

Text Analytics Workshop: Understanding the Full Picture

Student Worksheet

Part 1: Quick Self-Assessment

Before we dive in, let's see where you're starting from.

Check all that apply:

- I've analyzed survey responses manually
 - I've used Excel to find patterns in text
 - I've conducted interviews for research
 - I've used Python/R for any analysis
 - I've heard of thematic analysis
 - I've wondered how Amazon reads all its reviews
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Part 2: The Same Data, Two Approaches

Here's a customer review. Let's analyze it both ways:

"The laptop is okay I guess. The battery dies super fast which is annoying when I'm trying to work at coffee shops. But the screen is gorgeous, probably the best I've owned. Just wish it lasted longer on a charge. My old MacBook went all day. This one needs plugging in by lunch. Pretty frustrated TBH."

Qualitative Analysis Exercise

Read the review and identify:

1. What emotions are expressed? _____
2. What lifestyle context matters? _____
3. What comparison anchors their expectations? _____
4. What underlying need isn't being met? _____
5. Write a thematic statement about this review:

Text Analytics Exercise

Now analyze it computationally:

```
python

# Count approach
positive_words = ["okay", "gorgeous", "best"]
negative_words = ["dies", "annoying", "frustrated"]

Positive count: ____
Negative count: ____
Overall sentiment: ____
```

Extract mentioned aspects:

- Battery: mentioned ____ times, sentiment: ____
- Screen: mentioned ____ times, sentiment: ____
- Comparison brand mentioned: ____

Which approach told you more about:

- The customer's feelings? ____
- Specific product issues? ____

- The scale of the problem? _____
-

Part 3: Matching Method to Question

For each business question, choose the best approach: **TA** = Text Analytics | **QR** = Qualitative Research | **BOTH** = Both Needed

1. How many customers mention shipping delays? _____
 2. Why do customers feel anxious about AI? _____
 3. What features should we add to our app? _____
 4. Is sentiment improving after our apology? _____
 5. What does "reliability" mean to our users? _____
 6. Which competitor is mentioned most? _____
 7. How do customers use our product in daily life? _____
 8. What percent of reviews are negative? _____
 9. What cultural factors influence purchase decisions? _____
 10. Which words correlate with returns? _____
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Part 4: Building Your Analysis Plan

You're analyzing 50,000 hotel reviews. Design your approach:

Step 1: Text Analytics First

What patterns would you search for automatically?

- Overall sentiment distribution
- Most mentioned amenities
- Trending complaints by month
- _____
- _____

Write the code concept (not actual code):

1. Load all reviews
2. _____
3. _____
4. Generate dashboard showing _____

Step 2: Qualitative Deep Dive

You notice 2,000 reviews mention "uncomfortable." What now?

Sample size for deep reading: _____ reviews

Research questions:

1. _____
2. _____

Coding framework:

- Physical discomfort (beds, chairs, temperature)
 - Psychological discomfort (_____)
 - Social discomfort (_____)
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Part 5: Dictionary Development

Create both types of dictionaries for analyzing restaurant reviews:

Qualitative Coding Dictionary

Code Name: Food Quality Definition: _____ Include: _____
Exclude: _____ Edge cases: _____
Example quotes:

- " _____ "
- " _____ "

Text Analytics Dictionary

```
python  
  
# Automated word lists  
food_positive = ["delicious", "____", "____", "____"]  
food_negative = ["cold", "____", "____", "____"]  
service_positive = ["____", "____", "____"]  
service_negative = ["____", "____", "____"]
```

Key difference: The qualitative version requires _____ while the text analytics version only needs _____.

Part 6: Interpreting Results

You ran text analytics on 100,000 product reviews and found:

```
Top Negative Aspects:  
- Battery: 3,847 mentions (72% negative)  
- Price: 2,901 mentions (83% negative)  
- Updates: 1,204 mentions (91% negative)
```

Your Recommendations

Immediate action (based on text analytics): Priority 1: _____ Priority 2: _____
Priority 3: _____

Follow-up research needed (qualitative):

1. Interview _____ customers about _____
2. Conduct focus groups to understand _____
3. Ethnographic observation of _____

What text analytics CAN tell you:

- _____
- _____

What you need qualitative research to learn:

- _____
- _____

Part 7: Ethics Check

Scenario 1: Public Twitter Data

You scrape 1M tweets about depression.

Ethical concerns:

- Text analytics: _____
- If done qualitatively: _____

Your decision: _____

Scenario 2: Employee Feedback

Analyzing "anonymous" employee surveys.

Text analytics risk: Can identify people by _____ **Qualitative risk:** Researcher might recognize _____

Safeguards you'd implement:

1. _____

2. _____

Part 8: Tool Selection

Match the tool to the task:

Tools: A. Python/NLTK B. NVivo C. Excel D. ATLAS.ti E. R/tidytext F. SPSS Text Analytics G. Google Sheets H. Dedoose

Tasks:

1. Code 50 interview transcripts: _____
2. Sentiment analysis on 1M tweets: _____
3. Quick word frequency on 100 responses: _____
4. Collaborative qualitative coding: _____
5. Statistical text analysis: _____
6. Mixed methods research: _____

Part 9: Career Planning

Skills Inventory

Rate yourself (1=Novice, 5=Expert):

Qualitative Skills:

- Thematic analysis: _____
- Interview techniques: _____
- Coding & memoing: _____
- Theory building: _____

Text Analytics Skills:

- Python/R programming: _____
- Sentiment analysis: _____
- API usage: _____
- Dashboard creation: _____

Where's your gap? _____

Job Market Reality Check

Position: Customer Insights Analyst Requirements:

- Analyze customer feedback (text analytics)
- Conduct user interviews (qualitative)
- Build dashboards (technical)
- Present to executives (communication)

Which skill would make you stand out?

Part 10: Design Your Dream Project

Combine both approaches for maximum impact:

My question: _____

Phase 1 - Text Analytics:

- Data source: _____
- Sample size: _____
- Metrics to track: _____
- Expected output: _____

Phase 2 - Qualitative Follow-up:

- Method: _____
- Sample: _____
- Questions to explore: _____
- Expected insights: _____

Business impact: _____

Skills I need to develop: _____

Reflection Questions

1. **Biggest "aha" moment:**

2. **One misconception I had:**

3. **How I'll use both approaches:**

4. **Question I still have:**

Challenge: The Hybrid Approach

Take ANY company you're interested in:

1. **Week 1:** Scrape 1,000 reviews (text analytics)

- Find top 3 issues
- Calculate sentiment

2. **Week 2:** Deep dive (qualitative)

- Read 50 reviews about top issue
- Identify underlying themes
- Develop improvement recommendations

3. **Week 3:** Present findings

- Quantitative overview (what)
- Qualitative insights (why)
- Action plan (what to do)

Company chosen: _____ **Platform for reviews:** _____ **Your**

hypothesis: _____

Remember This

You're not choosing between qualitative and text analytics. You're choosing when to use each.

It's like being a detective:

- Text analytics = Your surveillance cameras (see everything)
- Qualitative = Your interrogation skills (understand deeply)

Master both, and you'll solve cases others can't even see.

Your next step: Pick one technique from each approach and practice it this week!