

Supplementary Material: Evaluating Accessibility in Sequential Onboarding Flows: A Conceptual Framework and Scoring Rubric

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Preface

This supplementary file provides the supporting information used in the study “**Evaluating Accessibility in Sequential Onboarding Flows: A Conceptual Framework and Scoring Rubric**”. The information is included to support transparency, enable replication, and facilitate comparison with future studies.

The file contains:

1. Consent Form used to ensure voluntary participation and informed agreement.
2. **Participant Accessibility Evaluation Form** (Table S1), administered after onboarding completion.
3. **Extended Framework Checklist for Evaluators** (Table S2), used to structure expert review and document evidence for scoring.

4. **Accessibility Scoring Rubric** (Table S3), defining the standardised 0–5 scale applied consistently across expert and participant evaluations.
5. **De-identified Score Summaries** (Table S4), reporting participant ratings without personal identifiers.
6. **Coding Framework for Qualitative Analysis** (Table S5), showing thematic codes mapped to the four evaluation dimensions.

1. Consent Form for User Evaluation

Thank you for agreeing to participate in this study. This evaluation is part of a research project focused on improving accessibility in digital onboarding experiences.

Participation is voluntary, and participants may withdraw at any time without penalty. No personally identifiable information will be collected or published.

By signing below, participants acknowledge that they understand the purpose of the study and consent to participate.

Participant Name: _____

Signature: _____

Date: _____

2. Table S1: Participant Accessibility Evaluation Form

A participant-facing self-evaluation form based on the four framework dimensions (Perceivability, Operability, Understandability, and Personalisation). The form was administered after onboarding to collect structured ratings and optional observations.

Framework Dimension	Checklist Summary	Rate (0–5)	User Notes / Observations
Perceivability	Is the content presented in a way all users can perceive (e.g., text alternatives, clear contrast)? Do screen readers interpret elements correctly? Are media elements captioned or transcribed? Are instructions conveyed through multiple modalities (not only colour)?	<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
Operability		<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	

	Are interactive elements easy to use and navigate, including by keyboard or assistive technology? Are focus indicators clear and sequential? Are time limits adjustable or clearly communicated? Are gestures accessible through alternatives? Are error messages recoverable?	
Understandability	Are instructions and flows easy to follow without cognitive overload? Are error and confirmation messages understandable?	<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
Personalisation	Can participants adjust aspects of onboarding to suit their needs (e.g., skip/revisit steps, change font size, adjust pacing, alternative formats)? Are preferences remembered across steps (where applicable)?	<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5

Rating Key:

- 0 = Not supported at all
- 1 = Severely lacking
- 2 = Partially addressed
- 3 = Adequately addressed
- 4 = Strongly supported (minor gaps)
- 5 = Fully accessible and inclusive

User Demographics (optional):

Assistive Technology Used: _____
 Impairment Type (optional): _____
 Age Group: Under 18 18–30 31–50 50+
 Device/Platform: _____
 Date: _____

3. Table S2: Extended Framework Checklist for Evaluators

An evaluator checklist used to structure expert review of onboarding flows. Checklist observations were used to justify dimension-level 0–5 rubric scores (see Table S3).

Dimension	Checklist Item	Evaluator Guidance	Evidence / Notes (to justify scoring)
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Perceivability	Images have descriptive alt text	Use screen reader to verify text equivalents
Perceivability	Text has sufficient contrast	WCAG contrast checker recommended
Perceivability	Audio/video content has captions or transcripts	Mandatory for onboarding videos
Operability	All functionality is accessible via keyboard	Test tab order and focus behaviour
Operability	Buttons and inputs are large and selectable	Consider touch-target size and spacing
Operability	No time limits that hinder interaction	Warn or allow extension if needed
Understandability	Language is simple and clear	Avoid jargon; use plain instructions
Understandability	Onboarding steps are logically ordered	Evaluate cognitive load and transitions
Understandability	Progress indicators are present	Include visual or textual cues
Personalisation	Users can skip, repeat, or extend steps	Optional customization improves inclusivity
Personalisation	Content adapts to user roles or needs	Evaluate tailoring based on context
Personalisation	Accessibility preferences are respected	Check system/browser-level settings

4. Table S3: Accessibility Scoring Rubric (0–5 Scale)

Standardised rating anchors applied consistently across dimensions in both expert and participant evaluations. Ratings reflect the extent to which onboarding supported each dimension, informed by checklist evidence (Table S2) or participant experience reports (Table S1).

Score	Interpretation
0	No support; major barriers prevent access
1	Severe lacking; critical gaps consistently affect use
2	Limited support; multiple accessibility issues present

3	Adequate support; partial accessibility with notable gaps
4	Strong support; minor issues remain
5	Fully supported; aligns with accessibility best practices

5. Table S4: De-identified Score Summaries

Participant scores across the four dimensions (0–5), reported without personal identifiers.

Participant	Perceivability	Operability	Understandability	Personalisation	Notes (selected anonymised rationale)
P1	4	1	4	4	Onboarding video has no caption
P2	3	4	3	3	No clear navigation
P3	3	2	1	2	Lack of visual scaffolding
P4	3	4	3	2	Fixed flow throughout
Average	3.25	2.75	2.75	2.75	

6. Table S5: Coding Framework for Qualitative Analysis

Thematic coding categories used to analyse qualitative participant observations. Codes were mapped to the four dimensions.

Dimension	Thematic Codes	Example Quotes (selected anonymised)
Perceivability	Contrast issues; missing text alternatives	“Text blended into background; hard to see.”
Operability	Gesture reliance; navigation difficulty; small targets	“Swipe-only was exhausting.”

Understandability	Return/back uncertainty; unclear flow structure	“Was not sure on how to return back.”
Personalisation	Limited customisation; assistive-technology configuration constraints	“No adjustable font size, and my accessibility settings were not supported.”
