# QUIK BITES USABILITY TEST - REPORT

Usability Test #1-03.22.2018
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## Background

The discovery phase for Quik Bites began in March of 2018 with comparative analysis research and user interviews. We discovered that while the market place had several options for recipe reader voice skills, there was still dissatisfaction among users with the quality of the user experience. The resulting prototype is an initial hypothesis on how we hope to address this need. Now, we'd like to test the most important features and functionality for our primary persona Liz:

- navigation of recipes by meal type
- advance of recipe by verbal commands
- ability to reference the ingredients list

**Test Objectives**

- can users effectively select a recipe from the available options, with navigation setup by meal type?
- can users advance through the recipe with verbal commands?
- do users have all the necessary information when they are in the instructions state?

## Methodology

The test was conducted with the help of the user-sourcing platform UserBob. This platform is a front end interface for UX professionals which leverages the reach of Mechanical Turk. The tester submits a link to a product or prototype along with a set of instructions for task completion and feedback. Solicited by Mechanical Turk, testers take part in the test and share their experience via a screen captured video and voice narration of their experience. Each test was approximately 5 minutes long. The testing round engaged a total of 7 users, yielding 5 relevant tests. All users were compensated $5 / test.

*Dashboard of the UserBob user testing platform showing the setup and tests from 5 users.*

**Participants**

The 5 relevant participants included 3 Males and 2 Females, ranging in age from 21 to 67 years old (with 30 years old as the median). Participants represented those who live in urban and suburban areas and also included those who were single, married, and/or had children.

**Script**

The following instructions were provided to each user in the UserBob interface:

*Extra Requirements:* You must have an Alexa enabled device

*Test Scenario*
You just got home from work and looking for a quick recipe to make for dinner. You heard from a friend there's an Alexa skill that helps you make quick meals. It sounds interesting to you so you decide to try it. (You must have an Alexa enabled device like the Amazon Echo, or the Echo dot, to preform this test).

*Test Instructions*
Launch the Alexa Skill called "Quick Bites."

Choose a recipe to make and navigate through the preparation process.
- after you have completed the above tasks, record your responses to the following questions:

1. How did that go?
2. What went well?
3. What didn't go well? How Come?

# Test Report Introduction

In general, the tests were successful in that users were able to effectively navigate to a recipe and go through the instructions flow without problems. Where these tasks were not properly completed, the problems users faced had more to do with a general unfamiliraity with Alexa and the skills paradigm, rather than with the skill itself.

With that said, within the test, some unexpected issues did emerge. These issues generally fell into one of 6 groups: Barge-In, Flow, Grammar, Navigation, Content, or Unimplemented Feature.

**Issue 1: Barge-In. Severity: Medium.**

Due to the way certain prompts were phrased, users began to give their response before the prompt finished playing. Since this skill does not support barge-in, users' responses were not received by the system, and this led some users to minor frustrations. In general users were able to recover from this with ease.

The suggestion is to re-write the problematic prompts in such a way as to avoid barge-in. Instead of following each possible action with that action's command (e.g. "To hear the next step, say 'next'. [barge-in] To repeat a step say 'repeat'"), give users all action options and then give them the options of what to say to trigger those actions ("To repeat a step or go to the next one say 'repeat' or 'next'").

**Issue 2: Flow. Severity: Medium.**

At two points in the experience, it was evident that users were confused by where they are in the flow or why certain information was being presented to them.

One such case, is the presentation of the ingredients of a dish in the first step of the instructions. This was initially implemented with the presumption that users would go straight to a recipe and would then need to know how much of what ingredient is needed. However, in testing it was apparent that users often asked for the ingredients of a dish before comitting to making it. As a result, users would hear the ingredients, make a positive decision about the dish, and then hear the ingredients again as part of the first step. This caused redundancy and confusion.

The suggested solution is to remove the ingredients listing from the first step. This might present a follow up problem, where users who do not ask for the ingredients while making a decision, will not know what they need once they enter the instructions state. Recognizing this, the ultimate solution is to implement an ability for users to ask for ingredients either in the decision making state, or in the instructions state. This issue is further detailed below.

An additional issue in the flow category, is the unclear completion of the skill. After the instructions end, the system appends a brief CLOSING_MESSAGE to the last isntructions step. This wasn't always clear to users, who, in several cases, expected further instruction, as evidenced by their saying "next" after the final step.

The suggested solution is to make the closing message more noticable and notable. One option is to introduce earcons. Another is to use SSML to make Alexa's reading of the final message stand out is recommended.

**Issue 3: Unimplemented Feature: Ingredients Request within Instructions Flow.**
**Severity: Medium.**

A user who reported that QuikBites would be useful to her, pointed out an unimplented feature which has in fact been called for in the initial designs. Namely, the ability to reference the ingredients list not just prior to selecting a dish to make, but also within the instructions flow. Implementing this option, would also solve the problem faced by users who did not ask for ingredients prior to the start of the instructions.

This issue has been resolved by adding the option to start the ingredientsIntent within the instructionsIntent. The closing message of the ingredientsIntent was adjusted. Instead of asking users whether they want to make the dish (what happens when ingredients are read before users' commitment to it), when ingredients are read during Instructions, the closing message reminds users how to navigate the recipe (by saying next, repeat, etc.).

This new feature has not yet been tested.

**Other issues. Severity: Low.**

Other issues which were much less common among users and are of lower impact to the overall experience of the skill are listed in the appended User Test matrix.

# Conclusion

In conclusion, this round of testing was successful in that it showed the skill to be effectively navigable and coherent. Additionally, it revealed several issues with flow, usability, and content which deserve immediate attention. A newly implemented feature – the addition of the ingredientsIntent to the instructionsIntent warrants further testing.

# USER TESTING FINDINGS MATRIX

Intent legend (left column):
- instructionIntent
- suggestRecipeIntent
- ingredientsIntent / insturctionsIntent
- chooseTypeIntent

| | BARGE IN | RELEVANT INTENT | FIX | FLOW | RELEVANT INTENT | FIX | GRAMMAR | RELEVANT INTENT | FIX | NAVIGATION | RELEVANT INTENT | FIX | UNIMPLEMENTED FEATURE | RELEVANT INTENT | FIX | CONTENT | RELEVANT INTENT | FIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USER 1 | "To hear the next step say something like next [BI] | instructionsIntent | "To repeat a step or go to the next one say 'repeat' or 'next'; | After the last step of the recipe not clear that the flow is over and the skill has closed | instructionsIntent | added prosidy to closing message: const CLOSING_MESSAGE = <speak>And you're done.<prosody volume="loud" rate="75%" pitch="+5%">Enjoy</prosody></speak>; | | | | | | | | | | | | |
| USER 2 | "To hear the next step say something like next [BI] | instructionsIntent | | INGREDIENTS REPEAT: asks for ingredients before comiitting to recipe - commits, hears ingredients again | ingredientsIntent insturctionsIntent | take ingredients list out of first step but give option to ask for ingredients at any point during isntructions | | | | | | | | | | | | |
| USER 3 | "to hear the ingredients, say ingredients" - doesn't realize to wait for more instructions | suggestRecipeIntent | If you want to make it, hear the ingredients, or skip to another recipe, say make, ingredients, or skip.'; <br> After the last step of the recipe not clear that the flow is over and the skill has closed → instructionsIntent | INGREDIENTS REPEAT: asks for ingredients before comiitting to recipe - commits, hears ingredients again | ingredientsIntent insturctionsIntent | | "{mealType} recipe" | chooseTypeIntent | added | | | | | | | user was uncertain about how the skill exactly worked: "thought could just pick out a recipe" | | further development needed |
| USER 4 | | | | | | | | | | on skill launch user wants to directly go to a previously used recipe without navigating through meal-types | chooseTypeIntent | further development needed | WITHIN-INSTRUCTIONS RECIPE CHECK: request for specific # of ingredients within recipe, cancels the user out of the skill | instructionsIntent | option to engage ingredientsIntent added to instructionsIntent | white bean soup does not start with ingredients | | all ingredients stripped from recipes' first step |
| | | | | | | | | | | | | | on skill launch user wants to directly go to a previously used recipe without navigating through meal-types | chooseTypeIntent | further development needed | user wonders how far along in the recipe they are. [place markers] | | added place markers to recipes |
| | | | | | | | | | | | | | | | | asks for relevant ingredient amounts in the steps (instead of in the beginning and all at once) | instructionsIntent | ingredientsIntent added to instructionsIntent |
| USER 5 | "to hear the ingredients, say ingredients" - doesn't realize to wait for more instructions | suggestRecipeIntent | | | | | | | | | | | | | | MEALTYPE MISUNDERSTOOD"what kind of recipe are you looking for?" user asks for seafood | chooseTypeIntent | make header clearer |
| | | | | | | | | | | | | | | | | Ingredients list before commitment is too long, give a quick overview instead | | gives full list of ingredients, but during instructionsIntent only lists ingredients on request |