DEAR DIGITAL DIARY
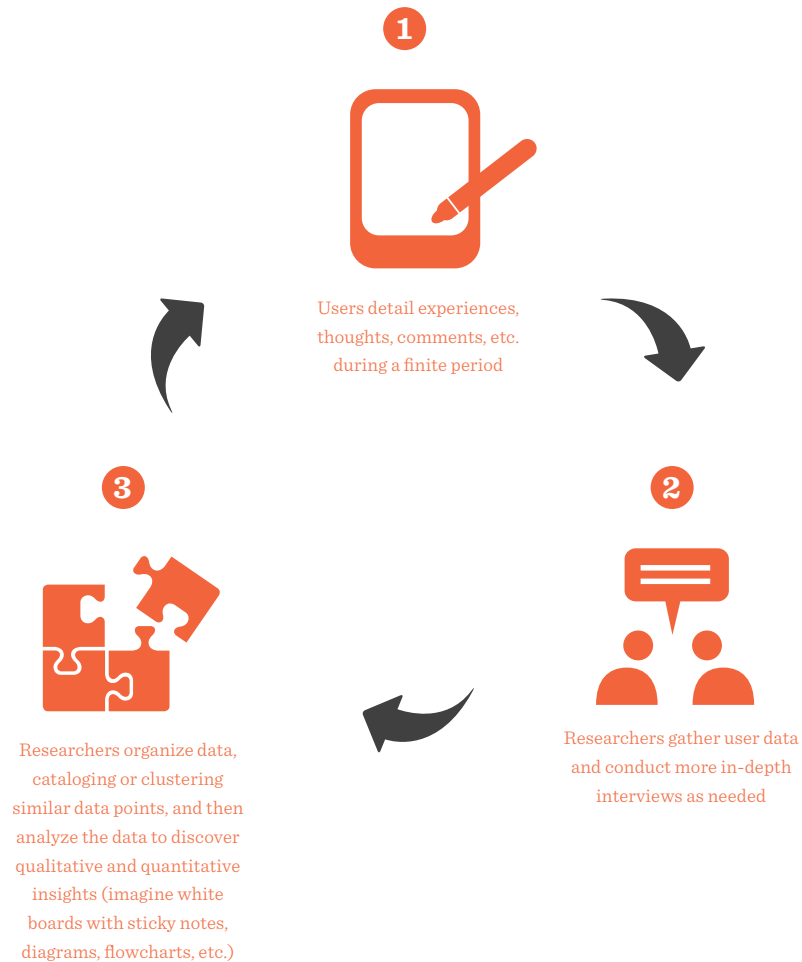
Exploring User Behavior in Context with Diary Studies

Photo by Thomas Leuthard, CC BY
Cover photo by Stephan Geyer, CC BY-NC-ND

CAPTURING IN-DEPTH USER EXPERIENCES BY UTILIZING MOBILE AND ONLINE DIARY STUDY PLATFORMS

Diary Studies are a research method that user experience and design researchers can use during design thinking and product development phases. User discovery, customer experiences, user validation, or design iterations—diary studies help collect insights in the context of users' daily lives. In this white paper, we explain the diary study insights cycle, highlight the benefits and drawbacks of diary studies, and delve into how to use online diary study platforms in our case study, My Mobile Banker App Project. The Appendix includes nine online diary study tools, ranging from all-in-one platforms to simple mobile apps and online tools.

Diary study insights cycle

1

Users detail experiences, thoughts, comments, etc. during a finite period

2

Researchers gather user data and conduct more in-depth interviews as needed

3

Researchers organize data, cataloging or clustering similar data points, and then analyze the data to discover qualitative and quantitative insights (imagine white boards with sticky notes, diagrams, flowcharts, etc.)

DIARY

The respondent records a variety of details such as facts, opinions, and emotional states related to experiences with a service, product or subject. A diary can be a record of regular purchases, viewing habits, or even household work habits. Online diaries can be similar to blogs or include several record capturing options, including voice recording, video recording, written logs, image uploads, etc.

DIARY STUDIES

User experience and design researchers conduct diary studies during product development phases like user discovery or customer validation to collect insights in the context of users' daily lives.

Diary studies occur for a fixed time period, which can be days, weeks or months, and participants create entries to self-report their experiences with a product, service, task, and so on.

Online diary studies can be done through the participant's smartphone. For some studies, the interactions primarily take place through their mobile device, which really capture the user's actions and behaviors "in the moment" of their daily activities.

BENEFITS

+ Participants record their experiences in their natural environment rather than an unrelated, unnatural environment such as a lab

+ Participants more likely to capture influential external factors such as time, location, social or environmental triggers, etc.

+ Researchers can collect participant observations in longer durations

+ Diary studies offer participants more time for in-depth consideration and opportunities for creativity than traditional-type research sessions, allowing participants a few days per activity/question

DRAWBACKS

− Researchers do not observe participants in their natural environment or collect their own real-time data

− Participants may have a belief bias, adjust behaviors, or have difficulty recalling events

− Researchers must trust participants on what they record or observe about their experiences and emotional behaviors

− Finding the right respondents who can be creative is a MUST, which means recruiting might take longer to avoid selecting candidates that might plateau or withdraw before the study is complete

Why diary studies?

Diary studies are useful to uncover user or customer habits and motivations for generative or evaluative research. They are incredibly valuable due to the nature of catching users "in the moment" of an experience. Experiences that are drawn out need to be studied over time and in detail so that the daily change can be measured. Diary studies allow for the user to move with the changes and self-document by answering specific questions for the day.

Most often, a quick interview is used at the end of the study to follow up on the overall diary as well as the trends noticed by the researcher on the persona/user population. This all happens in a cost efficient manner while enabling access to populations that cannot spare large amounts of time to interact with researchers further. As always, the research output can continue to validate the existence of personas, further characterize such personas, and focus in on the details of behaviors that are vital to the overall experience.

WE USE DIARY STUDIES:

For qualitative research to learn the many facets of user interaction with certain products, features, services, and so forth

For discovery during the initial stages of design thinking to uncover leading behaviors that need to be captured over a period of time

For user validation and design iterations during specific phases of the design process to evaluate a beta-stage application

Diary studies are generally part of larger research initiatives. Sometimes researchers pair this approach with larger quantitative data analysis methods to dig deeper into particular user behaviors, motivations and perceptions. At other times, researchers might use diary studies as "homework," asking participants to capture their at-home experiences and perceptions or to help provide a basis for upcoming in-person research sessions.

Diary studies in practice

Case Study: My Mobile Banker
App Online Diary Study

A financial services client is developing their mobile channel as they seek to become a digital leader. To achieve this goal, they want to define and deliver outstanding digital experiences through mobile marketing and feature development. As they refine their mobile strategy, the client wants to attain consumer input about a variety of mobile usage behaviors and preferences, including a detailed snapshot and understanding of how consumers approach, manage and envision mobile experiences with their brand.

The overarching goal of these objectives is to gain actionable insights to guide priorities and the subsequent delivery of future mobile initiatives.

CLIENT OBJECTIVES

Explore
- existing mobile banking usage behaviors and mindsets
- current consumer adoption and engagement paths for mobile banking
- mobile cross-selling and advertising attitudes
- interests in potential mobile features and/or benefits

Discover
- successful attributes of financial banking and management apps
- surface frustrations, inherent obstacles and barriers, and associated emotions at each mobile engagement stage
- unmet needs and desires in mobile banking, mobile security, and financial management experiences

APPROACH

The 14-day online diary study involved 45 participants for the initial two activities. Then, 30 participants continued on and completed eight additional activities, which included making videos, taking surveys, submitting pictures and collages, completing open-ended questions, and so forth. The participants received video and written instructions via a 24tru portal (see the Appendix for information about 24tru and other diary study platforms). They submitted digital or video responses on the 24tru platform using a computer or mobile app, allowing for continuous asynchronous participation and moderation, as they went about their normal daily routines.

This approach allowed data to be obtained from a more diverse sample of people across a variety of regions. By participating through the online diary study platform, participants were not pressured to come up with immediate answers, which reduced the frequency of "top-of-mind," generic answers common in IDI or focus group-type sessions. Instead, participants were asked to spend 5-6 hours each week to complete the online activities. They had time to reflect and respond more thoroughly to the activities and were able to respond in a comfortable, familiar setting.

KEY INSIGHTS

The online portal gives associates and moderators real-time access to respondent activities through a virtual backroom.

NEED

Starts with an initial need – defined by situation; sets stage to be open/closed to doing more with mobile

ADOPT

Trials for other needs/ use cases; determine app capabilities and where app "fits"

ENGAGE

Habits form; reliance leads to expectations; open to new solutions/growth

DESIRE

Desire for app to fulfill higher-level needs

Case Study: My Mobile Banker
App Online Diary Study (cont.)

PARTICIPANT DEMOGRAPHICS

- a mix of ages from 22-55 year olds
- a variety of ethnicities and gender
- primary or joint household financial responsibilities, including opening, closing and managing financial accounts; bill paying; researching financial decisions, and so forth.
- minimum of one personal checking or savings account and one credit card with a major bank
- geographic dispersion across the U.S.
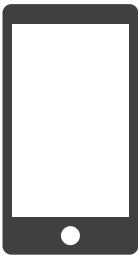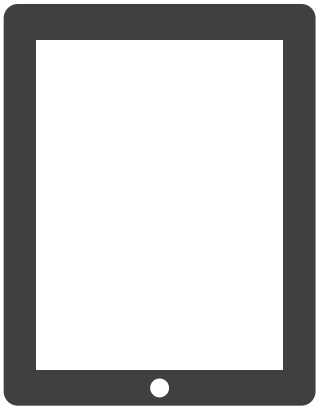
45/45
Respondents who use smartphones

21	24
Use Droid	Use iPhone

36	5	4
Use multiple times per week	Use once per week	Use monthly

33/45
Respondents who use tablets

9	17	7
Use Droid	Use iPad	Use both

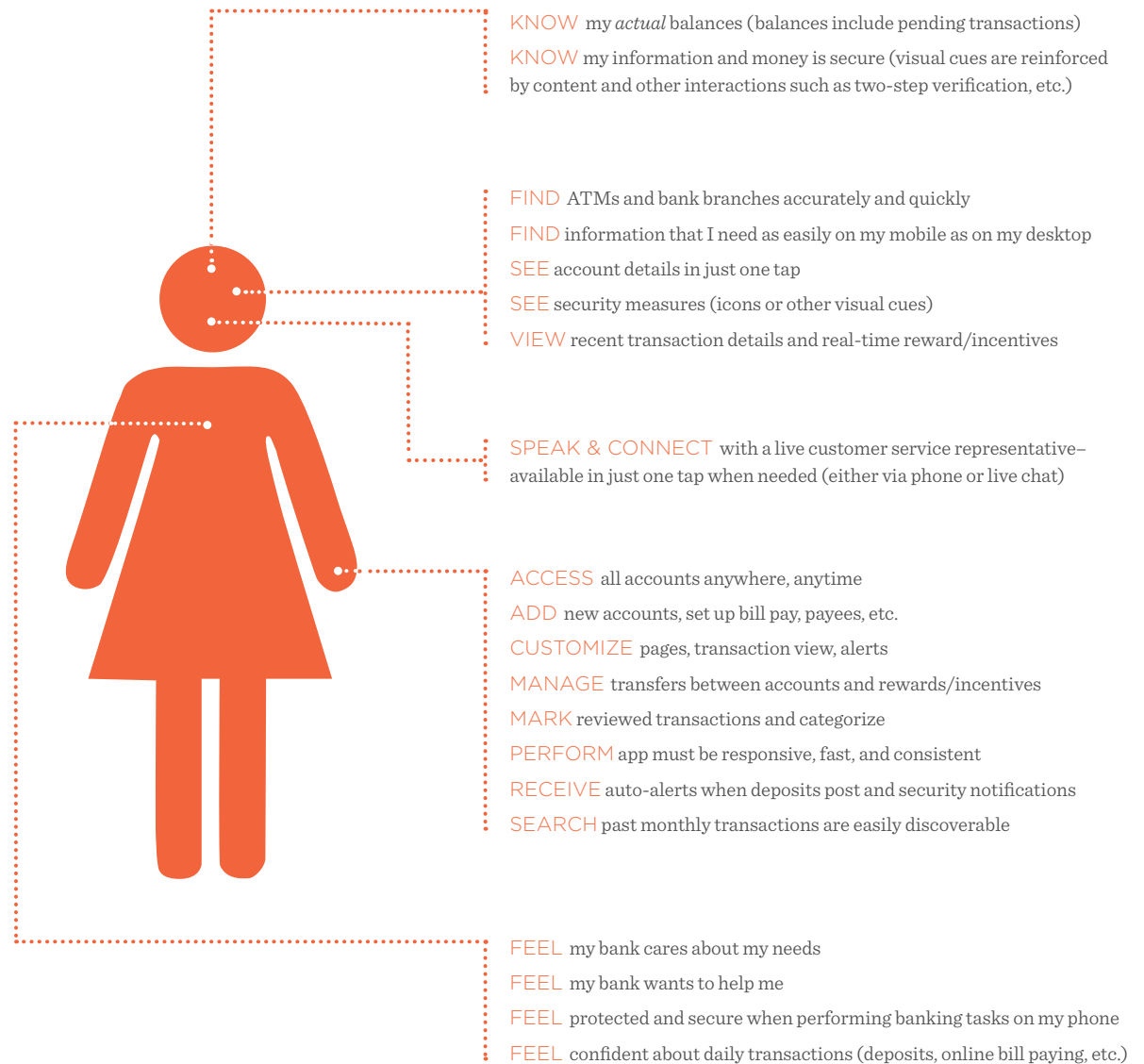| 27	6
Use multiple times per week	Use monthly

Video diary journals

Discover holistic insights
with video diary journals

In her video diary entries, Kayla took the time to speak about her mobile banking needs in terms of what she was thinking, feeling, and doing. Based on her responses during the study, researchers were able to create a detailed adoption needs map.

KAYLA'S MOBILE APP NEEDS

KNOW my *actual* balances (balances include pending transactions)
KNOW my information and money is secure (visual cues are reinforced by content and other interactions such as two-step verification, etc.)

FIND ATMs and bank branches accurately and quickly
FIND information that I need as easily on my mobile as on my desktop
SEE account details in just one tap
SEE security measures (icons or other visual cues)
VIEW recent transaction details and real-time reward/incentives

SPEAK & CONNECT with a live customer service representative–available in just one tap when needed (either via phone or live chat)

ACCESS all accounts anywhere, anytime
ADD new accounts, set up bill pay, payees, etc.
CUSTOMIZE pages, transaction view, alerts
MANAGE transfers between accounts and rewards/incentives
MARK reviewed transactions and categorize
PERFORM app must be responsive, fast, and consistent
RECEIVE auto-alerts when deposits post and security notifications
SEARCH past monthly transactions are easily discoverable

FEEL my bank cares about my needs
FEEL my bank wants to help me
FEEL protected and secure when performing banking tasks on my phone
FEEL confident about daily transactions (deposits, online bill paying, etc.)

Brainstorming exercise: the future of ...

Envisioning the future: my mobile banking app diagram helps define user desires for innovation

Brandon submitted a word cloud to illustrate what advancements he hopes banking companies will make with mobile apps and the roles he sees such apps assisting him with in the future.
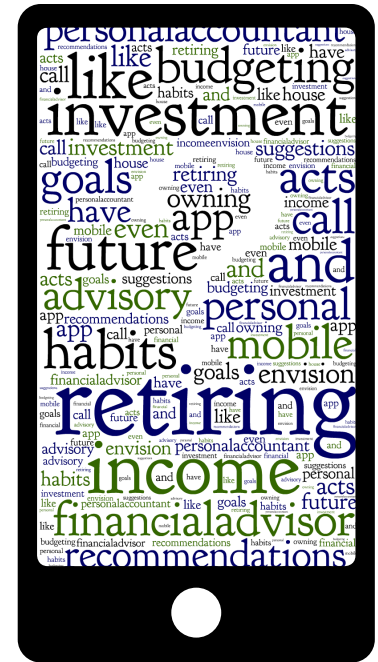
"I made an image with an iPhone outline with a question mark in the middle. I envision a future where I don't have to call or visit a personal accountant or financial advisor. Assuming security isn't an issue, I'd like my mobile app to be so advanced that it acts as my personal financial advisor, making budgeting recommendations and even investment suggestions based on my income, spending habits and financial goals. I'd like it to be smart and show me how I can save to buy a house and retire three years earlier."

Brandon D
32, IL, Mainstreet

Mapping your customer experience exercise

Mapping a recent financial task uncovers pain points within the mobile app customer experience
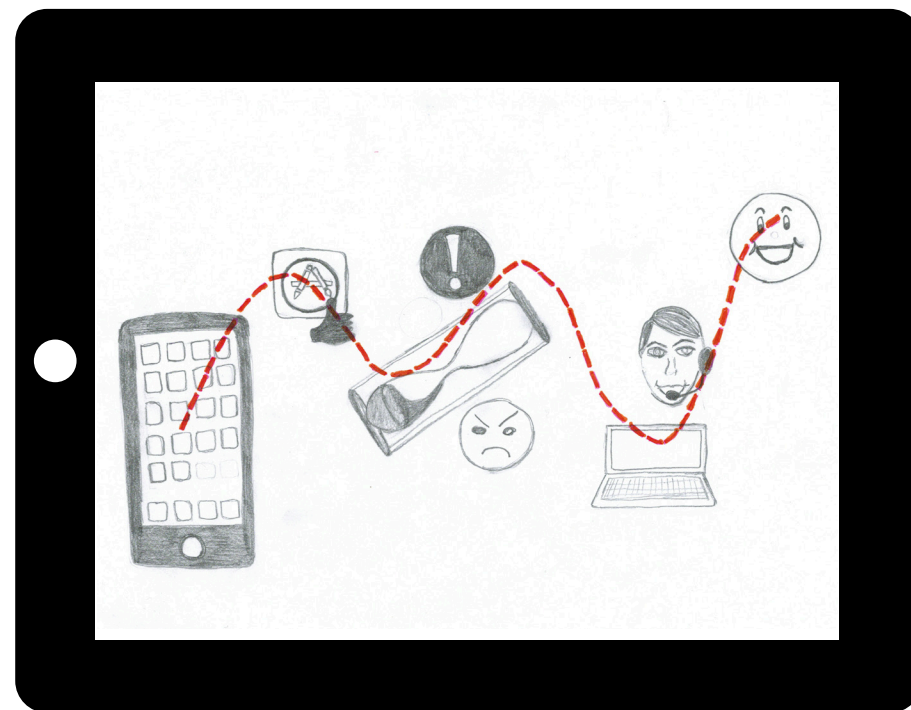
CUSTOMER EXPERIENCE

Devon sketched an image to illustrate the process and her subsequent feelings as she applied for a new credit card using a mobile app. She uploaded a video diary entry to explain her customer experience map.

She began the process by searching for a bank's app on her iPhone. After downloading and completing a new credit card application via the bank's app, she tapped approve. However, the app timed-out or froze. Once she exited the app and launched it again, she could not determine if her application was submitted or if she needed to restart the process.

She called the bank's customer service center and was directed to fill out a new application online from her laptop. She was eventually approved for a new credit card, but the process had "a lot of hiccups," was "time-consuming," and "ridiculously frustrating."

CONCLUSION

She was excited to find an app that would allow her to apply for a new credit card, yet when the app failed to deliver (she experienced obstacles/barriers), its consistency and effortless quotients dropped significantly. So, she disengaged with the bank's mobile channel and switched to her normal, tried-and-true engagement channels, phoning customer service and meeting her needs through the website.

Devon detailed her experience of applying for a new credit card via a mobile app through the sketch above

Community-wide app challenge exercise

App development exercise prompts out-of-the-box thinking and increases participant engagement, delivering further insights


Photo by Mary M U, CC BY-NC-SA

In the final week of the diary study, we asked the participant community to complete a community-wide assignment. Participants needed to create an awe-inspiring new app for finances, which they would present (hypothetically) at a mobile technology conference in Miami, Florida. The participant with the winning idea would receive a reward incentive (in this case, a $25 gift card).

After submitting their own responses, participants reviewed each other's ideas and had a chance to iterate their own idea before submitting their final app for voting. All participants voted for the best app. They could not vote for their own.

The community involvement and sense of competition significantly increased participant enthusiasm for the exercise and commitment to developing the best app possible.
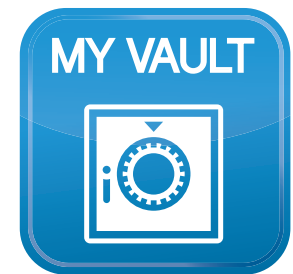
"After my experience trying to apply for a new credit card via an app and outlining that experience for this study, I definitely had strong opinions about what an awesome financial app would look like and what it should do for me. It was fun to share my ideas and get feedback from the group. It's cool winning, and I feel like the work I did certainly matters. I hope to see some of my ideas in a real app soon."

Devon C
App Challenge Winner
28, NY, Upmarket

Conclusions

By seeing a customer's experience over a length of time, you discover opportunities and pains points you might have otherwise missed with one hour, in-depth interviews. The participants gradually open up about their emotions and behaviors with well-thought-out activities and assignments.

Photo by Frozen Hell, CC BY

"We were able to understand the root of why people have rapidly adopted mobile banking apps. An in-depth interview would have told you that customers use bank apps for the ease and convenience of not going to a bank. Yet, through this mobile diary study, we had participants dig deeper than the typical "convenient" responses. We discovered mobile banking apps gave customers a sense of control that they lack in their busy life. There is something empowering about being able to check, monitor and manage your money anywhere and at any time—seeing the number displayed on your app instead of in a checkbook or paper statement."

Emily Chu
UX Researcher at Motivate Design

What do moderators and researchers do during online diary studies?

- Select the appropriate online diary study tool based on the study objectives

- Set up the diary study tool, create user accounts, and design study activities

- Compose an introductory email or letter to participants, including important study details and key dates

- Prepare the diary kit

  – participant/user account online login details
  – expected types of feedback
  – research contact details
  – information about what to do regarding additional questions, user account issues, and so forth

- Conduct online Meet & Brief sessions with participants

- Create activity and assignment prompts

  – prompts can be written or video instructions created by the moderator, using both methods helps clarify what participants should do and adds a personal, familiar touch

- Monitor diary entries and maintain engagement with participants to assure participants that their feedback matters and keep them on task

  – update and set next tasks
  – respond to participant inquires, diary entries, or ensure technical support issues are being resolved
  – pose additional questions or suggest alternative scenarios to gain deeper insights

- Make notes and compile data to refer to for follow-up interviews and final data insights report

- Conduct timely, final in-depth interviews to further probe and validate data revealed during the study

- Thank participants and ensure compensation is given as applicable

KEY INSIGHTS

An initial video message offers a unique and efficient way for researchers to introduce themselves to the participants, describe what's expected, and explain how to use the online diary study tool. Study participants respond well to researchers that are enthusiastic and encourage participants to be creative and spontaneous in their responses to each activity. It's a good idea to end the video by giving the participants a simple, fun homework assignment such as creating a self-portrait by either drawing, writing or collaging to submit before the study begins.

Appendix

Online diary study platforms & tools

Revelation | Next offers both a mobile and web platform. The Revelation app is available for Android and iPhone formats, allowing researchers to customize activities and participants to engage with a qualitative research platform through a mobile app or web platform, which mimics the feel and function of popular social media features and functions.

QualBoard® by 20|20 Research, Inc. is a qualitative research system that utilizes 'Bulletin Board' technology, allowing participants to have access anywhere and anytime to respond to questions posted by a moderator. QualBoard® also supports multi-media including pictures and video, webcam recording, segmented questions to respondent sub-groups, and built-in multiple-choice question and multiple answer formats.

7daysinmylife is an online tool driven by a research methodology called, Context Mapping. Using this online diary tool, participants fill out what they do, think, dream, and so on about how your product, brand or service plays a role in their lives. In the open-response format, respondents can digital post-its, pictures, and icons to personalize their entries.

IdeaStream by Dub is an activity-based platform for qualitative and quantitative research, which includes crowdsourcing and co-creation tools to help you capture insights. IdeaStream offers a range of languages and a pay-as-you-go pricing structure. The platform is scalable whether the respondent community is 2 people or over 1,000 people worldwide.

itracks provides a variety of online qualitative tools for discussion boards, focus groups, community panels, and more. The mobile app offers seamless connectivity for researchers, moderators, and participants to engage from their smartphones or tablets. The itracks software allows client observers and moderators to track participant activities and separately discuss findings.

Kernwert's all-in-one QDC Studio offers many possibilities for diary study research including chats, bulletin boards, blogging, albums, creative tasks, and questionnaires. The QDC Studio is available for smartphones and tablets, allowing respondents to make in-the-moment, authentic entries.

The Thinking Shed can be a stand-alone tool or used as part of a mixed methodology and offers a way to collect insights pre- and post-tasking. Using the social networking mindset, The Thinking Shed enables researchers to specify tasks and collect data efficiently in a semi-ethnographical way that corresponds with Behavioral Economic theory.

From online focus groups to mobile community panels, VisionsLive helps researchers run online qualitative research projects and insight communities. In a branded highly interactive, social media-feeling network, businesses and researchers are able to explore, test, evaluate, co-create, and more with customer, respondents, panel members, etc.

24tru is a digital platform offering a comprehensive workflow for qualitative research, offering customization, project support, integrated recruiting, data coding and analysis features, and flexible reporting/deliverable creation options.

We are a boutique UX firm in NYC. We lead the research, strategy and design to create exceptional experiences for brands, products and services that help humanize technology and enrich people's lives.

SMALL AND BIG AT ONCE

At Motivate Design, we offer big company expertise with a higher level of personal service. You work directly with our expert practitioners, which means you don't get insulated from the people actually doing the work. Yet, we have the big agency experience to know how to simplify and keep things easy for you.

RESEARCH & DESIGN EXPERTS

Our passion for research and design really comes through, as you'll see, in all our interactions. We love nothing more than a juicy problem to solve, and clients love the insights and solutions that we bring to the team.

AN EXTENSION OF YOUR TEAM

We are proud of our brand and our work. But, we don't need the credit and are happy to quietly work as an extension of your internal team. You know what works to move the needle at your organization; we work with you to get that done.

THE RIGHT PARTNER

We respect our clients and only work with clients that do the same for us. True success stems from meaningful collaboration. We are known for our honesty and will tell you the best way to approach a problem, even if it's a cheaper way to go. We value relationships, not projects.

For more information visit
www.motivatedesign.com