Turning anecdotes into insights Mixed methods research in support of design

Dalia El-Shimy UX Research Lead // Shopify

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"Now there is a **constant tweaking** of formats and systems. For the 'creatives' who work behind the scenes this might seem easy and inconsequential... but for process workers at the other end of the system it is just bloody annoying. It's as though every week or two when you opened your desktop on your computer the icons had been changed, and subtly re-arranged."

- A disoriented-and-somewhat-mad merchant, Shopify









"Look for 'Footprints' of the Trouble Area: Now that we've **seen** it **in the wild**, we look for repeatable **patterns** that could happen in the analytics **data**. This data could tell us if **others** are experiencing the same issue."

- Jared Spool, Center Centre





"Triangulation allows us to have greater confidence and richer insights than is possible to achieve through a single method alone. We aspire to form a comprehensive narrative of what we know about the current and future users of our products rather than methodologically siloed insights."

- Sara Belt, Spotify





"Value to the user is **qualitative**. Value to the business is **quantitative**. In order to make **holistic decisions**, you have to create a representation that makes that **translation**."

- Erika Hall, Mule Design





"Integrating **big data** and **thick data** provides organizations a more **complete context** of any given situation. For businesses to form a **complete picture**, they need both big and thick data because each of them produce **different types of insights** at varying scales and depths."

- Tricia Wang, Sudden Compass

When you combines statistical trends with stories and personal experiences, the collective strengths of both provides a better understanding of the research problem than either forms of data alone.

This is what mixed methods is all about.

"An approach to research in the social, behavioural, and health sciences in which the investigator gathers both quantitative (close-ended) and qualitative (open-ended) data, integrates the two, and then draws interpretations based on the combined strengths of both sets of data to understand research problems."

- John Creswell, University of Michigan

Let's talk about qualitative research.

http://uxmag.com/sites/default/files/uploads/anderson-richard/sandersdiagram.jpg

Elyse's Shopify Journal

Welcome back Elyse, and thanks for taking the time to fill out your journal today!

* 1. How's your theme coming along?

- I'm still working on it.
- It's ready to go live on my store.

Let's talk about quantitative research.

This is your chance to directly influence the upgrades we'll make to Shopify over this year. The more we understand what's important to you, the better we can develop solutions to help you make sales and grow your business.

This survey will only take about 10 minutes.

Complete the survey by Monday, January 16th for your chance to win a \$1,000 pre-paid Visa card.

* 1. How would you describe yourself?

- Shopify store owner
- Working for a Shopify store owner
- Shopify partner or expert
- Previously owned a Shopify store
- Did the free trial but never launched my store

Database Console Shopify Redshift_7

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Support Tickets Analysis

Number of support tickets for a chosen topic and period, with comparisons to an equal previous period, normalization by total number of customers, and as percentage of total support tickets.

HOME	REPORTING	CUSTOMIZATION	ADMIN	
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Das	hboards	Overview		
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• Inte	lligence Events	20,000		
🗘 Rea	I-Time	10,000		
🔒 Aud	ience	Jan	15	Jan 22
Ov	erview			0000 22
Ac	tive Users			
Co	hort Analysis BETA	Sessions	Users	Page
Us	er Explorer	498,621	255,457	3,1
▶ [Demographics			
► I	nterests	Avg. Session Duration	n Bounce Rate	% Ne
	Geo	00:04:40	30.86%	42
►E	Behavior			

Comparison	Confidence	Rel. Increase
control converts higher than inline	69%	
control converts higher than link	83%	
inline converts higher than link	68%	

Group	Conversion	Total	Observed rate
control	3,347	7,095	47.17%
inline	3,227	6,900	46.77%
link	3,167	6,830	46.37%

So how do we choose the right technique?

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Current financial situation

Purting your strategy into action is how your marketing plan should work. Mar set. At the same time, it will also show you how you're going to work with your through networking, advertising etc.

rategizing inclugation cannig that activities you are doing to develop your offers. Inclust are followed up and the activities you are doing to develop your offers.

Stage

Question

Method

Findings

Idea

Gather initial thoughts on problem and impact of solving it

Think

Become experts of the problem domain, both internally and externally

Explore

Plan how the problem will be solved, explore and evaluate various solutions

Getting shit done

Build

Iteratively build and ship small, quality components of the solution

Launch

Publicly release the solution to users

Tweak

Iterate on the solution based on user feedback and usage

- What potential problems might we solve? How might we gather context on the problem?

Idea

Qualitative:

- Looking at existing research (internal and external)
- Interviews, observations, surveys, diary studies to establish baseline of current problem
- Team kickoff workshop •

Quantitative:

- Mining existing data for potential hypotheses or insights Establishing facts, confirming/disproving assumptions

Getting shit done

- What are the root problems?
- What are the biggest challenges we might focus on?

Qualitative:

- Profiles/segments/personas to identify who might be impacted by the project More interviews and observations
- Workshops with users to further dive into the problem space ٠
- Team workshops to explore and scope down the problems to be addressed •

Quantitative:

• Quantify how big are the segments that would benefit from this product

Getting shit done

Getting shit done

Questions:

- How might we be resourceful and •
 - effective when testing assumptions and hypotheses?

Qualitative:

- Lo-fi prototype/clickable mockup testing • **Quantitative:**
- Define success metrics and measure baselines •

- Can people use what we're building?
- Is what we're building addressing the initial problems and goals?

Qualitative:

- High-fidelity usability tests
- Diary studies, beta testing

Quantitative:

 A/B tests, instrumentation, start building out reports

Build

- Are people using it in the way we thought they would?
- Did we successfully solve the problem we identified?

- •

Quantitative:

metrics

Getting shit done

Populate reports, monitor success

- •
- •

Getting shit done

What incremental improvements might be worthwhile? What revisions should we make to our roadmap?

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Retrospectives, post-mortem Analysis of support tickets Triangulate previous insights with quantitative data

Quantitative:

• A/B tests Monitor reports

How questions change over time

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Are we building the right thing?

http://radar.oreilly.com/2014/02/building-the-right-thing-vs-building-the-thing-right.html

Are we building the thing right?

Completion

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Stage	Question	
ldea	What potential problems might we solve?	Ε
Think	What are the root problems?	l
Explore	How might we test assumptions	L
Build	Can people use what we're building?	
Launch	Are people using it in the way we thought they would?	
Tweak	What improvements might be worthwhile?	

		•	. •	
Q	ual	lita	tive	

Quantitative

Existing research, observations, diaries, surveys, workshops

Identify segments, interviews, observations, workshops

o-fi prototype/mockup testing

High-fidelity usability tests, diary studies, beta tests

Forums/social media monitoring, feedback forms

Analysis of support tickets, retrospective, triangulate

Establish facts, confirm/ disprove assumptions

Quantify segments

Define success metrics, measure baselines

A/B testing, instrumentation, reporting Populate reports, monitor

success metrics

A/B testing, monitor reports

So how do you go from quantitative and qualitative to mixed methods?

"An approach to research in the social, behavioural, and health sciences in which the investigator gathers both quantitative (close-ended) and qualitative (open-ended) data, integrates the two, and then draws interpretations based on the combined strengths of both sets of data to understand research problems."

- John Creswell, University of Michigan

Strengths

Qualitative

Provides detailed perspectives Captures the voices of the participa Captures complex phenomena Adapts to context Is largely participant-driven Appeals to people's enjoyment of sto

Quantitative

Is relatively efficient when it comes data collection and analysis Draws conclusions for large number people Investigates relationships within da Appeals to people's preference for numbers

Weaknesses

ants	Is time-intensive when it comes to data collection and analysis Studies few people Has limited generalizability Loses scale Is subject to the researcher's biases
s to	Does not record the words of the
rs of	ls impersonal
	Provides limited understanding of the
ata	context of participants
or	Loses resolution
	Is largely researcher-driven

So how do you actually mix methods?

Three mixed methods designs

Convergent design Explanatory sequential design

Exploratory sequential design

Convergent design

Study large numbers of people

Captured detailed perspectives and complex phenomena

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REPORT

Explanatory sequential design

Discover patterns for large numbers of people

Enrich them with details and context

Exploratory sequential design

Capture the stories of few

Draw conclusions for large samples

REPORT

design

Data What else do we know about user X?

> Research What might be of value to user X?

Experiment: Is feature Y

of value?

Feature Y

Exploratory 3 sequential design

If you do **qualitative user research**, I'm not here to turn you into a **data scientist**.

And vice versa.

The real power lays in understanding enough about **both types** of methods, and their respective **strengths** and **weaknesses**, to be able to have **informed** conversations and forge **collaborations**.

So leverage the strengths of each method...

Voices, stories, complex phenomena, details

Objectivity, efficiency statistical trends, relationships between data

... to go from anecdote to an insight

Thank you! dalia@shopify.com

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Current financial situation

Parting your strategy into action is how your marketing plan should work. Mar set. At the same time, it will also show you how you're going to work with your through networking, advertising ere.

draitegrang the right tuning that its syour customers, buy up your offens, maximize sales. The marketing plan should be innovative, it should have the de ales are followed up and the activities your are doing to develop your offens.

