

Procedure Ideation

The goal of this assignment is to develop a plan for 3-4 procedures carried out in the same context of work. For example, recall how Bellamy et al. use the running example about the Espresso machine. One could consider how the use of this machine will involve numerous types of user scenarios and goals with their own set of tasks. In sum, your ideation work should consider multiple scenarios with connected goals/technologies.

This document guides you through a series of heuristics, i.e., a set of guiding prompts and questions, to consider the details of the scenarios, goals, and tasks that will inform your writing.

Copy this document to your Google Drive. Then, follow the instructions within each section. When you have completed it, submit a PDF version of it to Moodle.

Analyzing Your Audience

In this section, follow the guiding prompts to gather up a sense about your intended audience. Typically, you should conduct user research to qualify and verify such information. But, for the purposes of this exercise, it is fine if you rely more on your particular subjectivities. The point is to craft a more defined understanding of the audience.

Exigence: What is the occasion for these procedural instructions?

- Why are these procedural instructions necessary at this particular time and place? What issues/problems do these instructions aim to address?
 - Necessary to demonstrate how to use a stand mixer. Aims to address how a stand mixer can save time and effort, and help new bakers.
- Why is this issue important right now? What is at stake, and for whom?
 - Saving time and effort making homemade food will make users more likely to cook at home, which will save money on buying bread or pasta from a store, or ordering desserts for special occasions.

Who is the audience?

Highlight some of the characteristics that you think might apply to the projected audience:

- Potential user (someone who's exploring the product)
- New user (someone who's getting started with the product)
- Intermediate user (someone who has used the product before)

- Experienced user (someone who's well-versed with the product)
- New professional (someone who is new to the field and probably new to your product)
- Experienced professional (someone who is an expert in the field but might be new to your product)
- Admin/Leadership
- New contributor
- Experienced contributor
- Other: [Consider a more specific actor with a more specific role to the context of your procedure. For example, a software developer, if the procedure concerned some tool/feature for developers.]
 - Users with general cooking experience, but lack experience with a stand mixer
 - Users who want a stand mixer for baking recipes
 - Users who want a stand mixer for non-baking recipes

What are the audience's goals for these procedures? Develop 4 goals that all share the same context of activity with each other. Here are some examples to follow: 4 goals pertaining to making espresso drinks; 4 goals when playing Zelda: Tears of the Kingdom game; or 4 goals to improve one's basketball skills.

Answer:

- Use a stand mixer to make a meringue (for meringue cookies)
- Use a stand mixer to make a cake (from a box)
- Use a stand mixer & attachment to make pasta
- Use a stand mixer to knead dough for homemade bread

What situations and reasons might have brought the readers to your document(s)?

Answer: Looking for setup instructions. Looking for viability/plausibility/achievability of their goal with the device, and some instructions/proof from those who have done it before.

How might have they come to find your document?

Answer: Cooking/recipe blog, manufacturer website, included instruction manual.

What information do they already have about the product/feature?

Answer: The stand mixer (potentially) has the capability to make their baking tasks 1) physically easier, 2) faster. The stand mixer can make their cooking process more convenient in some way, either as-is or with attachments. The stand mixer is simple to set up and maintain, and generally user-friendly.

What are the main questions readers are likely to have?

Answer:

How difficult is it to use the machine for the user's purpose?

How difficult is it to clean up and care for after?

How well will the machine get the job done, specifically compared to doing the task manually (eg. beating eggs in the stand mixer vs beating them with a whisk by hand)?

How much time and effort does it save vs the time and effort to learn and clean/take care of it?

How difficult is the initial setup process?

How easy are the attachments to obtain, use, and clean?

Write Your User Scenarios

Based on the above information, write 4 scenarios that include the 4 main parts of information: Who, Motivation(s), Goal, and Important Characteristics.

You may not write a procedure for all of the scenarios in the end, but this will help you gather a sense of how many procedures you will need to write for the major assignment.

IMPORTANT: All of your scenarios should be within the same context of activity or tool use. In other words, don't write up 4 scenarios from 4 completely different contexts of activity. Here are some examples to follow: 4 scenarios pertaining to making espresso drinks; 4 scenarios when playing Zelda: Tears of the Kingdom game; or 4 scenarios to improve one's basketball skills.

Scenario 1: Use a stand mixer to make a meringue (for meringue cookies)

Intermediate chef, new to the mixer, using it to make the process easier/faster

Chris has a small hobby baking business where he sells baked goods to friends, family, coworkers, and neighbors. He is a small-time baker and has only his home kitchen and appliances to make his baked goods. He wants to add meringue cookies to his offerings, but the process to make them by hand is too time consuming and tiring. He recently purchased a stand mixer to more efficiently make his current recipes, and has heard that a stand mixer can handle meringues efficiently and easily.

Scenario 2: Use a stand mixer to make a (box) cake

Inexperienced chef, new to the mixer, using it to make cupcakes in a fool-proof, low-effort way.

Jordan was given a stand mixer by her parents when she bought her first home. She is finally moved in and having her friends and family over for a housewarming party. Jordan's experience with cooking extends to frozen and pre-made meals, and she is an inexperienced baker, but she wants to get better at both. She decides to use

the stand mixer and boxed cake mix to make cupcakes for the housewarming party and begin her 'baking journey.' She is concerned about how easy the stand mixer is to set up and use.

Scenario 3: Use a stand mixer & attachment to make pasta.

Prefers the taste and texture of homemade pasta.

Anna's grandmother used to make homemade pasta for the family. Now, Anna wants to make homemade pasta herself, but knows from her grandmother that properly rolling out pasta sheets and cutting the noodles is time consuming and difficult to freehand. She wants to ease into the journey of making pasta like her grandmother by using a pasta attachment for her stand mixer.

Scenario 4: Use a stand mixer to knead dough for homemade bread

Intermediate baker wants to make bread more quickly and with less physical effort.

Hannah started baking bread during the pandemic as a hobby so she could feel productive while isolating. She enjoys having control over the ingredients and flavors, her homemade bread is generally healthier than mass-produced store bread, and she enjoys having fresh, homemade bread every week. Kneading the dough is time consuming and requires a lot of physical effort, and when she injured her wrist she was unable to make bread for two months. Hannah wants to make the whole process easier, and avoid having to take such a long break from baking again, by using a stand mixer to mix and knead the dough for her.

Analyzing Your Audience(s) Tasks

Complete one of the following tables to analyze the tasks that you will write for each user scenario. A task analysis will help you develop a better understanding of the following questions:

- How much supporting reference and conceptual information to provide
- What level of “completeness” (low, mid, high) may you need to write the steps

Remember that this is meant to be an ideation exercise—not a finished draft of the actual procedure. Yet, it should help you develop an initial rough draft.

Refer to Bellamy et al.’s discussion and example of a task analysis in Chapter 1 for support, as you move through this analysis work.

Task Analysis for Scenario 1

Guiding Question	Details
What is the user-oriented goal? <ul style="list-style-type: none">Do not fall into the function/feature-oriented goal.	Use a stand mixer to make meringue cookies
What tasks does the user need to perform to accomplish the goal? <ul style="list-style-type: none">Remember tasks are not the same as goals, and tasks are not synonymous with steps.Steps are the more specific actions needed to complete a larger “high-level” task.Don’t worry about sequence or the “completeness” yet.	Gather the ingredients Prepare the mixer Preheat the oven Prepare and measure the ingredients Create the meringue Pipe cookies Bake till dry
What are the mental and physical steps involved in each task?	Mental: Determine when eggs have reached ‘stiff peaks’, when sugar has been fully incorporated, and when the meringue is dry Physical: Separate and whip eggwhites, pipe meringue cookies
Who performs the task?	Audience: A baker who wants to sell meringue cookies Experience: Intermediate or higher. Likely a difficult recipe for new

	<p>bakers</p> <p>Role: User?</p> <p>Authority:</p>
When and under what conditions is the task performed?	<p>Requirements: Stand mixer with a whisk attachment, both must be completely dry of water and/or grease; preheated oven; meringue ingredients must be available</p> <p>Limitations: User must have an understanding of what 'stiff peaks' (regarding whipping egg whites) refers to, or be able to reliably look it up</p> <p>Environment: Home kitchen</p>
What are the potential distractions to accomplishing the goal?	<p>Alternative path: Deciding to make the meringue into something other than cookies; deciding not to make meringue and make a different baked good instead</p> <p>Exception path: No whisk attachment; missing ingredients</p> <p>Boundaries: Time; oven; the space available in the kitchen</p>
What does the user need to know about the task?	<p>Duration: Approx. 2.5 hours (depending on the recipe)</p> <p>Complexity: Setting up the stand mixer is easy for new and intermediate users; the recipe will be difficult for users who have little or no baking experience, even with the stand mixer's help</p> <p>Frequency: Weekly</p>

<p>What is the sequence of tasks or steps?</p>	<p>Prerequisite: install the paddle attachment and bowl on the stand mixer</p> <ol style="list-style-type: none"> 1. Thoroughly dry the whisk and bowl. 2. Preheat the oven. 3. Prepare and measure the ingredients <ol style="list-style-type: none"> a. Separate egg whites and yolks b. Measure sugar, salt, vanilla extract, cream of tartar 4. Combine egg whites, cream of tartar and salt in the stand mixer 5. Beat on low to combine. 6. Add sugar 7. Beat on high until stiff peaks 8. Transfer to piping bag 9. Pipe cookies 10. Bake until dried 11. Leave in the oven once the baking time has passed, and leave till cooled
<p>What is the expected result?</p>	<p>Meringue that is stable enough to be piped into cookies, and tasty enough to be sold to acquaintances.</p>

Task Analysis for Scenario 2

Guiding Question	Details
What is the user-oriented goal?	Use a stand mixer to make a cake from a box
What tasks does the user need to perform to accomplish the goal? (<i>Don't worry about sequence or the "completeness" yet.</i>)	Choose a cake mix Collect required ingredients Set up the stand mixer Preheat the oven
What are the mental and physical steps involved in each task?	Mental: Decide what kind of cake to make; judging when ingredients are fully mixed Physical: Measuring ingredients; dividing batter into cupcake molds
Who performs the task?	Audience: Bakers (inexperienced or otherwise) saving effort and time with boxed cake mix and a stand mixer Experience: Easy Role: User? Authority:
When and under what conditions is the task performed?	Requirements: Functioning stand mixer; functioning oven; muffin or cake pan; ingredients must be available

	<p>Limitations: User must have the beater attachment for the stand mixer; user must have an oven-safe vessel for the cake batter</p> <p>Environment: Home kitchen</p>
What are the potential distractions to accomplishing the goal?	<p>Alternative path: Deciding to make brownies or cookies instead of cake</p> <p>Exception path: Missing ingredients; no oven-safe baking vessel</p> <p>Boundaries: Time; the space available in the kitchen</p>
What does the user need to know about the task?	<p>Duration: 15-17 minutes</p> <p>Complexity: Low complexity for new users and new bakers</p> <p>Frequency: Special occasions</p>
What is the sequence of tasks or steps?	<p>Prerequisite: install the paddle attachment and bowl on the stand mixer</p> <ol style="list-style-type: none"> 1. Choose cake mix 2. Preheat the oven. 3. Prepare and measure the ingredients <ol style="list-style-type: none"> a. Measure oil and water b. Crack eggs 4. Combine ingredients in the stand mixer 5. Beat on low to combine. 6. Raise speed to medium until fully incorporated. 7. Portion out into a cupcake tin. 8. Bake until fully cooked.
What is the expected result?	Perfectly mixed cake batter that can be portioned into cupcakes.

Task Analysis for Scenario 3

Guiding Question	Details
What is the user-oriented goal?	Make pasta
What tasks does the user need to perform to accomplish the goal? (<i>Don't worry about sequence or the "completeness" yet.</i>)	Prepare ingredients Set up the stand mixer Knead dough Sheet pasta Cut pasta sheets
What are the mental and physical steps involved in each task?	Mental: Deciding the type and thickness of pasta they want to make Physical: Make pasta dough; roll out pasta dough; put dough through noodle slicer
Who performs the task?	Audience: Home chefs who want to make fresh pasta Experience: Easy to medium Role: User? Authority:
When and under what conditions is the task performed?	Requirements: Dough hook to knead the dough; pasta sheeter of the correct thickness for desired noodles; ingredients must be available; must have time to allow the pasta dough to rest before sheeting

	<p>Limitations: user must know the basics of making homemade pasta</p> <p>Environment: Home kitchen</p>
What are the potential distractions to accomplishing the goal?	<p>Alternative path: Deciding to make a different type of pasta</p> <p>Exception path: Broken pasta sheeter; missing ingredients</p> <p>Boundaries: Time; the space available in the kitchen</p>
What does the user need to know about the task?	<p>Duration: About one hour</p> <p>Complexity: Medium for new users; easy to medium for users who have made pasta before</p> <p>Frequency: Weekly</p>
What is the sequence of tasks or steps?	<ol style="list-style-type: none"> 1. Configure the pasta machine with the bowl and mixing paddle 2. Gather and measure ingredients 3. Combine ingredients in the bowl 4. Mix till cohesive. 5. Change mixing paddle to dough hook 6. Knead with the dough hook for 3-5 minutes 7. Allow to rest 8. Set up the pasta attachment while the pasta dough rest 9. Divide the dough into equal portions 10. Sheet the dough <ol style="list-style-type: none"> a. Start on the largest setting b. Pass dough through the sheeter twice c. Once dough is uniform in thickness, move the setting down one size and repeat the process

	<p>d. Continue until all the dough is the desired thickness.</p> <p>11. Change sheeter to cutter</p> <p>12. Feed dough sheets through the cutter to cut into noodles.</p>
What is the expected result?	Fresh pasta ready to be cooked or stored

Task Analysis for Scenario 4

Guiding Question	Details
What is the user-oriented goal?	Use a stand mixer to knead dough for homemade bread
What tasks does the user need to perform to accomplish the goal? (<i>Don't worry about sequence or the "completeness" yet.</i>)	Measure ingredients Configure stand mixer with dough hook Add ingredients
What are the mental and physical steps involved in each task?	Mental: Deciding what bread to make; deciding what flour to use Physical: Measure ingredients; handle the dough once it's ready
Who performs the task?	Audience: Bakers, cooks, and general users who want homemade bread Experience: Easy to medium, depending on the desired bread Role: User? Authority:
When and under what conditions is the task performed?	Requirements: Paddle attachment; dough hook; ingredients must be available; must have time to allow the dough to rise before baking Limitations: User must have some familiarity with the breadmaking process (such as allowing the dough to rest and rise) and be able to test and identify

	<p>active yeast</p> <p>Environment: Home kitchen</p>
What are the potential distractions to accomplishing the goal?	<p>Alternative path: Deciding to make a different style of bread, or add fillings</p> <p>Exception path: Missing ingredients; no dough hook</p> <p>Boundaries: Time; the space available in the kitchen</p>
What does the user need to know about the task?	<p>Duration: 10-15 minutes mixing and kneading</p> <p>Complexity: Easy for new users; easy to medium for new bakers</p> <p>Frequency: Weekly</p>
What is the sequence of tasks or steps?	<p>Prerequisite: Configure mixer with dough hook</p> <ol style="list-style-type: none"> 1. Prepare ingredients <ol style="list-style-type: none"> a. Measure flour, water, sugar, salt b. Bloom yeast in warm water until foamy 2. Combine milk, sugar, salt, butter in a sauce pan and heat until dissolved. Cool to 110 degrees. 3. Add all ingredients, minus part of the flour, to the mixing bowl and mix on low speed 4. Once combined, add remaining flour and knead for another 5 minutes 5. Move dough to a greased bowl and allow to rise 6. Preheat oven 7. Bake bread
What is the expected result?	Bread dough ready to be baked (after resting)