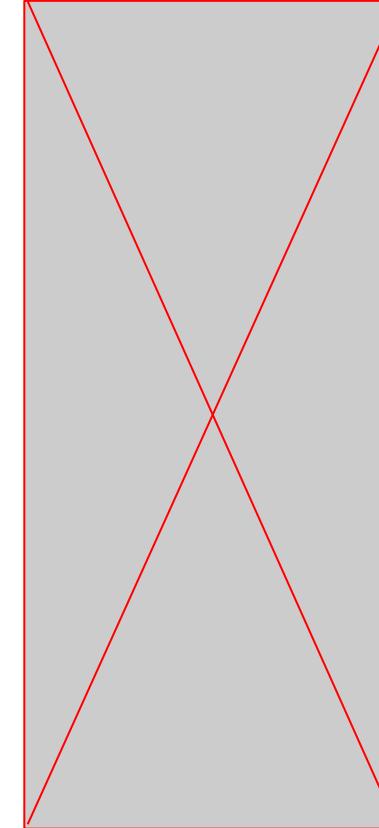
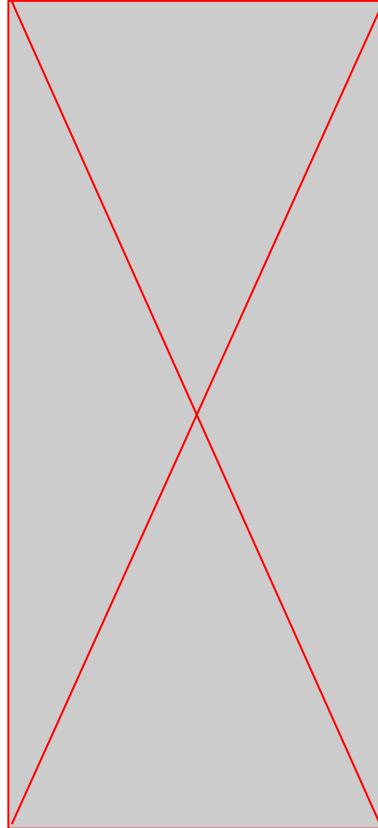
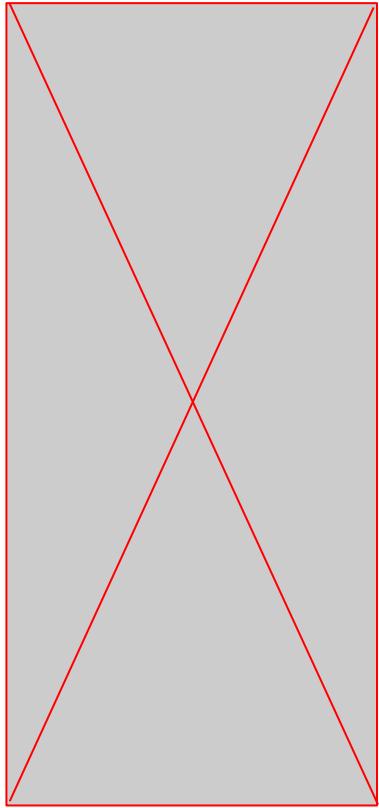
The image displays three screenshots of the Chipper app interface, each illustrating a different aspect of progress monitoring:

- Earnings:** Shows a total amount of \$3,646. A callout bubble highlights the "See more >" link under the "Challenges" section.
- Challenges:** Displays 13 completed challenges out of 74. A callout bubble highlights the "See more >" link under the "Tasks" section.
- Task Progress:** Shows task completion statistics: Total completed (17), Completed last 30 days (8), and Completed today (0).

Each screenshot includes a navigation bar at the bottom with icons for Schedule, Study, Progress, Coaching, and Account.

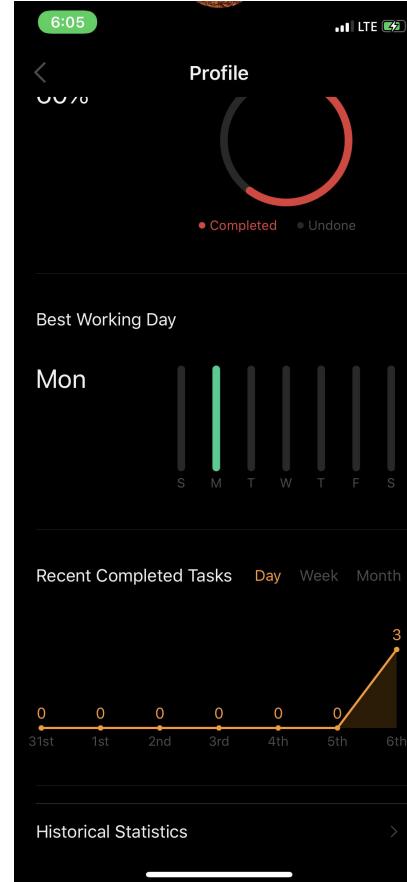
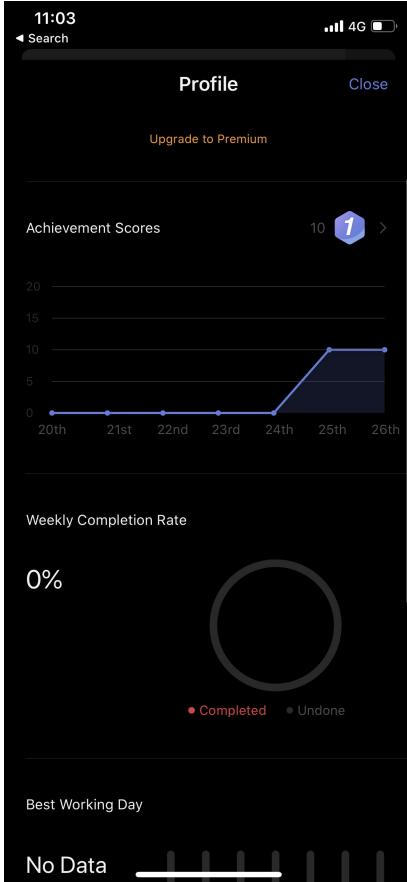
Chipper has progress monitoring in the form of “Earnings” which loosely translates to the amount of money you’ll earn from studying for a degree. They also have “Challenges”. This doesn’t provide much value or significance to the user.

Progress Monitoring - Planner Pro



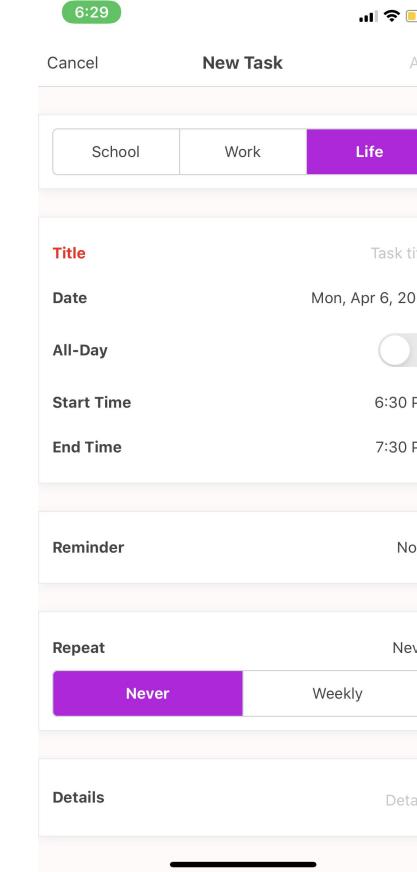
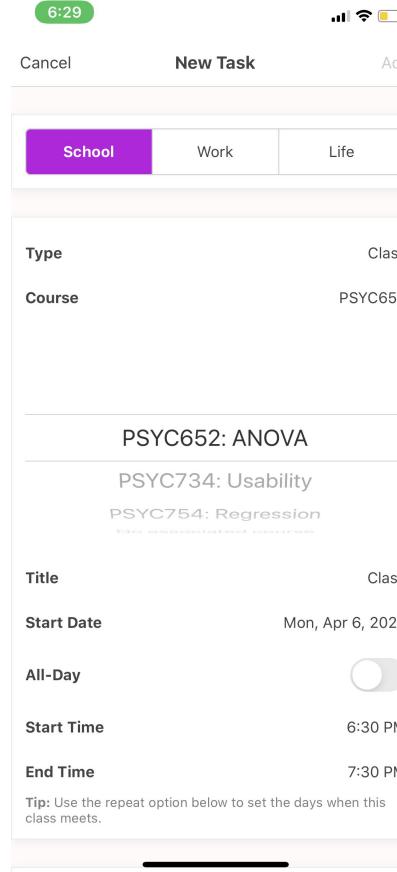
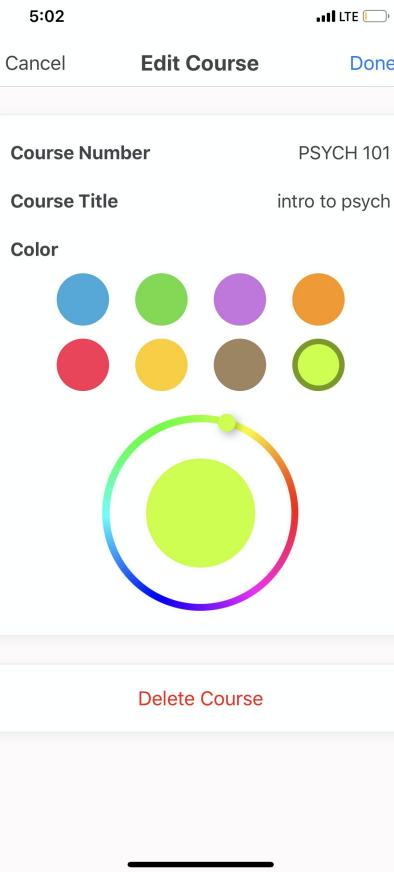
Planner Pro does not have this feature.

Progress Monitoring - Tick Tick



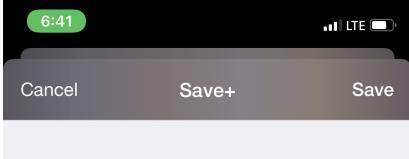
Tick Tick has great progress monitoring. It includes graphs, charts, data, and a level system to compare your usage within the app against other users.

Personalization - Chipper



Chipper doesn't have much customization. Users can color code their courses, but no other personalization features are provided.

Personalization - Planner Pro



dance till it hurts

Due Date Mon, Apr 06, 2020 >

Priority

A

B 1

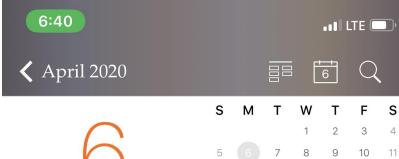
C 2

3

Notification 5:00 PM X

Add a Reminder

Description



Monday, Week 15

← Ads by Google

Stop seeing this ad Why this ad? ▾

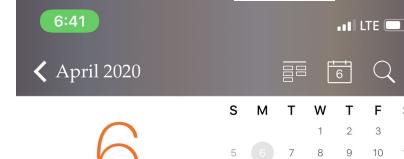
7:30 AM Work Out

- 10:00 AM Work
- 3:00 PM Regression

- A1 sign divorce
- A2 pick up kids from school

- B1 get mani pedi
- B3 buy alcohol to drown sorrow

 C4 skin deer



Monday, Week 15

7:30 AM Work Out

- 10:00 AM Work
- 3:00 PM Regression

- A2 pick up kids from school
- B1 get mani pedi

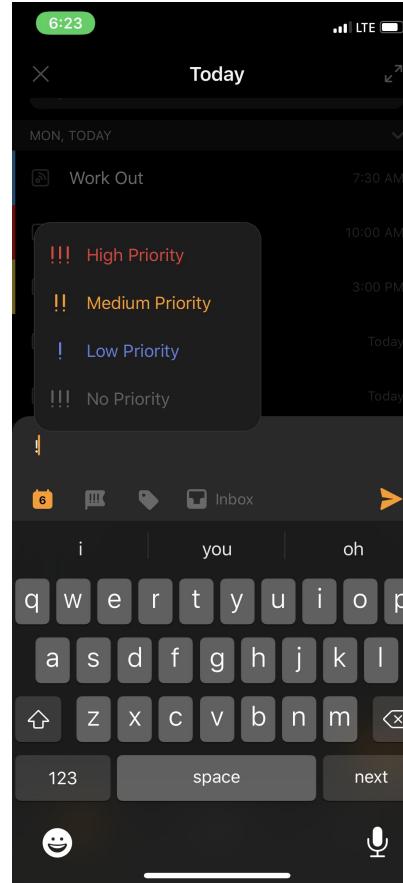
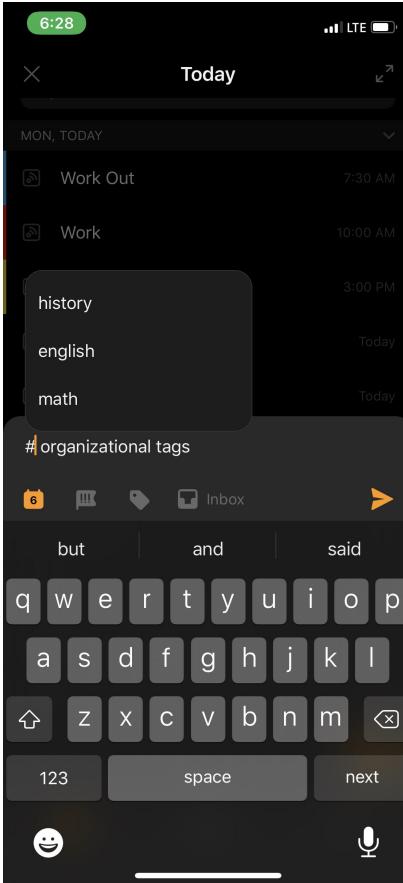
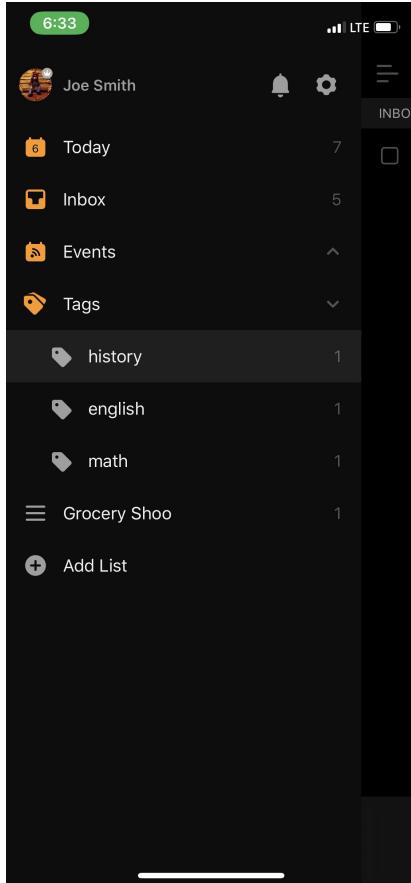
C4 skin deer

A1 sign divorce

B3 buy alcohol to drown sorrow

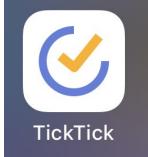
Planner Pro doesn't have any customization. Although it gives colors for tasks, users cannot choose them.

Personalization - Tick Tick



Tick Tick allows customization by giving the user the option to select and create their own categories/tags. Users can also customize the appearance of the app to light or dark mode.

Competitor Analysis Summary

	Home Screen	Data Entry	Data Visualization	Categorize	Prioritize	Progress Monitoring	Personalize
 Chipper							
 Planner Pro							
 TickTick							

Competitor Analysis: Moving Forward

- **Weaknesses:** 2 out of 3 apps performed poorly in the areas of Data Visualization, Progress Monitoring, and Personalization. All three of these areas are important to our personas who wish to:
 - Quickly look at the app for important information
 - Maintain motivation through progress monitoring
 - Personalize features to optimize personal organization

The context of use for these apps will be analyzed and tasks will be created for testing derived from user goals and competitor weaknesses.

Context Analysis



Goals: Understand the context of use and how various factors will affect the quality of user experience as well identify potential usability issues

Context Analysis: Evaluate

CATEGORY	FACTOR	DESCRIPTION	USABILITY ISSUE?
TASK	Goal or Output	Some apps may complete goals better than others	Yes, EVALUATE
TASK	Flexibility	Preferences based on schedule diversity and personal desire.	Yes, EVALUATE

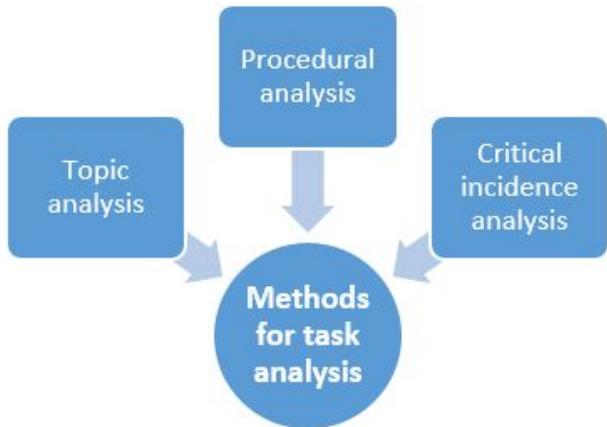
Context Analysis: Control

CATEGORY	FACTOR	DESCRIPTION	USABILITY ISSUE?
USER	Experience/Knowledge: Experience with similar systems or products	Familiar with organizer apps but no long term use.	Maybe, CONTROL
USER	Personal Attributes: Physical capabilities	Typical physical ability	Maybe, CONTROL
USER	Personal Attributes: Cognitive capabilities	Typical cognitive ability	Maybe, CONTROL
TASK	Technical Environment: Hardware	App will be used on a mobile phone	Yes, CONTROL
TASK	Technical Environment: Software	App will be used by an Apple user	Yes, CONTROL
TASK	Technical Environment: Network	App will be connected to data/wifi	Maybe, CONTROL

Context Analysis: Monitor

CATEGORY	FACTOR	DESCRIPTION	USABILITY ISSUE?
USER	Experience/Knowledge: Experience with system or product	Generally familiar with phone applications	Maybe, MONITOR
USER	Experience/Knowledge: Task knowledge	Generally familiar with entering data on an application	Maybe, MONITOR

Task Analysis

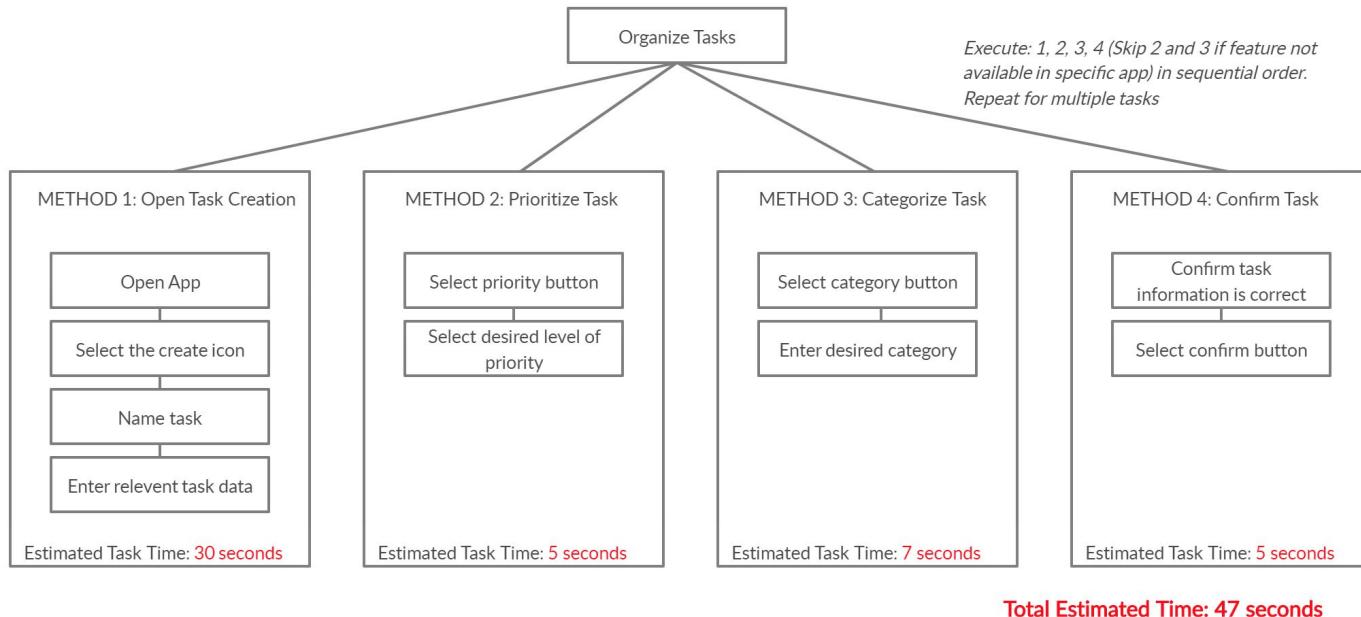


Goals: Identify what actions or cognitive processes a task requires by going through the action of executing the task to understand the steps taken to achieve said task

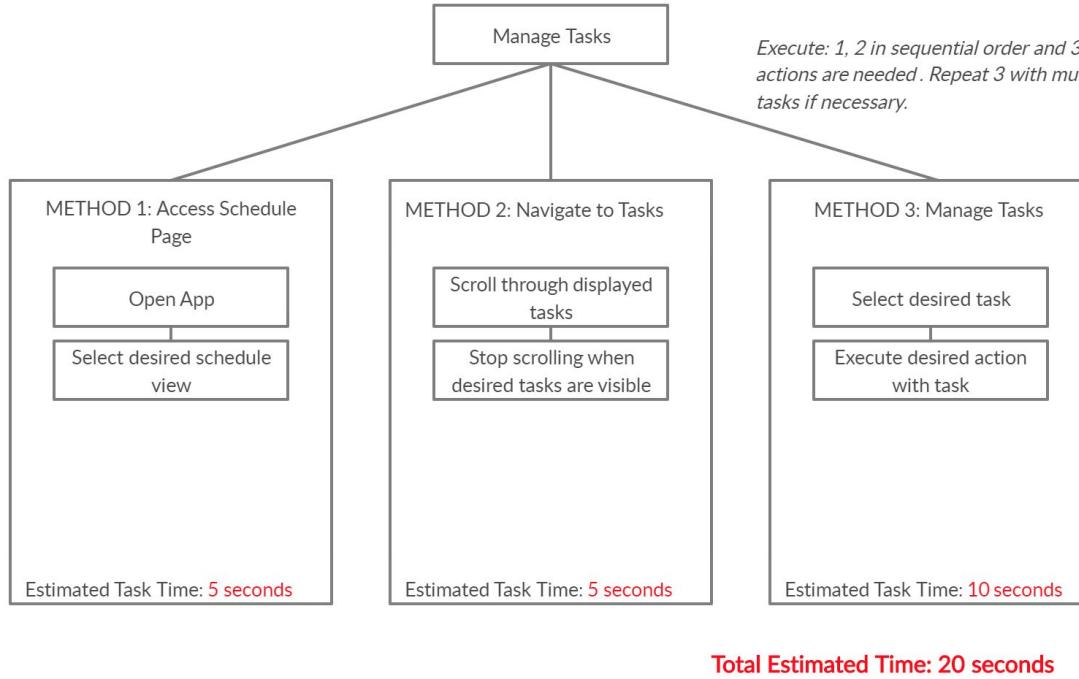
Task Analysis

- GOMS based task analyses were created for three tasks derived from user goals and competitor weaknesses:
 1. Organize Tasks
 2. Manage Tasks
 3. View Recent Progress
- These task analyses will be used during both heuristic evaluation and user testing.

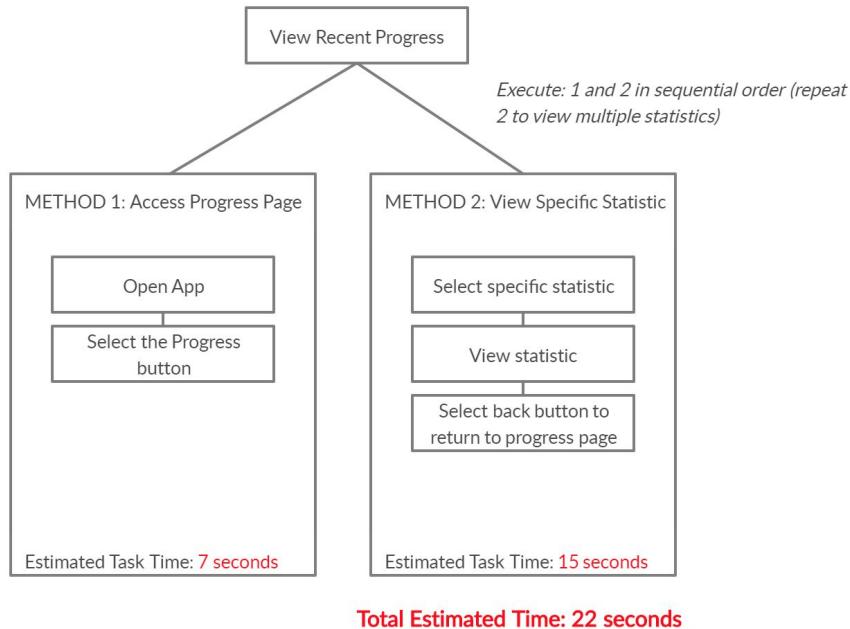
Task Analysis: Organize Tasks



Task Analysis: Manage Tasks



Task Analysis: View Recent Progress



Heuristic Evaluation



Goal: Review the interfaces against accepted usability principles to highlight possible usability issues

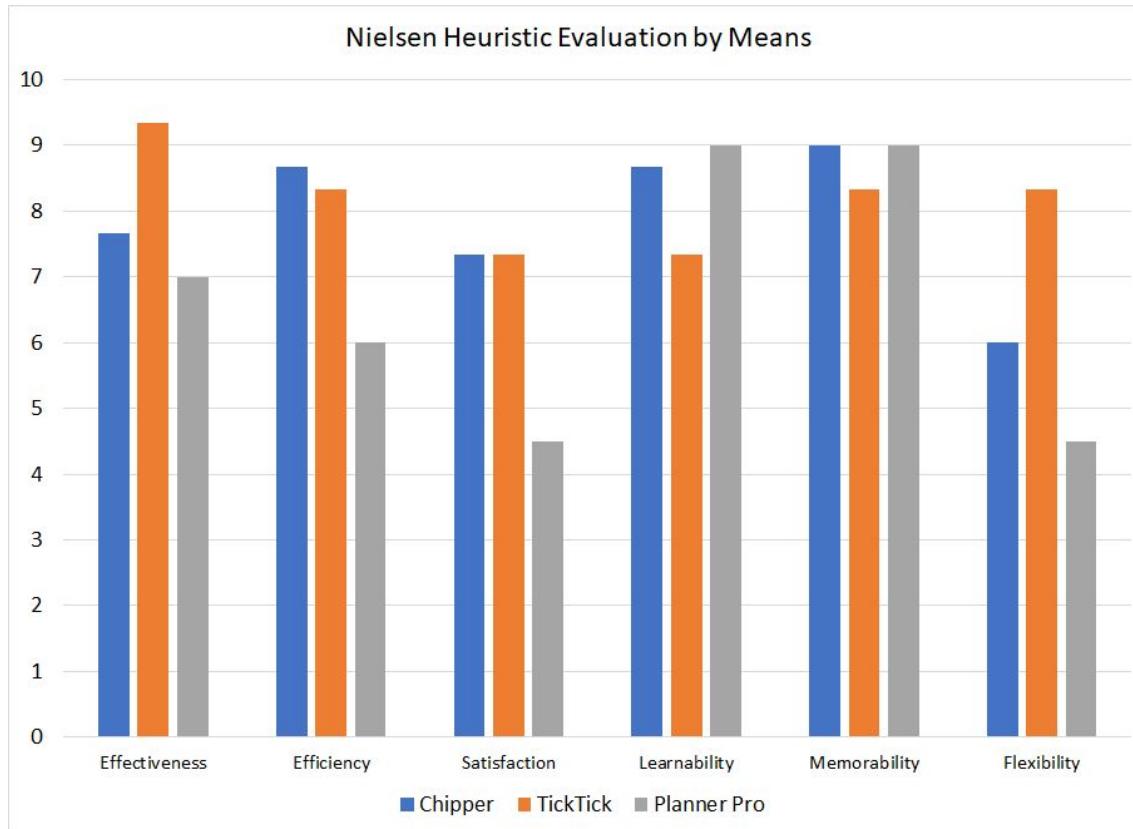
Heuristic Evaluation: Summary

- Three user experience experts collectively reviewed the three different competitor apps using Nielsen guidelines on three goals:
 1. Organize Task
 2. Manage Task
 3. View Recent Progress
- Apps scored on a scale of 1 (not fulfilled) to 10 (completely fulfilled)

Materials:

- Smartphone, 3 competitor apps (Chipper, Tick Tick, Planner Pro)

Heuristic Evaluation: Analysis of Heuristics



- Planner Pro performs consistently lower than Chipper and Tick Tick. Moving forward only Chipper and Tick Tick will be compared and tested.
- Chipper and Tick Tick are mostly evenly matched in heuristic scores.
- Largest differences are seen in Flexibility and Effectiveness (Tick Tick) is higher in both.

Heuristic Evaluation: Results

	Chipper	Tick Tick	Key Differences
Effectiveness	7.7	9.3	Tick Tick scored higher (10) than Chipper (5) on Viewing Progress
Efficiency	8.7	8.3	Chipper scored higher (10) on Managing Tasks than Tick Tick (7)
Satisfaction	7.3	7.3	Chipper scored lowest in View Progress (5). Tick Tick scored lowest in Manage Tasks (6)
Learnability	8.7	7.3	Chipper scored higher (8) on Organizing Tasks than Tick Tick (6)
Memorability	9	8.3	Chipper scored higher (9) on Organize Tasks than Tick Tick (7)
Flexibility	6	8.3	Tick Tick scored higher (7) on View Progress than Chipper (3)

Heuristic Evaluation: Chipper

CHIPPER	Organize Tasks	Manage Tasks	View Progress	Average
Effectiveness	9	9	5	7.6
Efficiency	8	10	8	8.6
Satisfaction	8	9	5	7.3
Learnability	8	10	8	8.6
Memorability	9	9	9	9
Flexibility	6	9	3	6
SUM	48	56	38	47.3

Heuristic Evaluation: Planner Pro

PLANNER PRO	Organize Tasks	Manage Tasks	View Progress	Average
Effectiveness	8	6	n/a	7
Efficiency	7	5	n/a	6
Satisfaction	4	5	n/a	4.5
Learnability	9	9	n/a	9
Memorability	9	9	n/a	9
Flexibility	3	6	n/a	4.5
SUM	40	40	0	26.6

Heuristic Evaluation: Tick Tick

TICK TICK	Organize Tasks	Manage Tasks	View Progress	Average
Effectiveness	9	9	10	9.3
Efficiency	9	7	9	8.3
Satisfaction	8	6	8	7.3
Learnability	6	8	8	7.3
Memorability	7	9	9	8.3
Flexibility	9	9	7	8.3
SUM	48	48	51	49

Heuristic Evaluation: Moving Forward

- **Average Scores:** Average scores between Chipper and Tick Tick are both:
 - Higher scores- the lowest being 6
 - Similar to each other- the largest difference is only 2.3 points

This informs us that both apps **generally** perform well by usability heuristic standards.

- **Individual Task Scores:** The biggest differences in scores are seen between Chipper and Tick Tick for specific tasks.

Usability testing will focus on collecting user experience data (likert scale responses and user quotes) in order to back up heuristic findings from a user perspective and inform decisions on features included in GYST.

User Testing



Goal: To identify usability issues and evaluate user experience of apps key features by conducting a moderated task-based usability test

User Testing: Participants & Materials

- **Participants:** 10 participants were recruited and used for the test. Participants were recruited by convenience sampling.
 - Age Range: 15-55
- **Materials:** Chipper app, Tick Tick app, Screen Recorder app, Smartphones with apps downloaded and ready for participant use.

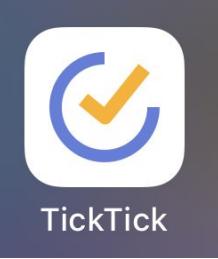
User Testing: Procedure

- Prior to user testing, the researchers entered pre-set events/tasks needed for task completion in both Chipper and Tick Tick.
- Participants were then given the smartphone with either Chipper or Tick Tick preloaded on the screen and asked to follow the written instructions to complete given tasks.
 - For example they were asked to set a doctors appointment, assign it the appropriate category or priority, and to view their progress page.
- Users completed a brief questionnaire after completing the tasks.
- A screen recording was made while the users performed tasks, and they were asked to watch it with the researchers afterwards and discuss their thoughts.
- Researchers recorded quotes and notes about each participants' performance.

User Testing: Data Collection

- **Survey Responses:** After the user testing; a survey using a 10 point Likert scale evaluating the effectiveness, efficiency, user satisfaction and flexibility of the app was given to participants. They also provided brief written explanations for their ratings.
- **Think Aloud:** User quotes were collected to supply more qualitative feedback to inform possible design implementations for the prototype.

User Testing: Results

	Effectiveness	Efficiency	Satisfaction	Flexibility
 Chipper	9 <i>Heuristic Analysis: 9.3</i>	7.8 <i>Heuristic Analysis: 8.3</i>	7.4 <i>Heuristic Analysis: 7.3</i>	8 <i>Heuristic Analysis: 8.3</i>
 TickTick	8.2 <i>Heuristic Analysis: 7.6</i>	8.2 <i>Heuristic Analysis: 8.6</i>	8 <i>Heuristic Analysis: 7.3</i>	7.2 <i>Heuristic Analysis: 6</i>

*All numbers were self reported by individuals in a post-test survey. Scores are out of 1 - 10 points.

User Testing: User Quotes

Chipper:

“I didn’t really care about the challenges [on progress page]”

“I didn’t understand the money [on progress page] because it’s probably not real so there’s no point”

“I’m normally really bad at figuring apps out, however I was quick with this one.”

“Not used to the format of app. Took a few seconds to orientate”

“The first screen is kind of cluttered. I didn’t really know what I was looking at at first”

Tick Tick:

“It took me a minute to figure out how to make the categories but then I found it and made some up for the tasks”

“I had to look around for a bit before I found the progress page”

“The app allows you to specify a lot. It was hard to navigate at first”

User Testing: Moving Forward

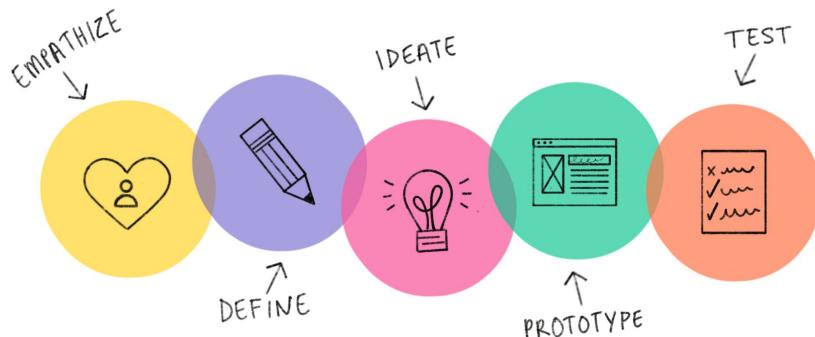
- **Average Scores:** Average scores between Chipper and Tick Tick were generally **Higher** (lowest was 7.2) and **More Similar** (biggest difference only 0.8) than in the Heuristic Evaluation.

This confirms that users as well as heuristic evaluators agree that both apps are **generally** usable.

- **User Quotes:** User quotes show, however, that users noticed clear strengths and weakness within both apps.

Data from the heuristic and user ratings as well as the highly valuable user quotes will be used in a design thinking session to inform decisions on features for GYST.

Design Thinking



Goal: Use feedback and results from the user testing and heuristic evaluation to inform decisions and generate ideas for the prototype

Design Thinking Process

- **Step 1: Brainstorm**
 - User experience data (survey responses and user quotes) were discussed. Competitor feature preferences were noted and informed ideas for features to be included in the prototype of GYST.
- **Step 2: Recommendations**
 - Recommendations were made for features of GYST based on brainstorm.
- **Step 3: Sketch**
 - Low fidelity sketches were created by implementing recommendations from the brainstorm into a first draft of what the interface of GYST might look like.

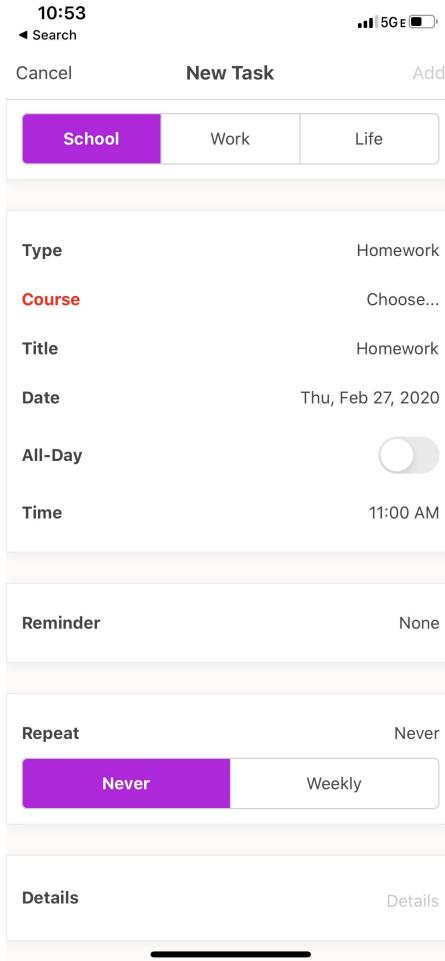
Ideas from brainstorm

Chipper

- Keep data entry aspect
- Put categories in drop down menu
- Add priority option

Evidence:

- “I’m normally really bad at figuring apps out, however I was quick with this one”
- “Easy to follow”
- “The scheduling part is pretty straight forward”



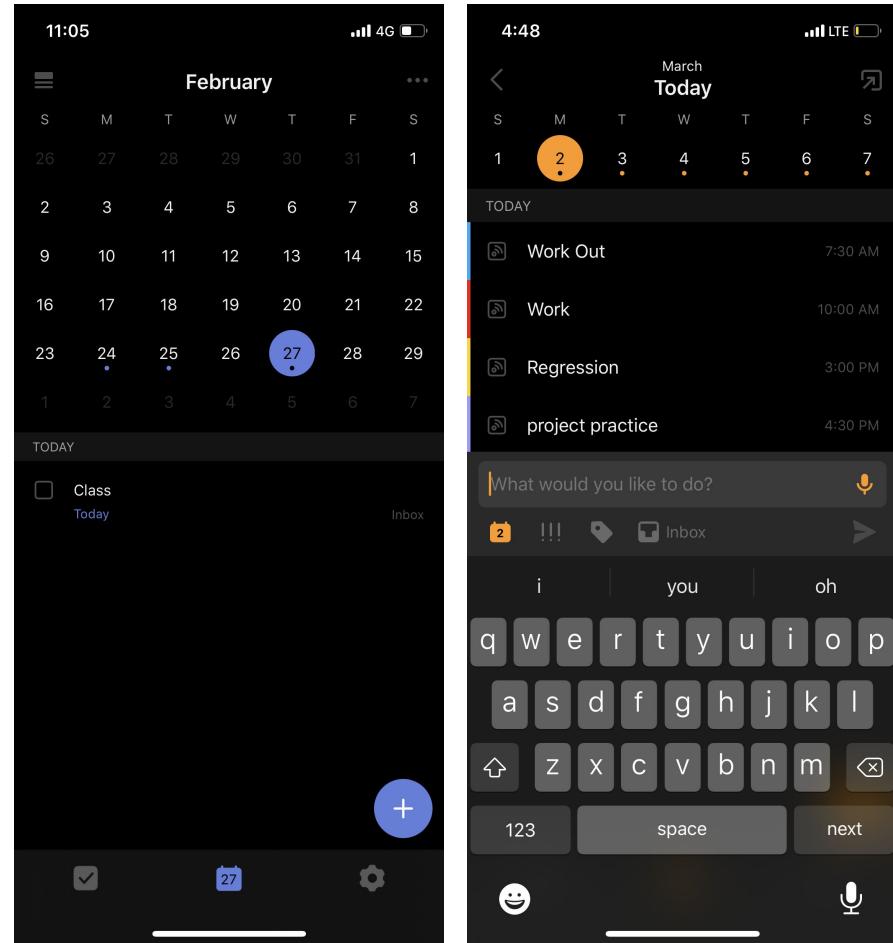
Ideas from brainstorm

Tick Tick

- Combine quick entry option of Tick Tick with clear field options of Chipper
- Clear navigation options needed

Evidence:

- “The app allows you to specify a lot. It was hard to navigate at first”
- “It’s one of the most detailed online planners I have seen, can plan out the whole day to the minute.”
- Users had trouble understanding where to go to complete some tasks in Tick Tick, they found exploring the app first on their own was helpful: “I was just looking around for a minute”



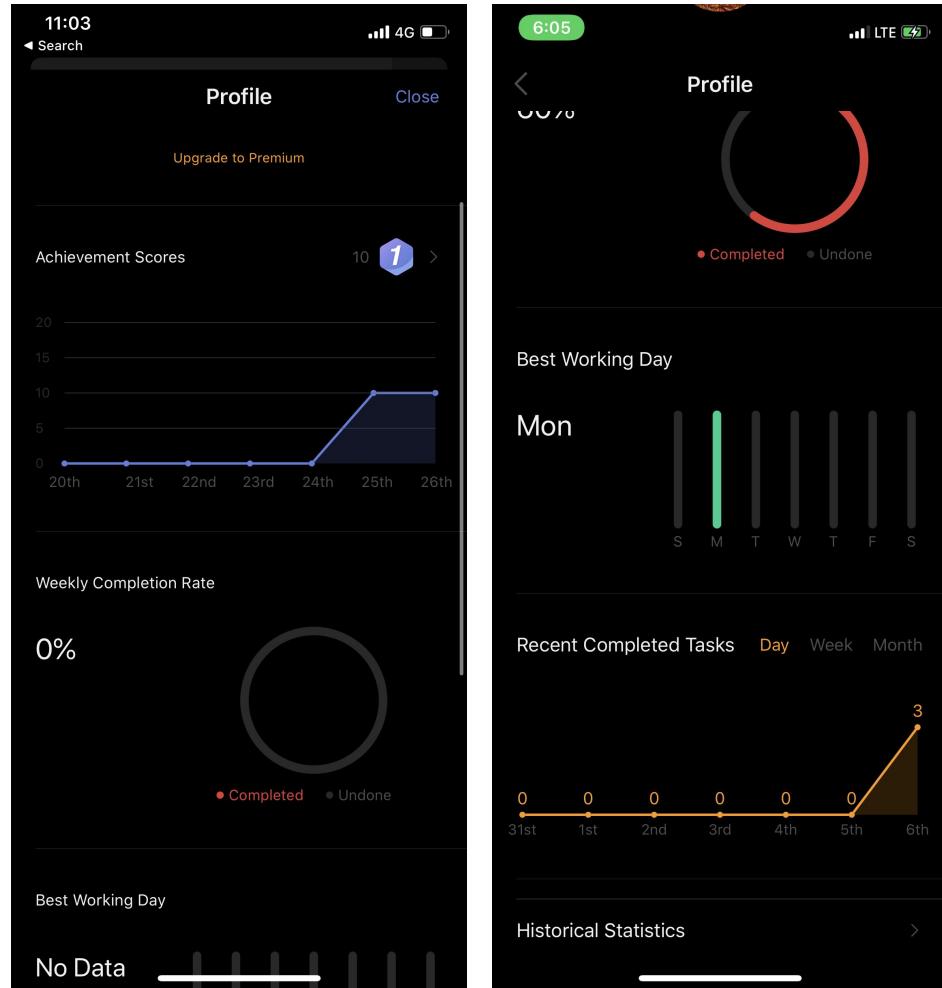
Ideas from brainstorm

Tick Tick

- Good progress page, was just very difficult for users to locate. Page could be moved to bottom navigation while keeping content.

Evidence:

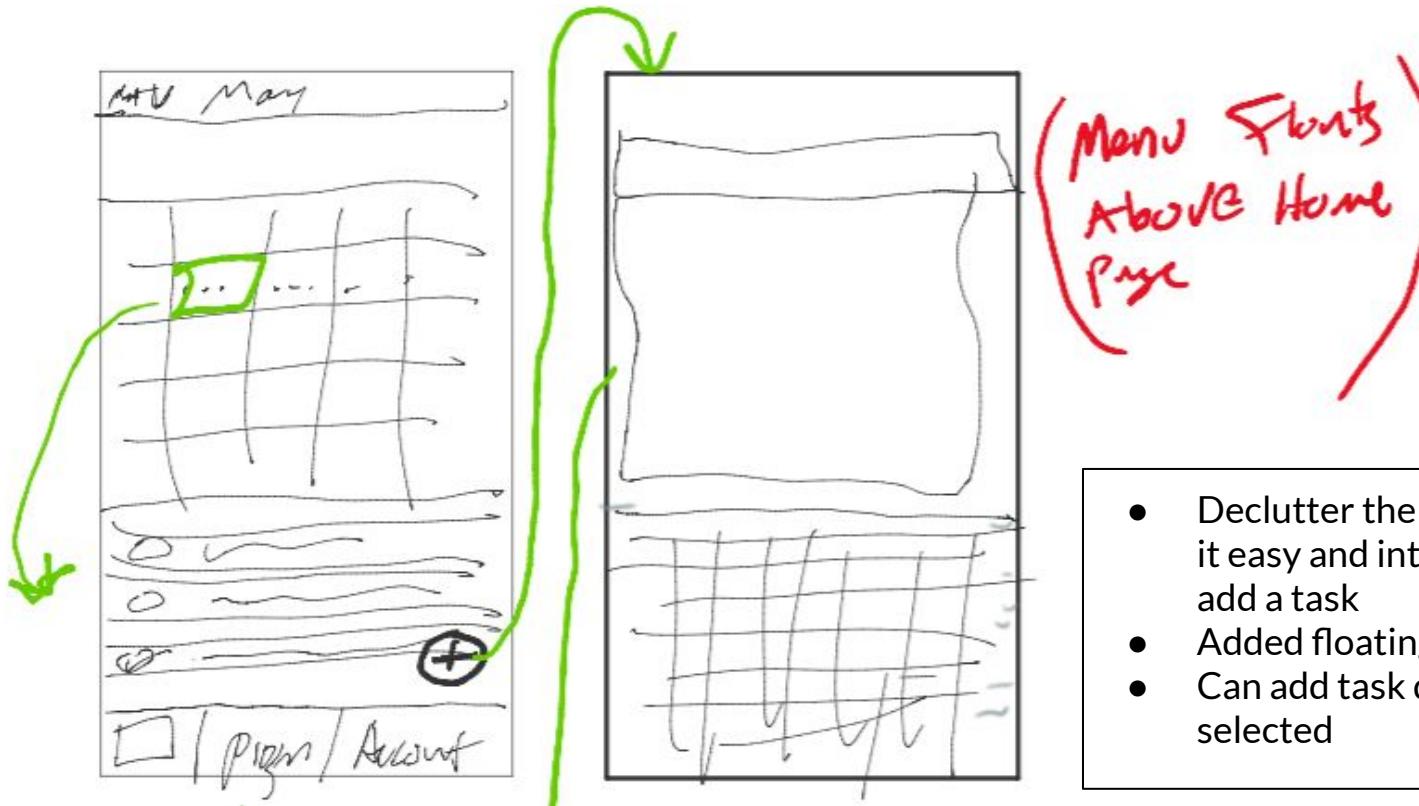
- “I didn’t really care about the challenges in Chipper”
- “I had to look around for a bit before I found the progress page in Tick Tick”
- “It looks like good stuff to keep track of”



Recommendations

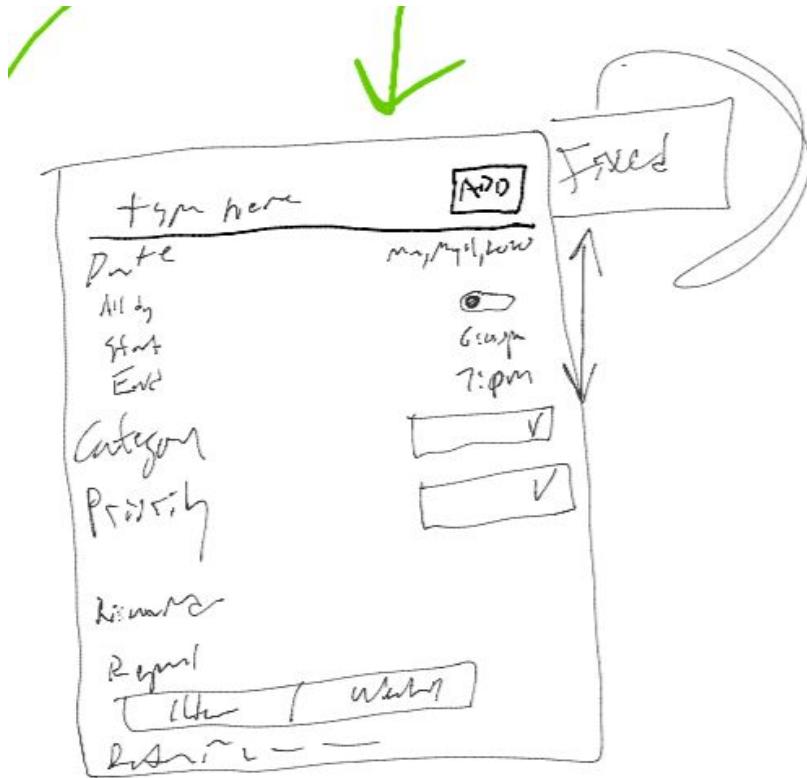
Usability Problem	Recommendation	Severity
Difficulty locating progress page in Tick Tick	Make progress page part of the app's navigation bar	High
Irrelevant information in Chipper's progress page (fake money, challenges, etc.)	Use preferred information from Tick Tick progress page (graphs displaying progress, level system, etc.)	High
Difficult to navigate Tick Tick	Simple navigation bar. Pop up menus to add and change information with current page still in background	Medium
Default list view in Chipper is cluttered. It's too disconnected in Tick Tick.	Use calendar view with scrolling tasks at the bottom of page	Medium

Sketches: Home screen & Add a task



- Declutter the homepage, and make it easy and intuitive for a user to add a task
- Added floating menu
- Can add task directly from the day selected

Sketches: Edit a task



- Sticky header for the task title
- Allow user to quickly add task with no other details besides title if desired
- User may also scroll down to add more information

Sketches: Progress Monitoring

- Sticky header shows your “level”
- Click drop down to view more information about your “level”
- Progress page with personalized statistics on your usage of the app



Sketches: Progress Monitoring

- Drop down floating header with Information about your level and statistics against other users



Prototyping



Goal: Provide a preliminary draft of the product that conveys intent behind design and allows users to explore ideas with some base interaction

Materials: Figma
(prototype/wireframe software)

Prototype: GYST

Home

Month ▾ May 2020

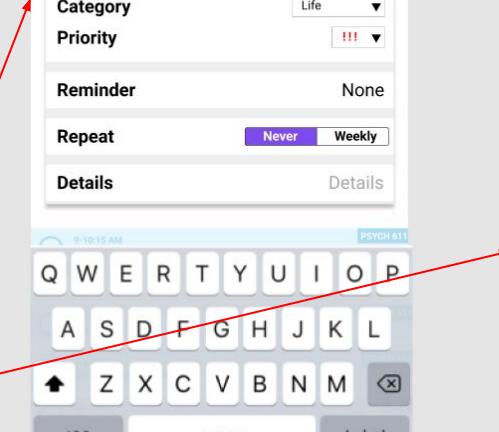
Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

9:10:15 AM Class PSYCH 611

3:45 PM Write Research Report PSYCH 611

10:11PM Workout Life

Schedule **Progress** **Account**



Data Entry

Month ▾ May 2020

Type Title Here... Add

Date Mon, May 11, 2020

Start Time 6:00 PM

End Time 7:00 PM

Category Life

Priority !!!

Reminder None

Repeat Never Weekly

Details Details

9:10:15 AM Class PSYCH 611

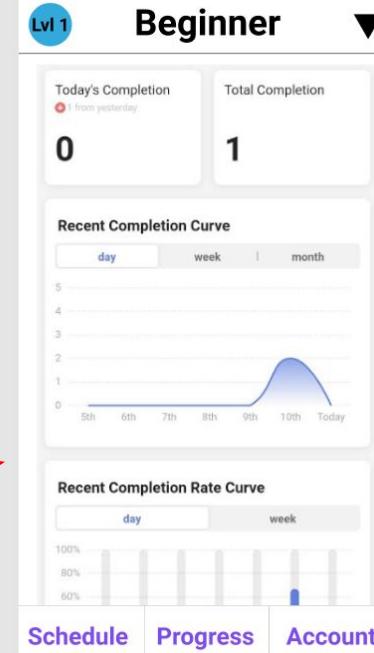
Q W E R T Y U I O P

A S D F G H J K L

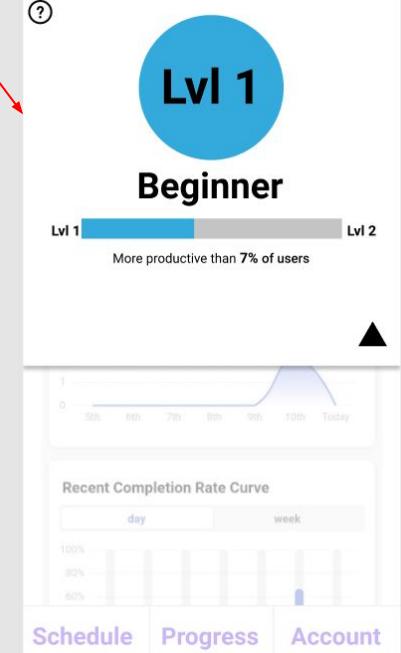
Z X C V B N M

123 space Label

Progress Page



Level Expansion



Appendix



Extensive Test Material List

Tasks Instructions / Survey

User experience/satisfaction survey:

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How well do you think the app completes the given tasks:

Briefly explain why you chose that rating:

Rate on a scale of 1 - 10, with 1 being not efficient and 10 being very efficient

How efficient (timeliness) do you believe the app was in completing tasks:

Briefly explain why you chose that rating:

Rate on a scale of 1 - 10, with 1 being very difficult and 10 being very easy

How easy do you think the app was to use?

Briefly explain why you chose that rating:

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How customizable do you think the app was on catering to your needs?

Briefly explain why you chose that rating:

Chipper:

|
Schedule a doctor's appointment a week from today at 2:30 pm. Assign it to the appropriate category.

Schedule a recurring meeting for "Book Club" that meets every Thursday at 7pm.

Add four tasks to be completed tomorrow and assign to appropriate categories: get a haircut, complete work report, study for exam, go grocery shopping.

Look at your tasks for today (workout, practice guitar, write research report). Check off "write research report" Move "practicing guitar" to tomorrow.

View your progress/personal statistics page

Tick Tick:

Schedule a doctor's appointment a week from today at 2:30 pm. Assign the highest level priority. Create/add to an appropriate category.

Schedule a recurring meeting for "Book Club" that meets every Thursday at 7pm

Add four tasks to be completed tomorrow and assign to/create appropriate categories with your choice of priority levels: get a haircut, complete work report, study for exam, go grocery shopping.

Look at your tasks for today (workout, practice guitar, write research report). Check off "write research report" Move "practicing guitar" from today to tomorrow

View your progress/personal statistics page

Survey Responses

Tick Tick:

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How well do you think the app completes the given tasks: **9**

Briefly explain why you chose that rating: **the app allows you to specify a lot. It was hard to navigate at first**

Rate on a scale of 1 - 10, with 1 being not efficient and 10 being very efficient

How efficient (timeliness) do you believe the app was in completing the task: **10**

Briefly explain why you chose that rating: **its one of the most detailed online planners i have seen, can plan out the whole day to the minute.**

Rate on a scale of 1 - 10, with 1 being very difficult and 10 being very easy

How easy do you think the app was to use? **8** Briefly explain why you chose that rating: **I was confused at first but you have to get used to everything**

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How customizable do you think the app was on catering to your needs? **10**

Briefly explain why you chose that rating: **i think it can work for everyone**

Chipper:

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How well do you think the app completes the given tasks: **9**

Briefly explain why you chose that rating: **completed well**

Rate on a scale of 1 - 10, with 1 being not efficient and 10 being very efficient

How efficient (timeliness) do you believe the app was in completing tasks: **9**

Briefly explain why you chose that rating: **processed fast and smoothly**

Rate on a scale of 1 - 10, with 1 being very difficult and 10 being very easy

How easy do you think the app was to use? **6**

Briefly explain why you chose that rating: **not used to the format of app. Took a few seconds to orientate**

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How customizable do you think the app was on catering to your needs? **8**

Briefly explain why you chose that rating: **pretty easy to get things done**

Survey Responses

Tick Tick:

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How well do you think the app completes the given tasks: **8**

Briefly explain why you chose that rating: **its easy to figure out how to do everything and figure out how to do the task**

Rate on a scale of 1 - 10, with 1 being not efficient and 10 being very efficient

How efficient (timeliness) do you believe the app was in completing the task: **8**

Briefly explain why you chose that rating: **it was very quick to go back and forth. Also once you know how it works its easy.**

Rate on a scale of 1 - 10, with 1 being very difficult and 10 being very easy

How easy do you think the app was to use? **10**

Briefly explain why you chose that rating:

Everything was right in front of you and it wasn't hard to figure out

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How customizable do you think the app was on catering to your needs? **10**

Briefly explain why you chose that rating: **it's a scheduling app and when i needed to schedule something it wasn't hard**

Chipper:

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How well do you think the app completes the given tasks:

Briefly explain why you chose that rating: **10**

Easy to follow

Rate on a scale of 1 - 10, with 1 being not efficient and 10 being very efficient

How efficient (timeliness) do you believe the app was in completing tasks:

Briefly explain why you chose that rating: **8**

I had to think to figure some out

Rate on a scale of 1 - 10, with 1 being very difficult and 10 being very easy

How easy do you think the app was to use? **8**

Briefly explain why you chose that rating: **Took more minutes to navigate**

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How customizable do you think the app was on catering to your needs?

Briefly explain why you chose that rating: **10**

The three categories were apt

Survey Responses

Tick Tick

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How well do you think the app completes the given tasks:

Briefly explain why you chose that rating:

I'd give it a 10, it accomplished the task it set out to sufficiently.

Rate on a scale of 1 - 10, with 1 being not efficient and 10 being very efficient

How efficient (timeliness) do you believe the app was in completing the task:

Briefly explain why you chose that rating:

I'd give it a 9, because it doesn't make you jump through any hoops, you just set reminders, sort them if you want, and are able to move on with your day.

Rate on a scale of 1 - 10, with 1 being very difficult and 10 being very easy

How easy do you think the app was to use?

Briefly explain why you chose that rating:

I'd give it an 8, it was pretty user friendly and I was able to navigate it without any prior knowledge.

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How customizable do you think the app was on catering to your needs?

Briefly explain why you chose that rating:

I'd give it a 7, there was a decent amount of customizability, but there could have been more such as reminder sounds or vibration patterns.

Chipper

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How well do you think the app completes the given tasks:

Briefly explain why you chose that rating: **9. Once I figured it out I was able add tasks easily**

Rate on a scale of 1 - 10, with 1 being not efficient and 10 being very efficient

How efficient (timeliness) do you believe the app was in completing tasks:

Briefly explain why you chose that rating: **8. Pretty efficient, I was able to add all tasks in around 10 minutes**

Rate on a scale of 1 - 10, with 1 being very difficult and 10 being very easy

How easy do you think the app was to use?

Briefly explain why you chose that rating: **8. Easy considering I'm normally really bad at figuring|apps out, however I was quick with this one.**

Rate on a scale of 1 - 10, with 1 being the worst and 10 being the best

How customizable do you think the app was on catering to your needs?

Briefly explain why you chose that rating: **8. I was able to customize well, I wish I could have seen a weekly view or a monthly view instead of just the daily view.**

Context Analysis

Experience / Knowledge			
Experience with system or product	Generally familiar with phone applications	maybe, monitor	Participants will be asked if they are familiar and comfortable using phone applications
Experience with similar systems or products	Familiar with the concept of organizer apps but has never used one long term	maybe, control	Participants will not include people who are proficient in long term use of organizer apps
Task knowledge	Basic phone application knowledge/data entry	maybe, monitor	
Personal attributes			
Physical capabilities	very good, no problem using products	maybe, control	People with Physical disabilities will not be tested
Cognitive capabilities	very good, no problem using products	maybe, control	People with Cognitive disabilities will not be tested
Task characteristics			
Task goal or output	A scheduled event/task to be completed is entered into a visible schedule	yes, evaluate	Between groups testing
Task flexibility	some preferences can be changed as well as types of events/tasks	yes, evaluate	Between groups testing
TECHNICAL ENVIRONMENT			
Hardware	Some apps are usable across different devices	yes, control	Only mobile phones
Software	different os availability	yes, control	Only apple devices
Network	some data transfer occurs	maybe, control	Must be connected to wifi

Chipper: Results

Chipper	ID 1	ID 2	ID 3	ID 4	ID 5	Average
Effectiveness	7	9	10	10	9	9
Efficiency	4	9	8	10	8	7.8
Satisfaction	5	6	8	10	8	7.4
Flexibility	4	8	10	10	8	8

The average ratings for effectiveness and flexibility were higher in Chipper than in Tick Tick.

Tick Tick: Results

Tick Tick	ID 6	ID 7	ID 8	ID 9	ID 10	Average
Effectiveness	8	8	9	6	10	8.2
Efficiency	8	8	10	6	9	8.2
Satisfaction	8	10	8	6	8	8
Flexibility	2	10	10	7	7	7.2

The average scores for Efficiency and Satisfaction were higher in Tick Tick than Chipper. This led us to focus on what portions of the app our users liked the most and why these ratings were given. From here, we reviewed user quotes and began a virtual brainstorming session.