

HCI 598 Milestone 2

Jay Hilwig Feburary 9, 2014

Users

My original notion of key stakeholders was cast largely from the user description as defined by the creators of the cards, IDEO. After reaching out to users familiar with the Cards, the original supposition (and IDEOs as well), is largely correct. That is, the user base is often working in user research, experience design, usability engineering or well as the more traditional roles of web, print, and interface design. My search had me reach out to approximately 15 people, the title/profession of these individuals included: Fine Arts (sculpture), Management Consulting, Product Design, MS Students, Interaction Designers, Researcher, 'Innovation' management/agency, Consultant & Educator, Museum Education, Agency (focus on Social Marketing), Self-employed, Hardware/Software interfaces, Social Work.

My criteria for contacting an individual was based largely on their mention of use of the Cards as a blog post or similar public web based review. Often the individuals describing their use of the Cards posted their experience with them through a work related blog or entry. More often than not, they fit the criteria of Researcher, designer, or simply curious and interested in 'innovative' processes when undertaking a method of deriving solutions to problems in original ways. Of the 15 individuals contacted, 4 responded and filled out a survey or were interviewed in person as a moderator/participant scenario with audio recording of the interview. Of the 4, 3 were in design and research related fields while 1 was in social work and unfamiliar with the Cards. Based on my research into those 15 individuals noting experience with the Cards, the chief occupations/fields that may be missing would be: Management, Consulting, and possibly Business (MBA) related workers.

The subjects surveyed and interviewed all reported working in collaborative, team oriented environments. Furthermore, the 3 respondents who completed the survey all noted using the Cards in an educational context at some point. Whether as a teaching aide or as inspiration for a student project, the Cards have significance in an academic environment more so than any other field from the responses I received.

For the purposes of this project, the focus will be on the digital (mobile, Android and iOS) version of the cards despite the fact that a few respondents showed a propensity for the paper deck. The participant "Andrea" cited a few reason for favoring the paper deck including: an inability to share a card with another user, not being able to pin cards up to a tack board, and a less fluid way of grouping on the mobile version. A focus on the product refresh should take into account which aspects of the paper version could be incorporated into the mobile edition. For instance, with current HTML technologies a user on a mobile could "share" a card to a web page to allow for more personal group dynamics.

Tasks

While there was only 1 person to person interview that allowed me to present some task based exercises, I believe that primary tasks can be inferred from the responses of the (survey) based participants. The three task buckets of primary focus to 'feel out':

As a means to test or stress an idea. The application of the Cards are always at a second (or greater) step in whatever process the user may be undertaking. For instance, they may be considering the best way to lay out a web page or site map. After their initial idea or problem is formulated, application of the card methods is the logical next step to test out different hypothesis.

Task in application: the designer may be considering several different ways to group the content for a new website. To test different information architecture approaches, they could employ Card Methods such as "Quick-and-Dirty Prototyping" and "Survey and Questionnaires" to vet the IA.

As a brainstorming tool, most often with a team or group. All the respondents used or alluded to a concept of the Cards as inspiration and how, in particular, a creative process relies on inspiration from many sources. The Cards can be an ideal catalyst for inspiring creative and innovative think session within groups, or by oneself.

Task in application: A design group or Agency may be challenged to come up with a solution for a poorly received social marketing campaign. Using Card methods such as "Unfocus Group" or "Anthropometric Analysis" would demonstrate less traditional methods to try to get to the root of the problem.

As an informing tool for designers to understand the people they are designing for. For instance, a number of the methods promote empathy such as: "Fly on the Wall" (observing without interfering),"Empathy Tools" (using tools to simulate user qualities such as poor vision by wearing an incorrect prescription), or "Personal Inventory" (document the things users identify as important).

Task in application: One of the first rules all designers learn is that you are not the audience and that, generally, the designer is an expert user when working on a system, website, interface, etc... The ability to remove oneself from this privileged role and truly see things from an end users perspective is often difficult. The numerous empathy tools within the Deck can be quite useful.

The survey the participants filled out can be seen and/or taken with this link: <u>https://jay.typeform.com/to/H2n7ba</u>

Analysis

When considering an analysis of the current IDEO Method Cards, there are certain "maxims" that can be derived from both user feedback and a heuristic analysis of the current state of the Cards. The focus of the User stage of this milestone was to understand what users familiar with the Cards want, in their own words and with little prompting. Conversely, we can also interpret and infer what they do not want or like. Based on user responses, some direction of both the desirable and non-desirable elements include:

A number of comments alluded to the Cards as more of a novelty than a serious tool. Something to be brought out as a play thing or curious object to show others. That they can be seen as both an inspiration to the softer side of creative endeavors, what Holtzblatt calls "Joy in Life" (Holtzblatt), as well as a problem solving tool is a quality to be maintained in prototypes or refreshed designs.

One respondent, a Professor and Researcher, made several points as to a preference for the paper version of the Cards. He felt it lends a certain "workshop" type feeling when using them and believes that when working with others, it is more natural as a tactile interaction when used with a team. As mentioned previously, some effort needs to be made to translate the comforting pick up, tack to a wall, flip over, shuffle etc... of the paper deck qualities as translated to a digital system.

Some comments were indecisive but additional scrutiny may yield a design direction to apply. For instance, the short descriptions on the back of the cards (the How and Why aspects) were seen as slightly negative ("not enough information") while simultaneously encouraging student's and others to dig deeper into the short descriptions (e.g. they are but a jump off point into a larger Research 'abyss', a positive aspect).

The digital version of the Cards lacks the natural expansiveness of the paper version. One person noted it is not possible to compare two cards, side by side, as he could with the paper deck. True too, consider the action of tacking up, 'dealing' the cards, viewing the cards laid out on a table, passing a card to a friend, etc... As an interesting aside, we could consider a version of the digital cards 'ported' to the Microsoft Surface tabletop, or PixelSense ("Welcome to microsoft,"), as a large, tactile, group based interactive display.

Heuristic Review

When considering an heuristic review, basically 'rules' that design researchers have devised, we should be able to apply some direction from a pass/fail criteria. I am using **Shneiderman's Eight Golden Rules** (Shneiderman), **Nielsens 10 Usability Heuristics** (Nielsen, 1995), and **Norman's Design Principles** (Preece, Rogers & Sharp) and applying the rule sets strictly to the iPhone version of the Cards.

Visibility: To maximize the photographic imagery, the top level menu is automatically hidden when a user

has selected a Card. This impacts all actions that can be taken when the photo side of the Card is shown. A user may not be able to:

- navigate back due to loss of iOS standard left pointing arrow key in top level header bar.
- flip the card to the description/text side
- add the selected Card to a Group

This interaction requires some slight learnability, but the visibility of these commands could be improved.

Feedback: from a visual perspective adequate feedback is provided for the key interactions. However, other feedback could be considered such as audio cues/effects, spoken feedback.

Flexibility/Accelerators/Shortcuts: The app itself is very simple and straightforward and uses standard iOS appropriate UI. A single accelerator was eventually found wherein the user can flip the card to its opposite side by double-tapping the Card. This seems like an excellent and appropriate accelerator. However, the delay between the two tap events is rather strict. Take too long (or too quick) between the first and second tap and the action will not execute.

Error control and messaging: I was unable to encounter error messaging or events of any kind. This is testament to a well-tested, simple app that requires no error scenarios whatsoever.

Mapping: the scant controls of the UI are well mapped and easily understood as most use a standard iOS approach. However, the one slightly difficult to discover control, a manual card flip action, uses iconography related more to the action of displaying data as a text based list (Figure 1).

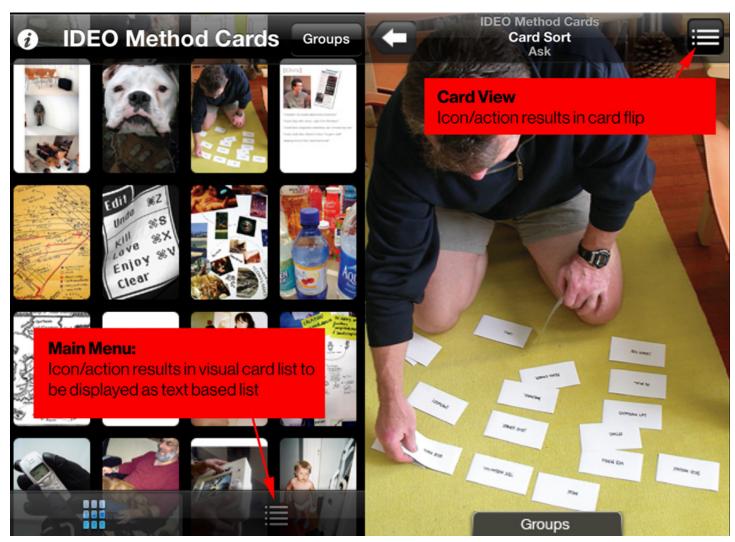


Figure 1: Confusing re-use of a familiar icon metaphor.

These 5 heuristics appear to be those which could be worth consideration when undertaking a re-design of the application. Other more formal and compliant heuristics such as consistency, simple aesthetics, and adequate help are implied aspects in a proper re-design.

Evaluation and Success Criteria

The initial approach is to design phases of the application in ever increasing scales of fidelity. User testing at an early stage (low fidelity) as well as later phase with a working prototype on the target device (mobile) will provide a delta of progress. At both stages of the testing, taking into account both the quantitative (Likert scales and time/motion studies, for example) as well as qualitative (pre and post interview evaluation) should allow us to generate an objective report. Ideally this type of evaluation will allow informed and non-biased judgment as to the success or failure of a re-design effort/re-think of the IDEO Method Cards in a mobile context.

Market Environment and Competitive Analysis

Currently, there are other tools in the market environment with like ambitions all seeking to inspire design motives with a barrage of varying design methods. One such list iscompiled by the Danish design studio ixd ("Method cards") and can be viewed here: <u>http://www.ixd.net/research/method-cards/</u>

A similar effort was put forth at Interact 2013 by 2 students who sought to evaluate card-based design tools. As can be seen in Figure 2, there are several areas of overlap amongst the numerous different card based tools.

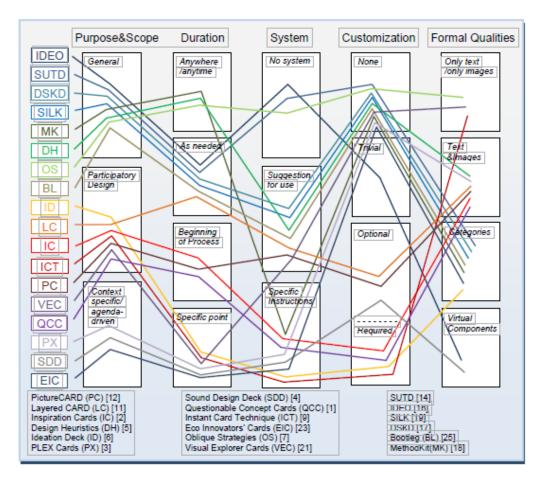


Figure 2: 18 different, but similar, approaches to card-based design tools.

While it is out of scope for the focus of this project, one of the more recent and comprehensive explorations of research and design methods is in **Universal Methods of Design** (Bella & Hanington). The goal of this project is a simple, useful redesign made available to a wider audience.

Citations

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Survey Results

I have used the IDEO Method Cards for a project or have explored them as a potential tool.

3 out of 3 people answ ered this question

1	Yes	3 / 100%
2	No	0 / 0%

If you answered "No" to the previous question, do you feel that you have enough background with the Cards to provide feedback?

3 out of 3 people answ ered this question

1	N/A (I've used the Cards)	3 / 100%
2	No	0 / 0%
3	Yes	0 / 0%

Which version of the Cards have you used currently or in the past?

 ${\bf 3}$ out of 3 people answ ered this question

1	Paper Deck (traditional)	3 / 75%
2	iPhone version	1 / 25%
3	Other	0 / 0%
4	PDF/web	0 / 0%

I have used the Cards in the following manner(s):

3 out of 3 people answ ered this question

1	browsed	3 / 30%
2	searched	2 / 20%
3	sorted	2 / 20%
4	spread out	2 / 20%
5	pinned up	1 / 10%
6	Other	0 / 0%

The Cards have helped me to:

3 out of 3 people answ ered this question

1	inspire others/team	3 / 33%
2	inspire me	2 / 22%
3	try something new	2 / 22%
4	develop my own method	1 / 11%
5	gain perspective	1 / 11%
6	Other	0 / 0%
7	problem solve	0 / 0%

I like the visual design of the Cards.

3 out of 3 people answ ered this question

1	Yes	3 / 100%
2	No	0 / 0%

I like that one side of the card is an image and the other is the method & description ("How" and "Why"). 3 out of 3 people answered this question

1	Yes	3 / 100%
2	No	0 / 0%

I use the following mobile OS as my primary daily device:

3 out of 3 people answ ered this question

1	iPhone	3 / 100%
2	Android	0 / 0%
3	Blackberry	0 / 0%

4	Nokia	0 / 0%
5	Other	0 / 0%
6	Windows Mobile	0 / 0%
7	iPhone & Android combination	0 / 0%

If you are NOT an iPhone user, would you use the Cards on your mobile device?

${\bf 3}$ out of 3 people answ ered this question

1	I'm an iPhone user	2 / 67%
2	Maybe	1 / 33%
3	No	0 / 0%
4	Yes	0 / 0%

Rate the visual design of the cards, 5 being the best.

3 out of 3 people answ ered this question



4.00 Average rating

1	* * *	1 / 33%
2	* * * * *	1 / 33%
3	***	1 / 33%

Please describe your previous or current experience and use of the Cards.

Scott I have used these in conjunction with the Immersive Worlds Handbook and also have used them with students in classes.

- Shelagh I find that they are only inspiring for finding new methods, the actual description of the method or ideas of how to use it is left to myself. which is both good and bad. I rarely look at them now, only when i share them with friends as something to be inspired by.
- Andrea The cards give a great overview to a number of different possible approaches dependent on the kind of project and on the project stage. I use them as inspiration tool for methods and basis for possible adaptations to individual project methods. Secondly I use them in my usability courses at the University of Applied Sciences Darmstadt.

If these cards helped inspire you to create your own methodology for design exploration or solution-finding, please describe your method.

Scott I believe that the cards allow me (and others) to brainstorm, effectively look for new solutions, and also develop new strategies.

Shelagh i wouldn't say I've developed my own method, but since they contain very little information, they do open up for my own interpretation of the method.

Andrea I developed the method of forming and describing the character of the application – in forms of collages or application personas. The question is: how would the app behave as a person towards the user?

For users of the Paper Deck (traditional) only.Skip if you use the iPhone app exclusively. What functions do you find useful with the in the app? For instance, maybe you like to create Groups or maybe you like to just pick a card at random and 'brainstorm' with your selection.

Scott I think that a deck format is useful since it allows one to choose one or more cards and use them in interesting ways.

Shelagh I like it being a break from the computer. And that they are physical cards. It is a source of inspiration.

Andrea In the usability course I let the students select three cards they assume to fit best to their individual projects in interaction design. They then have the time to implement the methods and to evaluate their benefit for the project. For this task the categories Learn, Look, Ask, Try are a good orientation for the students. Of course the cards can only be a first orientation. The short descriptions (How, Why) at the back of the cards are helpful, but not enough. They call for a deeper research on methods in detail. I like that there is only a short introduction on the cards, as although they are not brand new and methods continuously changed within the last years, the cards are still up to date. The examples of the showcases in which the described method has been used by IDEO gives hints to the applicability for certain projects.

Well, the grouping function is nice. But I prefer to have the cards on paper. I have a better "workshop-feeling" using them. I use the iPhone-Version because it is easier to keep the cards with me in case i need them unplanned - what never happened so far ;)

As described above I prefer the paper version. What I miss in the iPhone-Version: I can't compare two cards (sometimes they seem to be similar and you really need to read the texts carefully). You cannot (re)group them visually or pin them to a wall in a workshop session. I can't pass a card over to somebody to inspire him or discuss about the method - he or she would need the iPhone version as well and then we two would have to search for the same card.

Other Feedback

Shelagh I think the image is not always very descriptive of the method. It just seems random. I also find the example they explain below the WHY and HOW is more useful than the HOW and WHY. The WHY seems borderline bullshitty sometimes, and I don't usually bother reading it. Another thing that makes me kinda sad about the cards is that they have started to curve. I remember asking my dad for these cards a few years ago, because I was dreaming of how awesome they would be. Turns out they aren't as good as i expected them to be. I recently got the book called Universal Methods of design, and find it to be a better description of methods and examples of them. Although the explanation is wordy, the images are more related to the method. Also I would love to just have images of different methods, mapping activities etc. Another interesting aspect is the way you group the methods, is it in terms of phase of the design process, or is it based on type of activity.

Interview

Jay: Okay. Open up the idea method cards. Now, just take a few minutes and look around and see what it's all about, and I will give you some background. IDEO is a designing company, probably one of the well-known design companies in the world, and they develop mobile applications as well as help big companies solve design problems.

Carrie: Okay.

Jay: There are some other things to do, so yeah. Explore. Take your time. Now, whenever you think you're ready, let me know, so I can get started.

Carrie: Okay.

Jay: Okay, so, can you back to the main menu? And then, could you display them as a card? Okay. So, let me just ask you a few questions about your experience, and let me just say, we're not testing you. We're testing the application. So, there's no right or wrong answers to these questions. First question, how do you think these will be used by a designer? So, if they're a web designer, somebody that does usability testing, somebody that does design research, meaning they go out in a field and they observe people and they see how they interact with the software and objects. Just, designers in general.

Carrie: Well, it seems like they're all giving you ideas for how to test your idea and to get information on your idea.

Jay: Very good. Is there anything else, specifically to a designer?

Carrie: It seems like you'd use it to generate more ideas.

Jay: Okay. That's good. Now, you know, maybe a more significant question for yourself: how do you think these would be used by a non-designer, if at all? Is there anything you could relate, in your day-to-day professional life, where you could see a use for these?

Carrie: You could use them in meetings, like in other fields where you're trying to come up with ideas for improving a process or changing policy.

Jay: ?? improvement, okay. How about, I know you work on those, I always forget the name, the Schwartz Rounds, that you're kind of a member of that committee that does the Schwartz Rounds. Is there anything in there? Are they trying to do anything innovative, or new approaches to medical things?

Carrie: No, that's more the Toyota Productions system approach, where the kaizen events that we do, you take a, you want to improve a certain process, a medical process or a way of doing things in a hospital, and then we go out into the fields and we actually go to where work is being done and we interview people. And, we also test new ideas on those people. So, you do mini, it's called Rapid Process in Work, so you do like a quick, you set up a certain amount of time to trial the process, and then you go back and you realize...

Jay: Trial new processes or improvements on an existing?

Carrie: Yeah.

Jay: Okay.

Carrie: And, we also use visual, when we do kaizen events, you use visual things to represent parts of the process, so we have strings, different color strings, that we tie from one concept to another, to locate where things are stopped up or breaking down.

Jay: Okay. I see. It's interesting. I feel like there could be some overlap with this, if it's more on process

improvement and not so much, well, okay. So, thank you for that. The next question I'm going to ask, if you could just grade it on a scale of, one is being "strongly agree" and seven being "strongly disagree", the question is: I understood how to use these cards with ease. So, do you strongly agree, somewhat agree, strongly disagree? And, again, "strongly agree" is one, "strongly disagree" is even.

Carrie: Five.

Jay: And, can I ask why you gave it a five?

Carrie: Well, I'm not sure if the pictures have to do with what the card is about?

Jay: Yeah, that's good.

Carrie: It seems you would have to have some inside information to know why they chose these pictures, or their methods.

Jay: Yeah.

Carrie: They're not really, they're more clear once you click on them, but they're not apparently just, look at them, so there's a lot of clicking through to find the one you actually want to look at, instead of having it be clear right away. Like, with a title on the card or something.

Jay: Okay. Do you think that having, almost like when we play a game or something, a little bit of a preamble or instructions or some background? Like, what these are, what their intended use is, would be help-ful?

Carrie: Yeah, maybe. I don't know. Some of the pictures are more appealing. Like, some of them, I don't want to click on. They don't look very interesting, so if there's a way to, I don't know, organize them or ??, you kind of know what you're looking for.

Jay: Yeah, that's good. Okay. So, now, I'm going to ask you three quick tasks to complete. Task One would be: can you navigate to the card that shows the woman in a hospital bed?

Carrie: Yes.

Jay: And now, could you please flip the card over and read to me the "how" section?

Carrie: Role-playing. How I identify the ?? folders involved in the design problems and assign those roles to members of the team.

Jay: Okay, good. ?? Let's see if you can navigate there. Okay. Task number two: please make a group of three cards, and when you do that, can you please explain what you're doing as you work through the task. Take as long as you like. So, just think out loud when you're doing things, if you could, please.

Carrie: I'm clicking on 'groups', and 'header'. Wait, I need to, a group of three cards?

Jay: The task was, please make a group of three cards.

Carrie: Adding a new group, calling it 'Three'. Saving. Now, I'm clicking on 'show all cards'

Jay: Okay.

Carrie: And then, I clicked on the old man shopping for meat card. Now I dragged it up to see the bottom of the card, and it says 'group assignments' and I clicked on 'three'. Then I went back and I clicked on the dog, and then I just clicked on 'groups' at the bottom of the card and clicked on 'three', and then I clicked

on the red phone booth, or postage box thing. Clicked on 'groups' and clicked on 'three'. Now I'm back.

Jay: Excellent. Can you show me that group?

Carrie: Click on 'groups', click on 'three', and it displays the three cards.

Jay: Excellent, very good. Okay. Last task: Could you show the full deck of cards? Okay, great. Now, can you show me that full deck of cards as a text-based list, rather than a visual card deck? Excellent. Okay, those are the ends of the task. Now, to go back, I'm going to ask you another one of those. Now I'll ask you just to choose on a scale. So, one is 'strongly agree', seven is 'strongly disagree'. The statement is: the visual design of the cards is appealing. Now, when you consider it, think of not only the front of the cards, which is a photo, as well as the back, which is the method and description.

Carrie: Four.

Jay: Next statement: the interactive aspect of the cards is intriguing and appropriate.

Carrie: Three.

Jay: I agree. It has kind of a dated feel to it. It doesn't feel very up-to-date. Okay, so we're done with that. One thing, let's go back to this. I want to ask you just a few quick post-application questions. So, there are four types of categories in the deck. Can you name any of them? And, those categories were on the textbased side of the card, not the goals, photographs and imagery side.

Carrie: The how and the why.

Jay: Sort of. Those were, there are four categories, and in each of those, the 'how' is like how to apply it and why you would apply it. There were also categories. Do you remember anything? Okay. So, that's perfectly fine. At the top of the card, there were the categories of 'learn', 'look', 'ask', and 'try', and each of those would have, again, a particular way of how to apply it and why to apply it. So, they did, there was a logical grouping with the images. I guess, my follow-up question is: can you describe what was meant by 'learn', 'look', 'ask', 'try', but I don't think we can ask them. But, you did notice the 'how' and a 'why'. So, with each card, there was a how and why of explaining the method and how to apply. Did these make sense, or what feedback would you offer to improve the design or the content? I noticed you did read a few, kind of briefly.

Carrie: No, I liked that aspect of it. I thought it used pretty simple language and it's easy to understand, for somebody's who not a designer. It used kind of broad language, so you could apply it to other uses.

Jay: So, again, it could be applied to things beyond just strictly design. Okay, almost done. What is your summary of the usefulness, or lack thereof, of the cards?

Carrie: I mean, I think it could be useful for, I think it could be useful. I mean, I don't know how designers usually work, but it seems like a useful tool to have, maybe just as one tool out of many tools, you know? Or, maybe designer meetings or brainstorming sessions. It seems more of like a creative tool than a practical one, maybe? I can see it being used in education, as well.

Jay: Okay, that's good. Again, I think you sort of answered this. Let me see if there's anything else. As a designer or non-designer, what would you use these cards for, or imagine others would use them for? Now, I think you touched on some of those, like the educational aspects, maybe. It's a creative tool rather than practical. Again, is there anything you can think of that was related to it? And, it's fine if you can't think of anything else.

Carrie: No, I think I would use it in creating projects for children to use.

Jay: Hey, that's interesting.

Carrie: There was one that I liked about giving a camera to a cultural group, and then role-playing also, and I can see that being used for children and creative projects. And, it can be used at work, like in some of the process events that I'm in sometimes.

Jay: Okay. Is there anything else?

Carrie: Maybe like, I mean, it would be fun to use it as a brainstorming tool for other creative projects, or something.

Jay: Is there way you think when you're thinking about the brainstorming aspect? I think that's what it's used for a lot. Would you go about it kind of in a random fashion, like click on this card and just see what it says, or would you focus on, say, you knew more about those categories, the 'learn', 'look', 'ask', 'try'. Would you just stick to, say, the 'try' category, and ?? that was appropriate, or more as kind of a random idea generator. Oh, let's see what this says, and then, let's talk about the method, the 'how' and the 'why' aspect of that card,

Carrie: Well, it already seemed to go in an order to me, like steps in a process, so 'look' is, you make a general observation about something. It's your first snapshot. Whereas, you research and go in further, 'ask' is, you're doing more of a survey. And then, 'try' is, you're actually trialling the idea. So, it might make more sense to go in order rather than randomly, if there is a specific idea that I wanted to trial, or if I was going to brainstorm, I might do it more randomly. But, it might be more helpful to go in order of category.

Jay: So, there would almost be kind of a logical order to the methods?

Carrie: You can try something without, well, I mean, you could, but it might not be as valuable if you didn't ??.

Jay: Yeah, true. And, that sequence that you put them together, 'learn', 'look', 'ask', 'try', you feel that that's kind of the order you would go?

Carrie: Yeah.

Jay: It makes sense.

Carrie: I mean, I think 'ask' and 'learn' could be interchangeable or concurrent, but 'look' and 'try' would seem to be the first and the last.

Jay: I agree. Okay, that's great. Okay, that's it. Thank you for your time. Do you have any questions for me?

Carrie: No.