Quinoa

Cultivating a Creative Habit

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Introduction

As a team of creative individuals, we recognize that cultivating a creative talent is rewarding and hard work. From creating music to paining, practicing of a craft is an activity that many people enjoy doing, and have a passion for. In addition, studies have shown that deliberate practice played a significant role in developing creativity across a wide swatch of domains, and that those incorporating deliberate practice experienced greater strides in development and performance. With busy schedules and outside pressures, however, many individuals are unable to actively pursue their creative goals, and improve their craft.

Our team set out to develop a solution that encourages users to deliberately practice their craft (e.g. writing, painting, musical instruments) -- that is, to cultivate a creative habit. In this project, we studied why people struggled to keep up practicing their craft, despite their desire to do so. We uncovered the role that structured assignments played in the three elements that must converge for a behavior to occur: motivation, ability and trigger[1], and evaluated the effectiveness of an intervention designed to provide structure to deliberate practices in a field study.

[1] BJ Fogg, "What Causes Behavior Change?' Available: http://www.behaviormodel.org/, 23 Feb 2018.

1.
Research

Diary Studies and the Aftermath

Initial Information Gathering

To begin our field study, our team went out to gather information about the practices of our product's potential users. We recruited a series of four creative individuals with crafts, asked them to set broad creative goals for themselves, and then conducted a four-day study of their processes. Examples of goals were broad, such as "play Ukulele daily," or "write daily." Over the course of the four days, we gained insights that provided the basis of the design of our final solution. The structure of our four-day diary study is as follows.

Diary Study Structure

Activity

Every day for four days, each participant would practice a craft they are interested in cultivating.

Method

Each participant had access to one Google Document in a folder shared between the Quinoa team.

Each participant filled in the entry for each day, at the end of the day.

Logging

We asked the participant to log:

- whether they completed the goal

- feelings before and after the activity

- circumstances the activity took place

- recordings of their work

Diary Study Template

Please take a moment to reflect on your activity. You may find these prompts useful but please don't be constrained. Text, drawings, photos, record your feelings however you want. :)

We want to know if you have completed your goal...
- When & Where did your activity take place? How long did it take you?

Don't worry if you didn't complete your goal today (but please do try to keep up!). Mind explaining what happened?

We want to understand your feelings before v.s. after you complete your goal...
- What was your mood today *before* you started the activity today? Please briefly explain. (For example, if you were particularly happy/sad/anxious, what happened?)
- What motivated you to start the activity today? If you felt demotivated to start, why?
- How did you feel after you completed your activity? Mood? Energy level?

We want to understand the circumstances under which your activity take place...
- Were you on a tight schedule for anything? How do you feel about your schedule / deadlines?

DAY ONE (1/25 Thursday)
[Participants fill in]

DAY TWO (1/26 Friday)
[Participants fill in]

DAY THREE (1/27 Saturday)
[Participants fill in]
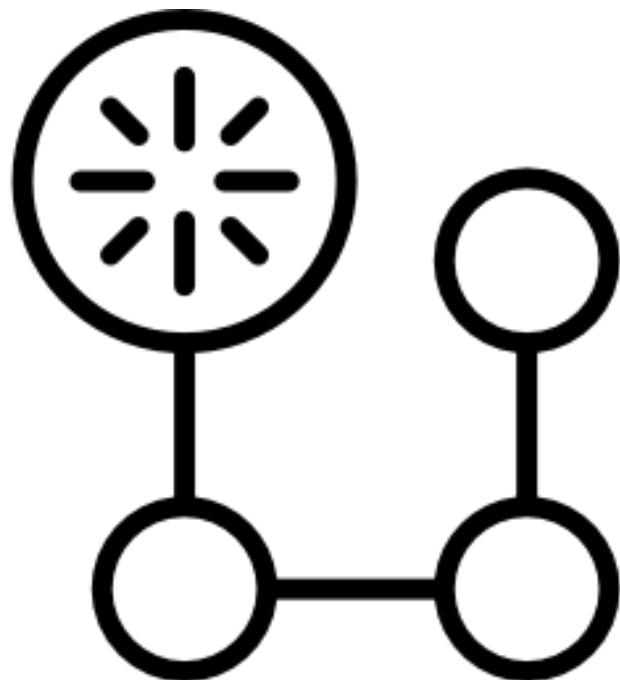
DAY FOUR (1/28 Sunday)
[Participants fill in]

Diary Study Key Insights

From the completed diary studies, our team was able to develop a series of insights into what was accountable for participant's actions. We were also able to track the progression of individual participants throughout the study utilizing the tool called Journey Mapping. With journey mapping, we were able to clearly visualize touchpoints, pain-points, and emotions of users over time.   A journey map for each participant is available in Appendix B.

Sample User Journey Map

User: Tony
Postdoctoral fellow at UCSF
Works ~9 hours a day in lab
Wants to practice creative writing on a regular basis

Phases	Pre-study		Day 1 (THU)	Day 2 (FRI)	Day 3 (SAT)	Day 4 (SUN)
Motivation & goals	Write excerpts for a novel & get some readers' feedback	Not motivated to write	Start writing to help friend with the diary study assignment	Write down ideas he has in mind		Wrote down some ideas from yesterday which he didn't have time to write.

Yay; I have something to show people

received negative feedback

tired & sleepy after work

Touchpoints	His friend		Signed up for diary study		Arrived home at midnight after work	
User actions	* Wrote a draft for the opening of the novel * Showed it to his friend * Did not receive positive feedbacks from friend		* Spent 1 hour at night writing/researching ideas for his novel	* Spent 1 hour at night writing/researching ideas for his novel * Came across interesting information during research	* Did not do any writing	* Spent 50 min writing. * Wrote down some ideas from yesterday * Also started something new.
User thoughts	"When my audience was very critical and doubtful about my work. It made it harder for me to continue writing."	"I **don't feel pressured** to get it done, if I don't have to show my writing to other people."	"**I need an assignment to kickstart.** I tend to slack off if no one pushes to write."	"I have lots of creative ideas in my head, but I find it hard to materialize them into words. **I lack the skills.**"		"**I have no coherent plan** for my writing. Not sure where it's leading to." "I'd like to practice creative writing skills more and have some positive **feedbacks** on my work to keep me going."

Interviews: Key Insights

Overwhelmingly, people lacked **motivation to get started.**

Amy

"It was so stressful because I had so much other work to do."

➡ **BUSY SCHEDULE BREAKS THE PRACTICE**

Tony & Yoko
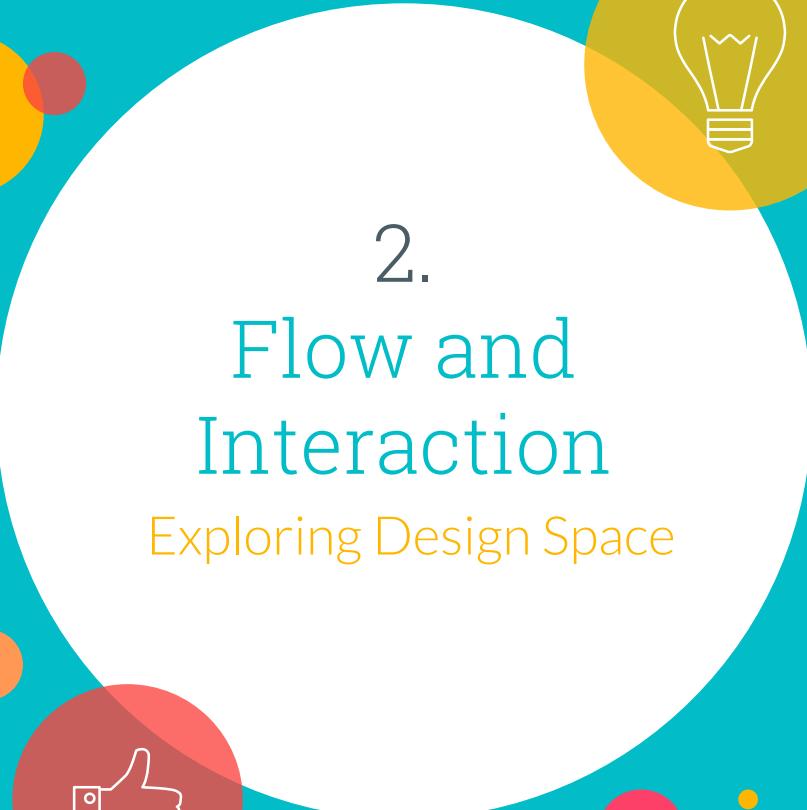
"I need an assignment to get started. It is otherwise easy for me to procrastinate. "

➡ **NEED FOR A STRUCTURE**

Jihee

"It was helpful to go through the diary study because it imposed a structure to follow upon my random guitar practices."

➡ **NEED FOR A STRUCTURE**

2.

Flow and Interaction

Exploring Design Space

Developing Mind Mapping, and Brainstorming
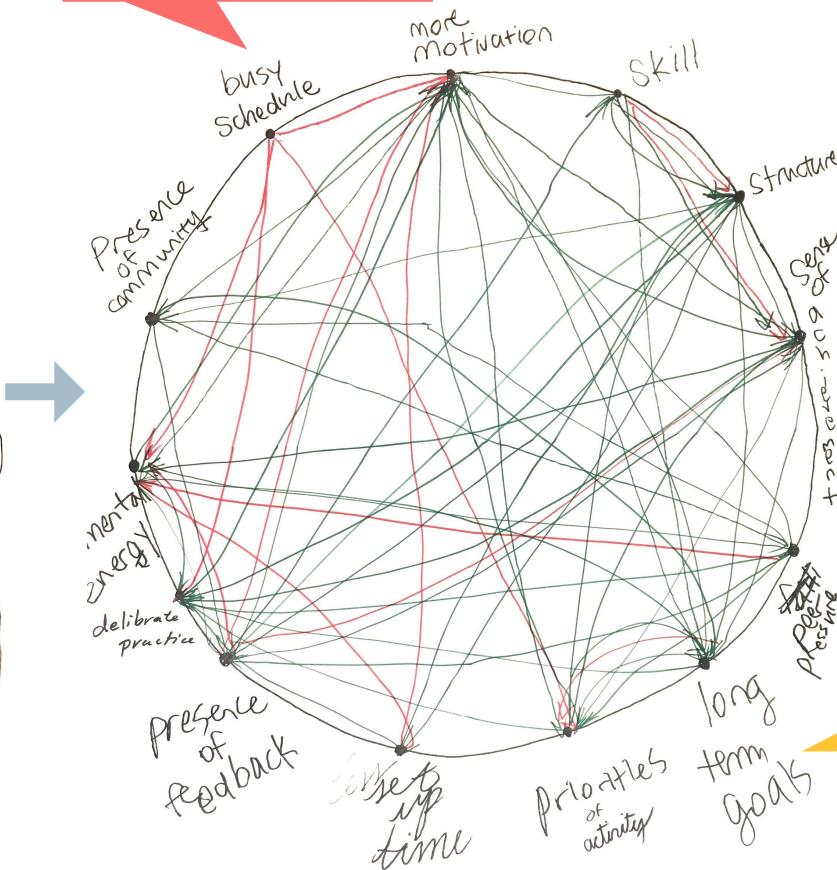
We analyzed the diary entries from participants and pulled out repeated keywords. We visualized the relatedness between each keyword in a Mind Map. After that, we analyzed the type of each relationship between the keywords. That is, does one thing mean more of the other? For example, more presence of feedback results in a positive reinforcement loop for more skill. We visualized such relationship between keywords in a System Map, where red arrows represent negative reinforcement loops and green arrows represent positive reinforcement loops.

Mind Map & System Map

Busy schedule is a consistent contributor to many negative feedback loops.

Structure emerges as a (somewhat surprising) contributor to many positive feedback loops that lead to more deliberate practice.
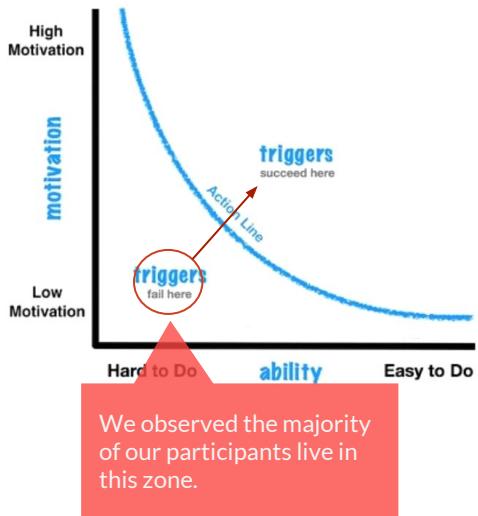
For example:
* structure **=>** increased priority **=>** motivation **=>** more practice **=>** ability to define more structure for practice

* structure **=>** sense of achievement **=>** long-term goals **=>** more motivation **=>** more practice **=>** ability to define more structure for practice

Long term goals contribute to many positive feedback loops.

Quinoa 13

Brainstorming The Solution

How might we intercede with the user's **motivation**, **ability**, and **trigger**?

We observed the majority of our participants live in this zone.

Post-it notes:
- "Call to progress" for Art
- Negative Threats message
- Web browser extension that puts 30 min of time every day on Google Calendar
- Automatic Ongoing
- Anonymous/Uber practice buddy
- Daily Challenge
- Send daily inspirations
- Rewards System - Points
- location based art community app ArtTinder
- Crowdsourced structure
- diary → diary studies → auto-feedback
- progress bar showing #subscribers @ Youtube channel
- link Google Calendar + your goal
- live feed of friends doing the same activity
- Work retweet by celeb
- Snart
- Internet wasting time → banner popup telling you to practice
- YouTube
- Competition
- Coach Bot
- course & book recommendations
- Virtual Practice Body - Skype partner
- Spontaneous combustion
- Instagram for artists friends
- App that Auto-blocks free time on your Google Calendar for your activity.

25 Post-it ideas, annotated with which of **motivation**, **ability**, or **trigger** they provide

Based off the system map, we explored design options that could potentially enhance these loops:

* structure **=>** priority **=>** motivation **=>** more practice **=>** ability to define more structure for practice
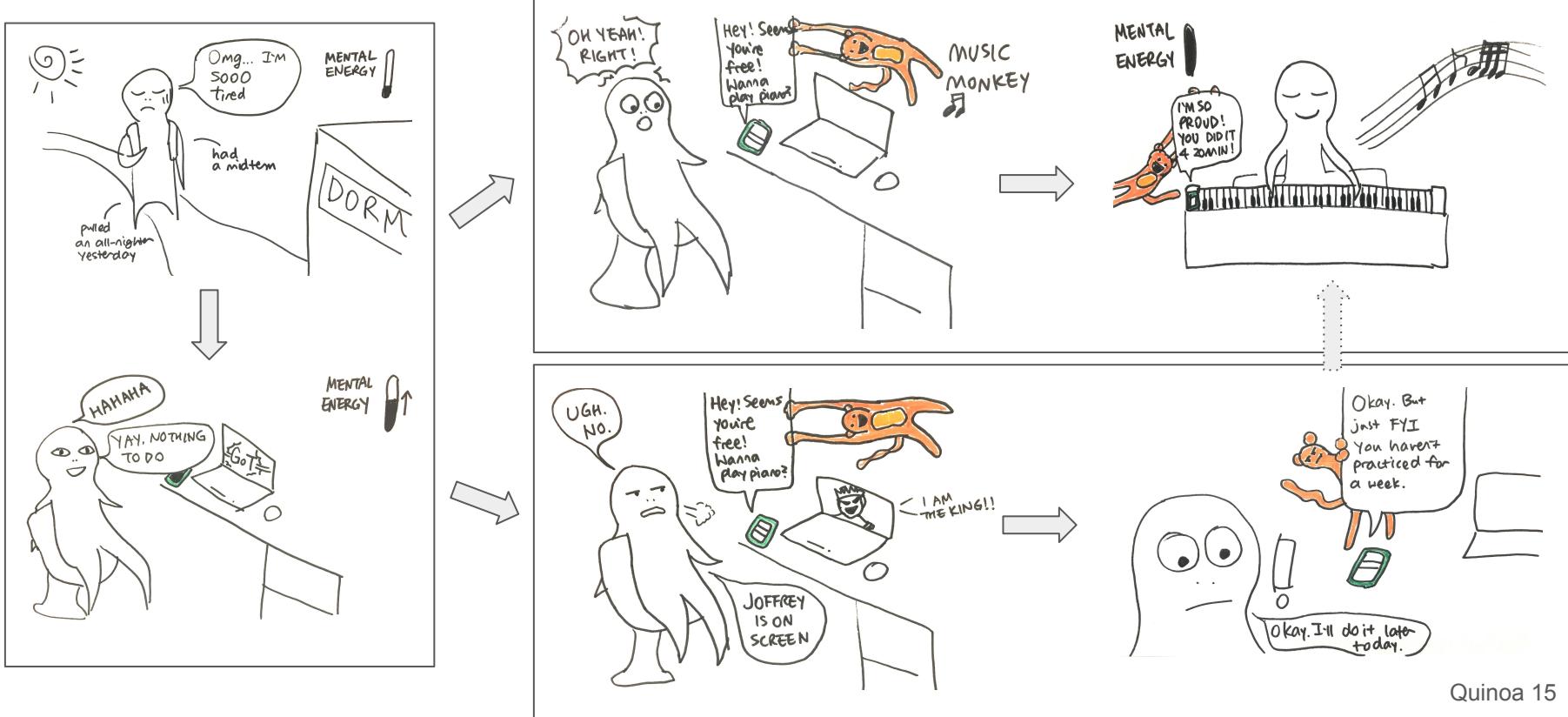
* presence of community **=>** motivation **=>** more practice

We decided to build upon this idea since it is able to intercede with all of motivation, ability and trigger, hence more likely to be an effective intervention.

User Storyboard

How we imagined our design would flow and influence user behavior.

Expanding on the Coach Bot idea, we imagined a design that offered opportunistic reminders to user (provided trigger), tracked how much time user was involved in practice, and interacted with users with the tone of a buddy (provided some motivation).

Can we make the reminders more effective?

Insight from Diary Study: use structured assignments to prompt the user!

While reminders helping users recognizing opportunities for practice were assumed useful, we realized they were vulnerable to circumstantial changes, easy to dismiss, and hence did not provide enough motivations.

Improvement: We coupled the simple reminder system with a web app (*Quinoa*) for users to create and track the progress of their **plans**/schedules for practicing their craft.

Quinoa allows users to complete a plan in small steps ("*Seeds*") and reminds user of their *Seeds* based on their desired times to get reminded.

How might this help:

BEFORE	AFTER (*Quinoa* users)
Practicing craft is not a priority of the day (procrastination)	Practicing craft is prioritized (more accountability)
Have no clear clue what to practice	Have clear clue what to practice (requires less activation energy)
	Increased sense of achievement

Quinoa wireflow
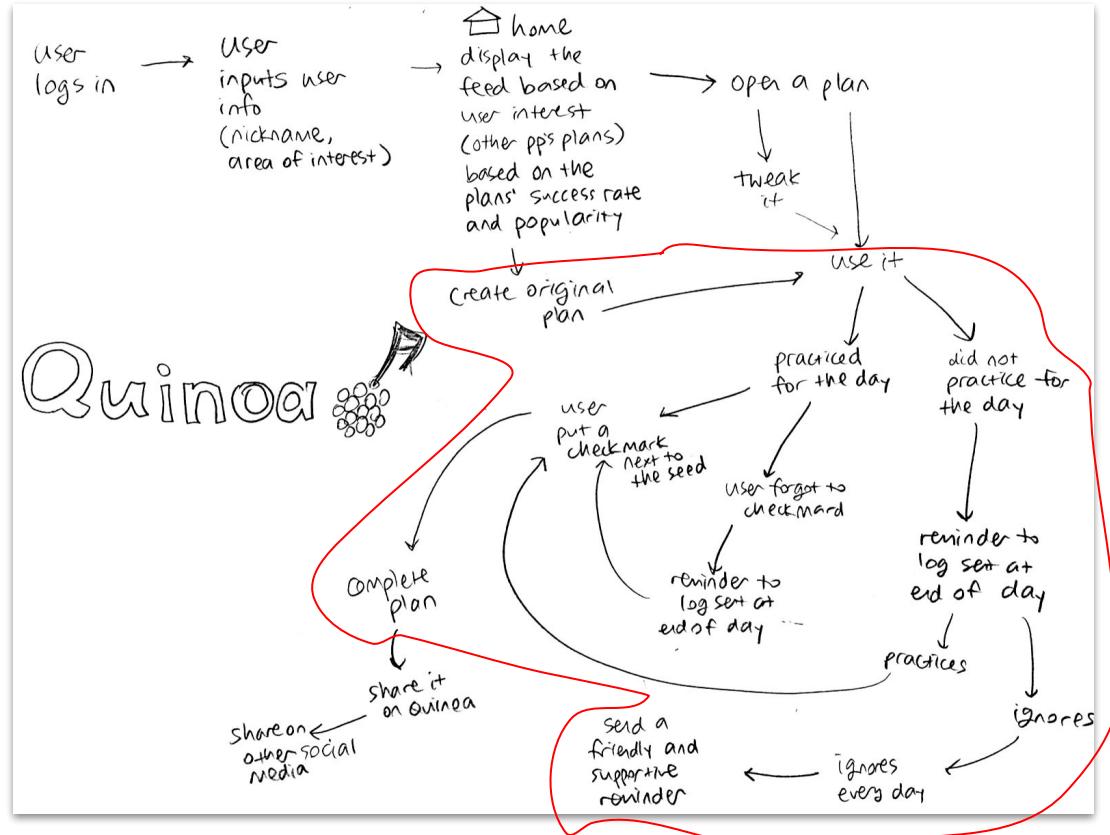
3.
Field Study
Testing Hypothesis

Field Study

An important unanswered question:

Would breaking down plans into small bits actually make it more motivating for people to practice their craft, i.e. is it an effective motivator?

In order to study this, we needed to design a prototype that tested the *role* having a plan played in cultivating the habit of deliberate practice.

Quinoa wireflow (red outline denotes the Field Study focus area)

The Prototype

Our prototype focused on testing the hypothesis:
Breaking down plans into small bits makes it more motivating for people to practice their craft.

Before the experiment started we asked each participant to create a 4-day plan:

What are you interested in practicing: _____

Please specify your mini-goal for each day.
Thursday 2/15: _____
Friday 2/16: _____
Saturday 2/17: _____
Sunday 2/18: _____
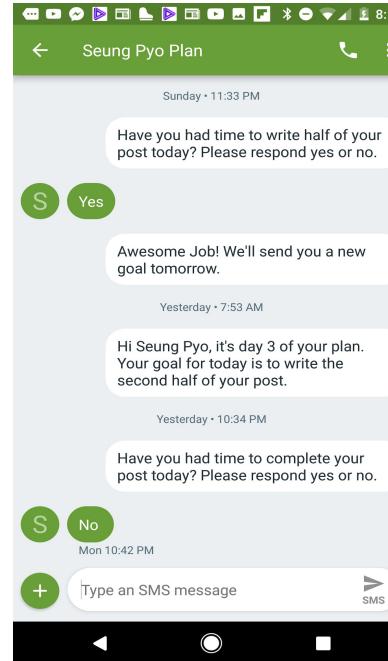
We'll help with the participants to come up with the specifics in their plans and make sure each day in their plans has an actionable mini-goal.

Create 4-day plan with each participant

SMS reminder in the morning about goal of the day

Another SMS message in the evening asking if they finished

Seung Pyo Plan

Sunday • 11:33 PM
Have you had time to write half of your post today? Please respond yes or no.

S Yes

Awesome Job! We'll send you a new goal tomorrow.

Yesterday • 7:53 AM
Hi Seung Pyo, it's day 3 of your plan. Your goal for today is to write the second half of your post.

Yesterday • 10:34 PM
Have you had time to complete your post today? Please respond yes or no.

S No
Mon 10:42 PM

Type an SMS message

The Prototype

Our prototype focused on testing the hypothesis:
Breaking down plans into small bits makes it more motivating for people to practice their craft.

Since our subject of test was the existence of plans, we kept our reminders minimal in order to control its influence on user motivation. Still, we cannot completely rule out the (good or bad) effect of reminders took in the study.

```
void promptUser(String username, Array plan, Number day) {
  var botMessage = "";
  var systemClock = getSystemClock();

  if (isMorning(systemClock)) {
    botMessage = `Good Morning ${username},
      It's day day of your plan. Your goal for today is ${plan[day]}.`;

  } else if (isEvenning(systemClock)) {
    botMessage = `Hi ${username},
      Did you have time to finish ${plan[day]} today? Respond Yes or No.`;
    respond();
  }
}


void respondToUser(String userResponse, Number day) {
  if (userResponse == "Yes") {
    botMessage = `Awesome Job! We'll send you a new goal tomorrow!`;
    day++; // Go on to next day's goal

  } else if (userResponse == "No") {
    botMessage = `That's ok! Let's try again tomorrow.`

  } else if (userResponse == "") { //No Response
    botMessage = `We didn't hear from you yesterday. If you did accomplish
      your goal yesterday, just let us know and we'll send you your new one!`;
  }
  return [botMessage, day];
}
```

Text bot logic

Participants: Individuals looking to **Practice** their **Craft**

We recruited a series of participants that we believed would be a good fit for our product. Each participant had the desire to accomplish an explicit goal unrelated to their main occupation, and for many people that was an extracurricular creative endeavor. Among our participants, we had two authors/creative writers, three musicians, one visual artist, and a poet with the desire to read. With each of the seven participants, we developed a plan with them to be completed over the course of the four days. Each participant had a specific overarching **goal**, whether that was learning a song, or reading a target amount, that was specific to them. Within each day, we worked to develop **immediate**, **concrete**, and more **simplistic steps** that could be taken each day in order to reach this goal.

Sample Plans

Goal: Practice creative writing skills. Watch a lecture on creative writing from the "Great Course" video series (~0.5 hr) and if time permitted, write a scene for his novel

Day 1 - Thursday: Watch the video "Integrating dialogue into your story", and if time permitted, write a scene for his novel

Day 2: Watch the video "Turning a story into a plot", and if time permitted, write a scene for his novel

Day 3: Watch the video "Plotting with the freytag's period", and if time permitted, write a scene for his novel

Day 4: Watch the video "Adding complexity to the plot", and if time permitted, write a scene for his novel
---

Goal: Learn guitar for "Dust in the Wind"

Day 1 - Friday
Learn the chords

Day 2 - Saturday
Keep learning the chords

Day 3 - Sunday
Practice with voice (first verse)

Day 4 - Monday
Practice with voice for both verses

Assumptions

Although the sharing of plans was designed to be a key feature of the Quinoa application, we focused the key part of the field study on testing the **assumption** behind the plans - **whether following a pre-defined plan was likely to encourage an individual to accomplish their goals.** Below, we have included the sample plans from two of our participants.

With a plan developed for each participant, we then moved forward to test out the daily plan, utilizing the testing prototype described above. Every participant received a series of daily texts from our intervention, which served to 1) remind the user of their plan, 2) receive feedback on the user's completion of the plan, and 3) adapt to the completion/lack thereof of the plan.

Results

2
Completed their plan

2
Completed Half their plan (2 days)

2
Completed 1 day

1
Completed zero days

"If there **wasn't this plan** installed I could imagine **I'd procrastinate forever**."

- Tony, Completed Plan

"Certain goals that aren't daily goals won't necessarily happen. People who want accountability, it would be a blessing. Some people need that. **But people like** me, I'm gonna do it, but **I'm gonna do it at my timing**."

-Sandra, Completed 1 day of Plan

Huge Variation between participants

The results of our field study were inconclusive and inconsistent among our participants. Only two out of seven completed it, and another two out of seven completed two days (half) of their plans. The plurality did not complete more than one day of their plan, even if their interviews revealed that they did practice their craft. Regardless of how individuals reacted to our intervention, our study reveals that our **hypothesis was incorrect**, and having a plan **did not affect the majority of participants.** Let's study why.

Successes

When we designed the study, we did so with those who succeeded did so because they desired structure, in post-interviews revealed to be incredibly disciplined (see text on right).

Those who succeeded had more concrete goals - instead of write a character, it was watch specific video, or learn a specific goal. Tony's plan, for example, centered around watching a series of 30 minute writing lectures. Claudia, who did not succeed, started with a broader "read 5 poems" plan.

Q: On a scale of 1-5, rate yourself based on **how often** you usually **stick to your plan**?
Tony: 5.
Q: Wow, ok.

The Rest…

A vast majority of the individuals who took part in our study **did not complete** their plans. In the follow-up interviews, they expressed a **variety of reasons** that they were compelled to complete the days that they did, and varying reasons of, ultimately, why they did not complete their plan.

The Guilt Factor

Many people felt pressured by the system itself to accomplish their goal. For the first day, or after missing a single day of their plan, people were more likely to keep missing their next goals.

However, after missing a single day, people realized that were no consequences real in not maintaining the plan. As a result, people soon stopped taking the study seriously, and ignored their plans.

"It created pressure, and maybe motivates. But maybe [it] makes you feel like a loser" - Sandra

"[our intervention] made me think about my goal more, because you're guilted into doing this." -Sandra

"I didn't want to keep on saying no to the robot, so I said yes for the day and determined that I'd do it later."
-Claudia

Timing

Throughout the study, we found that people were passionate to practice their craft - but at their own pace. Instead of following a specific reading plan, for example, people would read what they wanted. Instead of playing a specific piece, creatives would play what they desired.

In addition, the time was of message delivery was inefficient. It did not help individuals prioritize their own craft completion.

Conclusion

Based on the low completion rates of the plans, it seems that breaking down creative plans into daily bits is not the most effective in enforcing consistent creative practice. This is seen more in crafts that require a more active creative process, like painting or writing a novel, than in activities that are more passive and receptive, like practicing a song or watching lectures. The two people who completed the activities are Coco, who practiced a keyboard song, and Tony, who watched lectures every day.

As one of our participants mentioned (Seung Pyo), making something from scratch requires inspiration and intense focus in a short period of time, and it doesn't make sense to break it down artificially to multiple bits and complete it little by little. Seung Pyo said he usually writes a blog post every week, but rather than writing one-seventh of the piece for seven days of the week, he sits down one day and writes out the whole thing.

Based on the above observations, a better way to implement Quinoa would be to be more flexible about the creative schedule - rather than allocating an equal time or amount of work for each day, it may make more sense to conduct different sorts of the creative process in a more elastic schedule. Although this wasn't possible within the fixed frame of the field study, it may yield better results once it is incorporated.

Appendix

Interview Transcripts &
Journey Maps

Appendix A - Diary Study Interview Transcripts

Interviewee: Yoko
UI Engineer at tech startup
Works ~8 hours a day
Wants to practice watercolor painting on a regular basis

Interviewer: Chun Wang (C)
Interviewee: Yoko Li (Y), software engineer at a tech startup
Goal: spending some time drawing/painting everyday

C: You were really struggling to get started drawing. In fact, you didn't do it until the Day 4 of the diary study. What do you think was the main blocker?

Y: I usually feel tired and don't feel like doing anything when I return home after work. Yeah I find it super hard to *start* drawing. I tend to procrastinate it by playing with my cat, haha. But after playing with cat for a while I will no longer be enthusiastic about drawing.

C: Why motivated you to draw on Day 4?

Y: I thought I *had to* complete at least one drawing...to fulfill my commitment to your diary study.

C: You seem to be the type of artist who needs assignments to kickstart?

Y: Yes indeed! My biggest problem is I procrastinate a lot if I don't have an assignment. Likewise, I won't be able to keep running everyday if I don't sign up for a marathon or a race.

C: Would it be more effective if the assignment is created by someone else other than you? I remember you successfully completed a 30-day Instagram challenge of drawing everyday before. Was that an 'assignment' you started for yourself? Did you enjoy it or feel stressed having to post something everyday?

Y: Yeah. I realized I had the problem of procrastination and that was my attempt to solve the problem. Starting that challenge is to make an excuse for myself to start drawing. I'll never start doing it otherwise…

C: Aside from the external pressure, it also seemed it became hard for you to start drawing when you had low energy.

Y: It's easier for me to sit down and start drawing when I feel energetic and not stressed about other things.

C: Once I start drawing, I guess maintaining the momentum doesn't take much effort?

Y: Yep!

C: You said you was planning to draw on Saturday after returning home from Fremont, but didn't end up doing it...It wasn't helpful even when you put aside some time *in advance* that's dedicated to drawing?

Y: Sorry that was my procrastination problem..simply having a schedule wasn't enough to hold me accountable.

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Appendix A - Diary Study Interview Transcripts

Interviewee: Jihee
Student at Stanford taking a gap year in Japan
Wants to practice guitar on a regular basis

Q: Why did you practice late at night?

A: Because I'm a lame procrastinator.

Q: Does that mean you thought of it as a chore?

A: It's a totally a pastime but once you made it a chore, with writing report and stuff it feels like work.

Q: How did you decide how much to practice per day?

A: I did an hour. It just seemed a good choice. I practiced more than an hour than a day. I did play in the day but it wasn't as structured.

I definitely don't think it's as productive. You're not putting effort in a certain goal. I do it for fun. I do it for the sake of having fun. During the night I have a specific goal - I'm going to memorize the chords for this song - but during the day I don't. I guess it helps for the finger movements and stuff, but I'm not really putting any effort into it.

Q: How would you define structure?

A: Whenever I have a specific goal and when I'm conscious of that goal. Without that type of structure I'd just be playing random shit. Just some beats of songs I know how to play.

When you have structured practice it get's more boring. You're doing the same thing over and over again. But it's necessary to get better. But it's boring.

Q: Would you do something like this again.

A: Totally. I've got really good at this song. I want to polish it. Certain amount of time each day with a certain goal. Because I saw how much I can improve by doing this, I will be doing this for at least this song.

Q: Level of improvement?

A: Exactly the point I had anticipated.

Q: On your own, what would motivate you to pick up a song like this again?

A: If I like a song. This song had arpeggio that I wanted to explore and was easy. If I like a song and it has a more sophisticated finger style of arpeggios and stuff.

Q: How hard was it for you to make time for is

A: It was not hard at all

Q: If you were at Stanford?

A: It would have been possible, but I would have been much more stressed about it. I could have made an hour out of, say, a weekend. If it was every day, I could have done it but would have felt shitty.

Appendix A - Diary Study Interview Transcripts

Interviewee: Tony
Postdoctoral fellow at UCSF
Works ~9 hours a day in lab
Wants to practice creative writing on a regular basis

Interviewer: Chun Wang (C)
Interviewee: Tony Zhang (T), postdoctoral fellow at UCSF
Goal: spending time (30 min - 1 hour) everyday for creative writing after work

C: Hi Tony, thanks a lot for your inputs during the diary study! I'd like to ask you a few questions to further clarify your thoughts. Sounds good?

T: Sure.

C: OK, so reading from your diary entries it looks like, for the first day, the main motivation for you to get started was signing up for our study. Do you wanna elaborate a bit what was going on in your mind at that time?

T: Yeah, I must say that I only did get started because this is to help my friend finish her homework.

C: If this is not for homework, but only me reminding you everyday to write your novel, do you think that will provide as effective a motivation?

T: Hmm I don't really think so.. I'll probably still write, but won't feel an urge.. yeah…right.

C: Understood. So you need an assignment.

T: Right, otherwise I'd tend to slack off.

C: I think this is a common thing among creative people -- need an assignment to kickstart their work and prevent them from procrastinating. For example there were some old people in my art class, and they said that they sign up for classes because they needed an assignment, not because they really needed to learn how to paint. It's quite common to feel hard to just get started.

T: Yeah I agree. Another big source of demotivation for me...is that once I showed a draft of the beginning of my novel to my friend, but didn't receive much positive *feedback* from her, that was disappointing and kind of demotivated me a lot when I thought about creative writing afterwards…

C: Aww.

T: The primary source of demotivation for me is still being lazy though. But when I did try hard to write something down and showed it to my friend there wasn't a word of encouragement you know. I mean If I write only for myself, then I won't feel pressured to get it done. If for example, someone wants to see my work, say every two weeks or a month, then I'd say yeah I need to write something. It's different.

C: Would you prefer to get some external motivation as you said?

T: Hmm but my audience is very critical and doubtful about my work. It will make it harder for me to continue writing.

C: Your audience doesn't have to be limited to your friend though -- it can be someone else.

T: We'll see. Aside from the audience, to me it is *getting started* that is the most difficult part.

C: I noticed there was a change in motivation for you over the diary study. On day 2 you "wanted to write down some ideas".

T: I think in latter days I mainly wanted to write down more of my ideas.

C: Yourself desired to get started writing after day 1.

T: Yeah I had ideas for my novel, and I happened to be in this study, so I just wrote them down.

C: On Sunday, you did your writing in the afternoon, instead of at night, right?

T: Right.

C: I noticed some other participants did the same. Once they got started, when it's a more relaxed time, such as on the weekend, they'd pick an earlier time to do their creative activity. To me that means they've accumulated some creative impulse so that they feel some sort of urge to get their work done. There is generally more autonomy in the latter phase of the dairy study.

T: Hmm right. If I hadn't got started the habit of writing things down, I probably wouldn't write them down even when I had the same ideas and I had the time.

C: OK cool. Let's switch to next question. I know you were learning Latin after work everyday. So between Latin and your novel, you pick Latin to work on? Do you think it's relatively easy to learn Latin everyday compared to writing your novel?

User: Tony
Postdoctoral fellow at UCSF
Works ~9 hours a day in lab
Wants to practice creative writing on a regular basis

T: It's quite different. For studying Latin, there is a very concrete goal that you can accomplish -- for example when you read a Latin book, you can set a goal to yourself say "I want to finish ten pages today". I also have mastered some basic skills already to be able to study Latin myself.

C: It is consumption of information rather than creating something new.

T: Right. A creative process is quite different.

C: Do you think you need a much stronger motivation to do creative work?

T: I think my problem is that I have a lot of creative ideas in my head, but I find it hard to materialize them, into a novel for example. It's hard to write down exactly what I think about.

C: I think what you just said is a matter of *skills*. However, these can be taught to you and make you get better at it. For example painters weren't born good at making great paintings. They were first taught very basic techniques, like how to use watercolor brushes to paint a basket of eggs..very boring stuff. But then when they have a great idea they want to express, these basic skills are useful to help them get unstuck and it won't be as difficult.

T: Yeah I agree. I do think I lack the skills of creative writing.

C: Do you think your motivation is lower because you lack *ability*?

T: Yep.

C: Have you found some resources to learn the skills? Great Course series as you mentioned to me before?

T: Right. I need to learn how to materialize thoughts into words. From abstract, rough ideas to a much more concrete, detailed, engaging story. I really need to improve on this.

C: I guess my questions is: why do you want to write a novel?

T: I want to tell a story. I have an idea for a story and I want to tell it to other people.

C: Ok great. A curious thing I noticed from your second day of dairy, is that you stated you had no mood change before v.s after your finish your activity. Why is that? You mentioned you came across some interesting information when you did research online for you novel -- this doesn't make you happy or hopeful for your novel?

T: Hmm, interesting information doesn't necessarily lead to a mood change for me.

C: Alright, what happened on the third day?

T: It was too late, about midnight, when I came back home from lab. There was simply no time to do it.

C: Ok. Just curious. Why do you always write in bed?

T: So that I can sleep whenever I want to.

C: Ah, alright. Let's chat a bit about what might motivate you more, or make you more interested in keeping writing on a regular basis afterwards. Do you have some ideas?

T: …

C: From what I heard during the interview, you'd like some positive feedbacks on your work to keep you going?

T: Hmm, that would definitely help. But I do feel I'm stuck at a basic level. I need to move forwards from only rudimentary ideas and rough drafts to more concrete and polished writings.

C: You are reluctant to show other people draft work.

T: Yeah I won't be comfortable to show my rudimentary work to people I don't trust.

C: What about instructors?

Appendix A - Diary Study Interview Transcripts

User: Tony
Postdoctoral fellow at UCSF
Works ~9 hours a day in lab
Wants to practice creative writing on a regular basis

T: If I know I'm to show my writings to an instructor, I'd polish it to a much better level. It's quite a different flow when you construct a story in your head versus on the paper. I feel like I get tired after writing down only a small fraction of all my ideas.

C: Would it because you lack practice at writing?

T: It could be. But I do think it's because of the fundamental differences in the media. Telling a story in your head, on paper, via voice -- they're different.

C: I agree with you. But back to feeling uncomfortable showing work to others -- what causes the burden -- you're not making money on this anyways?

T: I myself are not quite satisfied about my work yet…

C: Is it also because there isn't a very good platform to show your work yet. For visual artists, there is Instagram, for example, where artists can *always* get some likes or receive positive comments for their work. But maybe such a platform hasn't existed yet for writers?

T: What about Gitbooks?

C: Nah, not a lot of people read Gitbooks from what I can tell…I do feel like when your novel gets to a very polished level, and it becomes very long, not a lot of people will have the patience to read through it and give you very detailed feedbacks.

T: Yeah you're right. A platform where writers can post their drafted ideas, and collect some thoughts from readers, would be good.

C: Or just a channel to tell your story to audience - you don't even have to write - and see if they are interested.

T: Right.
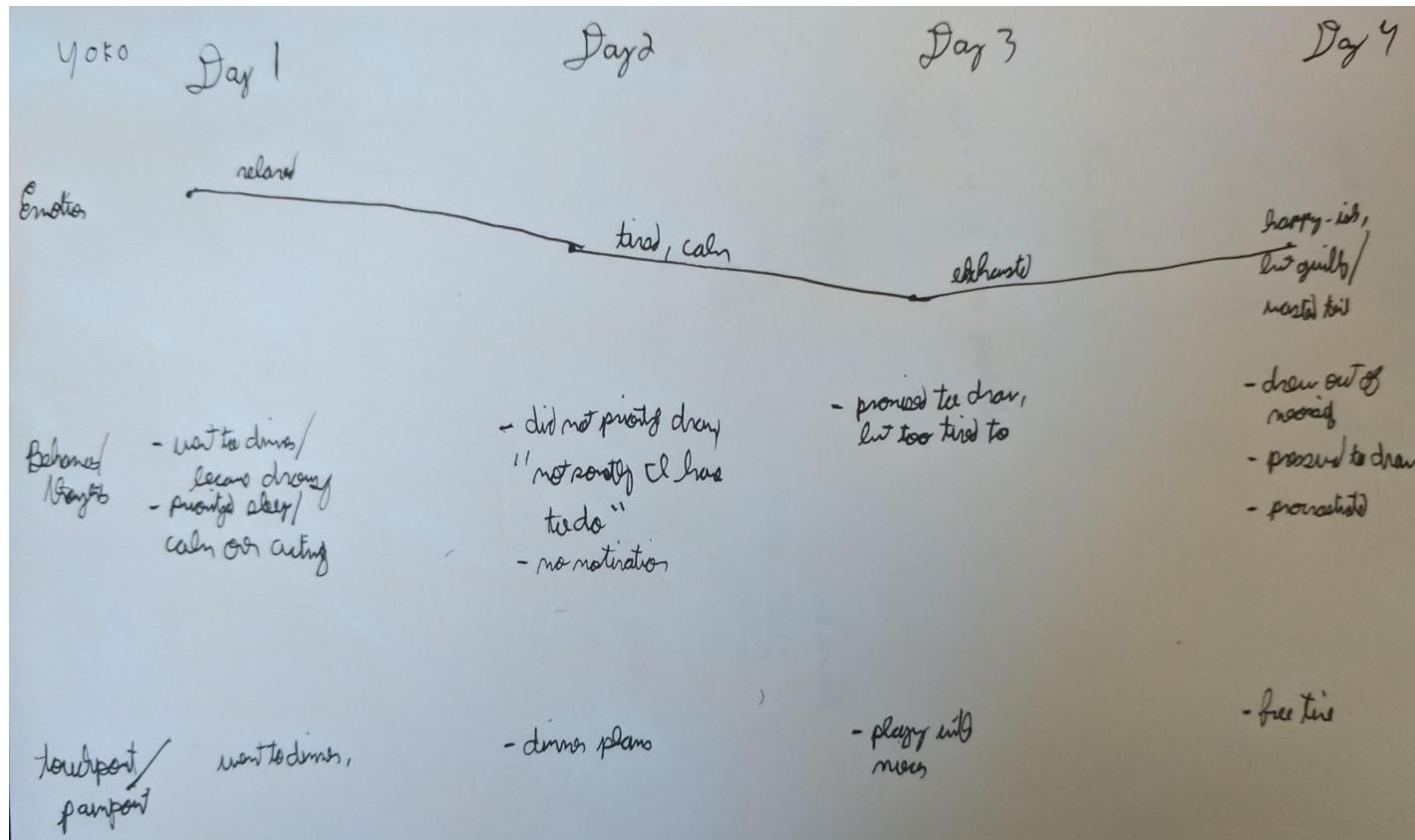
Appendix B - Journey Maps
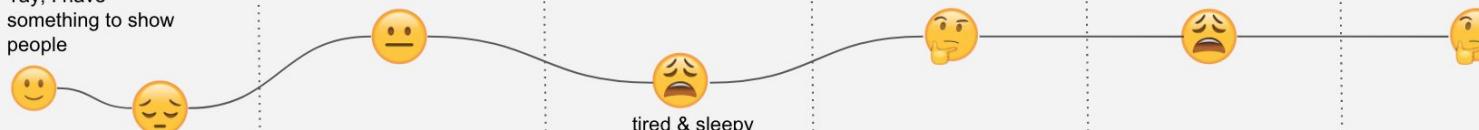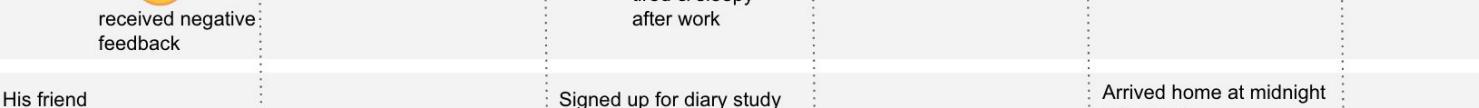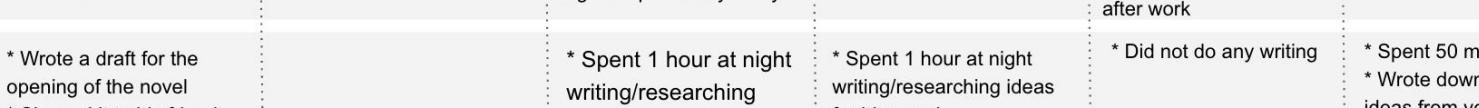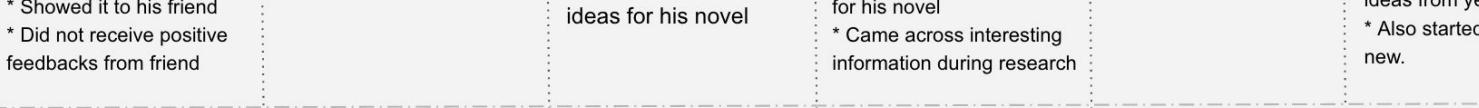
User: Yoko
UI Engineer at tech startup
Works ~8 hours a day
Wants to practice drawing/painting on a regular basis

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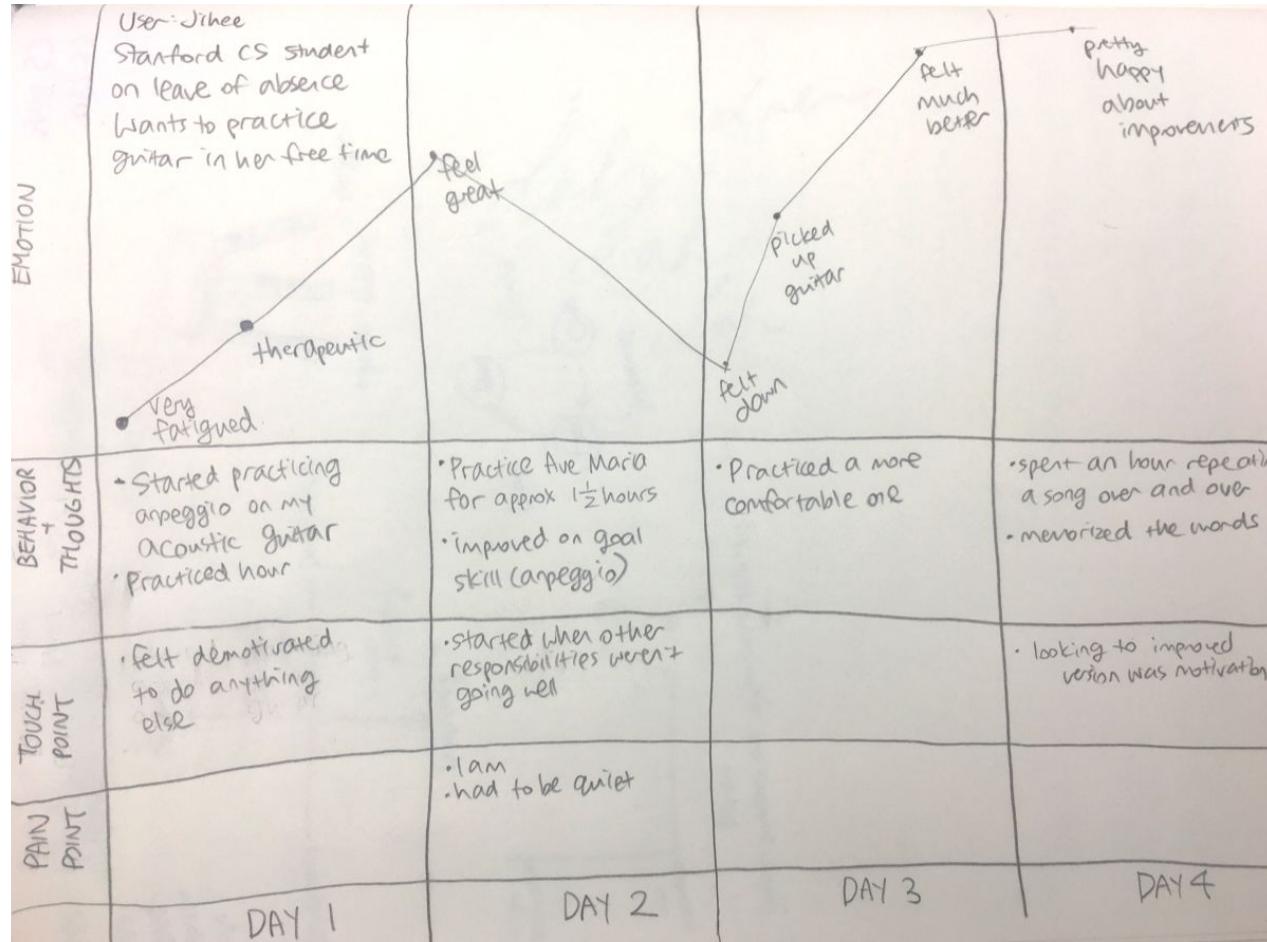
Appendix B - Journey Maps

User: Tony
Postdoctoral fellow at UCSF
Works ~9 hours a day in lab
Wants to practice creative writing on a regular basis

Phases	Pre-study		Day 1 (THU)	Day 2 (FRI)	Day 3 (SAT)	Day 4 (SUN)
Motivation & goals	Write excerpts for a novel & get some readers' feedback	Not motivated to write	Start writing to help friend with the diary study assignment	Write down ideas he has in mind		Wrote down some ideas from yesterday which he didn't have time to write.
	Yay; I have something to show people / received negative feedback		tired & sleepy after work			
Touchpoints	His friend		Signed up for diary study		Arrived home at midnight after work	
User actions	* Wrote a draft for the opening of the novel * Showed it to his friend * Did not receive positive feedbacks from friend		* Spent 1 hour at night writing/researching ideas for his novel	* Spent 1 hour at night writing/researching ideas for his novel * Came across interesting information during research	* Did not do any writing	* Spent 50 min writing. * Wrote down some ideas from yesterday * Also started something new.
User thoughts	"When my audience was very critical and doubtful about my work. It made it harder for me to continue writing."	"I **don't feel pressured** to get it done, if I don't have to show my writing to other people."	"**I need an assignment to kickstart. I** tend to slack off if no one pushes to write."	"I have lots of creative ideas in my head, but I find it hard to materialize them into words. **I lack the skills.**"		"**I have no coherent plan** for my writing. Not sure where it's leading to." "I'd like to practice creative writing skills more and have some positive **feedbacks** on my work to keep me going."

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Appendix B - Journey Maps

User: Jihee
Stanford CS student on leave of absence
Wants to practice guitar in her free time

EMOTION

therapeutic

Very fatigued.

feel great

picked up guitar

felt down

felt much better

pretty happy about improvements

BEHAVIOR + THOUGHTS

- Started practicing arpeggio on my acoustic guitar
- Practiced hour

- Practice Ave Maria for approx 1½ hours
- improved on goal skill (arpeggio)

- Practiced a more comfortable one

- spent an hour repeating a song over and over
- memorized the words

TOUCH POINT

- felt demotivated to do anything else

- started when other responsibilities weren't going well

- looking to improved version was motivation

PAIN POINT

- I am
- had to be quiet

DAY 1   DAY 2   DAY 3   DAY 4

Appendix C - Field Study Interview Transcripts

Interviewee: Tony
Postdoctoral fellow at UCSF
Works ~9 hours a day in lab
Wants to practice creative writing on a regular basis

Q: Let me start with this question: on a scale of 1-5, please rate yourself based on how much you like to make a plan for yourself to do something?
A: 3.

Q: On a scale of 1-5, rate yourself based on how often you actually stick to your plan?
A: 5.

Q: Wow, ok. How often do you actually make plans?
A: Not that often.

Q: In the past 4 days, did you write anything for your novel?
A: No.

Q: What's the reason?
A: I was too busy and too tired.

Q: The video lectures were only 30 minutes each, correct? In the previous user study, you managed to write for about 1 hour every day.
A: Because I had some ideas. Now I don't have ideas.

Q: Because you didn't have to come up with new ideas?
A: Because I had written the easy part for my novel, now I'm getting to the hard part.

Q: Were the lectures you watched helpful?
A: Yes.

Q: On a scale of 1-5, how helpful do you think having this plan was to you?
A: Hmm. I think it was really helpful. I would give it a 4. Because I think if I didn't have this plan I wouldn't have spent the time to watch those lecture videos. I would probably watch something else.

Q: What do you usually watch?
A: Some other videos..like quantum mechanics or educational videos on other topics.

Q: Why do you prefer to watch videos on quantum mechanics rather than on creative writing?
A: I think I'm more curious about the other topics. This [watching lectures on creative writing] is more about training for specific skills.

Q: If you don't object, please read through what you wrote for your diary study. I want you to compare your feelings between the past 4 days and the previous diary study.
A: [Reading]
Q: Was there anything you felt had been changed by having a plan and sticking to it?
A: If I actually make a plan, I will usually stick to it.

Q: Hm, did you feel good about yourself for completing your plan?
A: Well I learned something new -- that feels good. But…
Q: Not about fulfilling a task.
A: Right.

Q: That's fair. How did you feel about the reminder system, was it helpful or annoying?
A: It didn't bother me. It was helpful even if i would remember what i was going to do anyways. It's certainly not annoying. I am neural on this. I don't like it and i don't dislike it.

Q: After you're done with your 1st day's task, were you looking forward to the 2nd day's task?
A: not really.
Q: what was your feeling after completing the 1st day's goal?
A: hm, i did what i set up to do. I learned something new and helpful.. I'm not sure how i should feel about it.

Q: do you feel that you've changed how you prioritize your activities because you had this new plan?
A: yes!
Q: please be more specific.
A: you know when i had time i was setup to watch these lecture videos rather than something else on youtube or reading something else.

Q: i guess it's not fair to ask you for a prediction, but let's just imagine this is a prototype for a new web app -- it's going to be interface that helps you to make your plan and sends you reminders based on your preferences. what would you feel about it? Would you use it?
A: yeah! i would probably use it.

Appendix C - Field Study Interview Transcripts

Interviewee: Tony
Postdoctoral fellow at UCSF
Works ~9 hours a day in lab
Wants to practice creative writing on a regular basis

Q: why would you want to use it?
A: to remind me of things so i don't forget. Right now i don't have a very good method to keep track of stuff i need to do. Assume the app is not limited to just creative writing or whatever. I have to plan a lot of things in my own research work. This app is going to be helpful to remind me things automatically. There are other tools available but they're difficult to use and not very accessible to cross different platforms, like google calendar, microsoft has a calendar, a lot of email services do, and some apps on the phone.. Making a plan itself has become a significant barrier because you have to put in so much effort -- you have to click [on apps] some many times, etc. maybe i'm just too lazy..

Q: nope you're not alone. We also thought about enabling people to spend less effort to plan something, like in the hypothetical product we'll enable people to share their plans and other people can use them as templates.
A: how would you share your plans?
Q: like after you completed your 4-day plan you're allowed to share it.
A: i think it's useful to allow users to setup some templates for their plans. And it would be nice to have some app to help you say, you fill in 'i want to do this thing on this day', and it automatically reminds you that if you want to do this thing on this day, you should do this on this day.

Q: one last question. Was there any time during the 4 past days that you wanted to give up on your plan?
A: there was a day when i felt really really tired and didn't want to do anything. I think it was the last day.
Q: so what motivated you to finish?
A: well i thought since i had done 3 days... just for the completeness…

Q: what's next on your plan? do you feel like 4 days is the maximum number of days that you can stick to your plan?
A: Well I watched another video today. You know watching videos is not too demanding. If it's 5 days of writing i think it will be very difficult.
Q: how is it different?
A: It demands different levels of energy.
Q: but you were able to write for 4 consecutive days before?
A: it was very low quality writing.

Appendix C - Field Study Interview Transcripts

Interviewee: Coco
Senior UI Engineer at LinkedIn
Works ~8 hours a day
Wants to practice keyboard on a regular basis

Q: On a scale of 1-5, please rate yourself based on how much you like to make a plan for yourself to do something?

A: 4.

Q: On a scale of 1-5, rate yourself based on how often you actually stick to your plan?

A: 3.

Q: Walk me through your past 4 days, like when and how did you decide to complete your goal for that day.

A: I made the plan with some specific times during which I'd like to practice my keyboard. I fell behind on my planned time .. about 2 hr late, on the first day. On the second day you know there was this Chinese New Year celebration dinner, and I got back home very late, so I missed the practice. On the third day I practiced in the morning to finish my 2nd-day's plan, so I didn't do it in the evening as I planned. I did finish the 3rd day's goal last night. I'm going to finish my last day's goal tonight.

Q: Very cool.

A: Overall I didn't practice according to my planned times, but I made sure that I did practice in other times when I was free, so I could keep up with my plan. I felt a lot of distractions from the Chinese New Year celebrations.

Q: Congrats on successfully completing your plan! Are you feeling good?

A: Yes. If there wasn't this plan installed I could imagine I'd procrastinate forever.

Q: On a daily basis, what was your main motivation to work on your task? Was it more because you signed up for the study and we sent you the reminders? Or you felt inherently inclined to practice keyboard?

A: I was super sleepy on the first day… but I thought about it twice and decided not to procrastinate on the very first day…so I practiced for 1 hr at 1:30am! And I had to work from home the next day. LOL.

Q: Was there any time that you really wanted to give up on your plan, except for the 2nd day?

A: Nope. It was over the weekend anyways and I stayed at home and enjoyed lots of leisure time.

Q: How do you think about breaking down a plan into small pieces? Was it helpful to you?

A: Yes, it was helpful that I had small goals for each day. But being more specific about which times to practice wasn't helpful.

Q: One last question. Prior to this user study, what generally motivated you to practice keyboard? Mood? Some song of inspiration?

A: Yeah. I watched TV operas and if I heard something I liked, I'd dig out its piano scores and practiced that.

Q: On a scale 1-5 rate how much likely in the future you'll make a plan beforehand when you want to practice keyboard?

A: 4.

Appendix C - Field Study Interview Transcripts

Interviewee: Seung Pyo
Student at Stanford
Wants to write blogs on a regular basis

Q: Let me start with this question: on a scale of 1-5, please rate yourself based on how much you like to make a plan for yourself to do something?
A: 4

Q: On a scale of 1-5, rate yourself based on how often you actually stick to your plan?
A: 3.5

Q: How often do you actually make plans?
A: Everyday (Wanderlist, Google Calendar)

Q: In the past 4 days, did you write anything for your blog?
A: Two paragraphs

Q: What's the reason?
A: Background reading

Q: What are you trying to write and what did you read?
A: Product reviews, this week was Robinhood app (stock-exchange app)
Was trying to draw the landscape Robinhood is in, in comparison with PayPal, Berkshire Hathaway

Q: On a scale of 1-5, how helpful do you think having this plan was to you?
A: 2. Reminded me that I needed to do something, but I usually I don't plan out on a specific timeline. Mark something on the to-do and do it when I have time for it. Daily reminder is not something I really followed.

Q: Hm, did you feel good about yourself for completing your plan?
A: Yeah. Both keeping promise and because I did something.

Q: That's fair. How did you feel about the reminder system, was it helpful or annoying?
A: Bit annoying. It didn't ask me for contribution/commitment, basically asking me for a yes or no. Key takeaway is that it prompted me a simple question that I could have faked. Having a notification/set time, I didn't know which time period I would receive the message. Would rather prefer regular time. Didn't expect the notification.

Q: Was was your feeling after completing the 1st day's goal?
A: I just did it. Just doing for fun/personal delight. Not sure if it gives me any sense of accomplishment or looking forward to the next step. It's a voluntary thing.

Q: Did it make you prioritize?
A: No. I was really busy during the weekend and I had other stuff going on. The reminder wasn't strong enough to make me prioritize. If it's something I need to submit, or some assignment that has to be submitted by some deadline, then I'd be committed to prioritize towards completion over other activities. Wouldn't be my life goal. Would have helped if not during the school year.