Exploratory Sketch Thinking

Idea In Short

Many people treat a sketch as a picture of an idea they already have. Design researchers see it differently. Donald Schön described designing as a reflective conversation with the materials of a situation, in which the designer draws, looks at what the drawing shows, and then draws again. A rough sketch lets a team see an idea, test it, and change it before anyone commits time or money. This article explains how exploratory sketching works as a thinking tool, what research says about its value, and how business teams without any drawing talent can use quick visual drafts to discover better ideas.

A team gathers to plan a new service. People talk for an hour, everyone agrees on a general direction, and everyone leaves with a slightly different picture in mind. A single rough drawing on a whiteboard would have exposed those differences in minutes. Sketching works as a way of thinking, and not merely as a way of showing. This article explains why rough drawing helps people develop ideas, what researchers have found, and how to build the habit in a team that does not consider itself artistic.

A conversation with the drawing

Donald Schön, who studied how professionals think in practice, gave the practice a name that designers still use. In a 1992 paper he used the phrase "reflective conversation with the situation" to refer to a particularly important kind of design transaction, one that has several related meanings.1 The idea is that a designer does not simply execute a plan. The designer acts, observes what happened, and responds.

Applied to a sketch, the conversation runs in a loop. You draw a line, the line shows you something you did not expect, and your next line responds. The drawing talks back. A design researcher summarizing this view says that a designer sees, then moves, then sees again, and that by working in a medium the designer discovers what is actually there in the representation.

An interview with Schön by an interface design specialist adds context. In the published conversation, he described how professionals, and especially designers, move through stages and how reflection in action shapes each one.2 The lesson for teams is that thinking and doing are not separate steps. The act of drawing is itself a form of thought.

What sketches reveal

A sketch forces decisions that words can avoid. If you describe a customer journey aloud, you can leave gaps and nobody notices. Once you draw it, you must decide what comes first, what connects to what, and where the customer stands at each point. Missing steps show up as empty space on the page.

A study of architects shows another benefit. Researchers analyzed three sequences of sketches with a design theory that separates concepts from knowledge, and found that the drawings referred to both, but mostly to knowledge. They report that sketching helps the architect mobilize knowledge distant from the initial topic, and that this knowledge preordering supports the production of original and disruptive ideas.3 In plain terms, drawing brought relevant facts to mind that the architect would not have recalled otherwise.

Business problems benefit in the same way. A manager who sketches a supply chain may notice, for the first time, that three suppliers feed one bottleneck. A consultant who draws a client's decision process may see that approvals loop back on themselves. The sketch makes structure visible, and visible structure invites questions.

Sketching and sensemaking

Designers face problems that do not have clear edges. Researchers call these wicked problems, because every attempt to solve them changes what the problem seems to be. A paper on abductive sensemaking through sketching notes that Gabriela Goldschmidt argues that sketching is broader than a technique or phase. It represents the way designers reflect through the act of doing, and it helps them deal with the wickedness of the design problem.4

The word abductive deserves a short explanation. Abduction is the move of proposing an explanation or idea that might account for what you see, even before you can prove it. A sketch is a visible proposal of this kind. It says, "perhaps the situation looks like this," and

invites everyone to test the proposal against what they know.

For leaders, the implication is that early sketches should be treated as questions. A sketch that nobody can criticize has failed, because it carries no information about what to change. A good rough draft invites someone to say, "that arrow should point the other way."

Reflection on reflection

A more recent paper examines a distinction in Schön's work. It looks at the difference between reflection in action and reflection on reflection in action, which Schön expressed in 1992 as the difference between a conversation with the situation and a reflective conversation with the situation.5 The authors argue that a clearer picture of the process can help designers reflect on their own reflection.

The practical reading is simple. During sketching, you react to the drawing in the moment. Afterward, you step back and ask what the series of drawings taught you about the problem and about how you think. Teams that take the second step build judgment, because they learn which kinds of drafts reveal the most.

A habit that supports this is to keep the sketches. Date them, pin them to a wall, and review the sequence at the end of a project. The evolution from first draft to last often shows where key insights occurred and which assumptions fell away.

How to run a sketching session

A good session needs very little. Provide paper, markers, and a timer. State the problem in one sentence, and then ask each person to produce several quick sketches of different approaches, giving each only a couple of minutes. The time limit prevents perfectionism and forces people to focus on the main structure.

Next, display the sketches together and give everyone time to look in silence. Then invite comments of two kinds: what each sketch reveals, and what it leaves out. Avoid voting too early, because the aim is to learn from the whole set. Combine strong elements from different drafts into a new round.

Repeat with a narrower question. For example, after settling on a rough service concept,

sketch the first customer interaction in five ways. Move from the big picture to detail, and keep each stage rough enough that nobody feels invested in a particular drawing. The cycle ends when the team can describe the idea in a way that everyone recognizes.

Sketching beyond products

The method applies to many business subjects. Sketch an organization chart with the informal connections added, a customer decision journey, a pricing logic, a project timeline with its dependencies, or the flow of money through a process. Each drawing translates a verbal argument into a form that people can inspect together.

Remote teams can use shared digital whiteboards, and the same rules apply. Keep tools simple, avoid templates that force neatness, and invite everyone to draw and not only the facilitator. A tablet and stylus often work better than a mouse, because they allow loose lines.

Why rough beats polished

Roughness serves a purpose. A quick sketch costs a few minutes, so a team can afford to throw most of them away. That freedom changes behavior, because people try odd ideas when failure costs almost nothing. A polished drawing, by contrast, represents hours of effort, and its author will defend it.

Roughness also keeps attention on the right questions. When a drawing looks unfinished, viewers ask whether the structure is right, not whether the colors match. Teams that adopt this norm report that meetings move faster, since people argue about substance and spend less time on appearance. Make it explicit that early drafts are meant to be wrong in useful ways.

Cautions

Sketching has limits. A drawing can mislead by implying a precision that the idea does not have, so label rough drafts as drafts. It can also privilege people who draw confidently, so give everyone a clear role and encourage plain boxes and arrows.

Polishing too early is the most common mistake. A neat drawing signals that the decision is

made, and people hesitate to criticize it. Keep early drafts messy on purpose, and delay clean versions until the team agrees on the concept.

Finally, sketching does not replace evidence. A drawing can help a team see a customer problem, yet only customers can confirm that the problem exists. Pair sketches with interviews, observation, and small tests, and let the results change the next round of drawings.

- 1Designing as reflective conversation with the materials of a design situation
- 2Reflective conversation with materials
- 3Designing with sketches: the generative effects of knowledge preordering
- 4Abductive sensemaking through sketching
- 5It's complicated: Dewey, Schön and reflection-in-action

Summary

Exploratory sketch thinking treats rough visual drafts as a way to think and not just a way to present. Schön described a conversation between designer and situation, studies of architects show that sketches help bring distant knowledge into a design, and researchers link sketching to making sense of messy problems. The method needs no artistic skill, only a willingness to draw quickly, look hard, and redraw. Teams should keep early drafts cheap, ask what each one reveals, and resist polishing too soon. Take one unclear problem today, set a timer for ten minutes, produce five quick sketches of different approaches, and discuss what each one showed that words had hidden.