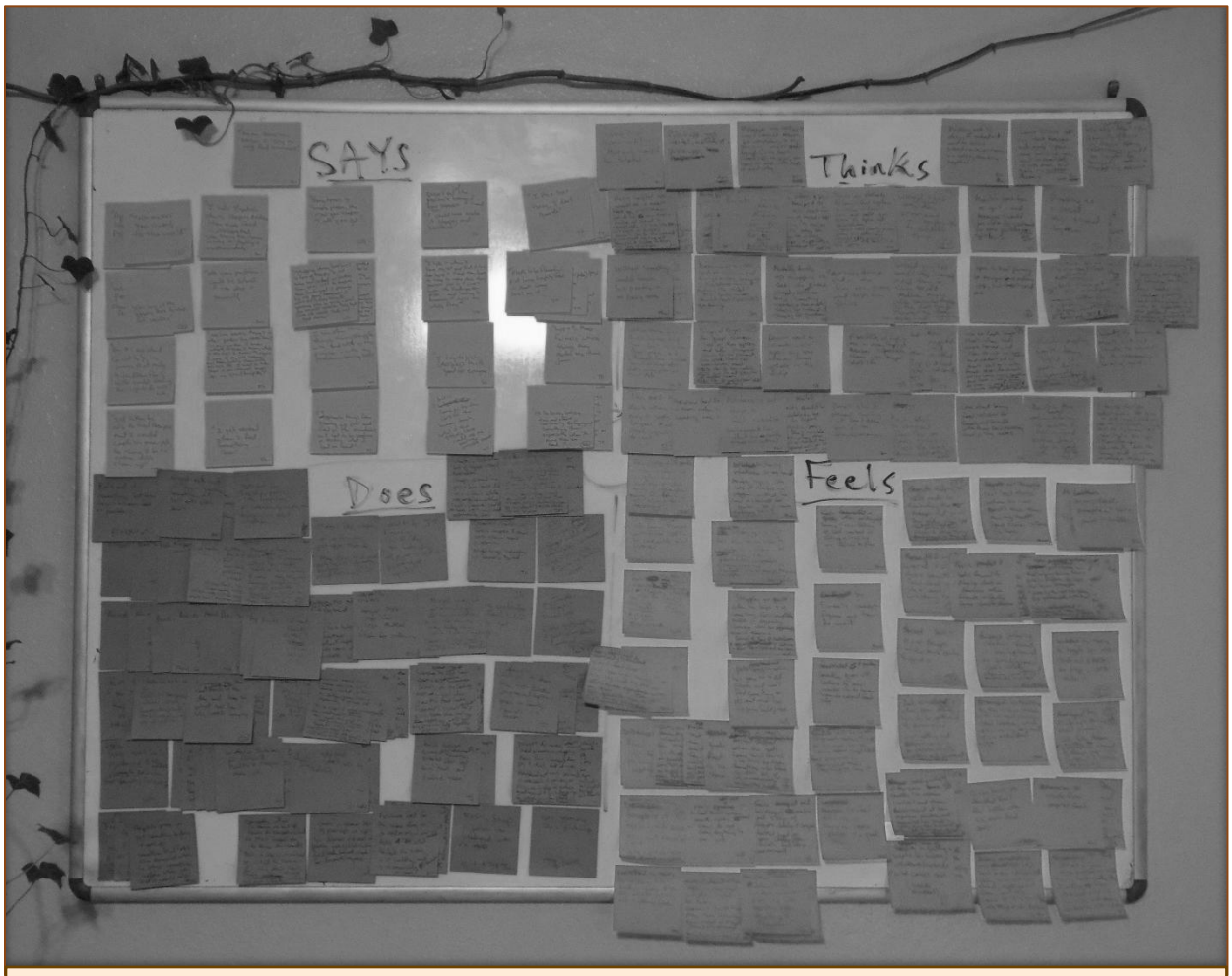
Meal Maven User Experience:

Exploratory & Generative Research Plan



Abstract:

This UX research plan enhances John Harris's user experience research and design skills through a practical case study for the Google UX Design certificate. The project focuses on "Meal Maven," an app to revolutionize meal planning via efficient inventory management. It involves understanding user needs, uncovering challenges, and benchmarking against competitors. Research goals include hands-on experience, obtaining the Google certificate, and identifying gaps in the food app market. The research includes competitor analysis, surveys, interviews, user personas, and journey maps. Limitations include solo research efforts and budget constraints affecting demographic diversity.

Harris Anthropological Research LLC

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Executive Summary

Introduction and Background

This UX research plan aims to enhance John Harris's expertise in user experience research and design through a practical case study as part of Google's UX Design certificate. The project targets the creation of "Meal Maven," an app designed to revolutionize meal planning through efficient inventory management. Exploratory research, such as being planned here, is crucial to distinguish "Meal Maven" in a crowded market.

"Meal Maven" aspires to transform pantry contents into culinary masterpieces. The project involves exploratory research to understand user needs, uncover challenges, and benchmark against competitors.

Research Goals

- Build hands-on UX research and design experience.
- Obtain the Google UX Design certificate.
- Identify gaps in the food app market and understand user groups' needs and challenges.

Research Goals

- Who are the user groups for a comprehensive meal planning app?
- What motivates each group, and what are their goals?
- How do users collaborate, plan meals, and make shopping lists?
- What barriers and frustrations do users face in meal planning?

Research Framework

- Conduct preliminary research on competitor apps.
- Design, release, recruit for, and conduct a screening survey.
- Design, release, recruit for, and conduct structured interviews.
- Synthesize findings into user personas
- Design and conduct competitor analysis.
- Develop journey map
- Propose problem statements, hypothesis statements, and value propositions
- Prioritize design challenges

Limitations

- John Harris, as a solo researcher, lacks multi-departmental insights and existing user demographics.
- Limited to no budget, resulting in recruiting from social circles, which may lead to less diverse demographics than ideal.

Introduction and Background

Project Background

This research plan is an ambitious endeavor designed to enhance John Harris' experience in UX research while undertaking Google's UX Design certificate—a seven-part course that thrives on hands-on experience. The course not only hones the skills of budding UX designers but also ensures students curate a stellar portfolio to enhance employment prospects, even nudging them towards establishing their own portfolio website and personal branding.

In this project, the investigator (John Harris), keen on acquiring genuine UX research experience, deviates from certain prefabricated information typically used for UX design purposes. Instead, he pursues real UX research, surpassing the course's stated goals. Crafting this research plan itself is a practice in adhering to rigorous UX research procedures. It ensures consistency in selecting and applying methods to answer key questions, provides reflective justification for methodological choices, and evaluates whether the stated goals have been achieved.

The case study revolves around designing an app and a responsive website, "Meal Maven," aimed at consumers' inventory management and meal planning based on available ingredients. This research plan outlines the framework for exploratory research, focusing on exploratory investigations to understand core questions about the target users of Meal Maven, their needs, and challenges. Additionally, the project involves comparing competitors' users and assessing their strengths and weaknesses.

This phase of the project is dedicated to exploratory research, aiming to uncover fundamental insights about Meal Maven's potential users and their requirements. It includes a thorough analysis of competitors' offerings, helping to identify the strengths and weaknesses of existing solutions in the market.

By meticulously following this research plan, the investigator strives to ensure that Meal Maven not only addresses user needs but also stands out in a competitive landscape, providing a meaningful and engaging experience for its users. After some immediate user research, Meal Maven is anticipated to include the following key functionalities to create a comprehensive meal planning app.

- Planner
- Cookbook
- Recipe Browser
- Shopping List
- Pantry

Research Goals

The goals and needs of Harris Anthropological Research LCC, or the investigator John Harris, is to:

- Forge Expertise in UX Research and Design: Embark on a journey to cultivate hands-on experience and sharpen skills in user experience research and design.
- Achieve Academic Distinction: Secure the prestigious credentials offered by completing Coursera's Google UX Design certificate, adding a significant feather to the professional cap.
- Decode the Food App Market: Delve into the intricacies of the food app landscape, identifying market gaps and gaining a deep understanding of the primary user groups, their needs, and challenges in executing meal planning activities.

Research Questions

The following are the research questions:

1. **Identify Specific User Needs and Pain Points**: Determine the top three challenges users face when planning meals using existing apps.
2. **Evaluate User Satisfaction**: Measure user satisfaction levels with Meal Maven versus the lead competitor app on a SUS scale of 1-5.
3. **Assess Feature Utilization**: Identify the top five features users frequently use in meal planning apps and their effectiveness.
4. **Benchmark Against Competitors**: Compare "Meal Maven" with two leading competitors in terms of user satisfaction, feature set, and usability.
5. **Determine Market Gaps**: Identify at least two unmet needs or gaps in the current meal planning app market.

Research Questions:

1. **User Groups and Demographics**:
    - What kinds of user groups are there for a pantry inventory + meal planning + research search + cookbook manager + shopping list generator + list export to a grocery store app shopping cart?
    - Which group is the primary target user group?
    - What are the primary demographics (age, gender, occupation) of users who actively use meal planning apps?
    - How do these demographics influence their meal planning habits and preferences?
2. **User Motivations and Goals**:
    - What motivates each group to use meal planning apps (e.g., time-saving, dietary needs, budget management)?

- What specific goals do users aim to achieve with meal planning apps (e.g., healthy eating, reducing food waste)?
- What are each user group's interests and goals when it comes to weekly planning routine?

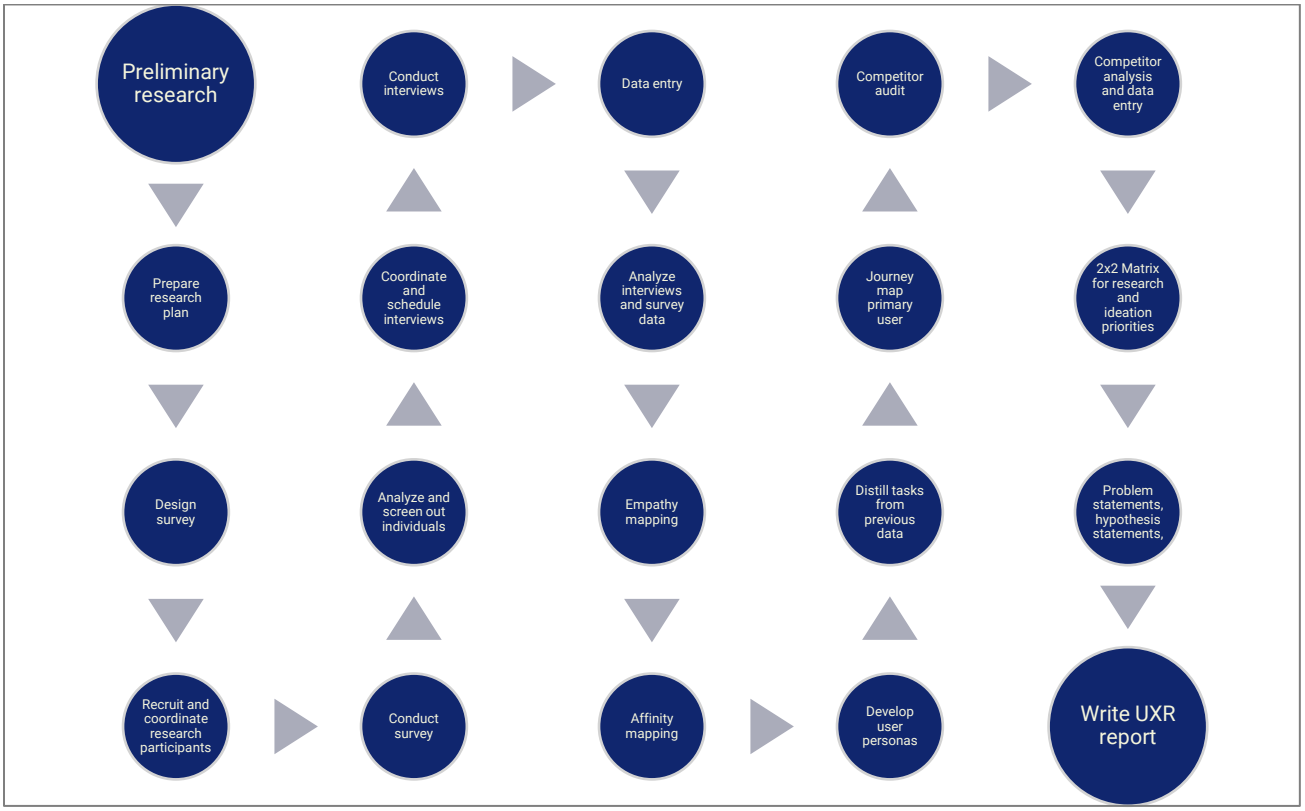
3. **User Collaboration and Planning**:
   - How do users collaborate with family members or roommates in meal planning and grocery shopping?
   - What tools or methods do they use for collaboration (e.g., shared lists, calendar apps)?
   - How do users coordinate or communicate the menu, or meal plan for the week with others, if applicable?
4. **Barriers and Frustrations**:
   - What are the top three barriers users face when using meal planning apps?
   - How do these barriers impact their overall meal planning experience?
   - What stressors or moments of frustration arise during users' meal planning routines?
5. **Feature Effectiveness**:
   - Which features do users find most helpful in meal planning apps (e.g., recipe suggestions, grocery list generation)?
   - How effective are these features in meeting users' meal planning needs?
   - What tools do users use in meal planning (e.g., calendar, app, chalkboard, notepad)?
6. **Competitor Analysis**:
   - How does "Meal Maven" compare to its top three competitors in terms of user satisfaction and feature set?
   - What unique features or benefits does "Meal Maven" offer that competitors do not?
   - What kinds of food-related apps do users currently use, or why not?
7. **Unmet Needs and Market Gaps**:
   - What are the top two unmet needs or gaps in the current meal planning app market?
   - How can "Meal Maven" address these unmet needs to provide a better user experience?
   - What barriers or unseen needs do these user groups experience in their meal planning routines and resources, especially which obstacles deter otherwise potential food-related app users from being these app users in the first place?

Research Framework

Steps Overview

Steps in conducting research and how the data is collected analyzed.

Figure 1. Research Framework



- **Preliminary Research** of competitor food-related apps objectives (see results in Appendix):
    - To familiarize the researcher with the variety of and functionalities of available food-related apps
    - Recognize immediate design strengths and weaknesses
    - Benchmarked food-related apps to assess Tier level of competitiveness
        - The limited budget testing to Android store apps and those without upfront pay walls to see all features and attributes for thorough comparison. This admittedly biases analysis somewhat towards those with free versions without commitments and limits a more fully representative sampling

    - Decide extent of meal planning app functionalities against existing market options and how this new app can stand out from the rest
    - Inform survey and interview line of questions
- Prepare research plan
    - Organize goals
    - Select research questions
    - Plan order of activities
    - Select appropriate methods for stated goals
- Design screening survey with initial closed-ended questions
    - Design informed consent for survey
    - Determine necessary demographic questions, screen questions, and relevant closed-answer questions suitable for a survey in its use in later shaping user group behaviors
    - Shop around most affordable survey platform
    - Determine ideal nature of research participants that are likely to meet screening limitations
    - Determine approximate representativeness of survey participants needed, survey was capped at 15.
    - Outreach to prospective research participants, explain project, and invite them to the survey
    - *Readers can see a separate copy of the informed consent and survey questionnaire
- Recruit research participants
- Release screening **survey** with initial closed-ended questions to research participants
- Devise research participant interview questions
- Shop around for video conference platform to host video interviews and calendar coordination and scheduling apps, HAR ended up using Zoom Workplace
- Schedule and conduct structured **interviews**
    - Obtain necessary recording permissions and releasing rights
    - After interviews, save audio transcripts in project folder
    - After interviews watch interview videos to appraise communication style, tact, and voice to educational purposes
    - After interviews water interview for non-verbal cues to note emotional reactions and annotate notes for later use in empathy map
    - See separate copy of the informed consent and survey questionnaire

    - Assess interviews for the point-of-diminishing returns
    - Thank participants for their help
- Data entry and code responses from survey and interviews into spreadsheet
- Inductively collate responses into **empathy map** and conduct analysis for increased frequency and co-occurring shared traits of participants into user groups
- Synthesize survey, interview, and immediate user research data in aggregated **affinity map** into clusters of user problems/opportunities
    - List collective challenges from competitive analysis, survey, interviews, and field observations
    - Group challenges by like challenges, quantify them
    - Data entry the challenges into spreadsheet
    - Prioritize design challenges in so far as they meet personas' needs and challenges
- Develop **user personas**, one longer detailed version for distilling into one single slide version for course assignment requirements and guiding design
- Conduct formal **competitor audit analysis**, prepare report and slides
    - Devise consistent functionalities as points for comparison
    - Classify food-related apps into a table
    - Audience profile competitor's products (newspapers, industry publications, internet search, user forums, blogs, review sites, and comments)
- Quantitatively prioritize affinity map clusters by degree of ease to design (least number of different functionalities) and offering the greatest value to more user groups into a 2x2 Matrix for prioritizing design ideation
    - X axis (user value)
        - "+2" repeated multiple user groups communicated this need
        - "+1" repeated need expressed in one user group with an anomalous interest expressed by another user group member
        - "-1" repeated need expressed in only one user group
        - "-2" an anomalous interest expressed by one user group member
    - Y axis (design difficulty)
        - "+2" Entails 1 underlying functionality
        - "+1" Entails 2 underlying functionalities
        - "-1" Entails 3 underlying functionalities
        - "-2" Entails 4 or 4+ underlying functionalities

    - Organize previous preliminary competitor information into table
    - Revisit competitor apps and enter their performance notes into the table
    - Collect review ratings and put into table
    - Collect reviewer comments and synthesize their positive and negative feedback, annotate for relevance to later affinity map
    - Prepare 2 exploratory competitive analyses matrices
        - 1 matrix summarizing the landscape of meal planning related apps and their functionalities, identifying which area in the meal planning app landscape does this project best fit into
        - 1 matrix comparing apps within the aforementioned target area of the meal planning landscape by two key aspects integral to users identified during initial questions survey and user interviews, to focus ideation against tier 1 competitors
- Distill survey and interview data into **journey map** of primary user
- Revise scenario portion of user personas with journey map data
- Conduct **competitor usability testing** with best version of a similar app to the one proposed with one individual from each of the user personas.
- Redefine user group problems with **problem statements, hypothesis statements, and value propositions**, in preparation for ideation.
- Write user research **report**

Limitations

As a single-member operation, John Harris faced the challenge of not having conversations with multiple departments to determine goals, interests, and potential research issues. Without the benefit of a business's existing user demographics or an in-depth understanding of the diverse landscape of food-related apps, the burden of exploratory research fell squarely on starting from scratch. Consequently, this project must aim to carve out a distinctive niche in an already saturated meal app market.

Assumptions:

- Preliminary exploratory research highlights that a key user group for meal planning apps comprises parents, especially those with young children.
- Anticipated users of food-related apps often include individuals strapped for time or money (see research participant profile section).

Planning Considerations:

- Identify who is using these apps and why certain types are favored, understanding what works for them and why.

- Uncover invisible challenges, barriers, or deterrents users face with specific types of food apps.
- Investigate user behaviors in meal planning routines and why potential users' needs are unmet.
- This design project intentionally excludes weight or nutritional goals, wellness tracking, and meal delivery kits, given that wellness is beyond this study's scope, and meal delivery kits often do not address more complicated needs.
- Preliminary research revealed that comprehensive meal planning apps, which cover all phases from planning to preparing recipes, are comparatively rare. Most food-related apps focus on specific tasks such as (see Appendix for more information):
    - Exercise + diet tracking for weight loss goals
    - Grocery store rebate redemptions, discounts, and coupons
    - Grocery store order pick-up or home delivery
    - Restaurant order pick-up and delivery
    - Recipe search and personalized cookbooks
    - Pantry Inventory and Recipe searcher
    - Recipe searcher, cookbook, and shopping list generation
    - Comprehensive meal planning with calendar integration and grocery list export to external apps for order pick-up

Data Collection

Participant Profile Screening & Initial Survey Methods

Target research recruits were based on preliminary research and chosen from the researcher's personal social circle when believed to meet some of meal planner app user characteristics, plus a few non-users to discover reasons for not using this app in hopes of innovating ways to solve obstacles to these would-be users. A total of 15 of participants are sought for survey, 10 for interview, and 5 for each usability test. See script for survey questions later in this plan. Fitness for study will be based on meeting all of the following conditions:

- Target demographic
    - Parents with children at home
    - Early career individuals or students
    - Retirees
    - Stay-at-home individuals, homemakers, or the unemployed
    - Individuals or families experiencing various meal planning complications, such as:
    - Dietary/healthy lifestyle, medical restrictions, ethical, ethnic, or religious restrictions
- Participates in about half or more of the week's meal planning activities
- About half or more of the individual's meals are homecooked
- Uses apps in general and uses at least one food-related app presently

Interview Methods

Structured interview questions were crafted based on the study's overarching research questions. However, they were also iteratively refined by participants' responses to the

Screening Questionnaire and Initial Questions survey, as well as the nature of their answers during the interviews. Clarification was sometimes sought for oversimplified responses, or new follow-up questions were posed in response to emerging patterns. These spontaneous follow-up questions helped answer other outstanding questions and provided rich context to enhance the details of previous answers.

Prior to the interviews, informed consent was obtained through the screening surveys. Permissions for digital recording and rights release were secured ahead of the recording sessions. Rapport was built with interviewees by first asking questions about their personality and values, which then smoothly transitioned into questions about their meal planning routine. After all questions were asked, interviewees were thanked and shown how their contributions would yield valuable insights. Interviews are expected to run between 45 min to 90 min. See interview scripts later in this plan for particular questions asked.

The intended outcomes of these interviews are the creation of empathy maps, journey maps, affinity maps, and user personas. The interviews were conducted via video calls on Zoom, and audio transcripts were produced to revisit exact quotes and use video for reference.

Results Analysis

In Table 1 you can see the angles from which data between the initial survey and the interview were cross-tabulated in the development of user personas for this project.

Table 1 Cross-tabulations for Persona Development

Question	Vitals/Demographic Background	Personality	Values	Weekly Meal Planning Hours	Definitive Habits	What is food?	Meal Planning Resources	Grocery Store Preferences	Goals	Frustrations	Skills	Relationships affecting Meal Planning
Age	x			x	x	x	x	x	x	x	x	
Gender	x								x	x		
City & State	x									x		
Occupation	x		x								x	
Ancestral Affiliations	x		x									
Household composition	x		x	x	x	x	x	x	x	x		x
Education	x		x		x		x	x	x	x	x	
Personality		x			x	x	x	x	x	x		

Values			x		x	x	x	x	x	x		
% of ethnic recipes / wk					x		x	x	x		x	
% of homemade meals/ wk				x	x		x				x	x
Typical meal planning routine			x	x	x	x	x	x	x	x	x	x
Food-related apps used, or why not	x				x		x	x	x	x	x	x
Meal planning tools used	x				x	x	x	x	x	x	x	x
Stressors in meal planning routine		x	x		x	x	x	x	x	x	x	x
Household food restrictions			x		x	x	x	x	x	x		x
Food aversions			x		x	x	x	x	x	x		x
Diets			x		x	x	x	x	x	x		x
Medically avoided foods			x		x	x	x	x	x	x		x
Religiously or other culturally avoided foods			x		x	x	x	x	x	x		x
What *is* food			x		x	x		x	x	x		x

Operation Plan

Since this project is part of a self-paced course and not a full-time job yet, the spread of this study is not comparable to industry expectations. However, there were limits for different portions of the study to keep things moving, for example, the initial questions and screening questionnaire, and research interview were conducted within a month, as time allowed and awaited voluntary participation by unpaid participants.

Recruiting, due to the necessarily small scale of this case study, has a small budget and recruiting research participants will be limited those in John Harris' social-network of individuals who may be willing to participate without incentive and meet aforementioned potential user groups. Unfortunately, certain biases are anticipated due to this budgeting limitation of participant recruitment.

Competitive Audit Analysis Methods

Objectives

The goals of this analysis were threefold:

- Identify key features and innovative solutions within meal-planning apps, focusing on their relevance to user needs.
- Analyze app store comments to extract unmet needs, successes, and common complaints from real users.
- Cross-reference insights from UXR exploratory research with app store feedback to inform how receptive the market is to emerging solutions.

Research Questions

Our inquiries aimed to shed light on the competitive landscape:

- How prevalent are apps with the six targeted functionalities, and in what combinations?
- Which design aspects are uniquely memorable or particularly effective?
- What user challenges and complaints dominate app store reviews?
- What design elements consistently receive praise from users?
- Who is using these apps, and what are their defining characteristics?
- What friction points exist in one-stop-shop meal-planning apps?

Comparison Criteria

- To evaluate competitors comprehensively, we compared the following aspects across apps and their platforms (apps and websites):
- Feature Functionalities: core and distinctive capabilities.
- Audience Profile: User demographics and preferences.
- First Impressions: Initial usability and appeal.
- User Interaction: navigation flow, responsiveness, and accessibility.
- Visual design: aesthetic quality and branding consistency.
- Content: relevance and clarity of information.
- Memorable attributes: standout elements that resonate with users.
- Advantages: competitive strengths.
- Hindrances: limitations or potential pain points.
- Pricing: affordability and value proposition.
- Review rating and number of reviews: ratings and review volume across platforms.

The analysis distilled findings into structured tables, discussions, visualizations, and a SWOT analysis.

Survey Questions

(Informed Consent)

Meal Planning Case Study: Participant Screening and Initial Questions

Thank you for your willingness to participate in my survey. Your feedback is insightful and impactful as it affords me the chance to dip my toe in User Experience Research and Design. Before participating, I want to be upfront about a few things, so you know what you are getting into.

You were invited to participate a member of my social network and are believed to meet at least one of the target audience/user categories.

The **purpose** of this survey is to:

1) demonstrate ability in screening for research participants relevant to this study;

2) grant insight into a user experience of a hypothetical app and website for inventorying and meal planning recipes based on available ingredients;

3) provide additional experience in analyzing interview data and sorting user data into user groups, with which I can find commonalities in shared user behavioral categories called "personas."

As to **length**, there are 21 total questions and is expected to take about 8-12 minutes to answer. They're mostly multiple choice or yes/no questions.

If you decide to participate, in this initial survey, I would also like to ask for your **commitment** in also participating in:

1) a private interview (in-person, virtual, or over-the-phone) for this study's open-ended questions; and

2) a follow-up prototype testing session (in-person or virtual).

As to **privacy**, while I ask for name and best contact information, this information will remain confidential while the other non-identifying information I would like to be able to include in my public portfolio. If something is still uncomfortable to answer, you're free to not answer a question. Though, the questions are not anticipated to pose much discomfort.

I also want to **inform** you that by participating you consent to your non-identifying information to be used for my educational and professional purposes. No name and contact information will be shared. It will be scrubbed from the spreadsheet at the completion of the study and will not be publicly disseminated. Unfortunately, there are no promised incentives for participating in this study; however, I'm happy to update and share with you the successes and results from your participation in this study.

If you have any questions, feel free to call me at 406-207-3898 or email me at harrisanthroresearch.com.

Questions:

1) I have read the informed consent and agree to participate.
- Agree
- Disagree
2) Name?
3) Preferred contact information
4) Check all circumstance(s) which apply to you, if any.
- I'm a parent who actively has kid(s) and/or teenager(s) living with me
- I'm a student and/or early career individual
- I'm a retiree
- Homemaker and unemployed
- I use restaurant, grocery store, or food delivery service apps
- I have dietary restrictions (e.g., health/diet, medical, ethical, religious, cultural, or ethnic reasons)
- None of the above applies.
5) What is your age?
6) What is your gender?
7) What city and state do you reside?
8) What is your occupation or industry (e.g. retiree, student, homemaker, unemployed are also valid categories if applicable to you)?
9) Describe your racial/ethnic/ancestral affiliation or identity.
10) Describe your family/household composition (e.g. 1 cat, or 2 adults and 3 kids)
11) What is the highest level of education you have completed?
- Did not attend school
- Elementary school
- Junior high school
- Graduated from high school
- 1 year of college
- 2 years of college
- 3 years of college
- Graduated from college
- Some graduate school
- Completed graduate school
- Other
12) During a typical week, what percentage of your household's typical weekly meals do *you* make at home? (For convenience, assuming you have 3 meals in a week, 3 meals would be 14.2%)
- 0-20%
- 21-40%
- 41-60%
- 61-80%
- 81-100%
13) Which kind of apps do you use?
- Restaurant ordering app(s)

- Food delivery service app(s)
- Cookbook / Recipe apps(s)
- Pantry inventorying app(s)
- Grocery store ordering app(s)
- None of the above apply

14) Which kind of food restriction categories apply to meal planning factors for your household?

- Health/ diet
- Medical
- Ethical
- Religious
- Cultural
- Ethnic
- No food restrictions apply

15) During a typical week, are at least half of all your meal plans recipes ethnic food (i.e. non-Americana)?

- Yes
- No

16) During a typical week, what percentage of your household's home-cooked meal preparation do *you* participate in? (e.g. recipe searching, shopping list-making, ordering, preparing ingredients, and cooking all count)

- 0-20%
- 21-40%
- 41-60%
- 61-80%
- 81-100%

Interview Questions

1) May I take pictures and collect voice and video recording, and do you release all rights to them?
2) How would you describe your personality?
3) What are your personal values?
4) Walk me through your typical meal planning routine, what are the when, where, with whom, and how do you go about it?
5) About how long does this take you in a week?
6) What stressors or moments of frustration arises during your meal planning routine?
7) What you meal plan what sort of categories or “buckets” or mental slots of needs do you usually think in terms of when trying to remember what to shop for?
8) How do you coordinate or communicate the menu, or meal plan for thw eek with others, if applicable?
9) What tools do you use in meal planning (e.g., calendar, app, chalk board, notepad)?
10) How do you decide to eat out / get take-out instead of home cook?
11) Why or why not use food-related apps, such as pantry inventory apps?
12) What kinds of food aversions do you plan for?
13) What kinds of diets do you subscribe to?
14) What kinds of foods do you avoid for medical reasons?
15) What kinds of food do you avoid for religious reasons or for other cultural reasons?

Ethical and Reporting Considerations

Ethical Considerations

1. **Informed Consent**: Before participating in the research, all participants will be provided with an informed consent form. This form will outline the purpose of the research, the procedures involved, the potential risks and benefits, and the participant's rights. Participants will be required to read and sign this form to indicate their voluntary participation.
2. **Confidentiality**: All personal information collected during the research will be kept confidential. Participants' names and contact information will be de-identified from the data to provide extra protection from any hacking and to protect their privacy. Harris Anthropological Research LLC will retain control over the data and will retain it for at least 7 years only in an abbreviated form on paper copies at Harris Anthropological Research's office.
3. **Data Usage**: The non-identifying information collected during the research will be used for educational and professional purposes. No names or contact information will be shared publicly. The data will be scrubbed from the spreadsheets within 90 days completion of the study and replaced with participant numbers. Notifications will be sent to each of the participants notifying them of the digital records being sanitized of identifying information to provide additional defense against hacking. The spreadsheets will also not be publicly disseminated.
4. **Withdrawal Rights**: Participants have the right to withdraw from the research at any time without any penalty. They can choose not to answer any questions that make them uncomfortable.
5. **Recording Permissions**: Permissions for digital recording and rights release will be secured ahead of the recording sessions. Participants will be informed about the use of their provided information and the purpose of the recordings.
6. **Data Security**: All data will be stored securely, and access will be limited to authorized personnel only. Measures will be taken to ensure the data is protected from unauthorized access or breaches through storing data on secure systems.
7. **Ethical Considerations**: Conducting ethical research is essential to Harris Anthropological Research LLC. We ensure we obtain permission from the research participants to use their provided information; obtain permission to collect unreleased video and photography (just for analysis purposes) and will not be public, unless they consent to releasing a still photo of themselves during an interview or test session; explain that they can withdraw from participation at any time and that there is no financial incentive to participate.

Deliverables

- Portfolio case study slides from the user research
- Research plan, including
- Survey questions
- Interview questions
- Spreadsheet workbooks of survey, interview, empathy maps, aggregated affinity map, and competitor data
- 4 Personas
- Include one non-human or non-user persona
- An in-depth write-up for each persona
- a single summary slide for each persona
- Problem statements for each persona
- Hypothesis statements for each persona
- Value propositions for each persona
- 1 Journey map of the primary user persona
- Competitor audit report
- Complete exploratory user experience research report

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Appendix A

Preliminary Research Findings

In an informal look at what kinds of food apps are available, words like “food” and “meal planning” were searched in the app store in person and with the help of CoPilot 2 and 2.5 to get a sense of relative prevalence of these apps and their niches. Considerations also included how focused their functionalities were; how much customization or personalization for users were available; observations about their limitations; and a sense of audience served by these apps.

Meal planning and recipe apps have become essential tools for individuals seeking to streamline their grocery shopping and dietary routines. AI-Chef leverages artificial intelligence to provide users with automated meal suggestions and cooking assistance (AI-Chef, 2025). Apptopia's audience data offers valuable insights into the demographics of various meal planning applications, helping businesses tailor their offerings accordingly (Apptopia, 2025). BigOven serves home cooks who require structured meal planning, recipe organization, and grocery list management (BigOven, 2025). According to Business Research Insights, the meal planning app market continues to expand, reflecting growing consumer interest in health-conscious meal planning solutions (Business Research Insights, 2025). Canvas Business Model provides further analysis of app-specific demographics, indicating that Jow primarily targets urban professionals and working parents, while Lifesum is most popular among millennials and Gen Z for health tracking and nutrition planning (Canvas Business Model, 2025). Cooklist helps users reduce food waste and optimize grocery shopping through smart pantry management (Cooklist, 2025), while Eat This Much is ideal for individuals seeking automated meal planning tailored to dietary goals (Eat This Much, 2025). EveryPlate, a budget-friendly meal kit service, continues to grow its presence in the U.S. online grocery delivery market (Statista, 2025). Other notable apps, including Mealime and PlateJoy, cater to users looking for personalized meal plans and grocery integration (Mealime, 2025; PlateJoy, 2025). Insights from SimilarWeb reveal key user engagement statistics for Cooklist, PlateJoy, BigOven, Paprika, and StashCook, showing variations in app adoption and functionality preferences across different user groups (SimilarWeb, 2025). With applications such as Paprika focusing on recipe storage and pantry tracking (Paprika, 2025) and StashCook helping home cooks save and plan meals more efficiently (StashCook, 2025), it is evident that the digital meal planning market provides users with a range of tailored experiences to suit their cooking habits and nutritional priorities.

A search of Google Play store, revealed food-related apps to fall into six major categories, see Figure 2 showing their approximate prevalence. The rows of interest are highlighted in gray. Most of these apps are single functionalities, showing that cumulatively single function apps make up 73.68% of food-related app market (n=95). While food-related apps having multiple functionalities from these categories only make 26.32% of the food-related app market. This is probably because it takes simply more time to design a good app that does more things. The largest single categories of food apps are nutrition & diet tracking, and food delivery apps, making up almost a quarter each of the food app market in their own right. When we think about who might use these apps, health conscious or those medically restricted

individuals come to mind. While food delivery apps may cater those simply too busy to visit the grocery store, or even those medically restricted from doing so. To further hone insights into who target research participants for the proposed meal planning app might be the next questions then are what are these multiple food app functionalities? What combinations of these categories are the most and least prevalent? Where does the Meal Planning & Recipes category fall in the mix? Who are the target audiences of these meal planning and recipe apps?

Figure 2. Major Food-Related App Categories

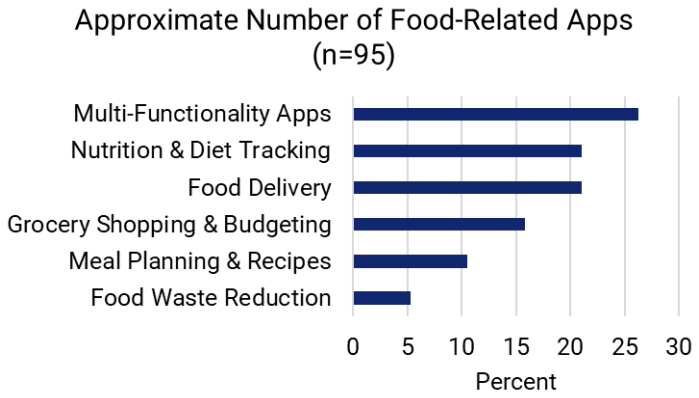

Figure 3. Prevalence of Combinations of Multi-Functionality Food-Related App Categories (n=25)

	Food Delivery	Meal Planning	Grocery Shopping	Nutrition Tracking	Food Waste Reduction
Food Delivery	-	24%	40%	20%	8%
Meal Planning	24%	-	32%	48%	12%
Grocery Shopping	40%	32%	-	28%	16%
Nutrition Tracking	20%	48%	28%	-	16%
Food Waste Reduction	8%	12%	16%	16%	-

Generally, food-related with multi-functionalities across major food-related app categories are not comprehensive, instead they tend to focus on sharing certain functions shared by user groups' goals and needs. Food delivery apps naturally pair with grocery shopping apps because of door delivery services that grocery store chains offer, 40% of these multiple functionality apps have these abilities (n=25). Nutritional tracking and meal planning apps are the highest pair combination, at 48% of these multi-functionality food apps (n=25).

If we look inside Meal Planning & Recipes apps for their particular functionalities, we will see the following prevalence of available offerings in Figure 3 among particular apps. In Figure 4, an "x" the app at the preliminary level appeared to offer it. Apps like Lifesum, Cooklist, and AI-Chef specialize in nutrition tracking and AI-powered meal suggestions, while Jow and EveryPlate focus on budget-friendly meal planning and grocery integration. StashCook and Paprika excel in smart pantry management and recipe organization. At this juncture, it seems the most competitive and clear leaders in being the most well-rounded and well-developed functionalities for a meal planning app are Food, AI-Chef, StashCook, Lifesum, Jow, and Cooklist. Some of these, particularly ones not behind a paywall, will be further examined in the Research Report. Those in gray will be slated for further consideration in the competitive audit analysis, where they will be compared by means of personalization like users differing circumstances and customizability of recipe filters.

Table 1. Salience of Functionalities Within Meal Planning & Recipe Apps Compared

	Eat This Much	Paprika	Mealime	BigOven	PlateJoy	Food	AI-Chef	EveryPlate	StashCook	Lifesum	Jow	Cooklist
Recipe Discovery	X	X	X	X	X	X	X	X	X	X	X	X
Meal Planning	X	X	X	X	X	X	X	X	X	X	X	X
Grocery List Management	X	X	X	X	X	X	X	X	X	X	X	X
Nutrition Tracking	X		X		X	X	X		X	X	X	X
Diet Customization	X		X		X	X	X		X	X	X	X
Budget-Friendly Suggestions	X		X		X	X	X	X	X	X	X	X
Ingredient Substitutions	X		X		X	X	X	X	X	X	X	X
Smart Pantry Management		X		X		X	X		X	X	X	X
Cooking Instructions & Timers	X	X	X	X	X	X	X	X	X	X	X	X
AI-Powered Meal Suggestions	X		X		X	X	X	X	X	X	X	X
Total X Count	9	5	9	5	9	10	10	7	10	10	10	10

Some immediate impressions in reading about in comments, app store descriptions, and attempting to test them out were a great many are stuck behind pay-walls. Due to the limited budget and difficulties in personally assessing various criteria, a smaller segment will be examined. However, it was obvious that how variable a user's options were in the free version to filter recipes by various preferences or budget. Some do not connect to grocery stores, others do. Some rely on manually entered recipes, some crowd-sourced recipes, and some AI-powered recipes. Manually entered recipes easily ran the risk being used up after considering the most filter options that come to bear, while AI-Powered Meal suggestions while less common were inexhaustible. However, just because something is inexhaustible does not mean it makes filtering for a plethora of personal or family food needs and circumstances. Certain functionalities like having a smart pantry, meaning it synergistically works with the other functionalities of the meal planning app, were not wide spread. Other uncommon features to find were complex means to filter by diets and nutritional concerns.

So who are using these apps and who are the target audiences for these apps? These are the prospective research participant target groups, summarized below:

- Busy professionals – Those seeking efficient meal planning and grocery automation.
- Families & working parents – Users focused on budget-friendly meal kits and pantry management.
- Fitness & nutrition-conscious users – People tracking their diet, macros, and meal planning goals.
- Millennials & Gen Z – Tech-savvy users interested in AI-powered meal suggestions and diet customization.
- Home cooks & food enthusiasts – Individuals who prioritize recipe discovery and ingredient organization.

- Cost-conscious individuals – Budget-focused users looking for meal prep and grocery optimization.
- Urban dwellers – Professionals with limited time seeking quick meal solutions.
- Older users (55+) – Those focused on recipe storage, pantry tracking, and structured meal planning.