

# Executive FollowUp

A productivity and organization tool

## Design Problem

How do you provide enough structure to students in the upper high school years and early college years so that students can be successful academically? Is there a way to provide a system that students can actually grow in their ability to manage their time and workload? Can a student, then, turn these skills into success in their academic life and adulthood?

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# Section 1: Introduction

Some high school and college students struggle academically. They may have diagnosed learning disabilities, or they may exhibit a lack of planning skills (or, both). As they progress in school, the structure of early education years is slowly reduced. There is less academic support, and more self-reliance is required. Parents, school counselors and students will turn to tutoring, or traditional psychotherapy to maintain some of this scaffolding a little longer. Once the student gets to college, there are few structural supports. They enter an environment with few constraints and a lot of open time.

The problem to be solved is this: How do you provide enough structure to students in the upper high school years and early college years so that students can be successful academically? Is there a way to provide a system that students can actually grow in their ability to manage their time and workload? Can a student, then, turn these skills into success in their academic life and adulthood?

In order to see if we can find a solution to this problem, we have targeted a user population that includes late teen-aged students, in the last two years of high school or the first two years of college. These students include those who have found some academic struggles and consider themselves "procrastinators" when it comes to academic work. An ancillary population would be parents of these students who have these aspirations for their children.

All members of the population currently utilize a web-based technology that the school system provides. In addition, the only reported support for organizational skills comes from students in high school. This comes from teachers or parents and no specific technology.

My solution will provide regular, consistent, on-going support to students and engender planning skills that they can apply to all areas of their lives. The high-level goals are to train students to set small goals and provide regular follow-up on the status of those goals. I believe this can be done at a reasonable cost. This solution is, ideally, meant to be used in conjunction with a weekly meeting with a mentor or coach.

The system allows the users to complete the following activities:

- the ability to create a preparation plan for each of their assignments for each of their courses, scheduling smaller preparation sessions over the course of time.
- the ability to understand the level of effort is necessary for different kinds of assignments
- the ability to "at-a-glance" see the assignments are due today, as well as what assignments are coming up.

In order to support the activities listed above, the following key tasks can be completed in the prototype:

- add, edit, delete and view courses, assignments and preparation plans

- housekeeping tasks of user registration, user login (with the ability to do facial recognition), logout and change of id and password
- complete initial setup, including option to import courses and assignments from an external data source or a setup wizard to guide the user through initial steps

## Section 2: Research Methods and Design Methods

Clarification of the design problem and scope was the first priority of the project. A *Needs Finding Study* and *competitive analysis* and *three personas/scenarios* were developed. With this foundation, the process of *ideation* and *sketching* took place, including initial digital *storyboards* to visualize key user flows.

Once the critical activities for the solution were determined, I developed a set of *digital lo-fi wireframes* to have an artifact that I could have a set of participants to react to. I developed a protocol for a micro-usability test and completed a first round of testing with a task list and follow up System Usability Scale (SUS) survey. With the data in hand, I converged it onto an *affinity diagram* and created a report of findings. Included in the report was a more focused definition of the scope of the project as well as a prioritization of enhancements.

With the first report in hand, I made the next prototype and *medium fidelity set of screens*, including color, font and image choices, more detailed user flows and revisions to the activities available to the user. I self-evaluated these screens by doing a detailed *heuristic evaluation* based on Jacob Nielson's principles.

After making refinements to the prototype based on the evaluation, I added *navigation to the prototype* to prepare for the final round of usability testing. This round of testing included a *pre-testing interview, a full set of tasks, a final debrief* and the *SUS questionnaire* to determine the overall effectiveness of the prototype. Analysis of the results of this round of testing included *synthesis and analysis* of the results, plus findings on what next steps would be.

### Research Methods

The *Needs Finding Study* included eight interviews with participants being members of our initial target population of high school and college students, female and male, as well as several of their mothers. Interviews were all recorded and were conducted over a one-week period, the week of *June 22, 2020*. All feedback is qualitative in nature.

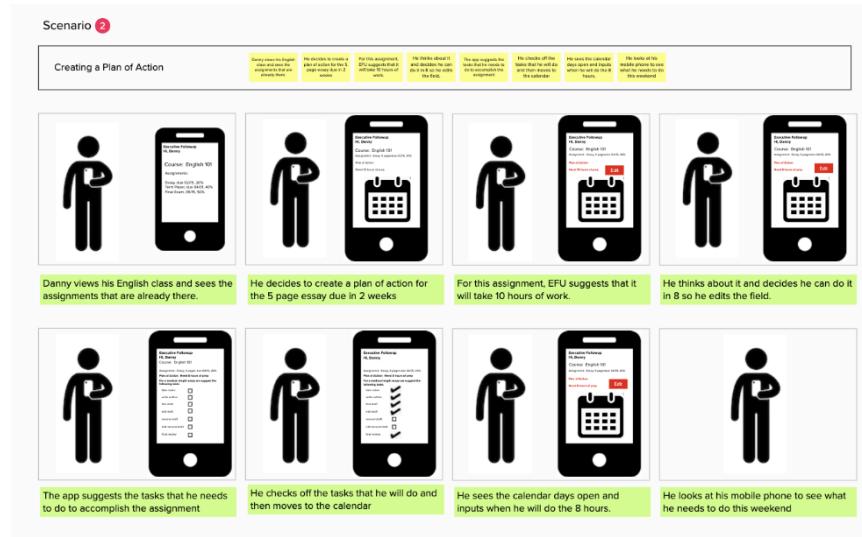
Based on information from the Needs Finding Study, the criteria for the participants for the *Micro Usability Test* was more focused. This round included 2 male and 1 female participants, all college students and took place during the week of July 10, 2020. Feedback was also received from a parent of one of the participants. All feedback is qualitative in nature.

The goal of the Usability Test was to identify why participants engage or disengage with Executive FollowUp. The round included 3 college students, 2 male and 1 female. The primary screening question was that participants consider themselves "procrastinators," in terms of planning and "good students but not top students," in terms of academic performance. They all acknowledged struggling to adjust to the academic load of a college student. The length of the test was 1 hour, and all sessions took place the week of July 22, 2020. All feedback will be qualitative in nature.

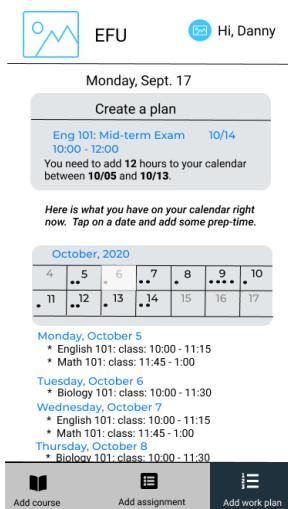
# Design Methods

Below is shown the most indicative artifacts of the design methods that were used.

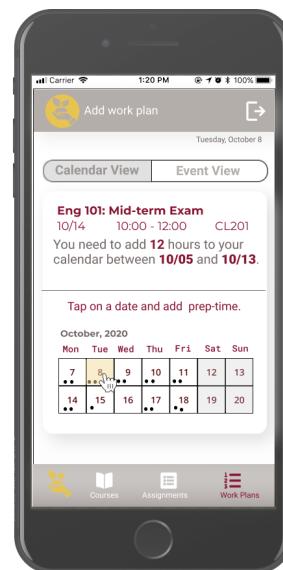
## Storyboard



## Wireframe



## Med-fi Prototype



## Refined Prototype



# Section 3: User Needs Analysis

Students have two types of skills that need to be acquired in order to be successful academically and in other aspects of life. The first need is to *learn the subject matter at hand*. The second need is to *develop planning skills, often considered part of a set of "executive functioning skills."* Executive functioning skills is really a family of skills that pertain to an individual's self-discipline and, ultimately, self-esteem. The skills include time-management, work and work-life balancing, prioritization and others. A student learns much of this in school but, for many students, the education in school is not enough.

## From the Needs Finding Study

**Both parents and students expressed the need for more "*personal attention*."** Some students don't feel comfortable "*speaking up*", afraid they will ask "*dumb questions*." They have expressed that in smaller group or one-on-one situations, they have learned "*how to talk to teachers*" and like the "*focus on them*."

**Students also have a need for "*more structure*" and feel that this engenders success.** Both parents and students expressed their highest concern for the "*lack of structure*" that begins to present itself in the upper grades of high school. According to the study, this may lead to "*procrastination*", "*handing things in late and losing points*", "*Not spending enough time on assignments*", and "*poor spacing*" of the workload.

**Students have a need to develop better "*time management skills*".** In both high school and college, the schools utilize software systems to facilitate communication between the students and the educators. On the whole, educators take advantage of the software so that students can view courses, assignments and grades. This is crucial to student success but does not address management of time for individual assignments and deliverables.

**Students need an extremely convenient tool to keep track of deliverables.** All of the participants noted utilizing desktop apps, provided by the school system, to view the information on grades and assignments. They will go to mobile apps and consider going to the desktop "*a pain*" but will go to it to get "*more detailed information*."

**Any solution needs to be reasonable in price.** In High School, the other most prevalent external supports are "*Parental Support*" and "*Tutoring*". Parents see the need for these soft skills but expressed that any kind of support outside of the school is "*extremely expensive*." The priority is subject matter expertise, so if money is spent on outside help, it is, inevitably, to develop subject matter expertise. In college, the primary external support mechanisms that are used are "*Getting Help from Friends*" and "*Load Balancing/Course Selection*" to improve and maintain academic success. Both of these options are free.

## **Additional needs from the Micro Usability Study and Final Usability Round**

Students feel that they need regular reminders of their commitments to be more likely to adhere to their schedule. All participants asked if there was going to be a "push notification" function.

**Students want to get the "satisfaction" of "checking off" items that they have completed.** Participants compared the use of this app to a written checklist. The satisfying part of a checklist is "*crossing the item out,*" and "*knowing that it is done.*"

**Students generally do not use any digital organizational tools after high school.** Participants reported trying some digital organizational tools in high school at the recommendation of parents or teachers but did not take advantage of anything currently available in college. Most participants "*didn't know of any tools out there*" although they said they "*know there are some.*" They "*just don't know the names of any.*"

**Students need to be able to access the data from anywhere.** Students reported mostly "*work at their desktop.*"

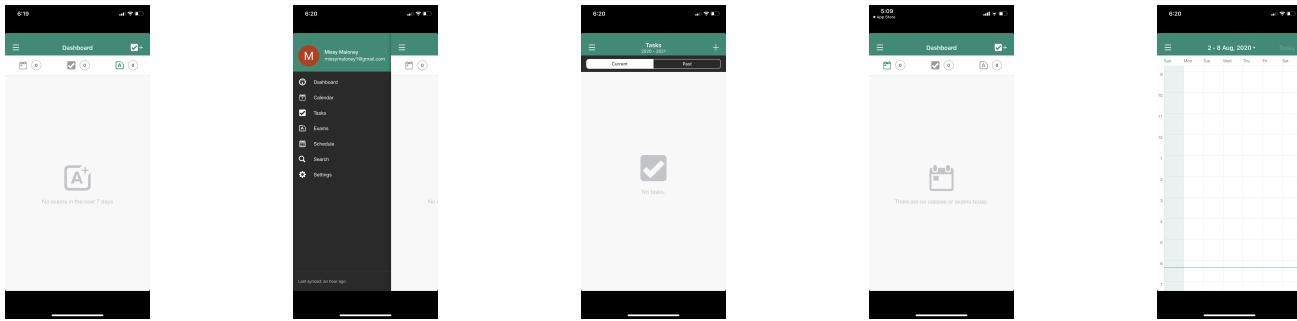
However, for at-a-glance information, like grades, they "*will look at their phones from wherever they are.*"

# Section 4: Competitive Analysis

## Available digital tools for organizing work

### My Study Life

Available on desktop and through the App Store, this is a scheduling system that is more focused on academics. A user can add classes, exams and tasks. There are reminders, a calendar view and a dashboard where you can see what is required today, the next 3 days and the next 7 days. Data is available from all platforms.



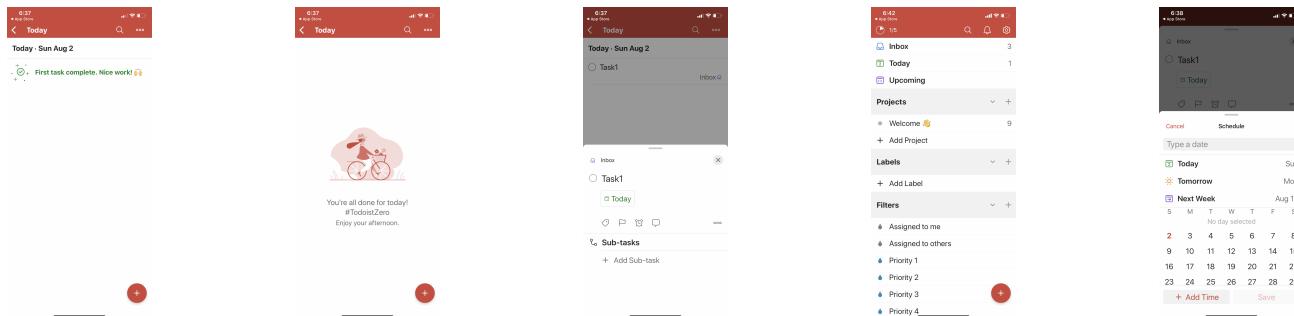
### Habit List

This app was recommended by [www.beyondbooksmart.com](http://www.beyondbooksmart.com) as an app to help improve Executive Functioning Skills. It is available on Desktop and a mobile app through the App Store. A user can create a list of their own set of tasks and the app helps show them how they can progress to completion of those tasks through progress bars, reminders, graphics and motivational images.



## Todoist

This app, also available for desktop and mobile from the App Store, has a free and a premium (paid) version. It is a full-featured task manager that allows prioritization and subtasks. In the premium version, a user can receive a variety of notifications. This is not geared toward education.



## Current practices in addressing the needs

High school students get academic and organizational support, predominantly, in the following three ways.

- Parental Help
- School-sponsored software systems
- Tutoring

For college students, the ways they get support is very different.

- School-sponsored software system
- Load balancing and course selection
- Group Study
- Friends

## Summary of best practices and opportunities

Digital tools fall in several categories and each has strengths. Only a few have an affinity with the educational field, and none focus on a particular age group. All offer the possibility of reminders/notifications. In most other ways, they are a variation on a calendar app. While they each offer very appealing interfaces, they offer a long list of options which might confuse a student who already has focus issues. The opportunity for this app is to offer a narrowly tailored tool that is focused on a student's needs and continuously reinforces excellent planning and preparation habits.

## Section 5: Design Goals

In designing this system, I took into consideration both Jacob Neilson's *Heuristic Principles* and Peter Morville's *User Experience Honeycomb*. Through my competitive analysis and Needs Finding Study, I understand that, while there are quite a few digital time management tools available, high school and college students do not use them. Furthermore, I could find no planning technologies that were linked directly to a student's course and assignment list. I wanted to design a system that would be a useful companion technology to the overarching technology that the educational system provides. In addition, I would like to be able to leverage the listing of courses and assignments that are already in the educational system and import this data into Executive FollowUp, if desired. This would boost the usefulness and usability of the app.

In terms of the functionality and user interface, I chose metaphors, symbols, navigation methods and other details that were already familiar to the user from other technology and the real world. I did this to reduce the learning curve and the need to educate the user on basic functions. This boosts the usability of the app by making it easy to use -- self-explanatory in most instances.

The heart of the app is the ability to break the larger task of preparing for an assignment, into smaller, more digestible time blocks. The messaging that I used was selected to encourage the user to complete the creation of a plan and then follow the plan. I did this using banners, progression bars and an 'at-a-glance' dashboard. The dashboard will be the page most referred to by a user and should include all critical details of work to be done on the current day or week.

# Section 6: Prototype

## Key Tasks that can be performed within this prototype

### New User functionality

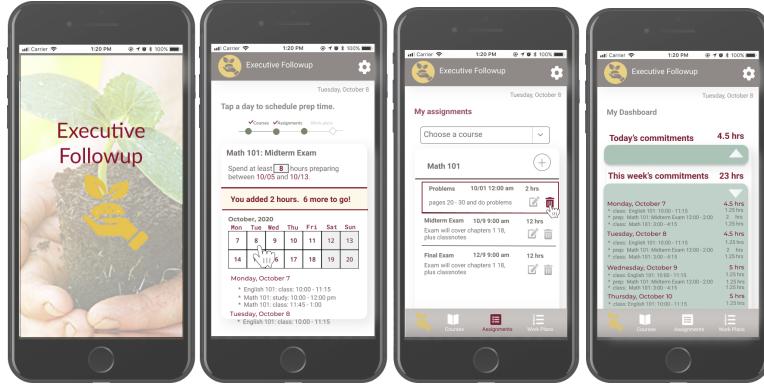
- Register as a user
- User login
- Login with facial recognition and import data from data extract
  - Manually input initial data
  - add course
  - add assignment
  - add prep plan
    - change the default recommended prep time

### Returning/Existing User functionality

- Courses
  - add
  - delete
  - edit
  - view listing
- Assignments
  - add an assignment
  - delete an assignment
  - edit an assignment
  - view assignment listing for course
  - change course to view course listing for another course
- Preparation plan
  - schedule prep time
  - delete prep time
  - edit prep time
- Dashboard
  - view sections of dashboard
  - view schedule for the day
  - view schedule for the week
  - view schedule for the month
- View settings menu with logout, change id and password options

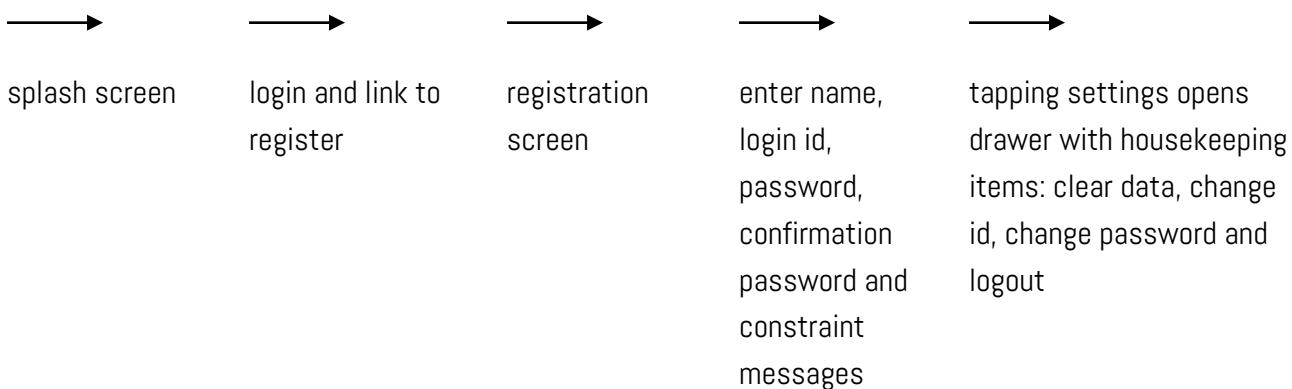
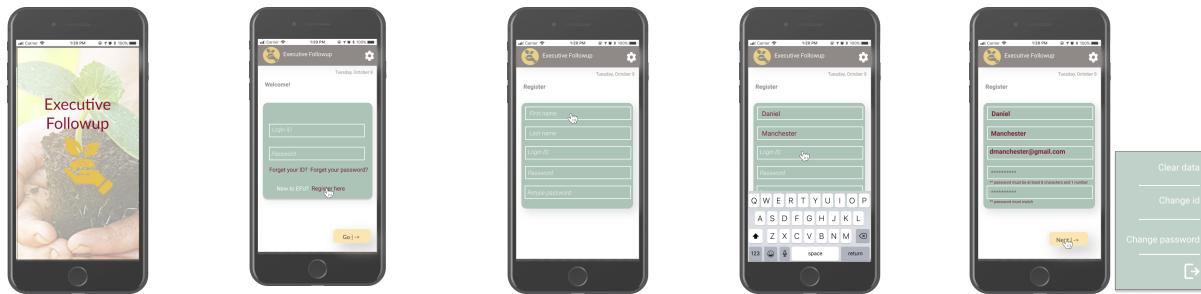
## Layout, navigation architecture and look and feel illustrations

The overall metaphor is of a plant sprouting and growing stronger over time. The color scheme selected includes a modern, clean palette with several stronger colors used in messaging and reinforcement: generally, the palette includes *a taupe, yellow, red, white and green*. Navigation upon setup is through a *progressive 'wizard' metaphor*. Once setup is complete, navigation is primarily by use of a bottom navigation bar. Other functions are reinforced with the use of a progress bar. Housekeeping functions are housed in the settings area at the top of the screen.

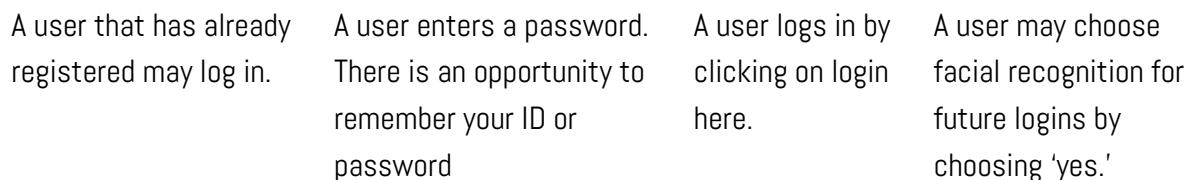
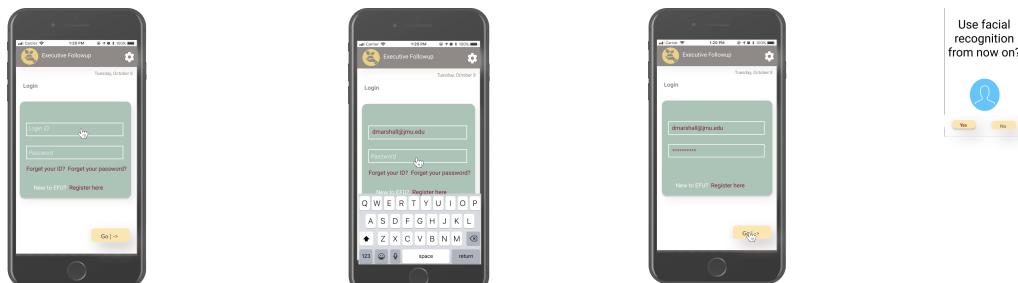


## Workflow for key tasks

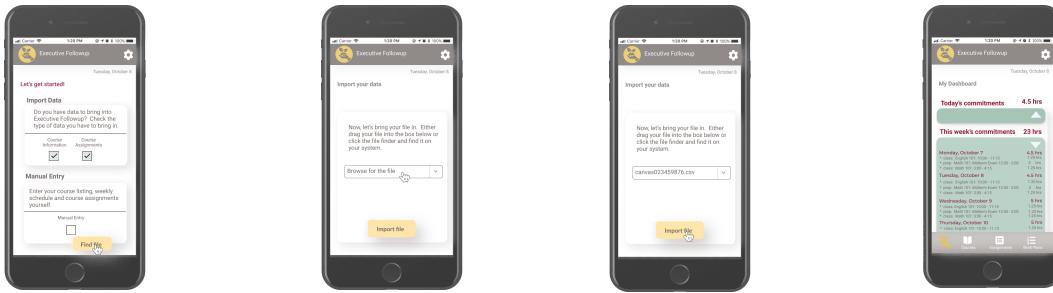
### Register as a user



### User login



## Import data from data extract



User selects the data that can be imported from an extract file.

User browses to find the proper file on their system.

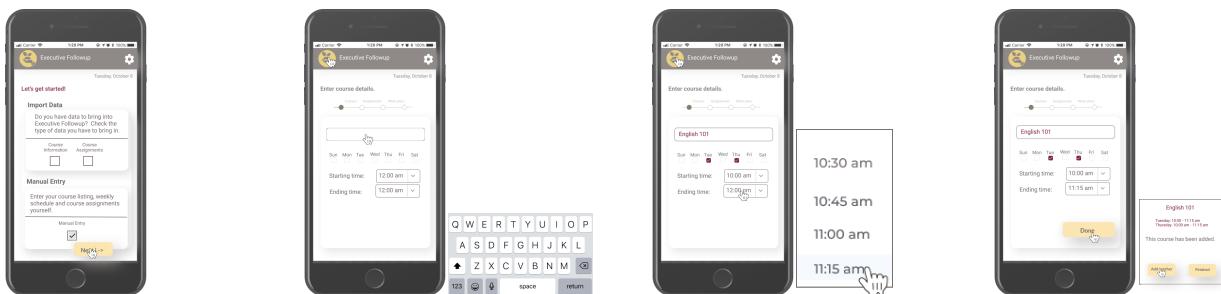
User taps import and brings the file into the system.

Populated data displays on the dashboard.

## Manually input initial data

- add course
- add assignment

- add prep plan
- change the default recommended prep time

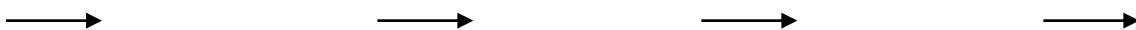
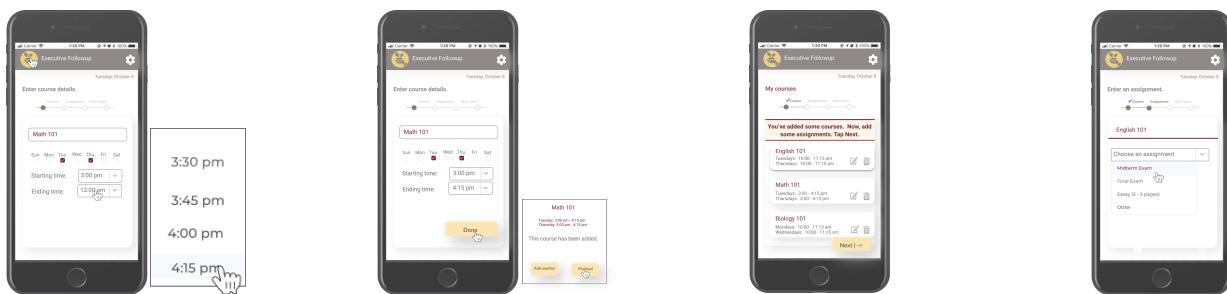


A user chooses to manually enter data and begins a progressive controlled 'wizard' where they will add data themselves.

Here a user will add a course title.

A user, then adds the days of the week that the course takes place.

A user, then adds the times of the class and a confirmation modal is presented.

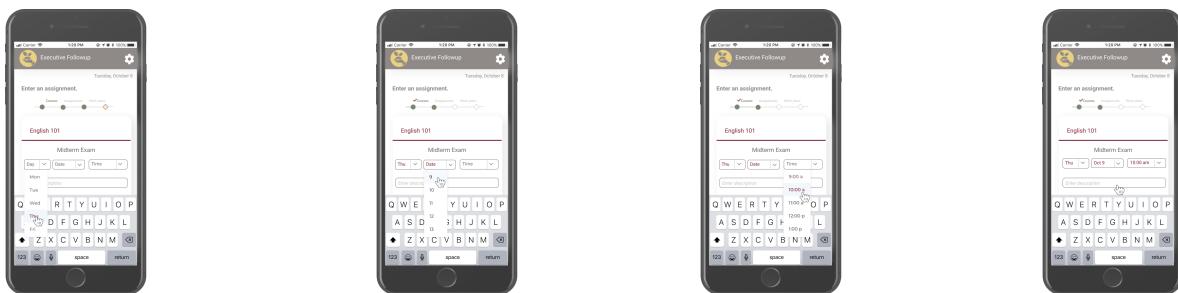


The user continues to add the rest of their courses in the same manner.

When the user is finished adding courses, they tap finished.

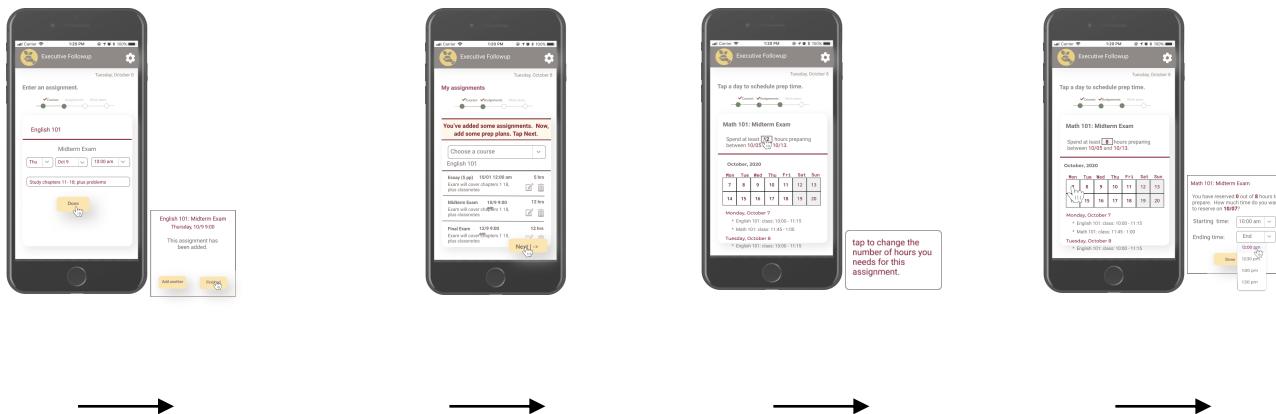
The user is brought to a listing of courses added, the progress bar is updated and they are presented with a banner and message to move on to adding assignments.

The user is presented with a dropdown, including various types of assignments that are associated with the course that is entered. The progress bar has been updated again.



The user adds the due date, the day, date and time that the assignment is due.

The user adds a short description of personal notes to reference later.

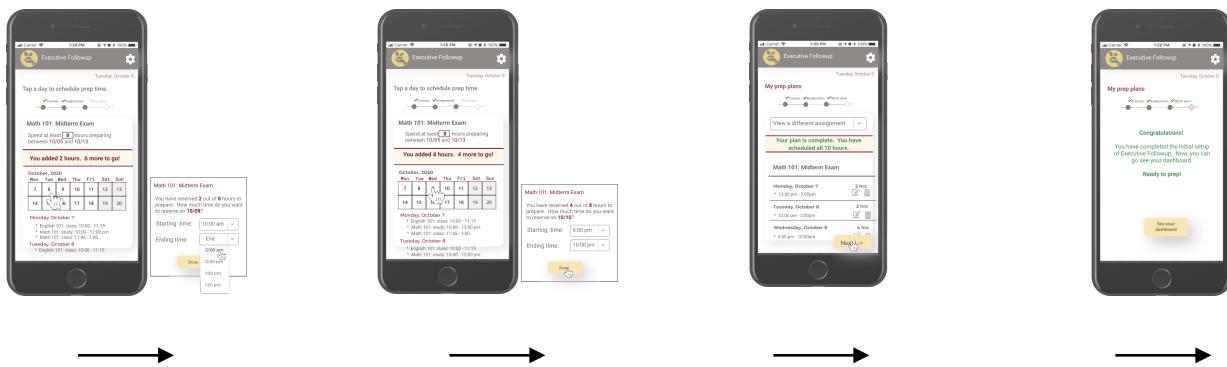


The user selects 'Done' to complete the transaction. A modal is presented asking if the user would like to 'Add another.' If not, they click 'Finished.'

The user is brought to a listing of all assignments (and details) as well as a banner encouraging the user to create a work plan for one of the assignments. The progress bar has been updated, also.

The system has suggested the number of hours of preparation that should be completed for the assignment as well as the dates, between which, it should be done. The user has the option to change the recommended number of hours.

The user reviews their existing obligations and clicks on a day that they can do some of the work. In the modal that is presented, the user chooses a start and end time. Reminders of how many hours are completed are shown on this screen.



The user continues to add more time to the work plan until it is complete. Reminders are shown in the banner in the center of the page. The progress bar is updated.

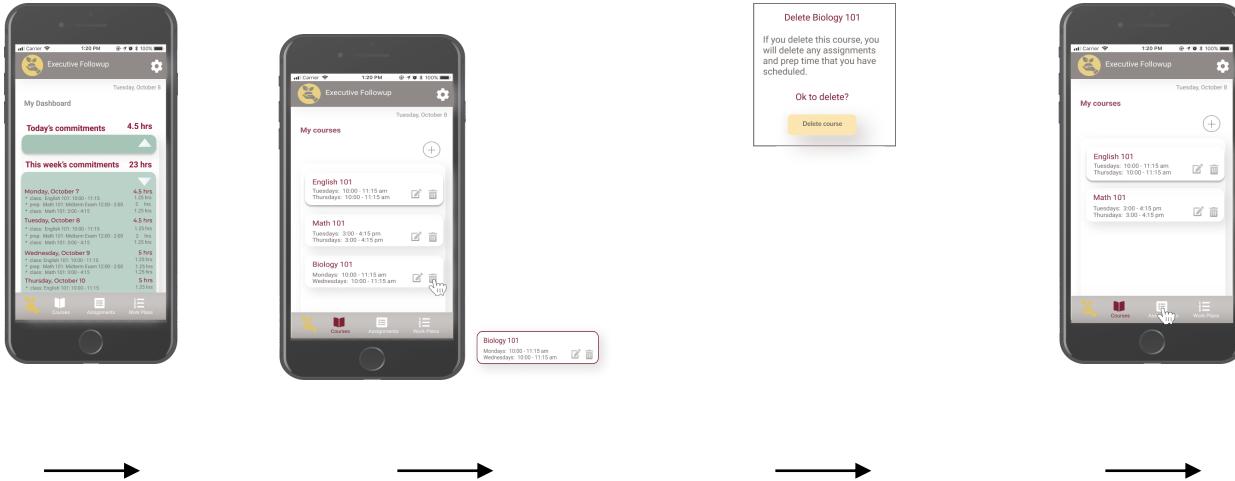
Once the user adds all the prep time for a given assignment, they are rewarded with a green banner that the plan is complete..

Upon completion of the setup process, the user is congratulated with a screen and an updated progress bar. From here the user moves to the dashboard.

## Courses

- add
- delete

- edit
- view listing



Once a returning user logs in, they are presented with their populated Dashboard. They have four options on the bottom nav.

If a user taps the courses icon on the bottom nav, they are taken to the 'My Courses' screen. On this screen, a new course can be added, edited or deleted.

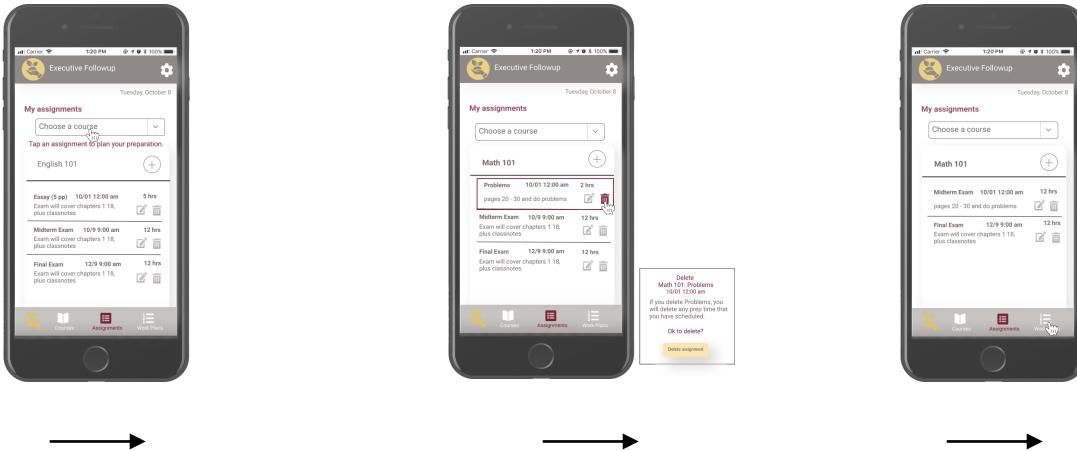
If a user chooses to delete a course, the modal tells the user what the consequences will be and asks to confirm the deletion.

If a user chooses to delete a course, the modal tells the user what the consequences will be and asks to confirm the deletion.

## Assignments

- add an assignment
- delete an assignment

- edit an assignment
- view assignment listing for course
- change course to view course listing for another course



If a user taps the assignments icon on the bottom nav, they are taken to the 'My Assignments' screen. There is a drop down so that a user may select a different course.

A user may add, edit or delete a selected assignment on this screen by tapping the delete icon. A confirmation of the deletion will appear.

After the deletion, the user sees the revised assignment listing.

## Preparation plan

- schedule prep time



If a user taps the 'work plans' icon on the bottom nav, they are taken to the 'My Work Plans' screen. There is a drop down so that a user may select a different assignment and see the listing of work sessions associated with that assignment. A banner message is displayed informing the user of the status of their work plan, either incomplete or complete. If the work plan is 'incomplete', the user may tap the + button to add other work sessions.

- delete prep time
- edit prep time

If a user wishes to delete a work session, because they have over scheduled themselves, or for another reason, they use the same method as they used to delete courses or assignments: i.e. tap the trashcan icon. They are presented with a modal reminding them of what they are asking the system to do as well as a confirmation of the deletion.

## Dashboard

- view sections of dashboard
- view schedule for the day



If a user taps the 'logo' icon on the bottom nav at any time, they are brought to the Dashboard. The Dashboard lists the commitments that the user has made for the week. This is showing by default.

- view schedule for the week
- view schedule for the month

If the user selects the week dropdown, then they will see the list of commitments made for the week. Included in these transactions are timeframe, type of commitment and hours committed.

# Section 7: Final Usability Test

## Goals

The goal of this study is to evaluate a prototype for a tool to help high school and early college students improve their ability to manage their time for completion of assignments. By improving students' skills in this area, the hope is that improved grades will follow. This is a usability study that will involve formative questions, observations of tasks and a debrief of the overall effectiveness of the app. The primary result will be qualitative feedback on a prototype that has gone through several iterations to find out if this design will fill the need that has been described. I will be testing 3 participants, 2 students and 1 parent, in 45-minute sessions.

### Overarching goals

- Identify why participants engage or disengage with Executive FollowUp.
- Understand how I can increase the ease of use of Executive FollowUp.
- Explore how to increase users' overall satisfaction with Executive FollowUp

### Detail Goals

- Can a user complete the initial setup of this app in an efficient enough manner that it would not be an obstacle to further use of the app?
- Are the steps that the user has to take to add, edit, delete and view their courses, assignments and preparation time easy to complete?
- Is viewing the data on the desktop convenient and easy enough that users would look at it on a daily basis?

## Participants

Participants included 3 college students, 2 male and 1 female. All described themselves as good students, procrastinators with mediocre planning skills. None took advantage of any outside technology to help plan their work.

## Process

The Usability Test was a one hour Zoom session where the participants shared their screens and a recording was taken. Once the Consent Form and Introduction was complete, I started the test with some pre-test questions. I asked about background and demographics as well as their current approaches to organizing their preparation and study for school work. Finally, some information was gathered on what they know about other technology is available in this area and if they have used it.

The examination of the prototypes was conducted next. Links to two clickable prototypes were sent by email to the user. The first prototype included tasks to register and log in a user and the initial setup of the app. The initial setup included a controlled wizard that required the user to add several courses, assignments and a work plan. Finally, they see the dashboard populated with the information that has been added.

The second prototype was from the perspective of an existing user and the dashboard has now become the central element. In this user flow, all the major tasks that the user may want to complete in an asynchronous manner were examined. These tasks included adding, editing, deleting and viewing their course listing, assignments and work plans.

During all tasks, the user was asked to "talk aloud" to get useful feedback on a variety of areas. These areas included: language, color, formatting and layout of the user interface, the language used, the simplicity of navigation, intuitiveness of the screens and usefulness of the functionality.

Once the evaluation of the prototype was complete, a debrief was conducted that focused on the overall app. Any areas where the user struggled were probed. Other open-ended questions were asked to probe their understanding of the purpose and goals of the app and any functions that they would like to see. Questions, such as, "what is the most useful function in the app?" were asked to determine if we have addressed the critical needs that surfaced during the Needs Finding Study,

The final part of the interview is the administration of the SUS Questionnaire. I sent this in an email link, asked them to print it, fill it out, take a picture and text it to me.

Each user in this final round of testing was compensated for their time.

## Results

From observations, all tasks were completed without any significant confusion. The SUS Questionnaire reflected that the app was intuitive and that there were no issues with navigation, understanding the purpose of the app or individual tasks. No participant reported the need for any outside technical support in order to use the app and none found it cumbersome.

Participants were pleased with the messaging. In particular, there were many positive comments on the deletion confirmation messages as well as the banners within a screen that told the user where they were in the process. Some of the banner messages were not read initially and the titles to the screen pages were all but ignored, in most cases. Participants reported noticing items in the center of the page, graphic images or highlighted text before any titles.

There was some confusion when it came to creating and following the work plans. There were a lot of suggestions about how to shepherd a user through the process of adding a work plan efficiently. Also, there were a lot of suggestions about how to encourage and reinforce adherence to the work plans.

Users liked the recommended preparation time and that it was showing on different screens. They were, at first, confused as to what the real definition of the prep time was. They were not sure if this was a countdown until the due date.

One of the unique elements of the app is the research and intelligence behind the recommended hours of preparation and the timeframe that the user should think of when creating their work plans. This intelligence needs to be well-thought out and backed up by industry studies. There are many opportunities to educate the student on many areas of planning and organization. Making them cognizant of the amount of time they need to study and the timeframe to complete their work is just the first and most critical element of task planning.

## Key findings

- Notifications

All participants asked if there were push notifications to remind them of upcoming prep sessions or classes.

I recommend adding an item to the initial progressive wizard setup that asks the user if they would like to receive notifications and give them several options to choose from. Notifications would be banner notifications at the top of their phone screens.

Some of the options could include the following:

- before a class is starting or a prep session is supposed to begin.
- progress toward your total prep plan
- a countdown of some kind to the due date of an assignment

- Recommended prep time

Participants liked seeing the numbers next to the prep session or totals for the day or week but misinterpreted what they meant. Messaging should be developed to educate the user on what the prep time amounts mean and how they were arrived at.

- Recommended prep time timeframe

Some participants understood what the recommended time frames were, but others misinterpreted it. Messaging must be developed to get this point across to users. Furthermore, it should be determined whether the end of the prep time is the actual due date or the date that all the preparation should be completed. This definition needs to be understood by the users. Also, add time in smaller, more realistic increments dropdown.

- Calendar graphic vs. list view when creating prep plans

Participants preferred to see a graphic of the calendar but needed to have the listing of commitments within it. All of them overlooked the dots that were representing events on the calendar. They understood that they signified that something was happening that day but did not know why there were one or more dots. All participants recognized the need to have the list view so they could see where they could fit a prep session into their schedule. I recommend thinking about a way to combine these two views of the events into one type of view that is graphical in nature and easy to understand. This could include a graphical representation of a calendar with only the most critical details showing that would allow the user to make scheduling decisions rapidly.

- Course options

Participants were comfortable typing in the description of their course. However, in order to see the listing of assignments that pertain to a given course, the courses should have a standardized course-type. The types of assignments available to that course-type would be built into the logic of the app. In addition, there could be an admin option under settings, where a user could add additional course types and/or course assignments that pertain to a particular course-type.

- Deletion modals

Participants were happy there was the language, "OK to delete course?" as well as 'delete course' on the button (same for assignments and work plans). This highlighted "OK to delete course?" was the first thing that the participant noticed on the modal. This is what triggered the participant to read the copy which had a description of the consequences of deleting the element. I recommend that the length and format of the copy be carefully reviewed to make sure that the user will be willing to read it before selecting a final delete.

- Completion of work sessions

All participants expressed the desire to "check off/cross off" finished items. In this way, the app could mirror what the participants expressed doing in the real world, checking off items on a pad of paper. One participant expressed interest in having completed items available elsewhere for future reference.

- Progress of prep plan creation

Participants appreciated that they received banners about the status of their prep plan creation. However, in several instances, I noticed that participants overlooked the banners, even though they were in bright colors. It is critical to the success of the student that they complete their prep plans. I recommend evaluating this to make sure that the status messaging and progression are clear and inviting.

- Progress of prep plan completion

There is currently no recognition of the progress through completion of prep plan: Work plan listing: I am done studying? should do something to recognize that you have completed the work plan... cross it off, maybe. One participant suggested "gamifying" the app

- Progress/countdown to due date for an assignment

Participants expressed interest in some way of seeing how close they were to the due date of the assignment at-a-glance. There is, currently, no facility for this. It could be included in a push notification but could also be noted in some way in the app.

- Dashboard

Multiple participants noted that, while they found the information on the Dashboard useful, the listing of commitments was cramped and unclear. One participant suggested a grid of some kind. There may be too many elements showing on the dashboard. Consideration should be given to which elements are critical. Lower priority elements could be hidden until a commitment is tapped on or swiped.

- Other user Interface issues

- Participants did not see the titles of pages at first.
- Participants noted not enough contrast with logo and background on bottom nav
- Participants noted that there was not a strong enough highlight on some elements
- One participant commented that he believed the word 'commitment' was a good balance between business and school.
- All participants liked the description input on the add-commitment screen. They appreciated the ability to add preparation details to the assignment.

# Section 8: Next steps

## Issues

- Develop data schema
- Develop plan for offline capability
- Develop plan for multi-platform capability
- Resolve issues with prototype
  - Dashboard and other user interface issues as described above
  - Calendar graphic and list view
  - Review color scheme and other elements for accessibility

## Next Version

- Push notifications
- Functionality to allow users to denote completion of prep sessions and prep work plans
- Report feature that lists assignments and work items completed
- Create functionality to populate the app with an import file of courses and assignments.

## Additional Research

Further testing is recommended to narrow down the proper target user group.

- Several participants noted that students earlier in high school, possibly high school sophomores and up, might benefit from an app like this and get into the habit of using it. They might carry this habit unto the college years.
- The app was originally envisioned to help high school students that had been diagnosed with ADD. Although I was not able to determine if my participants had this diagnosis, it would be worthwhile to investigate whether this tool would help improve their habits.
- The app was also originally envisioned to be a tool that Executive Functioning coaches use in collaboration with their clients. Further testing with psychologists and executive functioning coaches may yield important feedback as to whether this collaboration would be useful.

# Appendix

- Personas and Scenarios
- Pre-test Checklist
- Post-test Checklist
- Introduction Script
- Consent Form
- Logging Sheet
- Pre Testing Questions
- Post Testing Questions
- Post-Test Questionnaire

## Personas and Scenarios

Austin

	<h3>Motivators</h3> <ul style="list-style-type: none"><li>• loves to work on the computer; has saved up money and built a whole system himself</li><li>• wants to go to college</li><li>• getting finished with work so he can play video games</li></ul>
<h3>Demographics</h3> <ul style="list-style-type: none"><li>• Age: 17</li><li>• Occupation: student</li><li>• Location: Silver Spring, Maryland</li><li>• Life Stage: high school junior</li></ul>	<h3>Constraints</h3> <ul style="list-style-type: none"><li>• shy and reserved</li><li>• scattered;</li><li>• diagnosed with ADD</li><li>• he plays video games on the same computer that he does his homework</li></ul>

Austin comes home after school and can't wait to get on his computer and play Minecraft with his on-line friends. School is really hard right now and everyone is asking about "where he wants to go to college". He doesn't want to talk about it. He is having fun now and is sick and tired of thinking about his future. Math is really hard and he HATES English. He used to have to write 1 paragraph essays but how they are two pages long. How is he going to come up with enough stuff to write to fill 2 pages? His Mom is always on him. He knows she loves him but he just wants to avoid the issues. His grades have dropped recently and he is feeling overwhelmed. He figures he will start work after dinner. His Mom and Dad work so they always eat late and often don't start homework until 8. He is tired and puts any long-range projects off until the next day.

# Danny

	<h2>Motivators</h2> <ul style="list-style-type: none"><li>• hard worker; good work ethic</li><li>• wants to try to get his grades up so he can get into the Business school. The applications come out in November.</li><li>• also wants a good social life</li></ul>
<h2>Demographics</h2> <ul style="list-style-type: none"><li>• Age: 20</li><li>• Occupation: student</li><li>• Location: Herndon, Virginia</li><li>• Life Stage: college sophomore</li></ul>	<h2>Constraints</h2> <ul style="list-style-type: none"><li>• likes to party</li><li>• not too strong in math</li></ul>

Danny loves his college. He is in an off-campus apartment this year with some other guys. On Thursday nights, they often have some dudes over to pre-game before going to a sorority/fraternity social. He is always trying to figure out when to get his work done. There seems to be so much time but it just gets away from him. There is always so much activity in his apartment, it is hard to concentrate. The best time for him is in between classes. There is nothing else to do but eat and do a little work. Weekends are tough. He goes out on Friday nights, sometimes stays out pretty late, then sleeps until noon. He is not in the mood to do work at that point. He should be able to do all his work. He is taking a reasonable load and does not have a class on Fridays. He also planned his schedule so he doesn't have any early classes on any of the other days. He doesn't get up early to study. He sleeps in. He doesn't really know why his grades are so mediocre but in high school, his mother was always working with him to organize his schedule and he had a tutor in math. He really doesn't know what to do. There are group study sessions for 2 classes but they are always at night and on campus. It is pretty far to walk.

## Mary

	<h3>Motivators</h3> <ul style="list-style-type: none"><li>• support good habits in her children</li><li>• support good academic performance</li><li>• support healthy self-esteem</li><li>• support good self-discipline</li><li>• she wants her children to graduate from college and be able to support themselves</li></ul>
<h3>Demographics</h3> <ul style="list-style-type: none"><li>• Age: 51</li><li>• Occupation: part-time lawyer</li><li>• Location: Silver Spring, Maryland</li><li>• Life Stage: Mother of 3<ul style="list-style-type: none"><li>○ son, 20 years, second year college student</li><li>○ son, 17 years, high school senior</li><li>○ daughter, 14 years, rising high school freshman</li></ul></li></ul>	<h3>Constraints</h3> <ul style="list-style-type: none"><li>• not much control over the educational choices of her college son</li><li>• high school son is resistant to outside tutoring</li><li>• budget is limited</li><li>• time is limited</li></ul>

Mary is a very hands-on Mom. She keeps up what is going on academically with each of her children. Both of her boys have had some academic issues but she has been able to mitigate any low performance with a combination of her attention to their schedules, tutors and some psychotherapy.

Her oldest is in college and she is worried. He was a pretty good student in high school but he seems to be making some questionable choices. She is not happy that he has scheduled all his classes later for later in the morning and has nothing scheduled for Fridays. That means he can party Thursday night and not get any work done. He never seems to answer the phone on Saturdays, even at noon, and she is suspicious that he is staying out late and drinking a lot. His most recent report card was poor. She has called the college but they only want to talk to him and besides, all the options that were suggested had obstacles.

Her second son is getting ready to apply for college. He has so much work and really can't seem to "get down to business" until the pressure is on. Tests, for him, require multiple nights of study and she only sees evidence of

cramming at the last minute. She is taking advantage of a tutor for math, which is extremely expensive. When she tries to ask him about his schedule or suggest a study plan, he gets extremely defensive and won't listen.

### Pre-test Checklist

- Prepare and send link for clickable prototype
- Print admin forms: Consent form, Logging sheet, Post-test questionnaire
- Arrange the printouts according to the tasks.
- Go through the tasks once yourself before administering the test.
- Setup video and start it when appropriate.

### Post-test Checklist

- Stop recording the video and save it to the cloud.
- Make sure admin forms are filled out correctly: Consent form, Logging sheet, Post-test questionnaire

### Introduction Script

Hi, my name is Missy Maloney. Thank you for being willing to participate in this test. We are trying to find a solution for students to help them manage their time better and we have a prototype of the app to show you. This app is not functional but is designed to give you a sense of how the app would work. There are areas to click on and they will move to another screen.

To the extent possible, I will take your comments to be confidential. My research team and I will aggregate all the comments from several interviews we're conducting so that your comments are not easily traced to you. If there's anything you really don't want on the record, even if it's anonymized, please let me know that, too. Also, this interview is entirely voluntary on your part – if for any reason you want to stop, please let me know. We can end the interview at that point with no repercussions for you of any kind. I can also throw out anything you've told me until that point. Do you have any questions for me? All right, then, let's proceed.

Do you mind if I take an audio recording? No one other than the research team will have access to the recording.

The test is in four parts. I'd like to start by asking you some background questions. After that I will show you a series of printed images of our initial design and give you some tasks to do. After the tasks, I'll ask a few more questions and have you fill out a survey. The test should take about 30 minutes.

To the best of your ability, I'd like you to think out loud. This means giving me a running commentary on what you're doing as you work through your tasks. This means that you should try to give a running commentary on what you're doing as you work through the tasks. Tell me what you're trying to do and how you think you can do it. If you get

confused or don't understand something, please tell me. If you see things you like, tell me that too. I am going to try not to answer your questions or tell you what to do, but all your questions are helpful. Don't worry, though. If you get completely stuck, I will help.

All your feedback is good, both positive and negative. You will not hurt my feelings. The best kind of feedback is frank and honest. Do you have any questions for me?

# Consent Form

## **Consent Form**

I agree to participate in the study of the Executive Followup system that is being conducted as part of a larger goal of determining whether a tool like this could meet the needs of some students. I consent to the recording of this test. This recording will be used for research and product improvements only. I understand that participation in this usability study is voluntary and I agree to immediately raise any concerns or areas of discomfort during the session with the study administrator. Please sign below to indicate that you have read and you understand the information on this form and that any questions you might have about the session have been answered.

Date	<input type="text"/>
Please print your name:	<input type="text"/>
Please sign your name:	<input type="text"/>

Thank you! We appreciate your participation.

# Logging Sheet

## User Test Logging Sheet

Test Name		Logger	
Participant I		Date	
Task Number		Task Success	

## Pre-testing Questions

1. User Background and Demographics
  - To get started, can you tell me briefly about yourself?
  - [Probe:] What year are you in school?
  - [Probe:] How would you describe yourself as a student? How would you describe yourself as a planner?
  - On a scale of 1 to 5 (1=not at all confident, 5=very confident), how would you rate your level of confidence in using your mobile phone for academic technologies?
2. Current approaches
  - How often do you plan out your preparation for assignments, tests and homework?
  - [Probe:] Have you ever taken advantage of a tutor to help you be more organized?
  - [Probe:] When was the last time you have taken advantage of technology to schedule your preparation time for assignments?
  - [Probe:] What tools do you use, if any, to help with your schoolwork?
  - [Probe:] Please describe your experience with this tool. What tasks does this technology help you to complete.
  - [Probe:] What do you think would be most helpful to you in trying to improve your grades.
3. How much prior knowledge does the user have
  - Which of the following indicates how much you know about technology that helps you plan and organize your studying/preparation for assignments?
    - [Option 1:] I don't know anything about that.
    - [Option 2:] I know a little, but I could learn more
    - [Option 3:] I am an expert.

## Post-Testing Questions

- Debrief

At the end of the task list, a debrief will be conducted, using the notes taken, with the following questions in mind:

- Review parts of the test where the user struggled. What difficulties did you have on \_\_\_\_\_? I noticed that you struggled with \_\_\_\_\_. Can you tell me what happened? You paused here, tell me more about that.
- Preferences: What did you think of the site? What did you like/dislike? Which parts of this page are most/least important to you?
- Changes: If you had 3 wishes to make this better for you, what would they be? Why?
- Understanding: How would you describe this to a friend?

- Use Cases: Under what circumstances would you use this? Why?

## Post-Test Questionnaire

### Post-test questionnaire

Answer the following questions based on the scale of 1 -5 where 1 is 'strongly disagree' and 5 is 'strongly agree'.

1. I think that I would like to use Executive Followup frequently.

1	2	3	4	5
---	---	---	---	---

2. I found Executive Followup unnecessarily complex.

1	2	3	4	5
---	---	---	---	---

3. I thought Executive Followup was easy to use.

1	2	3	4	5
---	---	---	---	---

4. I think that I would need the support of a technical person to be able to use Executive Followup.

1	2	3	4	5
---	---	---	---	---

5. I found the various functions in Executive Followup were well integrated.

1	2	3	4	5
---	---	---	---	---

6. I thought there was too much inconsistency in Executive Followup.

1	2	3	4	5
---	---	---	---	---

7. I would imagine that most people would learn to use Executive Followup very quickly.

1	2	3	4	5
---	---	---	---	---

8. I found Executive Followup very cumbersome to use.

1	2	3	4	5
---	---	---	---	---

9. I felt confident using Executive Followup.

1	2	3	4	5
---	---	---	---	---

10. I needed to learn a lot of things before I could get going with Executive Followup.

1	2	3	4	5
---	---	---	---	---