

Enriching your clinical work with mobile technology

Michael E. Levin, Megan Oser, & Jack Haeger

Need CE credit for this session?

- Please don't forget to scan in to have your attendance tracked.



Disclosures (support)

- Michael Levin, PhD
 - *I am a research associate with Contextual Change, LLC, a small business involved in making technology-based ACT products*
- Megan Oser, PhD
 - *I have not received and will not receive any commercial support related to this presentation or the work presented in this presentation.*
 - *Relevant Financial Relationships/Conflict of Interest: My research at Brigham and Women's Hospital is partially funded by Blue Cross Blue Shield of Massachusetts for an investigation on a tech-delivered behavioral health intervention*
- Jack Haeger
 - *I have not received and will not receive any commercial support related to this presentation or the work presented in this presentation*

Goals of the workshop

- What technologies are currently available and what can they do for you
- How can you use these technologies in your clinical work
- How supportive accountability principles can help guide your clients' uses of these technologies

A quick poll – How many of you are...

- Doing clinical work?
- Used a mobile app with your clients?
- Doing research on technology?

Current Status of the Research

- Two pilot RCTs show promising results
- Bricker et al., 2014: SmartQuit produced non-significantly better results on smoking than QuitGuide ($OR = 2.7$)
- Ly et al., 2014: App reduced stress for managers relative to waitlist
- 11 published studies total have tested traditional and contextual CBTs
 - Only four of which are RCTs (from review in 2015)

A list of available ACT apps

- ACT Coach
- ACT Companion
- I Here Now
- Oiva – *1 pilot*
- The Sleep School App
- SmartQuit – *1 RCT*
- Viary – *1 pilot, 1 RCT*
- Learn2ACT

We have a lot more apps than research studies.

But ACT is doing better than some areas.

Questions We Often Have

- How would I use mobile apps in my clinical work?
 - For what role and function?
- How do I navigate all of the mobile apps that are available?
- How do I know which app to choose for this client?

What functions would you want an app to serve clinically?

- How would you use a mobile app in therapy?
- How might it help your clients?

Enhancing ACT work – In context of therapy

- Targeting specific processes: acceptance, defusion, values, ...
 - Skill acquisition – *Introducing it*
 - Skill strengthening – *Learning more*
 - Skill generalization – *Applying it across contexts*
- Goal setting
- Self monitoring
- Assessment feedback
- Crisis support
- Social engagement/support
- Communicating with therapists
- Homework/Practice between sessions
 - For highly engaged clients looking for more tools

Adding a support for clients – outside context of therapy

- After termination
- For time limited settings/contexts
- Stepped care model

App Handout

- You can access the handout here:
<http://tinyurl.com/jyyedzy>
- Reviews a range of ACT apps in terms of main features, goals, etc...
- Provides detailed information on key apps.

ACT Core processes in mobile apps

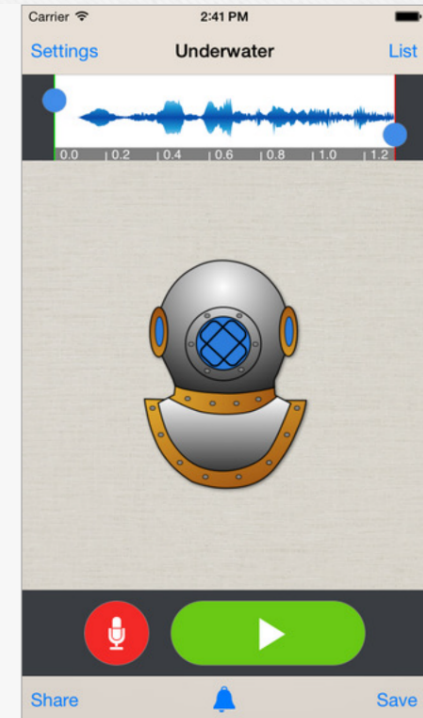
To be used in conjunction with ACT therapist

And after course of ACT to maintain practice

Defusion

- **Voice modulator apps**

- Songify (iOS & Android), <https://www.smule.com/songify/index>
- Talking Tom Cat 2 (iOS & Android), <http://outfit7.com/apps/talking-tom-cat-2/>
- ***Voice Changer Plus (iOS)***, <https://itunes.apple.com/us/app/voice-changer-plus/id339440515?mt=8>

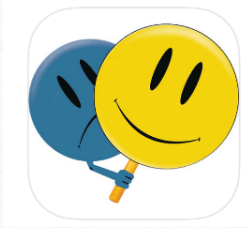


Headspace



Acceptance

- *ACT Companion*
- ACT Coach
- SmartQuit



ACT Companion

(Acceptance Exercise)

T-Mobile LTE 7:20 AM 90%

← +🔔

Notice your emotion

In this exercise, you will practice the skill of observing a painful emotion with an attitude of openness and curiosity.

Spoken by Russ Harris

Length: 11:00

Start Now

T-Mobile LTE 7:21 AM 89%

←

Notice your emotion

⏸

Tap to continue

T-Mobile LTE 7:21 AM 89%

← 2 of 7 →

What sensations were you aware of in your body?

Warmth in my chest. |

I The I'm

Q W E R T Y U I O P

A S D F G H J K L

↑ Z X C V B N M ↵

123 😊 🎤 space Done

T-Mobile LTE 8:59 AM 90%

← 3 of 7 →

What thoughts did you have?

This is silly. Maybe I'm really not good enough. What's the point? |

I The To

1 2 3 4 5 6 7 8 9 0

- / : ; () \$ & @ "

#+= . , ? ! ' ↵

ABC 😊 🎤 space Done



ACT Companion

T-Mobile LTE 7:22 AM 89%

← 4 of 7 →

What emotions did you feel?

Frustration, sadness. |

Q W E R T Y U I O P
A S D F G H J K L
↑ Z X C V B N M ✕
123 😊 🎤 space Done

T-Mobile LTE 7:22 AM 89%

← 5 of 7 →

How present were you during the exercise?

(0 = not at all, 10 = completely)

7

Progress bar showing 7 on a scale of 0 to 10.

T-Mobile LTE 7:22 AM 89%

← 6 of 7 →

How open to your thoughts and feelings were you?

(0 = not at all, 10 = completely)

8

Progress bar showing 8 on a scale of 0 to 10.

T-Mobile LTE 7:23 AM 89%

← 7 of 7 →

What benefits or difficulties did you experience?

I had a hard time staying with these difficult thoughts at times and had to refocus on my breathing every once in a while.

Would you like to save your responses?

Yes
Yes and send via email
No
Cancel



ACT Companion

●●●● T-Mobile LTE 9:25 AM 89%

← +🕒

Notice your emotion

In this exercise, you will practice the skill of observing a painful emotion with an attitude of openness and curiosity.

Spoken by Russ Harris

Length: 11:00

[Start Now](#)

Older Entries

July 12, 2015 >

July 12, 2015 >

●●●● T-Mobile LTE 9:04 AM 90%

← Result →

July 12, 2015

I'm not good enough. This is stupid.

Qn: What emotions did you feel?
Frustration, sadness.

Qn: How present were you during the exercise?
7

Qn: How open to your thoughts and feelings were you?
8

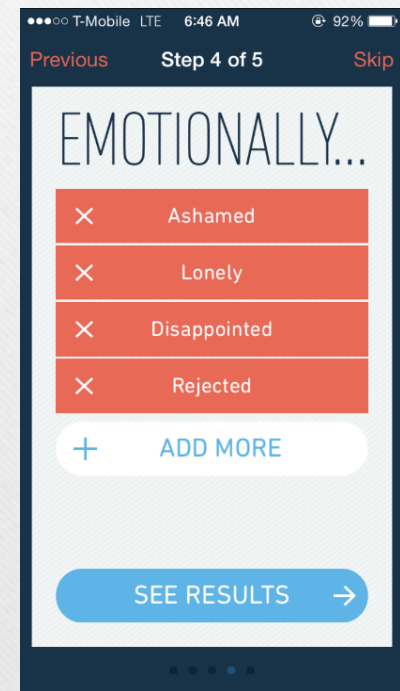
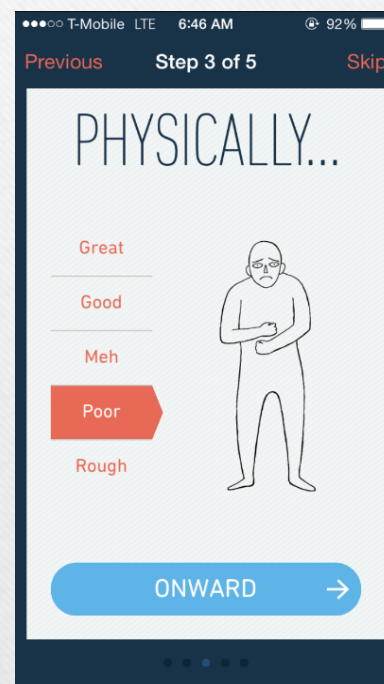
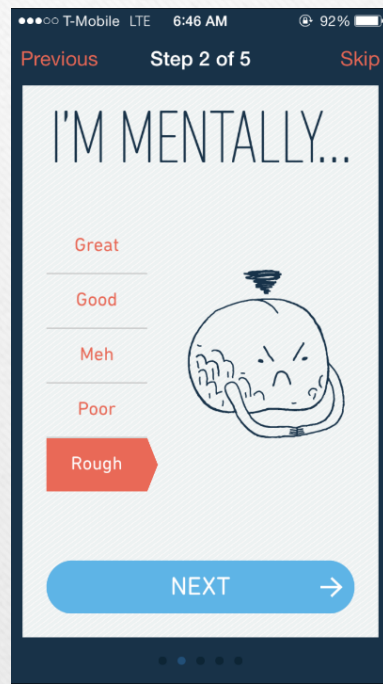
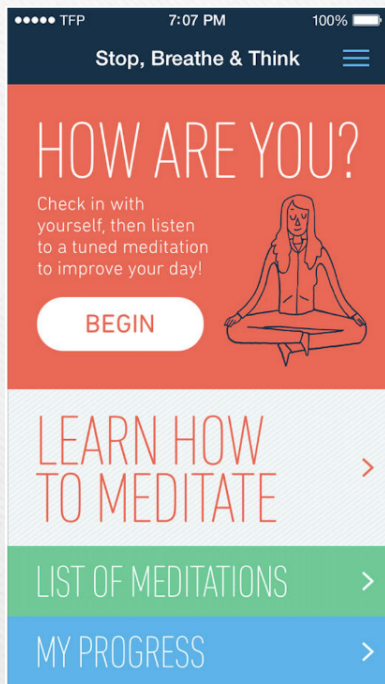
Qn: What benefits or difficulties did you experience?
I had a hard time staying with these difficult thoughts at times and had to refocus on my breathing every once in a while.

Mindfulness Apps

- ***Headspace (iOS & Android):*** <https://www.headspace.com/>
- ***Stop, Breathe & Think (iOS, Android, & web):*** <http://stopbreathethink.org/>
- Buddhify (Android & iOS), <http://buddhify.com/>
- Mindfulness Coach (iOS),
http://www.ptsd.va.gov/public/materials/apps/mobileapp_mindfulness_coach.asp
- **Various other apps like ACT Coach and ACT Companion also include mindfulness exercises*

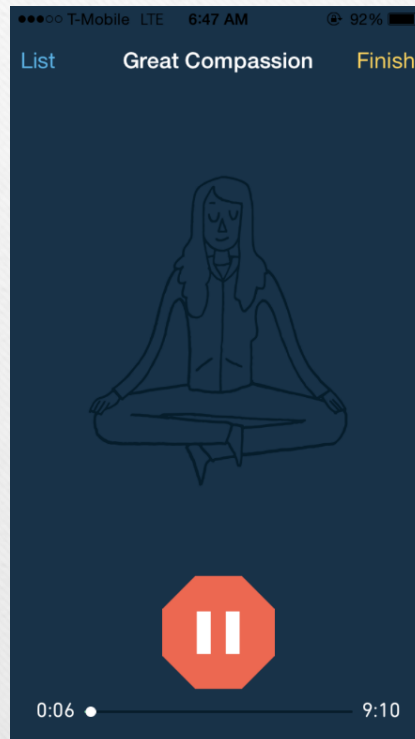
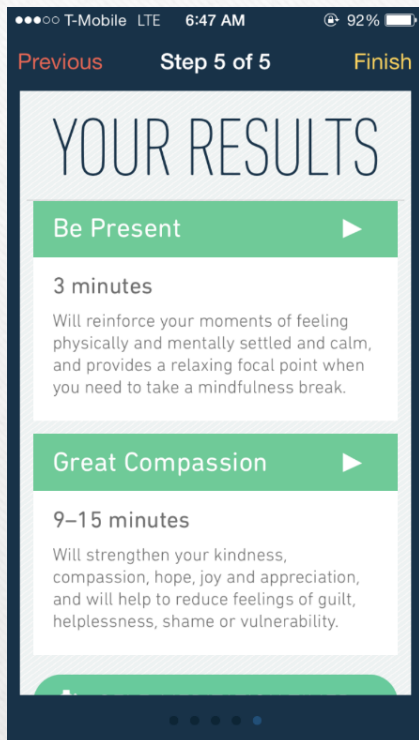


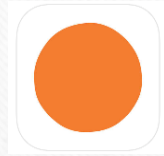
Stop, Breathe, & Think





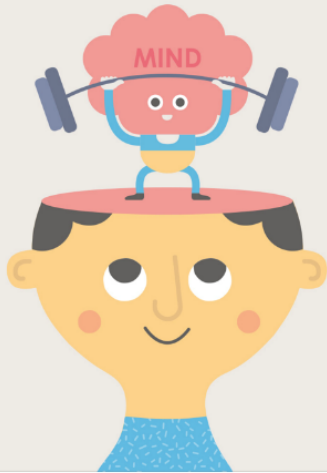
Stop, Breathe, & Think



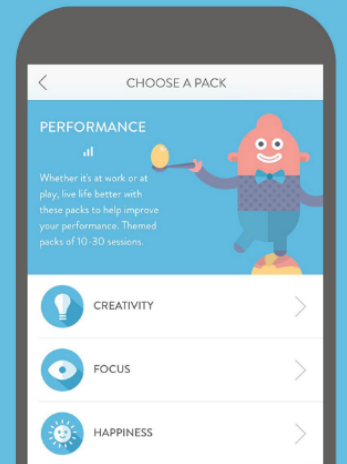


Headspace

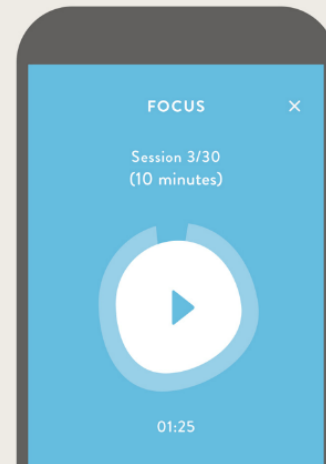
Headspace is a gym membership for your mind



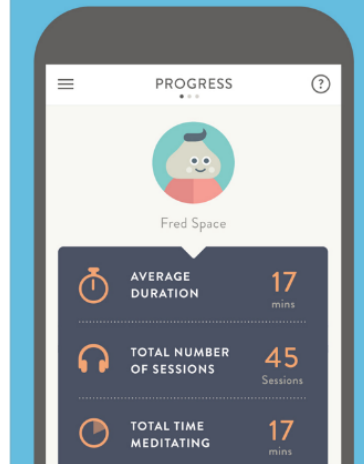
Bite-sized, guided meditations designed to fit busy modern lives



Learn to meditate with world-renowned mindfulness expert, Andy Puddicombe



A unique, down-to-earth approach. This is meditation for everyone.

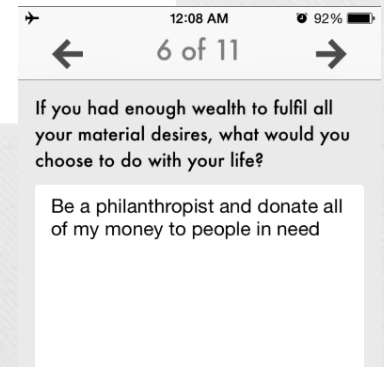
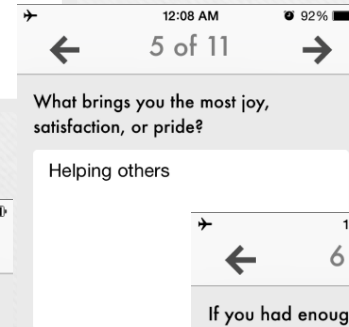
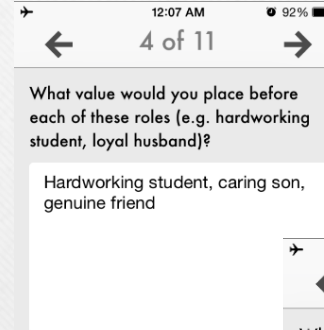
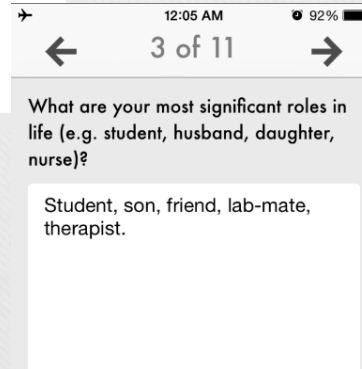
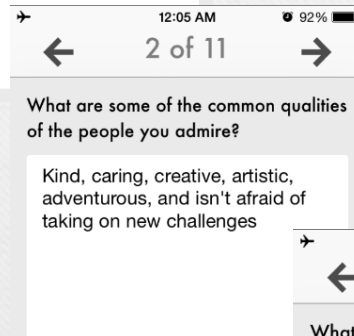
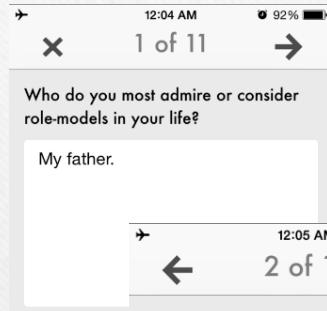
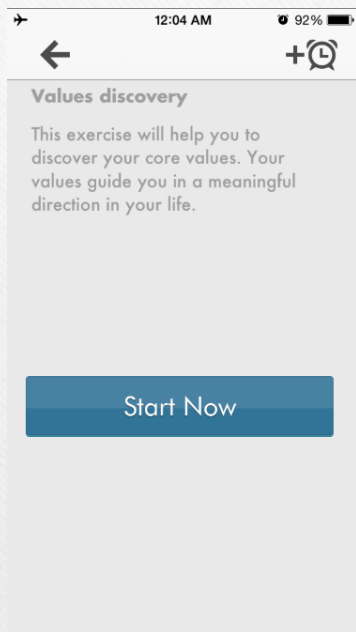


Clarifying Values

- *ACT Companion*
- ACT Coach
- Gratitude Journal (iOS),
<http://happytapper.com/gratitude-journal>



ACT Companion (Values Discovery)





ACT Companion

(Values Discovery cont.)

12:08 AM 92%
7 of 11

What would you be willing to risk your life for?

My loved ones.

Telekom.de E 11:42 AM 97%
8 of 11

What motivates you to overcome adversity?

My daughter.

12:10 AM 92%
9 of 11

List up to 5 core values that you have discovered in your answers to the previous questions. Remember, values are not goals that can be 'achieved' (like getting married or getting a job), but qualities that can be 'expressed' (like honesty or kindness).

1. caring

2. supportive

3. genuine

4. hardworking

5. Add your answer

12:11 AM 91%
10 of 11

What is something can you do right now to express one or more of your core values? This doesn't have to be something monumental or grand, just something small that brings you closer to your values.

Call my dad to check-in

12:11 AM 91%
11 of 11

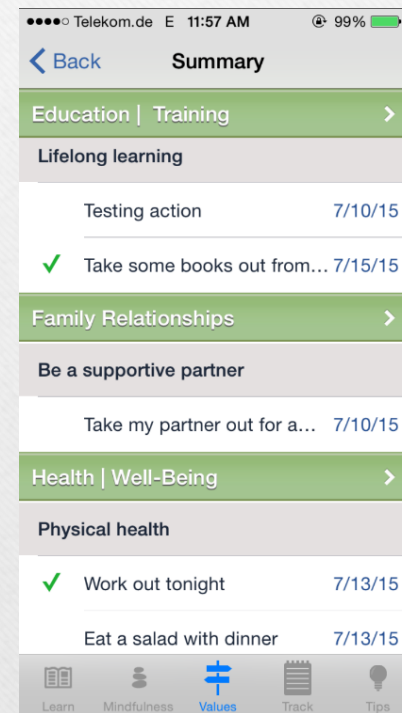
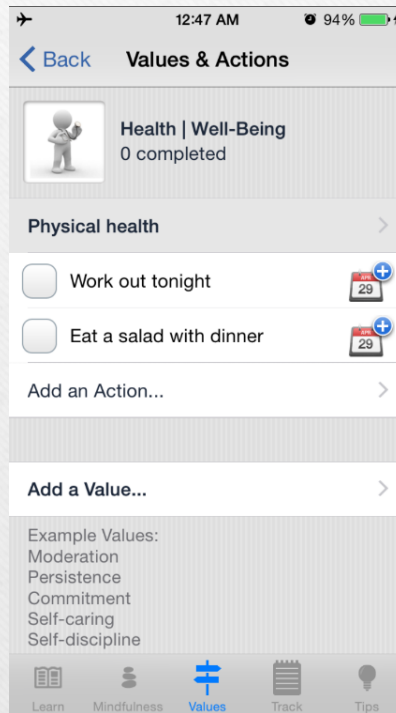
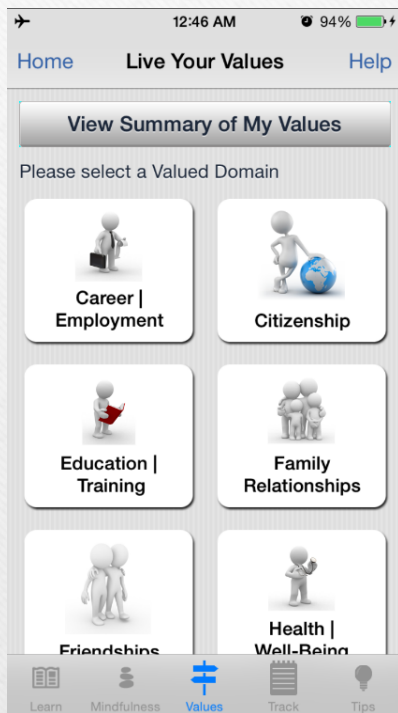
Great work. Now remember to get present, open up, and do what matters as you go through the rest of your day.

Committed Action

- ACT Coach
- ACT Companion
- Viary
- Coach.me
- Habit List
- Lifetick.com



ACT Coach



Core behavioral components/functions with apps

- Goal setting
- Self-monitoring
- Generalization and prompting

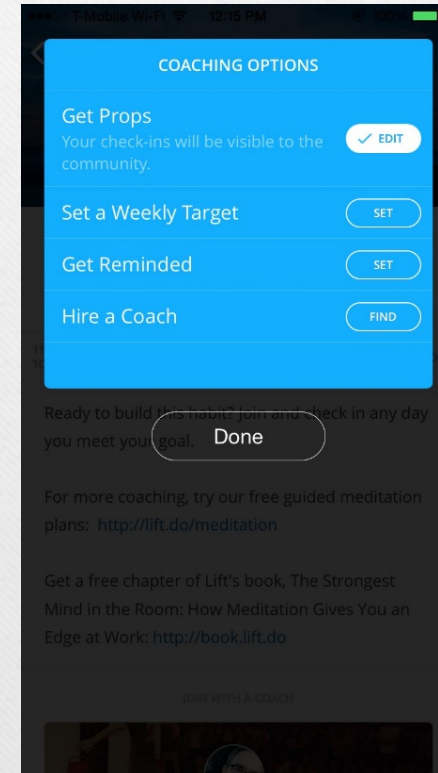
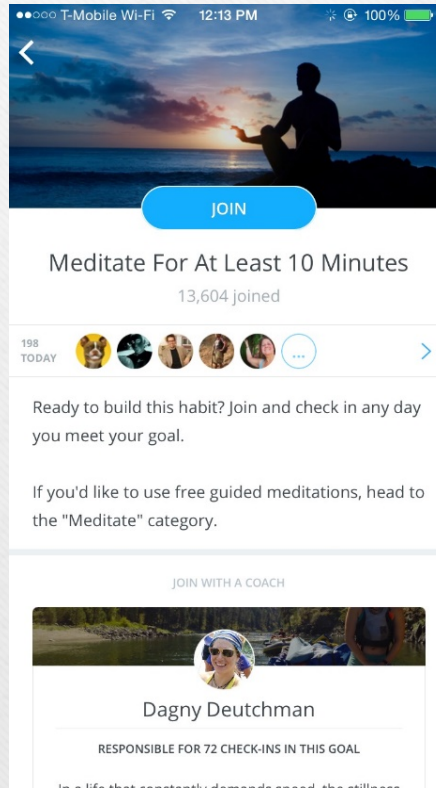
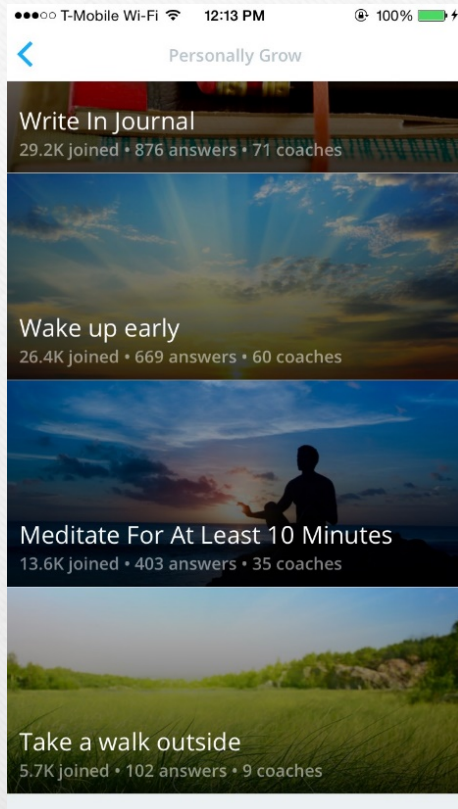
Goal setting

(primary application)

- *Coach.me*
- Habit List
- Viary
- Lifetick.com

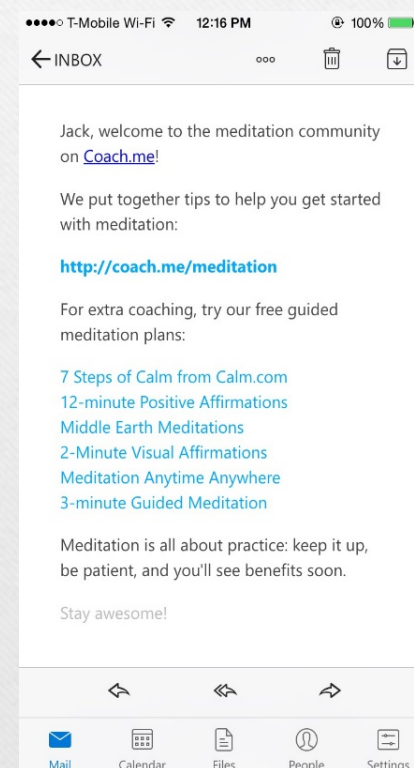
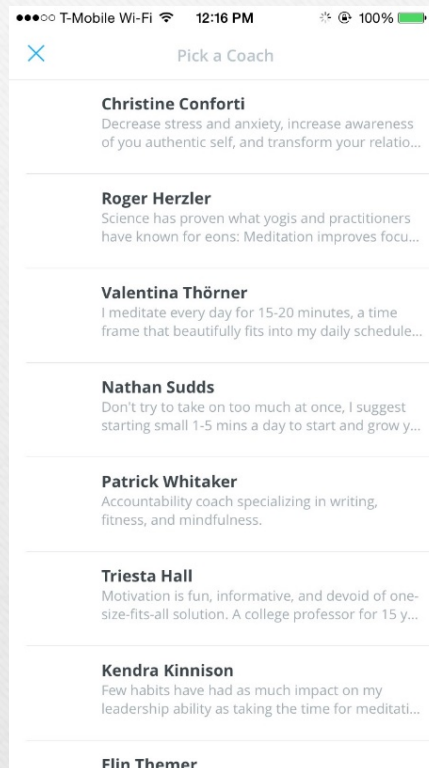
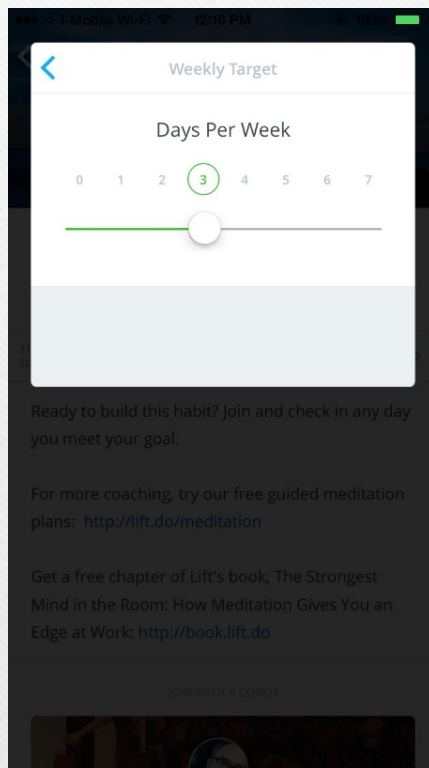
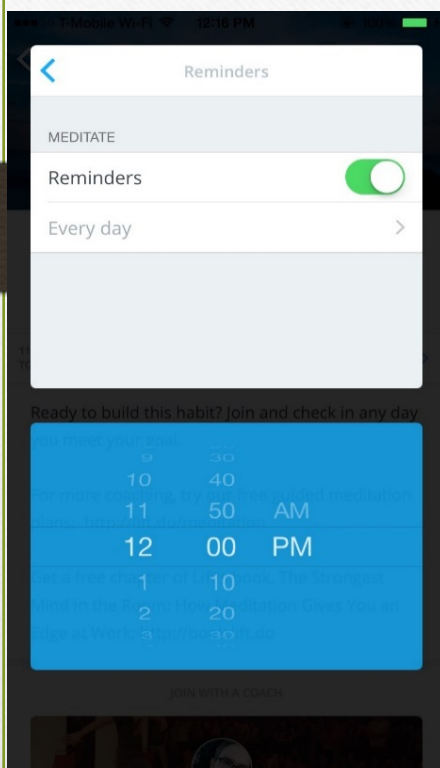


Coach.me



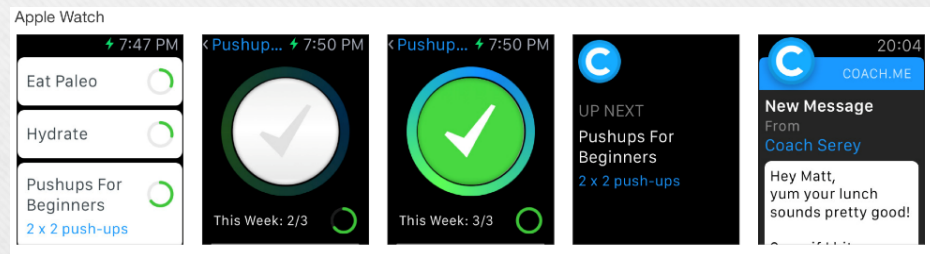


Coach.me (cont.)





Coach.me



Self monitoring

- Moodlytics (iOS & Android),
<http://www.moodlytics.com/>
- T2 Mood Tracker (iOS & Android),
<http://www.t2.health.mil/apps/t2-mood-tracker>
- Most ACT and mindfulness apps included in our handouts have a self monitoring feature



T2 Mood Tracker

The screenshots illustrate the following features:

- Rate Screen:** A list of mood categories including Anxiety, Depression, General Well-Being, Head Injury, PTS (Post-traumatic Stress), and Stress, each with a warning icon.
- Results Screen:** Options to view Graph Results, Create Reports, Saved Reports, and View Notes.
- MoodTracker Anxiety Screen:** A detailed view of the Anxiety category with a horizontal slider for various states: Worried vs. Untroubled, Pressured vs. Calm, Tense vs. Relaxed, Sleepless vs. Rested, Distracted vs. Focused, Irritable vs. Cheerful, Unsafe vs. Safe, Fearful vs. Fearless, Panicked vs. Content, and Anxious vs. Peaceful.
- Results Screen (Graph):** A line graph showing mood levels over time, with a legend for categories: Anxiety (green circle), Depression (blue circle), General Well-Being (orange cross), Head Injury (red star), PTS (Post-traumatic Stress) (purple heart), and Stress (grey person icon).



T2 Mood Tracker

(cont.)

1:29 AM 95%

MoodTracker Create Reports Save

Date Range

Start Date 7/13/15

End Date 7/13/15

Notes

Categories

Anxiety

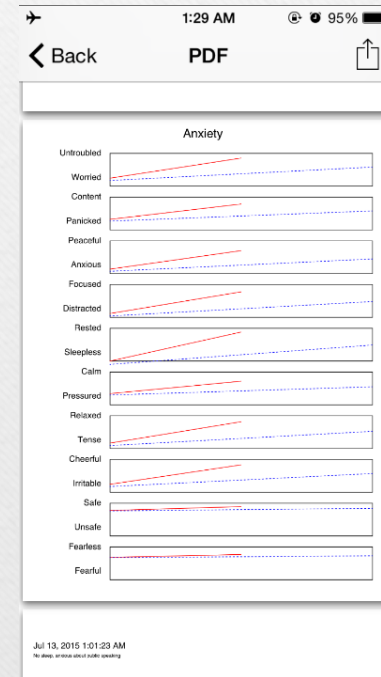
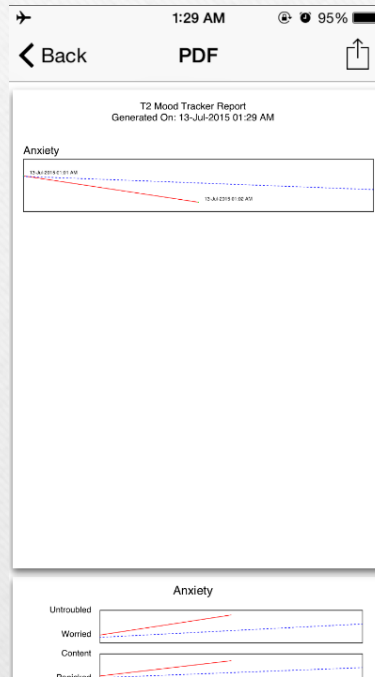
Depression

General Well-Being

Head Injury

PTS (Post-traumatic Stress)

Stress



EMA and prompting tools

- Free
 - PACO
 - iPromptU
- Fee-based
 - LifeData
 - Ilumviu
 - Self Echo (*part of mobiletherapy.com program*)
- Some ACT apps include prompts to remind users to complete exercises
 - ACT Companion, Sleep School, SmartQuit, Viary

LifeData

- A customizable and flexible EMA platform with a text-based interface.
- Many options for questions and prompts (random or fixed)
- HIPAA-Compliant, progressive & outcome dependent experience,
- Question branching, Notification and user-initiated sessions, geolocation and timestamping
- Create simple, tailored EMA and EMI surveys.

LifeData

Create a LifePak assessment or personal growth experience

The screenshot shows the 'LifePak' management interface. It includes a search bar for LifePaks, a table of existing LifePaks, and a 'Session Definitions' panel on the right.

Status	Name	Action
Unpublished	Daily Gratitude New	[Icons]
Unpublished	Mood Tracker	[Icons]
Unpublished	Positive Self-Talk	[Icons]
Published	Daily Gratitude	[Icons]
Published	Mindfulness	[Icons]
Unpublishable	Daily Gratitude Test Pak	[Icons]
Unpublishable	EMI Test Pak	[Icons]
Unpublishable	Healthy Mind & Body	[Icons]
Unpublishable	Migraine Study	[Icons]

Session Definitions

- Start Up Session
- Notification Initiated Sessions (NIS)
 - Gratitude Quote
 - Gratitude Report
 - Gratitude Assessment
- User Initiated Sessions (UIS)

See what they are saying & doing as it happens.

The screenshot shows the 'Daily Gratitude' dashboard with four main widgets:

- AVERAGE MOOD RATING:** A gauge chart showing a mean value of 5.62. Reporting Period: Pak Life, No. of Response: 65, Average Score: 5.62.
- DAILY MOOD RATING:** A line chart showing mood ratings over time from February to August.
- DAILY GRATITUDE LOG:** A table of user entries.
- GRATITUDE AT STARTUP - BAR:** A bar chart showing the count of users for different gratitude levels.

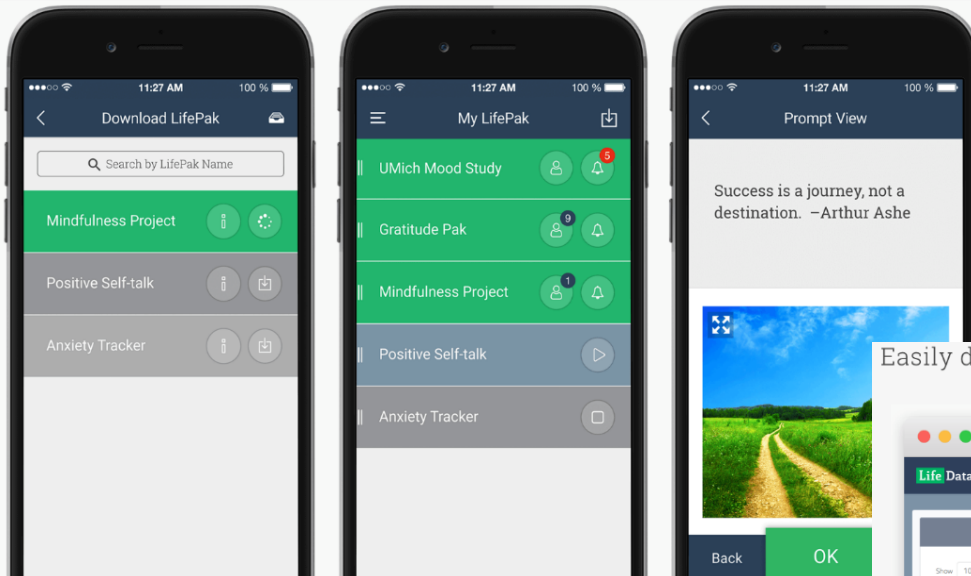
User	Text	Time
User:25	Lunch with friends. Being productive.	Feb 12 2015 1:55PM
User:25	Food. Friends.	Feb 10 2015 9:21PM
User:25	Got to work. Found some coffee.	Feb 10 2015 10:25AM
User:25	Sleep.	Feb 8 2015 6:45PM
User:25	Sleep. Breakfast.	Feb 8 2015 12:19PM

GRATITUDE AT STARTUP - BAR

Count	Very Ungrateful	Ungrateful	Neutral	Grateful	Very Grateful
Count	2	2	2	8	2

LifeData

Have people download your LifePak and respond on their mobile device



Easily download user generated data and analyze it with your favorite statistical program

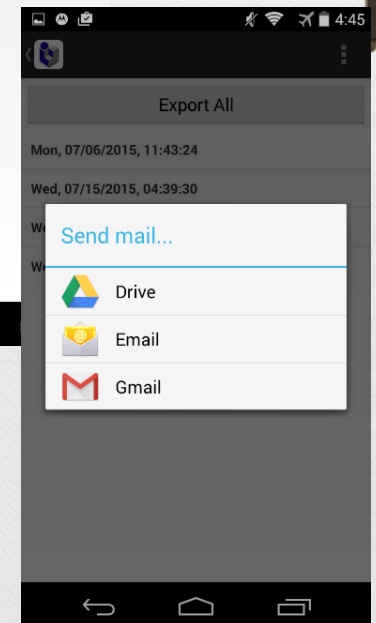
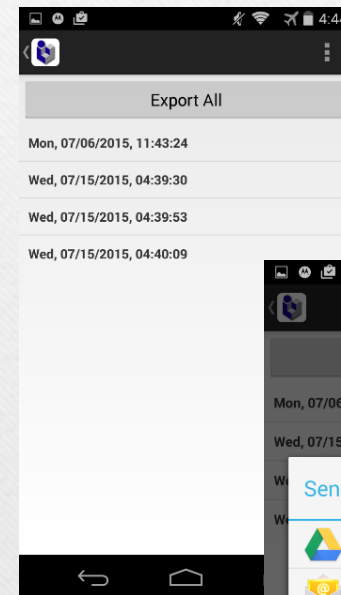
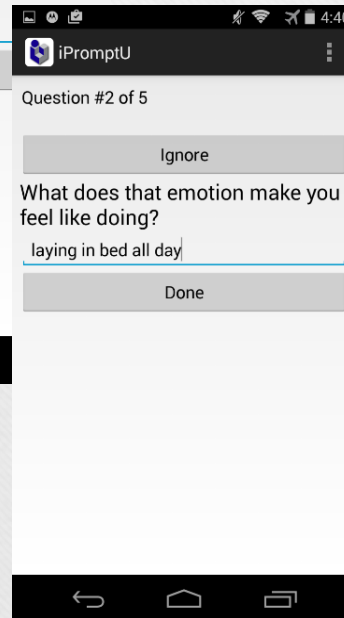
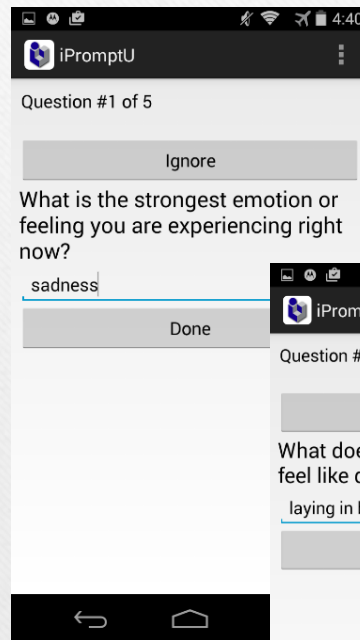
The screenshot shows the LifeData web interface. The browser address bar is 'server.lifedatcorp.com'. The page title is 'Life Data'. The navigation menu includes 'Dashboard', 'LifePak', 'Data Download', and 'Help'. The main content area is titled 'Data Download' and shows a table of LifePaks with columns for 'Published', 'Ended', 'Downloads', 'Active Users', and 'Download'. The table contains the following data:

LifePak	Published	Ended	Downloads	Active Users	Download
Migraine Study	02-01-2015	-	2	0	Startup UIS NIS UIS Summary NIS Summary
EMI Test Pak	02-01-2015	-	0	0	Startup UIS NIS UIS Summary NIS Summary
Healthy Mind & Body	02-01-2015	-	2	0	Startup UIS NIS UIS Summary NIS Summary
Daily Gratitude Test Pak	02-01-2015	-	0	0	Startup UIS NIS UIS Summary NIS Summary

The table footer shows 'Showing 1 to 6 of 6 entries' and navigation links for 'Previous' and 'Next'.

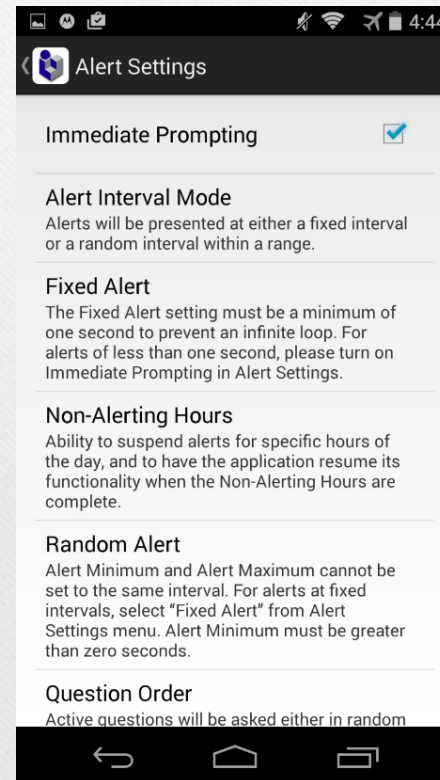
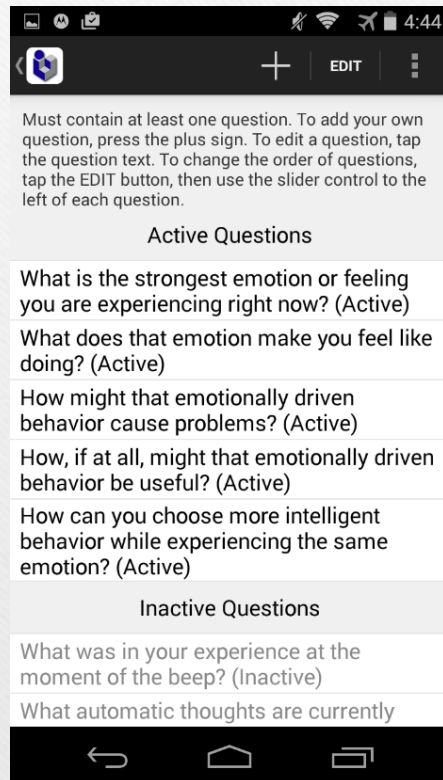


iPromptU





iPromptU



Apple

Breathe App

Quiet your mind.
Relax your body.

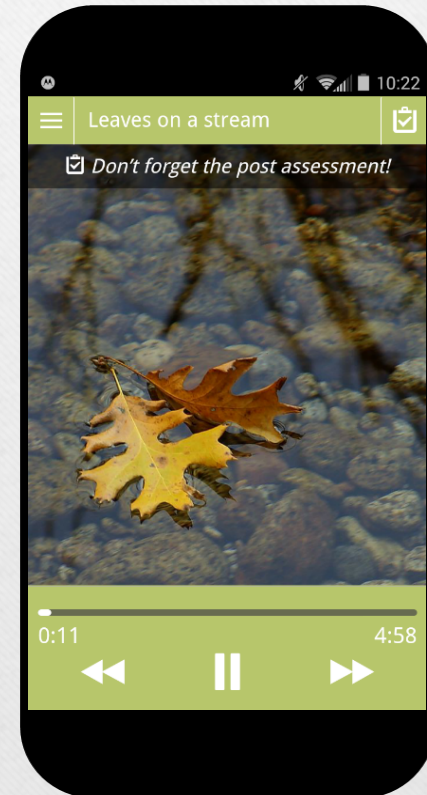
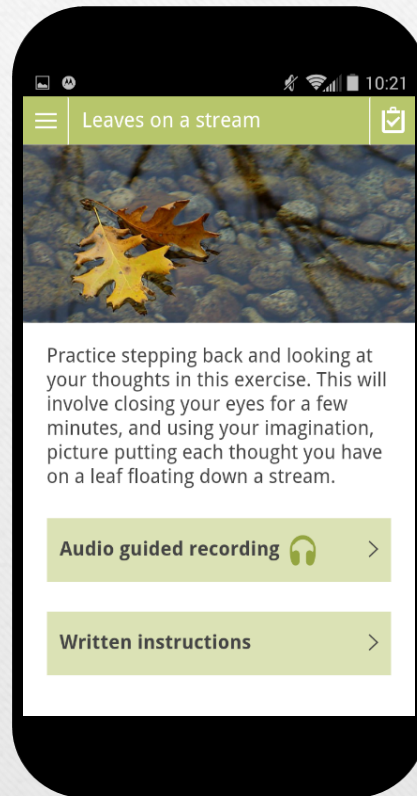
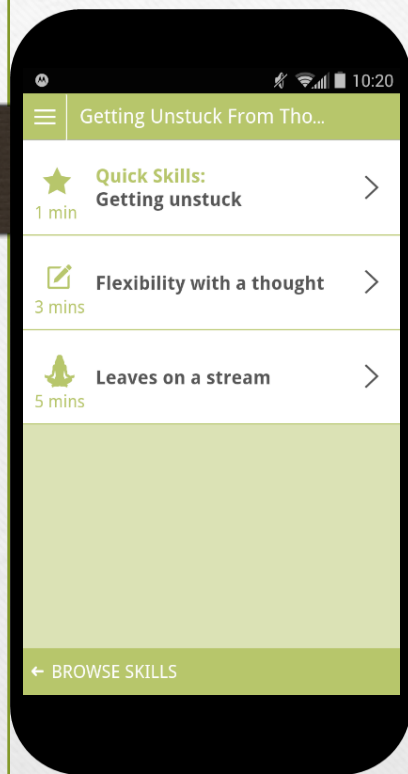


The new Breathe app guides you through a series of deep breaths that can help you better manage everyday stress or just experience a few calming moments. Start anytime and let the mesmerizing animation and gentle taps help you focus. See your heart rate when you're done, and use the Time to Breathe reminders to fit a session into each day.

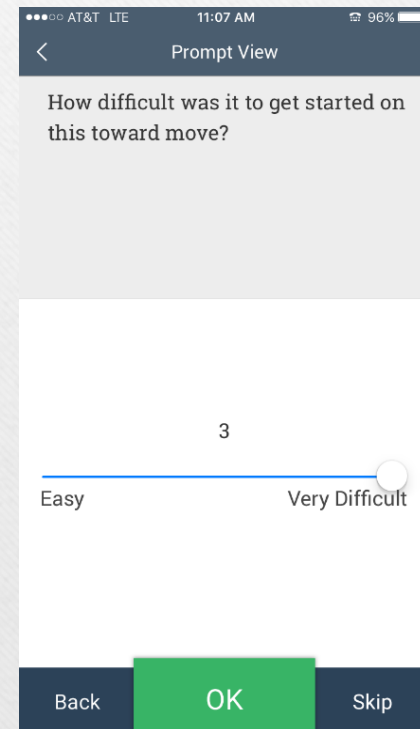
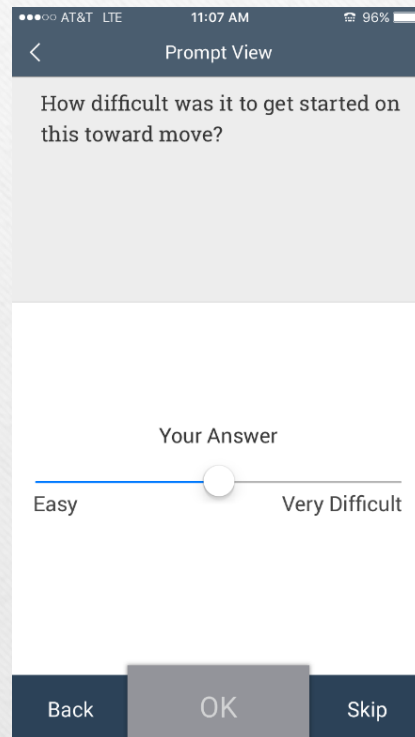
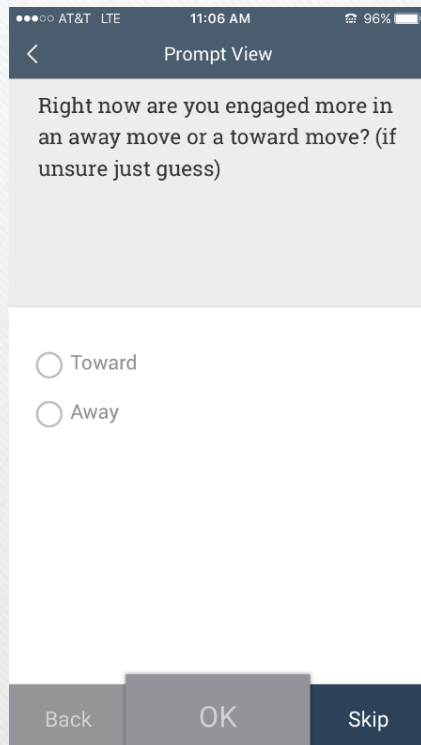
USU CBS Lab Apps & Platforms: ACT Daily



ACT Daily (cont.)



Matrix App



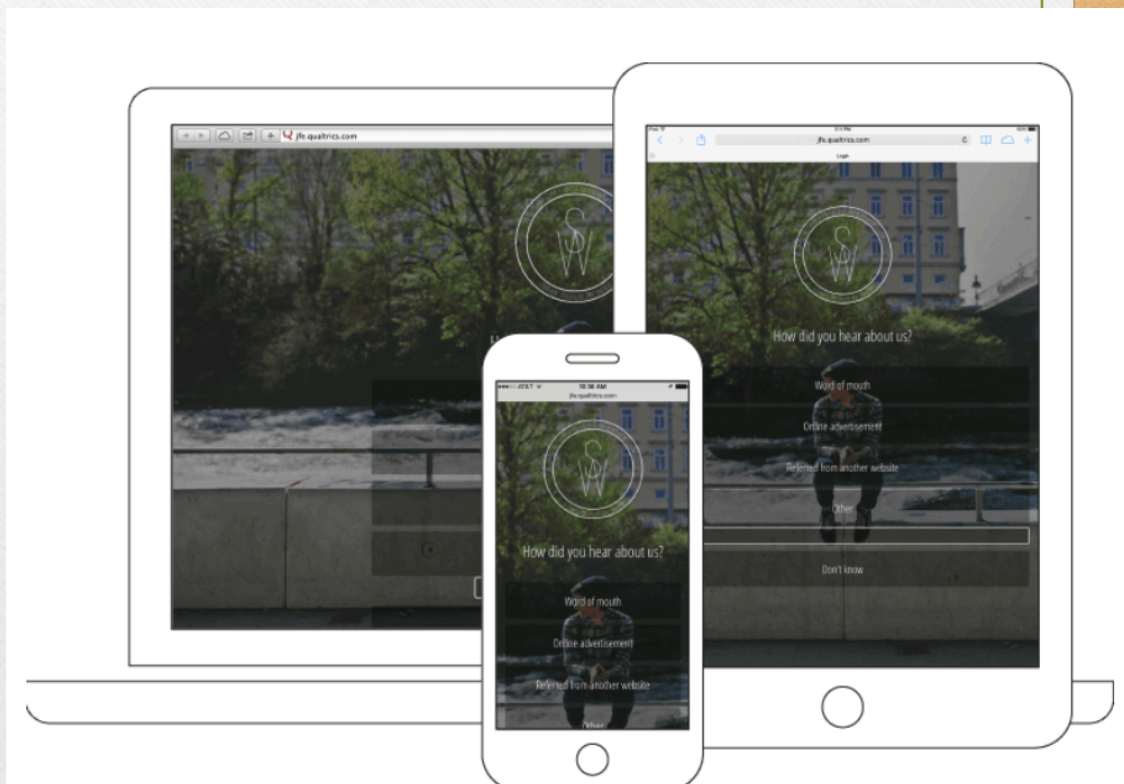
Qualtrics & the Life Toolbox Website

- Qualtrics: online survey program in use by 1,300 colleges and universities worldwide, including every major university in the US as well as 50% of Fortune 100 companies
- Point and click design, branching, randomization, lots of flexibility HTML coding available for more complex actions
- Secure & Confidential data handling

Qualtrics: Flexibility across platforms

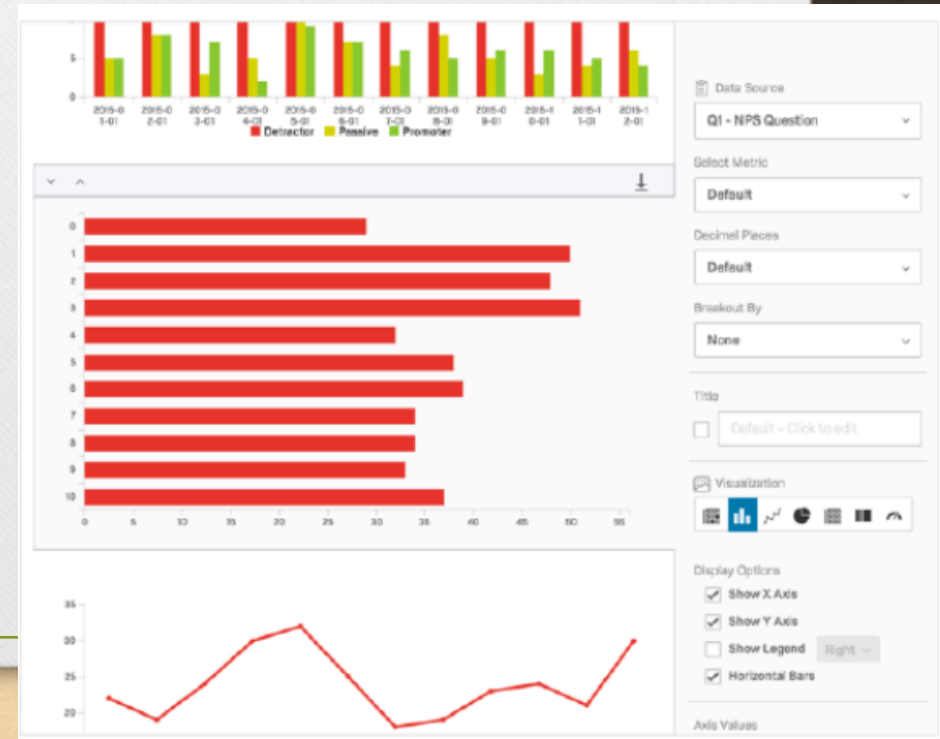
100+ question types, embedded data, branching, display logic, quotas, email triggers, mobile and offline compatibility, randomization.

Works across platforms, and utilizes dynamic sizing for text/images



Qualtrics: Real-time reporting

- Real-time reporting, choose from over 30 different graph types, share real-time web reports, or export to Word, Powerpoint, or PDF
- Triggered email reports
- Cross tabulations
- Shareable Web Reports
- Export to SPSS
- Custom dashboards



Life Toolbox

Welcome to LifeToolbox!

Pick a section below to get started:

Opening Up



1. Away moves

2. Letting go

3. Carrying it with you

Getting Unhooked



4. Noticing hooks

5. Stepping back

6. Being flexible

Clarifying Values



Life Toolbox (cont.)



This session will focus on learning how to let go of away moves (the things you do to try to make unwanted feelings go away).

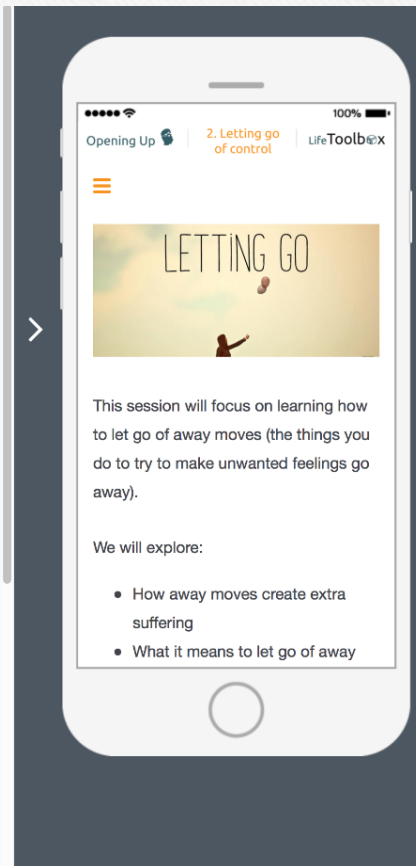
We will explore:

- How away moves create extra suffering
- What it means to let go of away moves
- Ways you can start practicing letting go



"You don't paddle against the current, you paddle with it."

-Kris Kristofferson



Stepping Back Session Summary

Print

Rose Colored Glasses: Being hooked by thoughts is like wearing colored glasses - they affect everything you see.

- For example when you get hooked by the thought
- It changes how you see things:

Taking The Glasses Off: This session taught two ways to take these glasses off - in other words to step back from your thoughts.

- **Leaves on a stream:** One strategy is to imagine putting each thought you have onto a leaf floating down a stream. Practicing looking at your thoughts rather than from them.
- **Labeling mindfulness:** Another strategy is to practice focusing your attention on your breath. Then whenever your attention is distracted by an internal experience, simply label it for what it is and then gently return to your breath.

Practice Assignment: Over the next few days we encourage you to practice *Leaves on a stream*.

- You will practice *At the end of the day*
- Here is your reminder to practice *Set an alarm on your phone each day to practice a "Stepping Back" exercise*

How do I decide which app to pick?

- Client needs: What supports does this client need?
 - Be creative in finding how app features can address client needs
- Practical issues: Android vs. iPhone, cost, etc...
- Ratings: User ratings, colleague recommendations...
- Empirical support: But few apps have been directly tested
- Try out the app yourself
 - Is it engaging? Easy to use?
 - Is the content consistent with your approach?
 - Will the content and features fit well with what you are doing in therapy?

Barriers to using technology

- What might get in the way of you using these technologies with your clients?

Overcoming Barriers

- Use the handout list to find the right app for the setting
- Try out the app for yourself to see what it's like
- Get colleagues opinions on apps you are considering
- Setup reminders to use apps in session
- Install the app with your clients in session
- Show it to them on the computer so have visual cue of what searching for
- Have a handout about the app available for clients

How do we engage clients in
using these technologies?

Supportive accountability

- Empirically supported, theory-based model for improving adherence to self-help technologies
 - Human support increases adherence
 - Clear accountability can further increase adherence
- This is a model for understanding guided self-help
- Can be implemented in a variety of contexts including face-to-face, email and phone calls

Principles of supportive accountability

- Clarify expectations: in using program, adherence, receiving support from you, and why
 - Adherence expectations: How they are expected to use the program
 - Receiving support: If/how they will be monitored, be held accountable, and be contacted about the app
 - Role of support: This is to support them and their goals, no negative consequences for not following through
- Legitimacy: You are trustworthy, benevolent, and have needed expertise
 - App should convey legitimacy too

Principles of supportive accountability

- Motivation: Develop intrinsic motivators for engagement
 - How program is important, applies to person, fits with values, can be helpful, etc...
 - Avoid covert or overt pressure to use program
- Choice: Provide choice and identify areas they have choice.
- Goal setting: Set adherence goals linked to larger values
 - Avoid usage goals not linked to meaningful outcomes
 - Set adherence goals collaboratively

Principles of supportive accountability

- Social presence: Sense of a human being involved can improve adherence.
- Monitoring: Monitoring adherence is key.
 - Check in calls, quizzes, program usage logs
 - Clarify what you have access to (therapists may worry about this more than clients)
- Address adherence level: Encourage meeting goals and address non-adherence
- Threshold: Point of diminishing returns with amount of support

Introducing technologies

- Go over the program and roles
- Link program to case conceptualization and client goals
- Elicit and reinforce motivation: Desire, Ability, Reasons, Need
- Identify barriers and problem solve
- Elicit commitment to adhere to program and to process of coaching

Typical call procedure

- Motivate use of the program
 - Reinforce engagement in the program
 - What did they like? Not like? What did they learn?
 - Elicit commitment to program
- Address non-adherence
- Troubleshoot any problems

Addressing Non-Adherence

- Remember accountability
 - Ask them why the adherence goal wasn't met.
- Remember support
 - Connect the goal back to larger goals and values
- Collaboratively problem solve solutions
 - Identify and address barriers to adherence.

Challenges in providing supportive accountability

What if I don't have time to check in?

- Solution 1: Target supportive accountability in session only
 - Each of these principles could be targeted in session.
- Solution 2: Setup clear expectations and structure to minimize time required outside of session.
 - Consider email or text message if clinically indicated and complies with confidentiality concerns.

How and when do I review app data?

- Solution 1: Review the data with clients in session.
- Solution 2: Use apps that can send data to you in a secure format so you can review ahead of time.
 - But let your clients know that this is likely right before session or during session.
 - You won't follow up about their data during the week (unless you will).
 - Consider if data will be collected that could raise liability concerns.

How do I address engagement over time?

- Solution 1: Help switch up what app they use on a routine basis.
- Solution 2: Build app usage as a habit.
 - Treating app usage as a habit; find when its convenient to use app
- Solution 3: Consider how long they need to use the app.
 - Are a couple weeks sufficient? When is it appropriate to “terminate” use of the app?
- Solution 4: Use the Premack principle
 - Schedule a highly preferred phone activity after the app practice

What if a client reacts negatively or the app provides contraindicated content?

- Solution 1: Review the app ahead of time to know what it includes.
 - Address any potential miscommunications or issues ahead of time with client.
- Solution 2: Monitor how clients use and respond to the app.
 - Catch negative reactions or concerning responses to the app.
- Solution 3: Address inconsistencies and issues.
 - Clarify how the app might differ from approach in therapy.
 - Emphasize client's experience for what works.
 - Avoid being judgmental just because its not the way you would do it.

How do I encourage ongoing app use after therapy ends?

- Solution 1: Clarify termination and the role of the app.
 - They can use the app as a support to keep working on skills.
 - You will *not* have access to their data and therapy is finished.
- Solution 2: Teach clients how to keep using apps.
 - How to choose new apps well, what to look for, etc...
 - Give them a list of apps to use.
 - But also help them get oriented to using one app to promote adoption.

Steps for going further

- Send us feedback:
 - Mike.Levin@usu.edu
 - Jack.Haeger@aggiemail.usu.edu
 - Moser@bwh.harvard.edu
- Join the ACTing with Technology SIG
- Ask colleagues about their experiences with apps.
- Try out some apps to see what you like and don't like
- Active use an app with a few engaged, tech savvy clients

Questions?

Need credit for this session?

Please don't forget to scan out

What did you think?....

complete the 3 question quickeval for this session at:

<https://contextualscience.org/quickeval>

This presentation was session # 121

Download the handout here: <http://tinyurl.com/jyyedzy>

