Data Analysis Section

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Summary

The purpose of this document is to describe the data analysis methods which will be used to analyze data yielded from two research methods.

First, here is the research question this research study seeks to answer followed by the research methods which will be conducted:

Research Question

What compels a person to receive app notifications from a news service?

More specific research questions:

- What compels a person to receive app notifications from a *local* news service?
- How often do users opt out of news app notifications? Why do they opt out?
- Why do users choose to enter the news app upon receiving a notification?
- What kind of content are users seeking to receive from an app notification?

Research Methods To Be Conducted

- **Interviews**
- **Diary Studies**

*Both methods are expected to yield qualitative data. The diary studies will include opportunities for participants to provide quantitative data, too.

Variables and Observations

The following participant variables will be sought during the research study:

Variables:

- Gender
- Age
- Technological skill level
- Device used (I.e.: iOS of Android smartphone or tablet)
- Number of news app push notification services subscribed to
- Number of app push notifications received in a day
- Type of news content participant consumes most
  (I.e.: Local, national, sports, niche, etc.)
- Push notification satisfaction scores — Likert scale
- Success rate — whether or not participant enters app upon receiving
  push notification
- Participant's overall thoughts and feelings toward app push notifications

Observations:

- Six people will be observed in either an interview or diary study.

Data Analysis Methods To Be Used

The interviews and diary studies are expected to yield both categorical and ordinal data, as described in the "Some Basics of Data Analysis" document provided in this week's course lecture.

With that in mind, the following data analysis methods will be used:

- **Summarizing**
- **Coding**
  - **Compiling codes into spreadsheet**
- **Deliverables including:**
  - **Flowcharts**
  - **Graphs**
  - **Personas**

- ## Summarizing

  Each interview and diary study will be summarized, highlighting the appropriate variables from each — both quantitative and qualitative variables will be summarized.

Summary documents will include both written summaries and edited videos which will highlight the most valuable variables, values and observations from each interview or diary study. This should help the research team form target audience personas, too.

- ## Coding

Variables, values and observations will need to be coded into useful data groups which can help form the listed deliverable items including flowcharts and graphs.

Spreadsheets

Codes will be compiled into spreadsheets which will help form the listed deliverables.

- ## Flowcharts, Graphs and Personas

Flowcharts

Flowcharts will help depict how a participant describes his or her interaction with app push notifications. The participant will be asked to describe his or her experiences with app push notifications — from start to finish. This type of qualitative data could reveal steps in a workflow, which should be displayed in a flowchart, or several flowcharts.

Graphs

The data from interviews and diary studies can be depicted in graphs.

For example: Variables and values shared by participants will be displayed in several different types of graphical documents. Success rates and satisfaction scores — which participants will be asked to compile as part of a diary study — can be displayed in graphs.

Personas

Summaries of the data from interviews and diary studies can lead to the development of personas. These summaries will be based on specific data gathered about these members of the target audience.

Research Instruments

The following research instruments will be used to conduct the
listed research methods with a focus on the above variables and observations:

- **Interview guide**
- **Video recordings**
- **Interview notes**
- **Diary study guide**

• Interview guide

The interview guide will make sure specific questions are posed to each
participant. The guide also will make sure the research question(s) stays in
focus during each interview.

• Video recordings

Video recordings of interviews will allow the research team to deeply
analyze each interview and create edited reels to highlight specific
portions of the interview which provide useful data.

• Interview notes

Taking notes during each interview can be a very important part of the
data analysis. Notes will help the research team sift through the recorded
interviews to find the useful parts, to put it plainly.

• Diary study guide

Diary study participants will be given a diary study guide which will help
them record specific data — both qualitative and quantitative.

Example items on diary study guide:

- Participants will be asked to categorize each app push notifications
  received by content type.
- Participants will be asked to provide the time at which each notification
  was received.
- Participants will be asked to rank each push notification based on how
  useful or useless he or she finds it — a Likert scale.