

Mini-project Report W07: Evaluation Report and Requirements

Team: TMNT

Website: spud.ca

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Summary of Evaluation and Results (Max 3 pages)

a. Human Need and Central Tasks (Step 1):

- **Human Need:** I want to be able to purchase groceries online.
- **Central Task:** I want to be able to browse groceries by searching for an item, reviewing the nutrition/product details, selecting my desired amount or specifications, and adding to cart. When ready, I want to be able to checkout items from my cart by choosing my desired delivery date, selecting payment information, selecting my delivery address, and confirming my order.

b. Evaluation Goals (Step 2):

- To what extent do the users find their desired products and specifications using the search and filter options?
- What obstacles do users face when trying to compare product specifications during the shopping experience?
- Which steps in the checkout process do users find confusing or time-consuming?

c. Participant Pool (Step 3): The participant pool for evaluating Spud's interface will consist of three key user groups:

1. **Users with Dietary Restrictions:** Participants with specific dietary needs (e.g., gluten-free, nut-free) to evaluate the effectiveness of product filtering and identification.
2. **First-Time Users:** Individuals who have never used Spud before, assessing ease of navigation and initial interface comprehension.
3. **Time-Constrained Users:** People with limited availability, such as working professionals, to evaluate the efficiency and speed of the site during busy schedules.

d. Protocol (Step 5): The study consists of two evaluation methods taking ~60 minutes.

1. Co-Working Demo: Participants will work in pairs to explore the Spud website using the *think-aloud method*.

Tasks include:

- Browsing product categories.
- Using the search bar.
- Applying filters (e.g., dietary preferences, eco-conscious options).
- Proceed through the checkout process.

Think-Aloud Method: Participants will verbalize their thoughts, experiences, and frustrations in real-time.

2. Post-Demo Questionnaire: Capturing both qualitative and quantitative insights.

Topics covered:

- Ease of navigation.
- Satisfaction with product variety.
- Effectiveness of filters.
- Clarity of product information.
- Website performance.
- Search functionality.
- Checkout ease.
- Overall user experience compared to other platforms.

1. e. Evaluation Rationale (Step 4):

Co-Working Demo with Think-Aloud Method:

- **Real-time interaction:** Simulates natural user behavior; captures real-world navigation and decision-making.
- **Think-aloud method:** Provides real-time qualitative data through verbalized thoughts, frustrations, and experiences.
- **Key feature focus:** Participants engage with critical elements (product categories, search, filters, checkout).

Post-Demo Questionnaire:

- **Comprehensive feedback:** Captures both qualitative (open-ended) and quantitative (ratings) insights.
- **Quantitative data:** Enables statistical analysis of user satisfaction (e.g., ease of navigation, filters).
- **Platform comparison:** Assesses Spud's standing against other grocery websites for competitive insights.

- **Identifies pain points:** Helps locate areas of confusion, friction, and usability issues as they arise.

- **Reflective feedback:** Encourages post-demo reflection, uncovering issues missed during live interaction.

e. Analysis (Step 9):

2. Co-working Observation Analysis:

- **Main usability challenges identified** across different tasks: navigation, filtering, checkout process.
- **Filters:** Many participants struggled with the visibility and accuracy of filters, often finding them hard to locate or non-functional for specific dietary preferences, such as nut-free options.
- **Navigation:** The homepage felt overwhelming, with too many distractions and unclear navigation pathways. Drop down menus of categorized items were often seen as having “too many options” (co-working pair 1, Table 3)
- **Checkout:** While most users could add items to their cart, adjusting quantities was unintuitive, and there was often a lack of visual feedback when items were successfully added. One participant mentioned “I can’t notice the cart update” (co-working pair 6).
 - Checkout process was particularly frustrating for many: required too many steps, lacked auto-fill features for returning users, and forced participants to re-enter information when they went back to a previous step.
 - Concerns about the security and transparency of payment confirmation were common, further contributing to a time-consuming and frustrating experience.
 - Had only 80% completion rate (Figure 7), ranking third overall in success rate.
- **Accessing Support:** Participants frequently had difficulty locating the help section or finding direct contact options for customer support.
 - The FAQ content was described as insufficient for addressing specific concerns, and many users became frustrated with its lack of detail.
 - Had the lowest completion rate of 50% (Figure 7), and took the most time on average of 8.5 minutes (Figure 8).

Qualtrics Survey Analysis:

Quantitative Analysis

- Most categories had average user experience ratings of ~3 on a 1-5 scale (Fig. 1 & 2)
- Notable variability of rating in purchase speed and search efficiency.
- Product variety and trust levels are moderately high (Figure 2).
- Opinions on organic product availability vary more widely (± 3).
- Most users experienced issues during checkout (Figure 4), and address input remained a frequent challenge, followed by difficulties with payment and order completion.
- Figure 5 reveals that 39% of users shop regularly, while 38% never engage with online grocery platforms.
- Only one participant reported using the platform once or twice, indicating considerable potential for

Qualtrics Analysis

- **Participants note several product availability issues:** Table 1 lists the commonly purchased grocery items, revealing that users frequently buy staples such as eggs, milk, fruits, vegetables, and bread. Absent items include udon, lentils, and specific spices, suggesting areas where product variety could be expanded to meet user demand.
- **Participants ranked product variety as the most important feature** in Table 2, followed closely by navigation and search functionality, indicating that users value a broad selection of items and ease of browsing.
- **Payment process was consistently ranked as the least important feature** (Table 2), though users still suggested streamlining it to enhance the checkout experience. Addressing

growth if awareness and engagement can be increased.

- Usability comparisons with other services (Figure 6) show that 39% of respondents found Spud's platform somewhat worse, highlighting opportunities for improvement to remain competitive.

frustrations with product variety and usability issues, such as confusing product categories and minimum order requirements, will be critical to improving user satisfaction and encouraging platform growth.

3. g. Conclusions (Step 10):

Strengths	Weaknesses
<p>Search Functionality:</p> <ul style="list-style-type: none"> • The search feature was well-received, with an average rating of 3.7/5. • It was particularly effective for users looking for specific products, especially those with dietary restrictions. • Several participants relied on the search function after facing difficulties with filters or navigation (e.g., "Search functionality is one of the few ways I could find products easily" - Pair 5). <p>Product Information Clarity:</p> <ul style="list-style-type: none"> • Product details such as nutritional information, certifications, and descriptions were rated highly, averaging 4/5. • Transparency in product information was valued by users, especially those with specific dietary needs, enhancing their confidence in the platform. 	<p>Filter Visibility and Functionality:</p> <ul style="list-style-type: none"> • Difficulty in locating and using the filter system was a common complaint in both demos and surveys. • Many participants found the filters either unintuitive or malfunctioning (e.g., "Couldn't find how to filter by nut-free" - Pair 2). • This is a significant issue, as filtering is crucial for users with dietary restrictions or those seeking specific products quickly, impacting their overall shopping experience. <p>Checkout Process Complexity:</p> <ul style="list-style-type: none"> • The checkout process was frequently mentioned as a pain point, with users finding it overly complicated. • Issues like re-entering information when going back a step caused frustration (e.g., "I had to re-input the same information twice" - Pair 4). • This complexity creates friction for time-constrained or frequent shoppers, who expect a streamlined and efficient checkout experience.

The evaluation revealed that filter functionality and an efficient checkout process are crucial for the overall user experience and retention on Spud.ca. Users with dietary restrictions, such as those in Pair 2, rely heavily on filters to avoid allergens, and when filters malfunction, it not only disrupts their shopping experience but also poses safety risks. Improving filter accuracy and visibility is therefore vital for maintaining user trust and satisfaction. Similarly, the length and complexity of the checkout process significantly affect user retention, especially for time-constrained or frequent shoppers. As noted in Pair 6, the need to re-enter details or the absence of auto-fill features frustrated users and could deter them from returning to the platform.

Initially, we anticipated only minor usability issues because of the popularity of the website, but as the study progressed, it became clear that navigation and checkout challenges were more significant, even for frequent shoppers. Additionally, the critical role of filters, particularly for users with dietary restrictions or eco-conscious preferences, became more evident, reinforcing the need for immediate improvements in these areas to enhance the overall user experience.

If we had more time and resources, we would expand the study to include a larger and more diverse participant pool, incorporating returning customers, tech-savvy users, and a variety of online shopping experiences to gain broader insights. We would conduct longitudinal studies to observe user behaviors and frustrations over time, capturing recurring issues and retention challenges. By integrating advanced methods like eye-tracking and A/B testing, we could refine specific elements such as filters and checkout flows to enhance usability. Additionally, we would explore the post-purchase experience, including delivery

tracking and customer support, to provide a more comprehensive understanding of the full user journey and identify areas for long-term improvements.

Task Examples and Requirements (Max 1.5 pages)

4. Task examples (Step 11):

Task Example #1:

Mel is a parent who is responsible for a family of four and is a professional who works 4 days a week (Monday-Thursday). Having her time stretched thin while being responsible for the groceries, and other household items that the family needs, Mel finds that she must fit all of her shopping on Friday so that when the weekend comes she can take her children to their sports games and find some time for her to relax. Additionally, one of Mel's children has celiac which requires her to find gluten-free alternatives to the goods which she gets so that everyone in her family can eat the same meals together.

This normally adds a considerable amount of time to her weekly Friday shopping for groceries. Looking for a good alternative to save her some time, Mel switches to a grocery delivery service to get her weekly groceries for her family. She receives a delivery every Friday and is able to plan when the delivery will come so that she can do other things with her day. Mel also receives deliveries at night during certain weeks or for special occasions. Nevertheless, she gets most of the same items every week and will order these items every week, with a few different items each week. She also needs to be able to find the gluten free alternatives for the products she gets, knowing that gluten free alternatives can be gross, she looks for reviews on alternative gluten-free products before she buys them unless she knows it already. While cost is not Mel's first concern, she tries to budget her spending and keeps the families weekly staples under \$150. Choosing cheaper alternatives to products if they are offered.

Task Example #2

Jackie is a full-time university student juggling a busy schedule that includes classes, assignments, and extracurricular activities. She also is a student athlete and has sports practice during the week and games on the weekends. Having limited free time, especially for activities like grocery shopping she looks for a solution. After watching a documentary about the harmful effects of pesticides, Jackie becomes conscious of the food she eats and decides to switch to organic-only groceries. Since her parents cover her bills, she doesn't worry about money, but time is a constant challenge. She needs a quick and convenient way to order groceries online without having to physically go to the store. While scrolling through Instagram, Jackie sees an ad for spud.ca, an organic grocery delivery service, and decides to give it a try. Jackie wants to make sure she gets her groceries delivered at a convenient time, but because of her unpredictable schedule, she's unsure of when she'll be home. To accommodate this, she plans to reserve a delivery far in advance. When she is certain of her schedule she solidifies her delivery. Jackie enjoys being able to order groceries while still on campus, she feels a sense of freedom of knowing that she is able to order entire meals online. She plans for one night a week to have dinner delivered to her door so that she doesn't need to cook after one of her long days at school and practice. She looks at the status of her delivery as she is on her way home so no one takes her groceries while she is not there, as that happened previously when she had left a delivery out for a long time. She was able to find where to call about reimbursement for her stolen delivery through the service she delivered it from.

5.

6. Requirements (Step 12):

Suggested Requirement	Rationale
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<p>Product Browsing: The system must allow users to effectively search and browse products, offering clear and explicit categories to help users locate items.</p>	<p>The product browsing/search system must allow clear categories and effective search functionality. This enables users to quickly find products, reducing frustration and improving user experience. Without this, users may abandon purchases, negatively impacting the platform.</p>
<p>Pricing and Minimum Spend Transparency: The system must clearly display all pricing and spend requirement details on the appropriate pages and decision points.</p>	<p>Clear display of pricing and minimum spend requirements must be shown at key points in the user journey. This prevents surprises at checkout, managing user expectations and reducing cart abandonment caused by frustration.</p>
<p>Intuitive AI Support Navigation: The system should ensure the AI Agent is easily accessible at all times during the user journey.</p>	<p>The AI support tool should be easily accessible throughout the user journey. Users need to quickly find help when needed, preventing task abandonment and dissatisfaction caused by friction points.</p>
<p>Address Input Flexibility: The system could provide flexible options for entering shipping and billing addresses, allowing for both auto-search and manual input options.</p>	<p>The system could offer both auto-search and manual input for shipping and billing addresses. This flexibility accommodates all users, minimizing frustration for those whose addresses are not recognized by auto-search.</p>
<p>Checkout and Payment Flexibility: The system could offer a more streamlined checkout process, with reliable data persistence and intuitive navigation features.</p>	<p>A streamlined checkout process with data persistence should be implemented. This prevents the need for repeated data entry and reduces disruptions, decreasing the likelihood of cart abandonment.</p>

Appendix A. (no page limit) – goes in same pdf as report

A.1) Figures and Tables

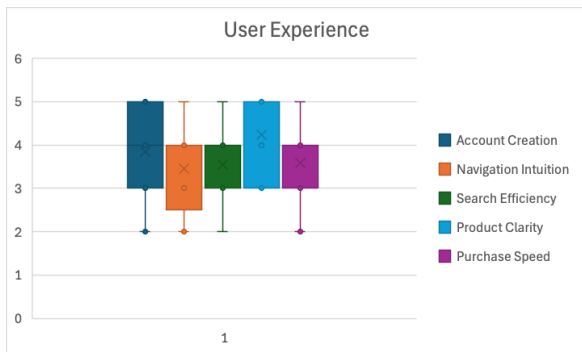


Figure 1. User Experience

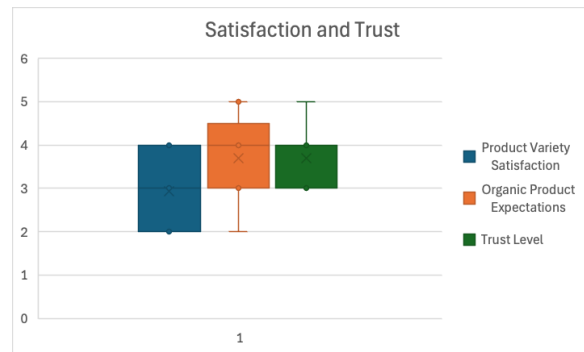


Figure 2. Satisfaction and trust



Figure 3. Reason for online grocery shopping

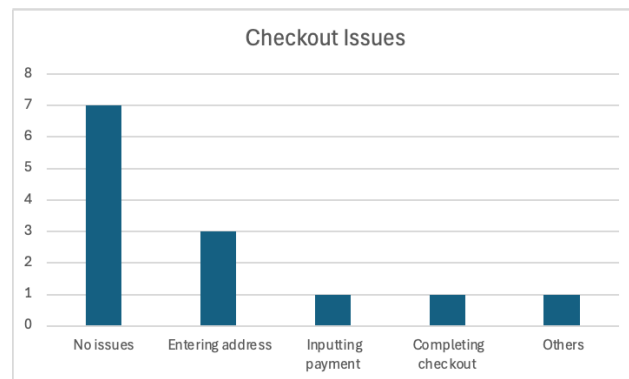


Figure 4. Checkout Issues

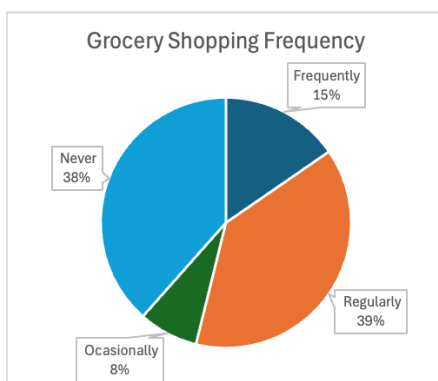


Figure 5. Grocery Shopping Frequency

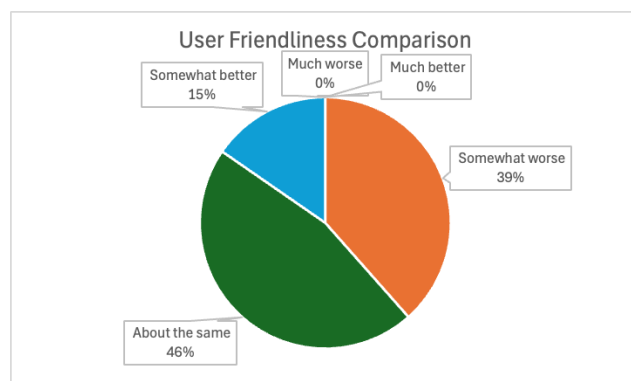


Figure 6. User Friendliness Comparison

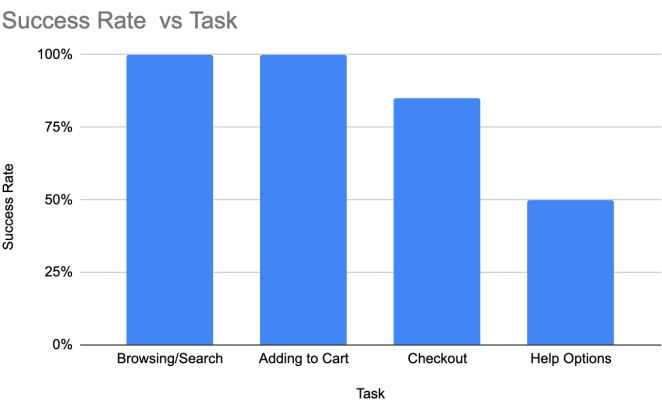


Figure 7. Task Completion Rate

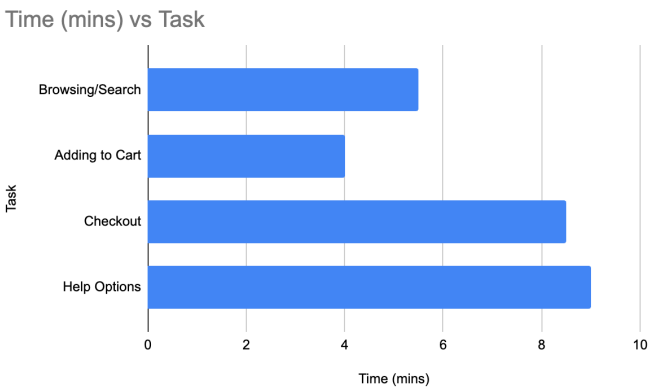


Figure 8: Average Task Completion Time (minutes)

Dairy	Fruits	Vegetables	Meat & Protein	Grains & Carbs	Beverages	Snacks	Spices & Condiments
eggs (8)	fruits (5)	vegetables (5)	meat (4)	bread (3)	coffee (1)	crackers (1)	spices (1)
milk (8)	frozen fruit (1)	greens (1)	chicken (2)	rice (2)		snacks (1)	saucers (1)
yogurt (2)	strawberries (1)	lettuce (1)	tofu (1)	udon (1)			peanut butter (1)
cheese (2)	bananas (1)	broccoli (1)	lentils (1)	instant noodles (1)			
oat milk (1)	bananas (1)	tomatoes (1)	hummus (1)	pasta (1)			
dairy (1)		carrots (1)		grains (1)			
		onions (1)					

Table 1. Commonly Purchased Grocery Items

P1	P2	P3	P4	P5	P6	P7
Product Variety [1]	Navigation [1]	Product Variety [1]	Product Variety [1]	Search Functionality [1]	Search Functionality [1]	Navigation [1]
Search Functionality [2]	Search Functionality [2]	Navigation [2]	Search Functionality [2]	Product Variety [2]	Navigation [2]	Product Variety [2]
Payment Process [3]	Payment Process [3]	Search Functionality [3]	Navigation [3]	Payment Process [3]	Payment Process [3]	Search Functionality [3]
Navigation [4]	Product Variety [4]	Payment Process [4]	Payment Process [4]	Navigation [4]	Product Variety [4]	Payment Process [4]

P8	P9	P10	P11	P12	P13	
Product Variety [1]	Navigation [1]	Product Variety [1]	Product Variety [1]	Product Variety [1]	Product Variety [1]	

Navigation [2]	Product Variety [2]	Navigation [2]	Navigation [2]	Search Functionality [2]	Navigation [2]	
Search Functionality [3]	Functionality [3]	Search Functionality [3]	Search Functionality [3]	Payment Process [3]	Payment Process [3]	
Payment Process [4]	Payment Process [4]	Payment Process [4]	Payment Process [4]	Navigation [4]	Search Functionality [4]	

Table 2. Feature Importance Ranking

A.2) Supplementary Analysis of Observation (Co-working and Think Aloud Procedure)

Task	Participant Comments/Notes	Confusion/Frustration Points	Time Taken (mins)	Observed Behavior	Completion Success (Yes/No)	Issues Identified	Themes/Findings
Browsing or Searching	"What does subscribe mean?" "I can't find how to make a special request." "There are too many options." "The homepage looks clean but I can't find the filters easily."	Difficulty with filter accuracy (e.g., not filter not working), overwhelmed by number of product options, unclear filter visibility, postal code entry required upfront	3-8 mins	Participants hesitated with filter use, scrolled back and forth, some switched to search bar after struggling with filters	Yes	Filters are not intuitive, category links are hard to find, homepage has too many options or distractions, slow loading times	Filter visibility, search bar placement, product overload, unclear category structure; improvements needed for intuitive browsing
Adding to Cart	"Can you order alcohol if it's non-alcoholic?" "Why can't I type in the quantity I want?" "I didn't notice the cart update." "Adding to cart was fine, but adjusting quantity was tricky."	Confusion over subscription options and minimum order, unclear quantity adjustment buttons, no visual feedback when items were added to cart	3-5 mins	Participants paused or re-did quantity adjustment, pop-ups during cart updates distracted or slowed the process	Yes	Adding items works but adjusting quantities is not intuitive, feedback after adding items is unclear	Quantity adjustment process needs clarity; visual feedback post-addition should be more pronounced to improve user confidence

Checkout	"I didn't know about the \$60 minimum." "There are so many steps in checkout." "It didn't save my information when I went back." "I don't trust this payment system."	Too many steps in the checkout process, re-entering information when going back, no auto-fill for address, concerns over payment security, slow feedback post-payment	7-10 mins	Participants hesitated when entering payment info, went back and had to re-input information, concerns over missing order confirmation	Yes, but slow	Overly complex checkout, lack of save-state features, no auto-fill for returning users	Simplifying checkout steps, enabling auto-fill, and providing instant payment confirmation could significantly reduce user frustration and improve experience
Help Options	"I didn't see the help button until now." "The FAQ is okay but not detailed enough." "It took a while to find where to get help." "No direct way to contact support."	Difficulty locating the help section, FAQ content not specific enough or difficult to navigate, lack of direct support contact options	4-12 mins	Participants searched for help options, often scrolling for a while, frustrated by buried FAQs and lack of immediate support contact	No	Help section is not visible, FAQs are long and unspecific, no direct contact options	Help section needs better visibility and more detailed FAQs, providing clear contact options (e.g., chat or direct form) would improve usability

Table 3. Detailed Analysis from Observation Protocol

A.3) Team Member Contributions

Team members	Contributions
Stuti Sharma	<ul style="list-style-type: none"> Organized group meetings, took meeting notes, and delivered action items to the group Created evaluation protocol, evaluation rationale, coding sheet for W01 deliverable, and revised it per TA feedback. Formatted and submitted W01 deliverable Interviewed 6 participants for study Wrote the Summary of Evaluation Analyzed Observation Co-working data (qualitative and quantitative) Helped with data analysis of qualtrics survey information (summarizing it for the report, editing and adding data to appendix) Analyzed qualitative and quantitative data from coding sheet (observation) Formulated the conclusion Formatted W07 report: created Appendix A, Appendix B
Yoonha Jeon	<ul style="list-style-type: none"> Interviewed 2 participants Created Qualtrics data Compile all the survey responses in the excel file Analyzed quantitative survey data Analyzed qualitative survey data
Julien Roy	<ul style="list-style-type: none"> Created and revised participant pool Held a pilot study and revised evaluation protocol based on results Informally presented initial findings about the interface in workshop Interviewed 2 participants Wrote a task example
Rafael Park	<ul style="list-style-type: none"> Interviewed 2 participants Wrote task example Collected and ranked requirements from interviews Formatted document
Caleb Chang	<ul style="list-style-type: none"> Interviewed 2 participants Collected and ranked requirements from interviews Formatted document Wrote justifications for requirements