University of Windsor | EPICentre
Entrepreneurship + Practice + Innovation

Testing Assumptions

Research Methodology for Start-ups

an EPICentre presentation

Presented by Paul Brereton

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epicentreuwindsor.ca

Today's speaker

Paul Brereton, MBA

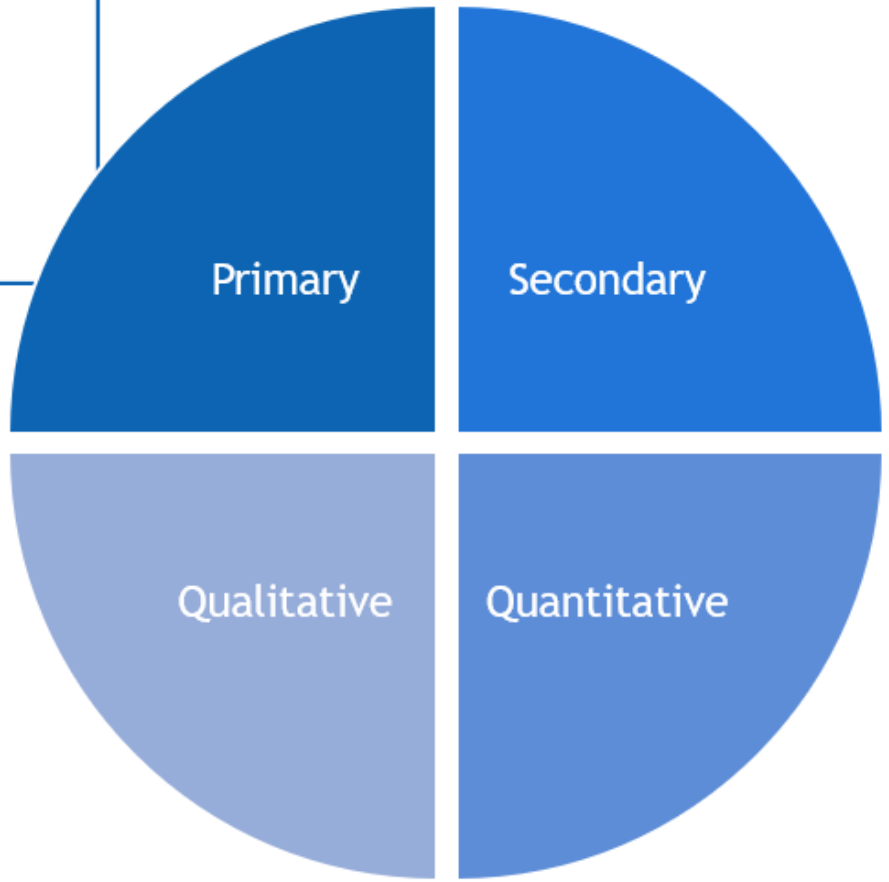
Coupling an MBA with a diverse background of experiences in multiple fields and industries, Paul has provided consulting services to over 40 SME's in Windsor-Essex. As a small business owner himself, he now leverages his knowledge to work with start-ups through the EPICentre as a Program Coordinator in Emerging Technology.

Research Basics

Research Basics

Terminology – The research roundtable

- Depends on
  - The question
  - Your philosophy
  - Your skill and resources



Research Basics

Assumptions… They make a researcher out of U and Me

If I build it, they will come…

No, they probably wont. You built what you wanted to build, not what they wanted to buy!

1. Write down all of your assumptions (yes… all of them)
2. Organize them using a tool like the Business Model Canvas
3. Make a plan to test your assumptions
4. Label an assumption as confirmed only when you have empirical evidence to support it

Start-up Research

A pizza-based example

- Paul wants to open “Pauley’s Pizza” on campus
- He thinks that his pizza needs to be different to get and keep customers

Paul thinks he has identified an opportunity…

Should he just open up shop and start sending out pizzas?

Market Research

Understanding your operational environment

Market research is the process of understanding trends and broad market dynamics in order to find a "place" for your idea.

1. Problem (or opportunity) identification starts the process
2. Secondary research helps narrow the "consideration set"
3. The findings guide your primary research

Competitor Analysis

Who are you up against?

To be get and keep customers, Paul needs to know who his competition is. This will allow him to craft his “Unique Value Proposition.”

- Direct competitors
  - Other pizza places within walking / delivery distance
  - Other restaurants with similar offerings and price
- Indirect competitors
  - Frozen pizza
  - Gas station pizza
  - Leftovers

Search Methodology

High-level Vs Exhaustive

Your approach should be a balance of time and the need to "get it perfect."

- High-level searches are good to "scratch the surface"
- Business decisions should only be based on exhaustive searches!!
- Direct Competition = Exhaustive
  Indirect = Mix
  Substitute = High-level

Research Basics

Sources of secondary data

- Search Engines (Google)
- Wikipedia source list
- White Papers
- Consulting Reports
- Government
- Business groups

http://leddy.uwindsor.ca/

http://www.windsoressexsmallbusiness.com/resources

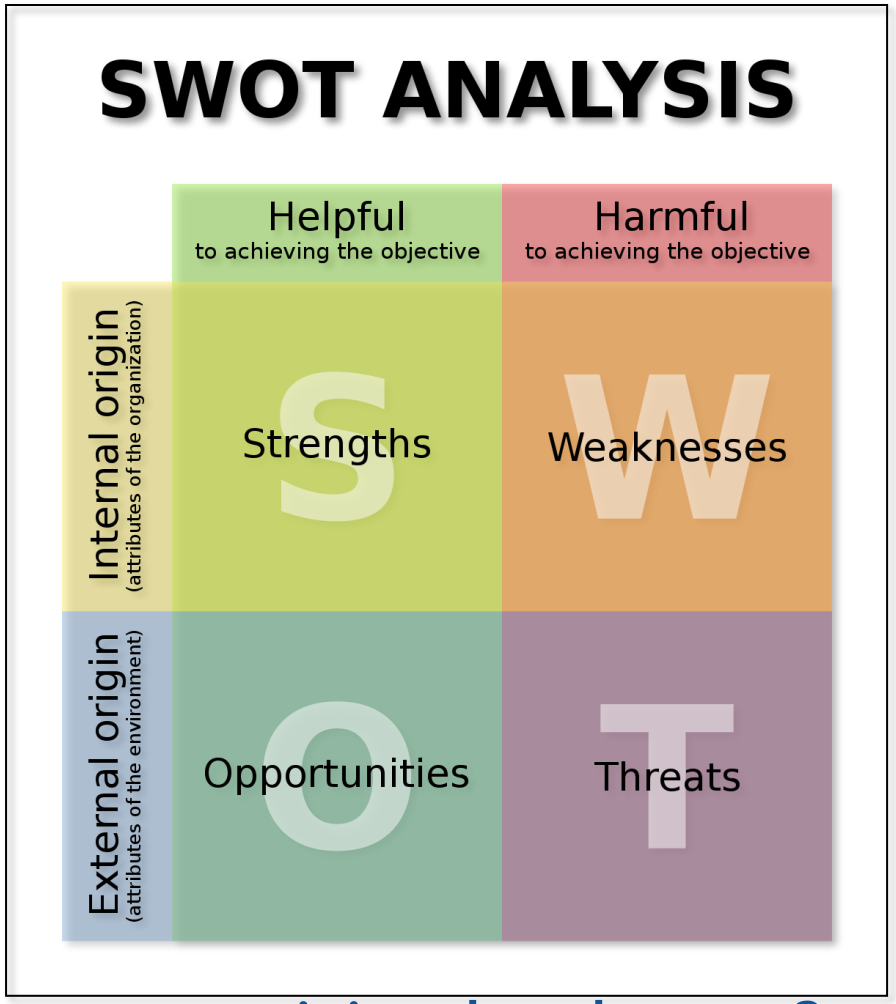
https://www.statcan.gc.ca/eng/start

https://scholar.google.com/

https://business.windsoressexchamber.org/list

Competitor Analysis

Activity



- Who are your direct competitors?
- Who are your indirect competitors?
- Who are your substitutes?
- What is your SWOT?
- How do you imagine you will fit in to the competitive landscape?

Competitor Analysis

How to show the results

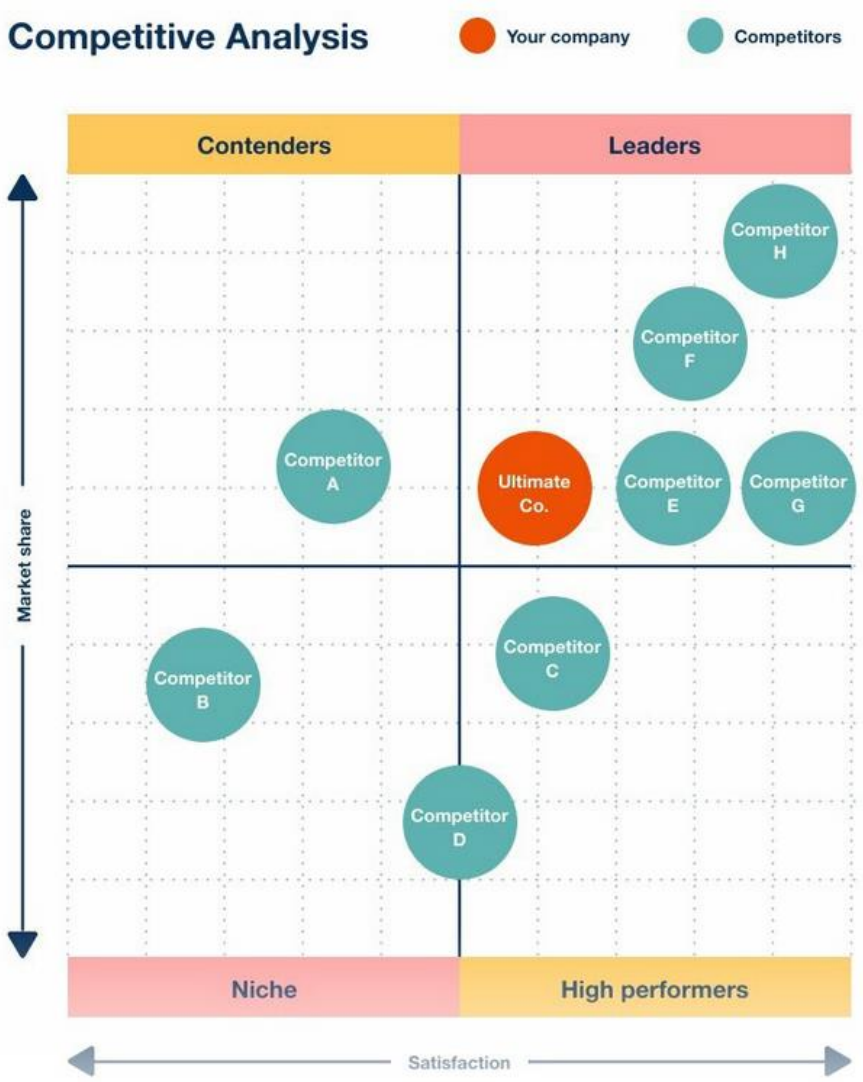
Comparison Table

	You	Competitor 1	Competitor 2	Competitor 3
Product quality	9	1	8	5
Pricing	3	4	3	2
Place	3	7	4	8
Promotion	4	7	9	4
Positioning	6	9	7	10
Reputation	4	10	4	8
People	7	3	7	2
Partnership	8	7	8	6

Competitor Analysis

How to show the results

Quadrant chart



Secondary Research

Benefits and Drawbacks

The Good!

- Cost-effective: Saves on research expenses
- Time-efficient: Quick access to readily available data
- Large sample size: Access to extensive and representative information
- Historical analysis: Insights into trends and changes over time
- Access to diverse sources: Wide range of industry reports, publications, and data

The not-so-Good!

- Lack of control: Limited influence over data quality
- Outdated or incomplete data: Potential for irrelevant findings
- Lack of customization: Data may not align with research objectives.
- Limited data availability: Gaps or proprietary information
- Potential bias: Influence of biases from original data collection methods

Needs, Wants, and Desires

What I would do for a pizza right now…

Problem / solution fit is when you have something; a product, a service, an idea… that someone wants. In the business world, them must want it enough to pay for it.

Paul could just start making pizzas that he assumes students will buy and hope for the best…

Or

He could try to learn exactly what his customers want from a “pizza experience”

He needs to record, organize, and test his assumptions!

Start-up Research

A pizza-based example

- Paul wants to open “Pauley’s Pizza” on campus
- He thinks that his pizza needs to be different to get and keep customers

1. Secondary research shows that pizza is very popular with students, but they are price conscience and lack brand loyalty. Broad trend analysis of students shows that they are becoming more interested in “experiences” instead of simple transactions
2. A search of reviews and menus of existing pizza places within walking distance of campus reveals that students are tired of “the same old pizza”

Paul has identified an opportunity! An experience-based (but affordable) pizza place close to campus. Primary research will help him refine this idea.

Testing Assumptions

Primary Research

Benefits and Drawbacks

The Good!	The not-so-Good!
• Specific and customized data	• Higher cost and time commitment
• Fresh and up-to-date information	• Limited sample size
• Greater control over data quality	• Potential for bias
• In-depth insights	• Difficulty reaching certain populations
• Opportunity for customer engagement	• Ethical considerations

Steps to Testing Your Assumptions

A structured approach

- Choose your business component
- Rationalize your “big question”
- State your Hypothesis (1 or 2)
- Build questions that will confirm or nullify your hypothesis and answer your big questions
- Check that the test works and is a good fit for your questions
- Implement the test
- Analyze the results

Testing assumptions

First steps

Go through the components of your business that we identified earlier and choose one that has testable assumptions

Think up some “Big Questions”

If you had the perfect [customer, supplier, partner, mentor] what would you ask them?

Do you have any burning questions left unanswered from your secondary research?

Return…. The pizza analogy…

The Hypothesis

If I do this, then this will happen

Your hypothesis statement is something you believe to be true (or false) and must express a "directional" result. It is NOT a question!

Stick to 1 variable per statement.

1. If I deliver pizza dressed as a clown, university students will buy it
2. University students will buy pickle-pizza
3. University students are willing to pay extra for pizza shaped like a narwhal

Steps to Testing Your Assumptions

A structured approach

- Build questions that will confirm or nullify your hypothesis and answer your big questions
- Check that the test works and is a good fit for your questions
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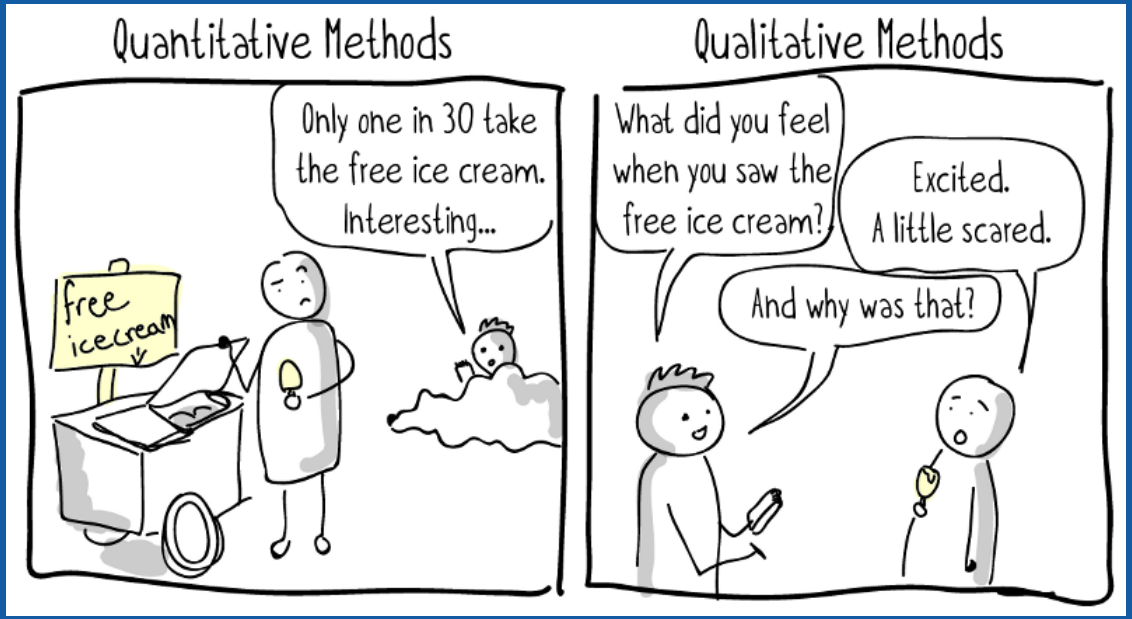
- Analyze the results

And we do this through Surveys and Interviews!

Survey Basics



Steps to Testing Your Assumptions

Main survey components

- Title (clear and descriptive)
- Introduction
- Body (the questions)
- Demography (sometimes before the main questions)
- The conclusion

Survey basics

The introduction

The intro prepares the respondent for the survey. A good intro will encourage quality responses through clear communication of what to expect and why.

Who you are

"My name is Paul, and this survey will help me understand your pizza preferences."

A warning about sensitive questions

"This survey will ask about pizza-related trauma from your childhood"

A note about the time and effort

"This survey will take about 5 minutes to complete"

OR

"This survey will ask you to reflect on a few defining moments in your life. Please expect to spend about an hour completing it. Feel free to save your progress and return as needed. Your detailed responses are appreciated and will go a long way to help us, so please take your time in providing them."

Surveys

Key considerations

- The survey must “stand on its own”
- It should be “easy”
- It should give you what you are looking for (test for this!)
- If you want control of your responses – be sure to control your distribution

Survey Basics

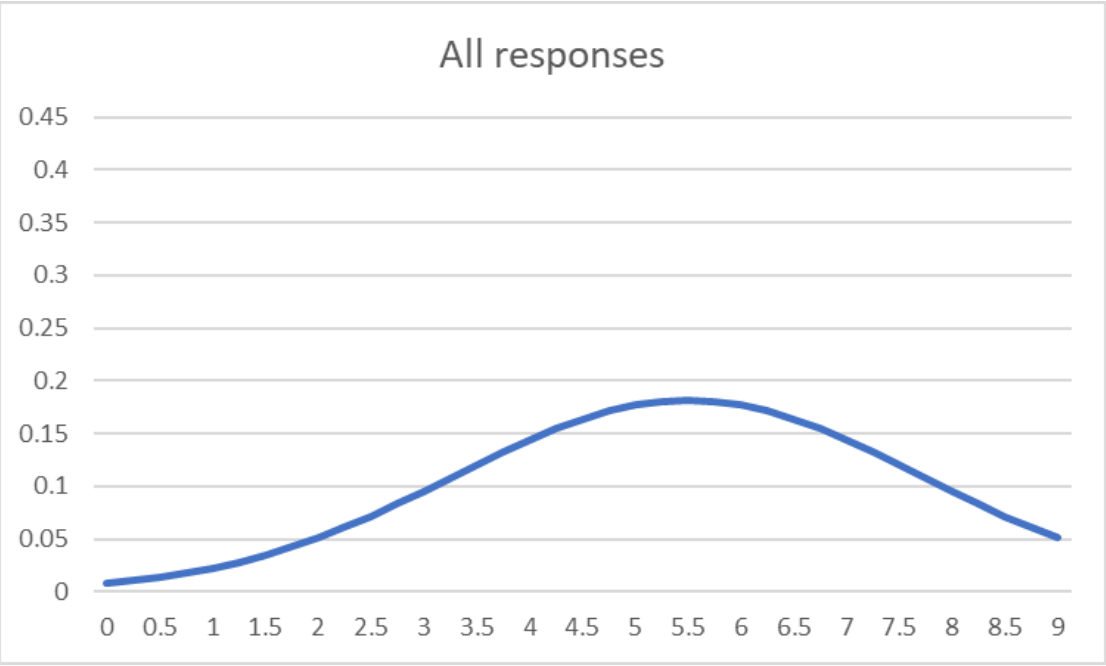
Tips for Likert Scales

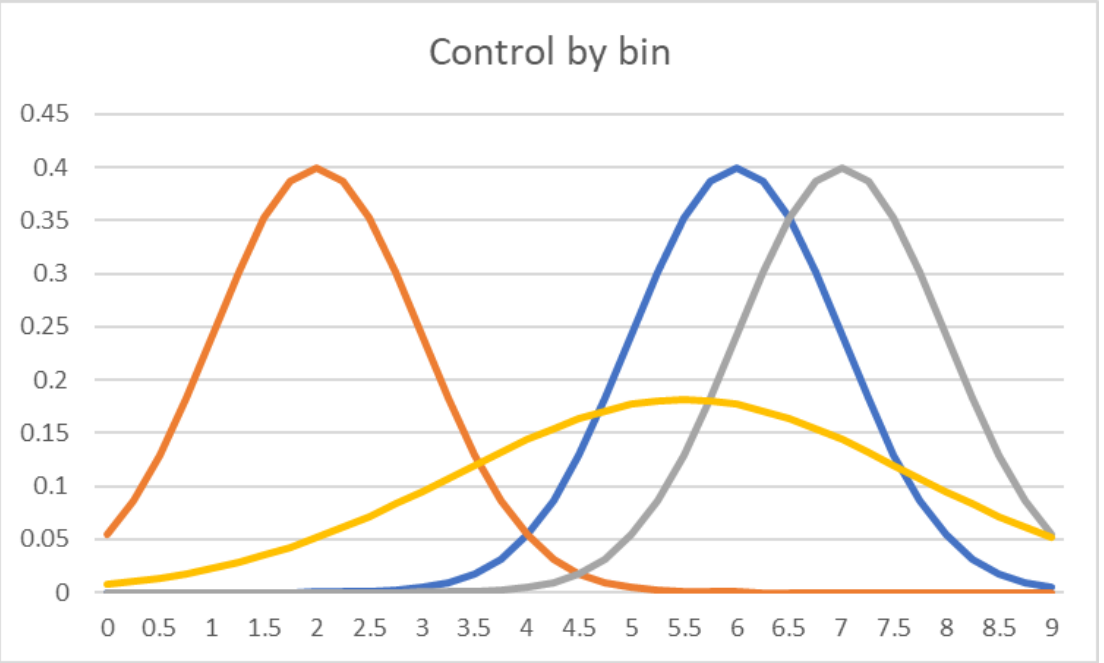
- Use odd numbers
- Don’t make the scale too big OR small
- Try to stay consistent throughout the survey
- Use “zero” only when needed

Survey Basics

Bonus Likert Scale Tip!!!

Using a 9-point scale gives you “next level” data!





Survey Basics - Demography

All about the respondent

Gender identity, age, ethnicity, marital status, income, etc.

Why we ask these questions –

- Find out how many respondents fall into each category
- To see if different groups respond differently
- Make sure the right people are answering the survey

Survey Basics - Demography

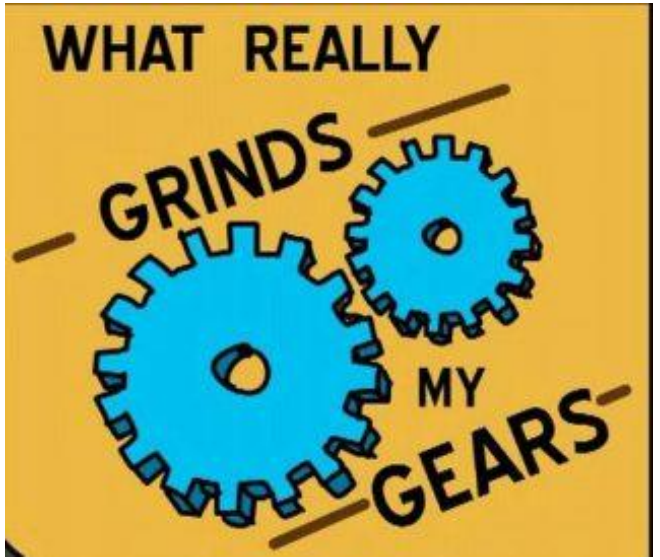
How to ask someone where they live…

Knowing where a respondent lives can give you a lot of valuable information. Keep these things in mind:

- A stranger is not likely to trust you with their address
- Don’t ask too much if you don’t need to!
- Avoid neighborhood names
- FSA is a good balance between precision and burden

Paul's Survey No-no's

I see these all the time….



Likert Scales-

On a scale of 1 to 4…

Making assumptions-

In your area…

Double-barreled questions-

How much did you like the taste and appearance of…

Response binning-

"Annual salary?" 15k – 25k, 25k-45k, 50k+…

Survey basics

Test and launch your survey!

Test the survey first!

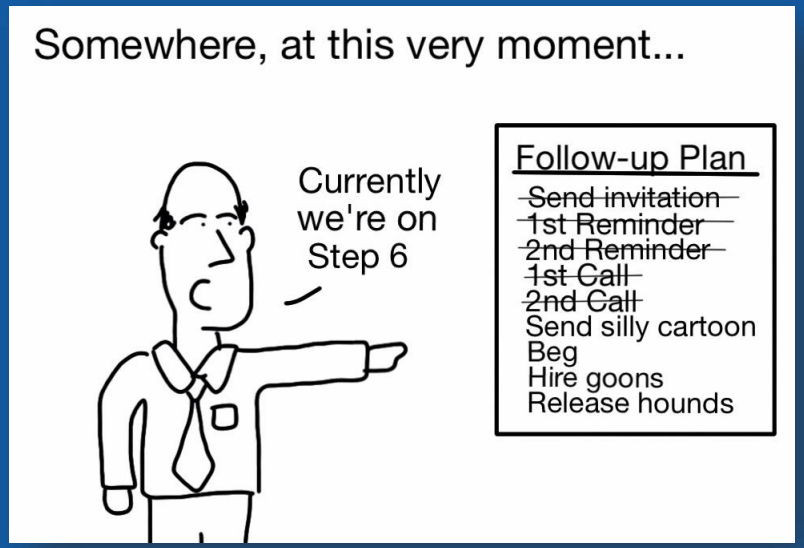
This is your chance to see if people understand the questions, and that you are getting responses that make sense.

1. "Share" your survey with a few people you know and trust and have them take it.
2. Take note of any questions they ask you!
3. Adjust your survey to pre-answer these questions
4. See if the survey responses "make sense"

Now get surveying!!

10-minute Break!!

Interview Methodology



Surveys Vs Interviews

Lets compare

Surveys	Interviews
• Scalability: Reach a large audience simultaneously • Anonymity: Encourage honest and candid responses • Standardization: Consistent questioning and response options • Cost-effective: Conducted at a relatively low cost • Quantitative data: Well-suited for statistical analysis	• Depth and nuance: In-depth exploration of experiences and emotions • Flexibility: Adapt questions based on responses • Contextual understanding: Uncover rich details and customer context • Building relationships: Establish personal connection and trust • Qualitative insights: Provide rich, subjective perspectives

Interview vs. Interrogation

Let's discuss this

Interview

- Freedom
- Mutual consent
- Growth and learning
- Welcoming location

Interrogation

- No sense of freedom
- "I'm in charge"
- EXTRACT information
- Home-field advantage

Interview formats

Choose your style

Structured

- Same questions in the same order
- Basically a survey done in person
- Easy to analyze and make comparisons
- Requires almost no skill

Unstructured

- No set questions
- At the sole discretion of the interviewer
- Very hard to analyze and make comparisons
- Requires great skill

Semi-structured

- The “Prompt and Probe” technique
- Prompt questions give the road map
- Probe questions dive deeper
- Results based on skill of interviewer

Who do we interview?

And why?

- People with the **most to give**
- People with the most **clout**
- People with the **deepest understanding**
- People within **arms reach**!

When and where do we interview?

(Hint… its not what's easiest for you…)

- When is best for them?
- Do they have a family?
- Do they eat meals? (like for real, no one wants to do an interview while they are trying to eat)
- Set up a time with plenty of cushion

- Give the respondent the home-field advantage
- Make it comfortable (some exceptions may apply)
- Reduce their burden
- Check your tech!
- Mind your surroundings

How many do we interview?

Can't stop, won't stop.

- Must balance the need for data with the effort to get it
- High-value respondents = need less of them
- Seek "Data saturation"
- B2B ≠ B2C ≠ B2G
- Remember: (Almost) every interaction is an interview!

Phase	Goal
Customer Discovery	5-50
Problem / Solution Fit	5-15
MVP Demo / walk thru	5-100

Interview **do's and don'ts**

- Treat them as people!
- Be kind and courteous
- Use active listening techniques
- Use accepting body language
- Get consent and record if you can
- Read their body language
- SHOW GRATITUDE!!!!!

- Don't lead them down the garden path
- Don't sell to them!!
- Do NOT disagree with their stance

Starting the interview

Every interview should have these!

- Give them the what, why, and how
- Warn them of sensitive topics
- Give them a time-frame (if practical)
- Consent to record

What do you actually ask?

https://youtu.be/OTkP2JDeGWM

Pauley's Pizza

How does the story end?

- Campus area pizza places had been "doing it they way they always did"
- They failed to pivot in response to market trends and changes in student preferences
- They likely blamed low revenue on a saturation of the market (and didn't see Pauley's Pizza as a threat

Pauley's Pizza took the time and effort to gather data through both secondary and primary research. This allowed Paul to create a "magical pizza experience" that has made Pauley's Pizza a shining example of pizza-power, a pillar of the pizza-community, and a hit with students.

Data-leveraged Business Decisions

Be like Paul

Thanks to his intimate understanding of what his customers actually wanted, his business has been hugely successful. As a result…

Paul now delivers Narwhal shaped pizza in his Lamborghini (while dressed as a clown)…

And sometimes gives workshops on research for startups

Interview Guide Basics

Research Methods for Startups

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