TEACHING NOTE

Synopsis
Eric, the co-founder of Inkdome, a platform that connects people who want to get a tattoo with tattoo artists in their city, has just started the acceleration program The Startup Training, which will help him to understand whether there is a profitable and sustainable market for his business idea. As a first of three steps of market validation, he is asked to understand whether there is problem really worth solving in his market by talking to potential customers. As he reports the results of his interviews to Alessandro, the head of the acceleration program, he is helped to reflect on how well he chose his interviewees and conducted the interviews.

Teaching objective
- Make students sensitive to the need for early customer interviews
- Make students realize interviews could provide erroneous inference on the viability of the business if not conducted correctly
- Make students aware of how to use scientific principles to conduct interviews in a precise way and minimize erroneous inference

Assignment question
See yourself as a scientist which is helping Eric to be sure his interviews reveal how the tattoo market really works and whether launching a search engine that connects users and tattooists is actually a good idea. For this purpose, analyze how Eric conducted his interviews (the 4 points in italic font on page 4-5) and respond to the 6 questions Eric asked himself.

1) Was the decision to interview close friends sensible or could I have selected a different group of potential customers?
2) I made sure the interviewees had an "interest in tattoos" so that they were sensitive to the topic at hand. Nonetheless, could I be any more specific in the way I classify each interviewee? Why could this be useful?
3) Was hosting a Focus Group a good idea in order to obtain information from customers or could there be any dynamics of the group-setting which could be deceiving? What else could I do?
4) I investigated customers' problem by asking them to confirm whether the search for tattooists is long and chaotic. Is there any issue with having such a direct approach to the problem? Could I approach them in a different way in order to understand better whether searching for tattooists is really painful for them?
5) I asked interviewees to suggest me features which they would love to have on my product. Does it make sense to listen to all of their suggestions or is there any reason why I should be cautious about it?
6) The % of people who told me they would use Inkdome was impressively high. Is there any reason why this could be the case? Is there any better metric I could use to have a fairer assessment of the size of the market which would be interested in Inkdome?

Additionally, imagine you were Eric yourself and had the opportunity to do a second round of interviews. Which approach would you use? Write a 1-page proposal where you describe:

a. what you want to discover from your customer interviews
b. the people you want to interview
c. the questions you want to ask them.

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Make sure you explain why your approach allows you to learn more effectively than Eric's whether the search for a tattooist is indeed a problem for customers in the industry. Finally compare your proposal with the one which is provided on page 9.

Discussion plan

Response to Eric's questions

1) Interviewing family and friends is usually not a good idea

Eric started out by selecting the people he wanted to talk to. He opted for some friends of his. This is not an optimal strategy to follow. Friends and family can be positively *biased* towards one's ideas. Nobody wants to tell an entrepreneur's idea is not good, especially people who are personally very close to the entrepreneur. When making customer interviews, make sure to reach for people that you don't know so that they have a real business relationship with them, free of sentimental biases.

2) Segment your customers in depth, different segments have usually different problems

While Eric made sure to interview people who are interested in tattoos, the *sampling* remained superficial. An entrepreneur should create a more nuanced profile of his customers. Who are they? First of all, Eric could start sampling based on the customers' "experience" with the matter at hand. Who would be more likely to use Inkdome? People who are tattooed already or people who are not yet? And if it is people who are tattooed, are these people highly tattooed and experienced or just have few tattoos and feel inexperienced yet? Different segments may have different problems and follow completely different dynamics. When you sample your market, make sure to make a proper segmentation and interview enough members of each segment separately or you could be receiving mixed signals that disorient your understanding of the market.

3) The risk of group-thinking in focus groups, you'd better making 1-to-1 interviews

Eric purposefully decided to summon his friends for an in-depth discussion about tattoos (focus group). As you read from his recount of the group session, people were talking among each other and expressing their opinions collectively. This was the case, for example, when they were asked to say whether they had any advice to improve Inkdome. The problem is that people are likely to influence each other in such context (*groupthinking)*, especially if feedback is provided sequentially (one says a thing out loud and other comments follow on that). What we witness here is a problem that in academia we call as *external validity.* More precisely, a prediction (such as that it is a good idea to introduce the price of tattoos in the platform) is externally valid if the context in which the information to make such prediction was gathered is representative of the context on which we are making predictions on. In our case, the group session is not representative of the true market setting in which Inkdome operates, because it is expected that Inkdome future users will make use of Inkdome services individually. In such a context, a better approach could be to ask interviewees to write, at the same moment in time, a feedback on a piece of paper. Alternatively, one could interview people one-to-one. In either cases, you explore customers' problems individually.

4) Ask your customers to recount their experience, do not push them to think about your hypothesized problem

Another essential part of problem validation is what Eric should ask/tell interviewed people. Eric decided to tell them front-end what he thinks is a problem for people in this market: the search for tattooists is long and chaotic. This is a problem because it may induce people to think this actually is

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a problem when it is not. When customers are solicited to think about something specific, an *anchoring/priming effect* is created, which means that that they perceive a problem as such because it has been induced on them and not because they really perceive it. Here, we are trying to understand the extent to which users perceive this problem painful, a proxy of the cost they will be willing to bear to search for and try the solution offered by Inkdome, which can only be revealed precisely by measuring the extent to which users report the existence of this problem on their own, without any fictitious induction. Academic researchers know this very well. Differently from classic market researches, where one can collect objective information by seeking official statistics regarding a specific market, when you are interviewing someone, you need to solicit information out of them. In order to obtain objective information from respondents, you need to remain impartial, put aside preconceptions and prior knowledge and let people's thoughts come out freely. Eric should have used an *open-ended* approach. He could have asked tattooed people to recount to him how they found their latest tattooist and how much time it took them. Only if they mentioned that it took them a tremendous amount of time and, for example, that they did not go get tattooed as a consequence, then he could truly infer the time to search a tattooist is indeed a relevant problem to solve. Besides, an open-ended approach can also allow to unearth aspects of the business one did not take into account before. For example, Eric's hypothesis is that non-tattooed people search for tattooists online. However, he may discover users rather go to tattoo conventions[1]. This would imply that developing a search engine online would not probably sell much, because the search for tattooists does not take place online but rather offline.

5) <u>Don't listen to customers when they stop being customers</u>

Remind yourself what role interviewees are called upon playing. They are the voice of your potential customers. So, pay attention to whether they put on different shoes along the discussion. Were people asking Eric about Inkdome's competitors from the perspectives of customers or of entrepreneurs/investors themselves? What do you think? The fact they told Eric that they wished they had his idea in the first place, may be a signal of the fact that they switched perspective. This happens very frequently. As you vividly talk about your venture, people begin putting on your perspective and give advices as if they were the founders of Inkdome. In this case, one needs to pay attention. It could take you few seconds to justify changes in the strategic direction of a business because you think customers are suggesting that. We suggest following a more rigid protocol in interviewing customers, where you ask them to wait the end of your questions before they make their own, so that you can split the phase in which they play users from that in which they play some other role.

6) <u>"Would you use my product?" is not a valid metric, focus on the frequency of your problem occurring</u>

The number of people that say that "they would use your product/service" is not a *valid* statistic to rely upon for deciding whether there is demand for your service. What is meant by *validity* is that this question does not really give you what you truly mean to measure, that is the actual probability people are going to use for your service. This is because in an interview context, there is no cost for people to reply "yes, I would use your product". Because your product is not out there, there is no activity users need to perform to obtain it. In an actual market setting, there are instead costs. If you want people to download an app, for example, the cost is that this requires time to do so. This is the reason why the only valid metric you should collect during the problem validation phase is what percentage of people have the problem you have hypothesized. If people have a problem, then it is more likely they will incur some costs to solve it. That is a valid metric because it is an actual proxy of who will undergo the cost of obtaining your service.

[1] These are events in which all major tattooists are summoned by the organizers and offer their services to users along the duration of the convention.

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A suggested approach – 1 page proposal

Overall, we propose that Eric followed a more structured approach to problem validation. It is called scientific approach and consists of four steps: define a theory, break it down into a set of falsifiable hypotheses, test these hypotheses with rigorousness, analyze data in a systematic way to understand whether your hypotheses were correct or not.

Theory

First of all, Eric should start from stating out loud to himself his personal *theory* of why people need Inkdome to exist. He needs to get into the details of what problems he thinks users face in this industry and argue why the search engine is the right solution to that problem. Having a clear theory in mind helps to set the stage for customer interviews, providing one with a map of the questions that needs to ask and how to interpret responses. For example, Eric has mentioned the fact that searching for tattooists is long and chaotic. Let's start from there. Why is it long? Why is it chaotic? What people is to so for? All of them or only some types? Eric should write down his thoughts. It would help a lot. For example, Eric's theory could be something like this:

"People who want get tattooed search for the right artist for their idea. They primarily search online where there currently exists no single platform to view the tattooists' profiles in a given city. As a consequence, people must resort to social media browsing. There is no way to filter tattooists on social media; therefore, search is chaotic and takes a long time. For this reason, a web platform that allows people to directly search tattooists of interest should reduce the time and stress people go through in searching for a tattooist. Therefore, it should increase their ability to find the right tattooist and ultimately their propensity to get tattooed".

Hypotheses

A second necessary step is that Eric transforms this story into a set of *hypotheses* to test through interviews. This is important because, in addition to be more schematic, it pushes him to think about the hidden assumptions on which some of these hypotheses rely upon. Let's see it together. The list of hypotheses could be the following.

1) *People search for tattooists*
2) People search for tattooists online, mainly through social media
3) It is impossible to filter tattooists on social media
4) The online search takes time
5) The online search is chaotic
6) This is so because there exists no single platform for filtering tattooists
7) Once people have filtered tattooists they know *how to choose*

As you can see, there a couple of conditions we did not mention in the theory, number 1 and 7. A precondition for the search problem to exist is that people do indeed search for tattooists. This may be taken for granted, but what if people always go to the same tattooists? Then the search could be something relevant only for non-tattooed people. As to number 7... You see, even if all hypotheses from 1 to 6 were not rejected, it may still be the case the search engine would not represent a valuable solution to customers. Why? Because even if the search process were fastened and users had quick access to a pool of tattooists in their city, they still wouldn't know how to choose among those

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tattooists. They could, for example, not be experienced enough to assess their skills; in other words, they may be unsure on the quality of the tattoo or how well it will preserve over time. Alternatively, it could be that people have original tattoo ideas, in the sense that it is highly unlikely that tattooists have realized users' desired drawings in the past. In this case, users would need to imagine whether a given tattooist is capable of depicting their idea properly. If this uncertainty prevents them from getting tattooed then this is something Eric needs to know. The point is that there could be different theories and different theories may imply different solutions. If Eric is not specific in the way he frames his theory and picture alternative theories, he could fail to detect signals that disprove his original one and prove another one true.

Test

Now Eric is almost ready to go for a new cycle of interviews. It is time to sample his interviewees. For doing that, he needs to segment his potential customers and draw what design thinkers call a customer persona, that is write down the characteristics the potential user has. The criterion one should follow for segmentation is to think about all those characteristics that explain the level at which users perceive the problem one is trying to solve. For example, if Eric thinks that only users in metropolitan cities search for tattooists online, then what city a person lives in is an important variable he wants to take into account. In particular, he wants to test whether those that come from smaller cities do not indeed search for tattooists online, such that he is sure the customer target is only those users who live in metropolitan cities. For the same reason, as mentioned previously, Eric could distinguish between tattooed and non-tattooed people. Perhaps they resort to social media to a different extent (e.g. tattooed people either go to the same tattooist or go to conventions, while non-tattooed people may first resort to word of mouth and then move to social media, as they do not even know tattoo conventions exist). Seemingly, they are most likely to have different abilities to choose the tattooists, because of their different expertise with tattoos. And so on and so forth.

Once Eric has identified the segments worth exploring, he can proceed with the interviews. Remember what we said, it is important that one asks people to recount their experiences, and leave questions open so that people can objectively reveal their problems, desires and wishes. Eric should ask them to tell him about the last time (or first time) they went for a tattoo and what they did. Did they have a clear tattoo idea in the first place? How did they search the tattooist? Did they encounter any problem in the process? Could they choose the tattooist easily? Were they happy about the result? Why?

Data Analysis

To close the circle, Eric must know that it is extremely important to have a clear *data collection* and *analysis* process in place in this phase. Because his goal is to understand whether this is a market worth investing in, he wants to know exactly the % of respondents that have the problem he wants to solve for them. A useful exercise is to sign next to each hypothesis the % of people who confirmed it. For example, what proportion of the interviewed people find search long and chaotic? If this proportion is too small, then your hypothesis is not validated or, in other words, the number of people who have your hypothesized problem are not enough to make your business worth investing in. Additionally, this procedure will also allow to compare two or more customer segments quickly and efficiently, on the basis of the same criterion.
Eric should also remember to record all interviews and take notes. Keeping records of the interviews is essential to allow you to go back at them in case he forgot something. This is important because it is often documented how interviewers may fall victims of bias such as the *serial position effect* which is a memory error that consists in the tendency to remember the first and last things of an interview more than those that were spoken in the middle. Seemingly, earlier and latest interviews may be

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remembered with more probability. Too often, entrepreneurs fail to take this disciplined approach and make mistakes that, once summed up, risk giving him/her a distorted view of their market.

Take Aways

1) There are 3 phases every entrepreneur must undergo in order to make sure his business idea is worth investing in: problem, offer, solution validation.

2) Problem validation is the phase in which entrepreneurs understand whether the problem they are solving with their product/service does indeed exist in the market, how severe it is and for whom it is and is not

3) Common mistakes entrepreneurs commit in this phase are:

    a. **Interview to non-representative sample of customers**, friends and family in particular which tend to give positive confirmatory biases
    b. **Segment their customers too little**, obtaining "average" responses which are not very informative; different segments have different problems
    c. **Rely on focus groups** rather than 1-to-1 interviews and consequently risk incurring in group-thinking biases
    d. **Push interviewees to confirm the existence of their hypothesized problem**; rather a more open-ended approach should be used so that interviewees can reveal the problems which are most painful for them
    e. **Listen to all customers' suggestions for product improvement**, while they should know sometimes customers just like putting themselves in the founders' shoes. The problem validation phase is not the right time to test new product features.
    f. **Use "how many people would use their product" as the metric which reveals the market potential of their project**, but positive responses are to be expected as there is no cost for people to say "no". A better metric is the % of interviewees freely reporting the existence of the hypothesized problem.

4) The best approach to problem validation consists of 4 steps:

    a. **Theory**: write down in details what problem you are solving and why your product will solve that problem
    b. **Hypotheses**: write down all the assumptions that must be true for your theory to hold
    c. **Test**: test these assumptions by asking a representative sample of interviewees to recount their usual behavior with the matter at hand (e.g. the last time they went to get a tattoo) and calculate the % of people who confirm/disconfirm your hypotheses as a score that helps you say whether your assumption holds or not
    d. Data Analysis: record all the interviews, re-listen to them before calculating your score

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