HCDE 417

DoorDash Usability

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Introduction & Background

This study investigates the usability of grocery shopping within DoorDash Market, a feature of the broader DoorDash platform that has recently expanded its offerings to include grocery delivery. DoorDash, a leading food delivery service with over 56% market share in the U.S. (Davalos, 2021), is evolving into a comprehensive "local commerce app," which underscores the importance of evaluating its new initiatives like DoorDash Market. This study focuses specifically on the usability of grocery shopping in this digital environment, exploring how users interact with the app to make effective and efficient shopping decisions.

Key usability factors under examination include navigation and search, inventory management, and recommendation systems. While users in physical stores navigate aisles or rely on store layouts, digital grocery shopping requires intuitive navigation and search features to find items quickly. Similarly, challenges like handling out-of-stock items or low inventory can significantly affect user satisfaction. Providing transparent inventory information and adequate alternative recommendations are crucial in ensuring a seamless user experience and encouraging retention. These usability attributes not only affect individual user satisfaction but also have broader implications for the success of online grocery platforms.

Previous research on DoorDash's usability has revealed both strengths and opportunities for improvement. A comprehensive UX benchmark study evaluated 214 design elements across DoorDash and 250 other e-commerce sites, finding that DoorDash performs well in areas like customer accounts and order tracking. However, usability issues were identified in mobile navigation, on-site search, and restaurant lists, suggesting there is room to enhance critical aspects of the user experience (Baymard Institute, 2022). It is essential to build on this prior research to specifically examine DoorDash Market and how it aligns with—or diverges from—these broader usability trends.

While there are areas for improvement, DoorDash's position as a market leader highlights its potential to set industry standards. This study contributes to that goal by focusing on usability challenges and opportunities in DoorDash Market, ensuring it supports users effectively while reinforcing DoorDash's reputation for excellence in local commerce.

Positionality Statement

As a team, we each brought a unique perspective to the usability testing of DoorDash's grocery delivery feature, shaped by our personal experiences with the app. While all of us were familiar with DoorDash's restaurant food delivery service, our experience with the grocery shopping function varied significantly. This divergence in familiarity led us to recognize how our

individual backgrounds influenced our expectations and interpretations during the research process.

Emily initially assumed navigating the grocery section would be intuitive for most users but recognized her technical background and comfort with apps might differ from those with less digital literacy, prompting her to actively seek diverse feedback. Brynn approached the project with a blend of insider knowledge from food delivery and outsider status with grocery shopping, allowing her to empathize with users facing challenges in transitioning between the two services. Bianca, having used DoorDash for food delivery, assumed the grocery interface would be similar, but testing revealed differences like item search and substitutions, leading her to be more mindful of accessibility needs and the varied experiences of users. Hailey, familiar with both features, observed that users, like herself, often prioritized convenience and efficiency, but recognized that her greater experience could bias her views, so she focused on keeping a neutral perspective during testing to capture a broader range of user strategies and feedback.

Overall, our team worked collaboratively to ensure that our usability testing was inclusive and accounted for the varying levels of familiarity users have with DoorDash's grocery delivery function. We each remained mindful of our own positionality, recognizing how our different levels of experience with the app could shape our interpretations and assumptions. By seeking out diverse user perspectives and engaging in reflexive practices, we aimed to produce findings that accurately reflect the experiences and needs of a broad range of DoorDash users.

Description of problem space

The problem space for our study is within **mobile app usability** and **online grocery shopping**, specifically focusing on the DoorDash Market feature. Grocery delivery apps have become increasingly popular, driven by convenience and the increasing adoption of digital platforms for daily needs. However, these services often face usability challenges that affect user satisfaction, particularly when users encounter obstacles in finding, selecting, and purchasing items efficiently.

Several key challenges exist within this problem space:

1. **Navigation and Search**: Users must quickly and accurately locate items within a vast and diverse inventory. Poorly structured categories or unintuitive search features can lead to frustration and inefficiency.
2. **Inventory Management**: The app must effectively handle out-of-stock items and limited quantities, providing seamless solutions such as suitable alternatives or real-time stock updates.
3. **Decision-Making Support**: Users often rely on recommendations or visual cues to make choices. Poor suggestions or visibility of relevant options can negatively impact the shopping experience.

The problem is set around the expectations users have of mobile apps in terms of **speed, clarity, and reliability**, as well as the competitive landscape of grocery delivery services. Platforms like Instacart and Amazon Fresh have set a high bar, offering features like personalized recommendations, real-time inventory updates, and easy navigation. DoorDash Market must not only meet these expectations but also differentiate itself by addressing these usability challenges.

Methods

Participant Recruitment and Screening

Recruitment Method:
Participants were recruited through personal networks, social media platforms (e.g., Slack, Instagram, Reddit), and peer outreach.

Screening Criteria:
Eligible participants were:

- Aged 18–30, matching DoorDash Market's primary user demographic.
- Experienced with mobile apps and online grocery shopping.

Materials

- Mobile Devices: Participants have preloaded the DoorDash app and have screen recording enabled.
- Scripts: Moderator scripts covering consent, task instructions, and follow-up questions.
- Grocery List: Predefined list provided in-chat for virtual sessions or shown to them if in person.
- Internal Inventory List: Designating low-stock (LS) and out-of-stock (OS) items to simulate real-world challenges, specified for the interviewer's list and unknown to the participant.
- Observation Sheets: For noting participant actions, behaviors, and verbalized feedback.
- Recording Equipment: To capture think-aloud comments, screen interactions, and tasks. Recording is conducted through zoom.

Session Setup

1. Environment: Quiet and distraction-free for in-person or virtual testing.
2. Device Preparation: Devices set to the DoorDash Market page with screen recording enabled.
3. Consent Process: Reviewed consent forms, addressed participant queries, and confirmed

recording permissions.

Testing Procedure

Moderator Script

Introduction and Consent:

- Brief participants on the academic nature of the study, emphasizing its independence from DoorDash.
- Address questions and confirm consent for participation and recording.

Study Context:

- "We aim to understand how people navigate and use the DoorDash app for grocery delivery. Your input will help identify strengths and areas for improvement."

Setup Instructions:

- Instruct participants to open the DoorDash app and set their delivery address to Sieg Hall.
- Have participants open DoorDash market

Tasks

Task 1: Navigating Without the Search Bar

- Instruction: "Please find and add the following items to your cart without using the search bar. Use any navigation methods you prefer."
- Grocery List (adjusted as needed throughout the sessions to account for low stock/out of stock):
    - Silk Original Almond Milk (0.5 gallon)
    - Franz Gluten-Free Mountain White Bread (18 oz)
    - Egglands Cage-Free Grade A Large Brown Eggs
    - Blueberries (6 oz)
    - Green Beans (15-count, LS)
    - Ground Beef (80% lean, 1 lb, OS)
    - Philadelphia Original Cream Cheese Spread (8 oz)
    - GT's Synergy Guava Goddess Kombucha (16 oz, OS)
- Observation Focus: Track navigation patterns, wrong turns, confusion, and task completion.

Task 2: Handling Out-of-Stock Items

- Instruction: "Attempt to add an [out-of-stock] item to your cart and explore suggested alternatives."
- Observation Focus: Participant responses to unavailability (e.g., exploring alternatives, abandoning the task).

Task 3: Handling Low-Stock Items

- Instruction: "Try adding [more than the available quantity] of a [low-stock item.]"
- Observation Focus: Reactions to stock limitations, including adjustments, substitutions, or frustrations.

Post-Task Questions

- "What aspects of the process did you find confusing or frustrating?"
- "Were the alternative suggestions helpful?"
- "How satisfied were you with how the app managed low-stock and out-of-stock items?"

Data Collection and Analysis

- Quantitative Metrics: Task success rates, time on task, and error rates.
- Qualitative Insights: Think-aloud comments, navigation observations, and post-task feedback.
- Screen Recordings: Capturing navigation steps, timing, and verbal reactions.
- Observational Notes: Documenting behaviors, emotional responses, and satisfaction indicators.

Post-Session Debrief

- Wrap-Up:
    - Thank participants for their input and offer a brief debrief on their feedback's value.
    - Invite any final comments or suggestions.

Materials and Recording Setup

Materials

1. Mobile Device for Testing:
    - A smartphone with the DoorDash app installed and screen recording enabled. This device will be used exclusively by the participant during the study.
2. Recording Equipment:
    - Screen Recording: The mobile device will use its built-in screen recording feature to capture the participant's interactions within the DoorDash app.

- Audio and Video Recording: A separate device, such as a laptop running Zoom or a smartphone with a voice recording app, will capture the participant's think-aloud comments and any non-verbal cues.
    - For In-Person Sessions: Audio will be recorded using a dedicated voice recording app on a secondary smartphone or a laptop with a microphone.
    - For Remote Sessions: Zoom on a laptop will record both video and audio.

Findings

Research Q1: What strategies do users use to find items without using the search bar?

Finding: Users Rely on Categories and Icons for Navigation

Participants frequently turned to categories and icons to locate items without using the search bar, relying on the app's visual and organizational cues to guide their exploration. This reliance suggests that categories/icons are essential for users attempting to browse, especially for those who prefer a more exploratory approach or do not have a specific item in mind. However, this strategy often was time-consuming, as users needed to scroll through extensive lists or apply filters to narrow down their options. While categories/icons are effective starting points, the process can feel inefficient for users dealing with a large inventory. This highlights the importance of ensuring categories and their contents are clearly labeled and logically grouped. Users want to feel confident that the time spent browsing will lead them to their desired item without unnecessary frustration.

Evidence:

- *"I clicked on the bakery. Now I'm just scrolling to find the Franz gluten-free mountain white bread."* – Participant 7
- *"Okay, now I'm gonna go to drinks and then, oh, you can sort by brands. Let's sort by brands."* – Participant 6

Finding: Frustration with Category Organization Impacts User Experience

While categories and icons provide an essential framework for navigation, their usefulness is undermined when they fail to align with users' mental models. Participants frequently expressed confusion and frustration when items were not grouped in expected categories, leading to inefficiencies and negative experiences. Misleading or overly general category labels often forced users to backtrack or try multiple sections, creating friction in the shopping process. This frustration shows a mismatch between how items are categorized and how users expect to find them. This can ruin experiences in the navigation system and discourage users from browsing categories in the future. Clearer categorization and more intuitive grouping could significantly

improve usability by aligning the app's organization with users' mental models.

Evidence:

- *"Why is bread under bakery and not pantry? Pantry has everything else."* – Participant 7
- *"I thought ice cream would be in frozen snacks...but it had its own section."* – Participant 3
- *"..these categories make no sense."* – Participant 1

Finding: Users Prefer the Search Bar for Efficiency

While categories/icons serve as a helpful browsing tool, many participants ultimately preferred the search bar as it offered a more efficient and direct method for locating items. This preference stemmed from frustrations with the time and effort required to navigate categories, especially when items were difficult to find or misplaced. Participants highlighted how the search bar reduced friction, allowing them to bypass confusing categories and go straight to their desired item. This finding underscores the importance of maintaining and enhancing the search feature. For many users, the search bar is not just a fallback option but their primary navigation tool when browsing categories fails to meet their expectations. Its efficiency becomes even more critical when users encounter poorly organized categories or struggle to locate specific items. The search bar's prominence and functionality should be a core focus in future designs, ensuring it provides accurate, predictive, and helpful results to support users' needs quickly and effectively.

Evidence:

- *"I like using a search bar. It's convenient and avoids all the scrolling." - Participant 7*
- *"I didn't love having to scroll down for everything. If I had a list, I would just use the search bar." -Participant 6*

Research Q2: How do users handle out-of-stock items?

Finding: Users Expect More Guidance and Substitution Options When Items Are Out of Stock

When encountering out-of-stock items, users often struggled due to the lack of clear guidance or readily available substitutions. Participants expressed frustration with the absence of features that would suggest alternatives or related products, which forced them to manually search for replacements, adding unnecessary effort and time to their shopping experience. While some participants adapted by substituting items themselves, this approach relied on their knowledge and willingness to explore options, emphasizing the need for the app to better support this process. Many users noted that the app failed to present substitutions in a seamless way, such as

automatically suggesting related items when one was unavailable. Others pointed out issues with interaction design, like the inability to click on an out-of-stock item to view potential alternatives. These challenges highlight a significant gap in functionality, with participants expecting the app to provide an intuitive and efficient way to handle substitutions directly from the product page or shopping list.

Evidence:

- *"Oh, they're out of stock, but I'll just add the powdered, if that's okay to substitute."* – Participant 6
- *"There's not really, like an alternatives feature where, if, like, when one item is out of stock, you can, like, find similar stuff, related to it."* – Participant 4
- *"There was no way to see other options like onions when yellow and white were out."* – Participant 3
- *"I'd click on it to see alternatives, but it wouldn't let me."* – Participant 4

Research Q3: How do users handle adding more items than available?

Finding: Users Expect Real-Time Stock Feedback When Adding Items

Users expressed frustration when attempting to add more items to their cart than were available in stock, highlighting a significant gap in the app's real-time stock management feedback. Participants noted that the app allowed them to add items to their cart without warning about low inventory, leading to disappointment and wasted effort during checkout when unavailable items were flagged. This lack of transparency not only disrupted the shopping experience but also diminished trust in the app's functionality. Users expected clear, upfront notifications about item stock limits while browsing or adding products to their cart, ensuring a smoother and more efficient shopping process.

Evidence:

- *"Oh, yeah, it totally said I could add that. But when I checked out I couldn't. That's so weird. What a waste of time. I hate this."* – Participant 5
- *"It should only let me add two if there are only two left in stock, or it should let me know."* – Participant 4

Discussion

Our usability testing revealed several important challenges in DoorDash Market's grocery shopping feature that impact how users navigate and interact with the app. One of the main issues was the organization of categories, which frequently misaligned with users' mental models and expectations. This mismatch caused frustration and slowed down the process of finding items. While categories and icons are helpful for browsing, they need to feel logical and intuitive for users to avoid wasted time and effort. The search bar was widely preferred by participants because it was faster and more direct compared to browsing categories. However, relying solely on the search bar would be counterproductive, as users have diverse shopping preferences. Some individuals prefer exploring items through browsing, while others might not have a specific product in mind. A more balanced design that improves both browsing and searching would better support a variety of shopping styles.

Another major issue was inventory management. Participants struggled when items were out of stock because the app didn't provide helpful suggestions for replacements or give clear feedback on stock availability. This lack of transparency caused extra work for users and decreased their trust in the app's reliability. Addressing these issues is essential to improving the overall experience and maintaining user loyalty. Addressing these usability challenges is crucial for DoorDash Market to differentiate itself in a competitive grocery delivery landscape. By refining category organization, enhancing search and browsing experiences, and implementing more transparent inventory management, the app can create a more intuitive and user-friendly interface. Such improvements are essential not just for user satisfaction, but for maintaining a competitive edge against established players like Instacart and Amazon Fresh

Design recommendations/implications

Based on what we observed, we recommend the following improvements to DoorDash Market's grocery shopping feature:

1. Make Categories More User-Friendly
    - Reorganize categories to match how users think. For example, include bread in both "Bakery" and "Pantry" so users can find it more easily.
    - Test new category layouts with users to make sure the organization makes sense.
2. Fix Inventory Issues
    - Add real-time stock updates that notify users if an item is low or unavailable before they add it to their cart.
    - Create a feature to suggest substitutes for out-of-stock items, like showing a different brand or a similar product.
3. Improve Browsing Features

    - Add “breadcrumbs” or shortcuts so users can jump between related categories without starting over.
    - Highlight popular or frequently purchased items in each category to make browsing quicker.
4. Handle Out-of-Stock Items Better
    - Let users click on out-of-stock items to see suggested replacements or sign up for restock alerts.
    - Add a setting at checkout to automatically approve substitutions for similar items.
5. Continue User Testing
    - Regularly test updates with both new and experienced users to make sure the app keeps improving.

Wrap-up/conclusion

This study revealed that DoorDash Market possesses significant potential as a digital grocery delivery platform, yet currently falls short of optimal user experience standards. Our research identified critical areas for strategic improvement, including category organization, search functionality, and inventory management—each representing pivotal touchpoints in the user's digital shopping journey.

The proposed recommendations are not merely cosmetic adjustments but fundamental redesign strategies aimed at addressing core usability challenges. By implementing these user-centered design interventions, DoorDash Market can transform its grocery shopping feature from a transactional interface to an intuitive, responsive digital experience. Such improvements are crucial in a rapidly evolving digital marketplace where user experience directly correlates with platform adoption and customer loyalty. These recommendations represent a strategic approach to competitive positioning in the increasingly competitive online grocery delivery sector. As digital grocery shopping continues to grow, platforms that prioritize nuanced user experience design will be best positioned to capture and retain market share.

Appendices

Appendix A: Recruitment Materials

Appendix B: Full Moderator Script with Think-Aloud Prompts.

Appendix C: **User Interviews**

- Participant 1
- Participant 2
- Participant 3
- Participant 4
- Participant 5
- Participant 6
- Participant 7
- Participant 8
- Participant 9

Appendix D: Miro Board

Works Cited

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