

Report on User Testing Methodology for the Living Wage vs Postsecondary Earnings Dashboard

Prepared for: U.S. Census Bureau

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1. Introduction

This report documents the process and methodology used in designing and conducting user testing for the Postsecondary Earnings Dashboard. The methodology emphasizes scenario-based evaluation, structured survey feedback, and iterative refinement of testing instruments to ensure actionable, representative insights.

The aim was not only to test the dashboard's immediate functionality, but also to establish a repeatable, rigorous framework that ensures Census Bureau data dissemination tools align with the needs of real-world users.

2. Designing the Use Case Scenarios

We created eight scenarios to reflect realistic post-graduation decision-making. Scenarios asked participants to compare job offers across states, explore migration and program earnings, assess staying versus relocating, and evaluate program reliability across regions.

Rationale for Scenario Design

- **Realism:** Anchored in actual student choices.
- **Breadth:** Covered individual, program-level, and regional perspectives.
- **Depth:** Included reflective prompts after tasks.
- **Adaptability:** Refined wording and sequencing based on participant feedback.

3. Designing the Post-Task Survey Questions

The post-task survey included 15 structured Likert-scale items and open-text responses. The questions addressed ease of use, clarity, efficiency, confidence, trust, and overall experience.

Rationale for Question Design

- **Quantifiable benchmarks** through Likert scales.
- **Captured both functional and emotional dimensions** of user experience.
- **Complemented scenarios** by validating observed behaviors.

- **Iteratively refined** for clarity during early testing.

4. Research Methodology & Testing Process

The methodology combined structured scenarios with reflective feedback mechanisms:

- **Participants:** Nine graduate students from diverse majors.
- **Protocol:**
 - *Think-Aloud Method:* Participants verbalized reasoning during tasks.
 - *Scenario Completion:* Participants completed three structured scenarios each.
 - *Post-Task Survey:* Immediately after tasks, participants rated their experience and provided feedback.
- **Iteration:** Scenario phrasing and survey items were adjusted after early runs.

This approach ensured that feedback remained authentic, contextualized, and adaptable.

5. Adaptive Improvements During Testing

Flexibility was central to our testing approach:

- **Simplified tasks** when cognitive load was too high.
- **Clarified key terms** (“living wage,” “variance”) using revised language and tooltips.
- **Refined survey focus** on confidence and clarity when hesitations emerged.

These iterative refinements improved both the dashboard experience and the quality of our data collection methodology.

6. Strategic Recommendations for the U.S. Census Bureau

The findings from user testing point to strategic priorities:

1. **Prioritize Data Granularity**
Expand datasets to include program specializations, job titles, and placement rates.
2. **Support Comparative Analysis**
Embed side-by-side comparison tools for states and metro areas.
3. **Enhance Contextualization of Data**
Incorporate additional datasets (safety, healthcare, career progression) with partner agencies.
4. **Embed Clarity and Transparency**
Provide inline explanations, consistent terminology, and tooltips to ensure data is accessible.
5. **Reinforce Public Trust**
Ensure usability, accessibility, and transparency to maintain confidence in Census data.

Implication for Census Bureau Strategy



By embedding user-centered design principles in dissemination tools, the Census Bureau can extend its role beyond data collection to **active public decision-making support**, reinforcing its reputation as a trusted, indispensable data provider.

7. Conclusions & Lessons Learned

This methodology demonstrates a **student-centered, adaptive approach**:

- Realistic, scenario-based tasks anchored in real decisions.
- Well-structured surveys quantified user perceptions.
- Iterative refinements enhanced clarity and reduced confusion.
- Mixed-method design ensured both qualitative and quantitative insights.
- Strategic recommendations align with Census Bureau goals of accessibility, trust, and impact.

This framework provides a replicable model for future Census-led usability studies on public-facing dashboards.



Appendix

Supporting Materials

A. Use Case Scenarios

Eight structured scenarios were developed, covering topics such as:

- Cross-state comparisons of earnings vs. living wage.
- Tracking earnings by program and migration trends.
- Decision-making for staying versus relocating.
- Metro area feasibility assessments.
- Risk assessments for educational investments.
- Regional economic opportunity analysis.
- Program viability across multiple locations.
- Financial feasibility for recent graduates.

Each scenario included targeted post-task questions to probe ease of use, clarity, and confidence in responses.

B. Post-Task Survey Questions

The post-task survey included 15 Likert-scale questions plus open-ended prompts.

Survey Questions:

1. On a scale of 1 to 5, how easy was it to complete this task using the dashboard?
2. On a scale of 1 to 5, how clear and understandable was the information you found?
3. On a scale of 1 to 5, how efficient do you feel the process was in terms of time and clicks?
4. On a scale of 1 to 5, how easy was it to find and use the filters or controls you needed?
5. On a scale of 1 to 5, how confident are you that your answer to the task is correct?
6. On a scale of 1 to 5, how well do you think the dashboard supported you in making a decision based on the data?
7. On a scale of 1 to 5, how easy was it to compare different states, programs, or metrics in this dashboard?
8. On a scale of 1 to 5, how visually appealing and well-designed did you find the dashboard?
9. On a scale of 1 to 5, how much do you trust the accuracy and reliability of the data presented?
10. On a scale of 1 to 5, how easy was it to navigate and find your way around the dashboard?
11. On a scale of 1 to 5, how easy was it to correct mistakes or reset filters when needed?



12. On a scale of 1 to 5, how quickly did you feel comfortable using the dashboard's features?
13. On a scale of 1 to 5, how useful would this dashboard be for making actual career or education decisions?
14. On a scale of 1 to 5, how likely would you be to recommend this dashboard to someone else making similar decisions?
15. On a scale of 1 to 5, how satisfied are you overall with your experience completing this task?

C. Application of User Testing to Redesign of Tools

Based on feedback from this study, the following changes were made to the Living Wage vs. Postsecondary Graduate Earnings tool to improve its usability:

- Removed the map from the tool.
- Moved filters from the right to the top of the tool.
- Consolidated filters into two groups rather than three.
- Moved program earnings from within the table to above it.
- Colored rows green and red to indicate whether program earnings were higher or lower than the living wage for a particular metropolitan area.



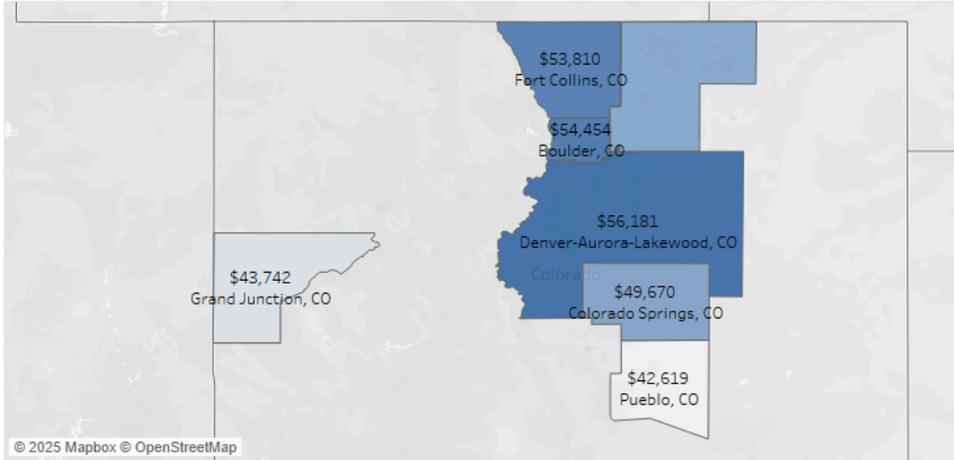
Before User Testing



Living Wage vs. Postsecondary Graduate Earnings

Discover how earnings for a program of study compare against the living wage for metropolitan areas in a state.

Living Wage by Metropolitan Area



About Your Studies

Graduating Institution
Northern Illinois University

Degree Level
Baccalaureate

Graduation Cohort
All Cohorts

Program of Study
All Instructional Programs

About Where You Want to Go

State Name
Colorado

Earnings Period
5 Years

Variance Between Living Wage and Program Earnings

Metropolitan Area	Living Wage	Program Earnings	Variance	Variance %
Boulder, CO	\$54,454	\$59,136	\$4,682	7.9%
Colorado Springs, CO	\$49,670	\$59,136	\$9,466	16.0%
Denver-Aurora-Lakewood, CO	\$56,181	\$59,136	\$2,955	5.0%
Fort Collins, CO	\$53,810	\$59,136	\$5,326	9.0%
Grand Junction, CO	\$43,742	\$59,136	\$15,394	26.0%
Greeley, CO	\$49,546	\$59,136	\$9,590	16.2%
Pueblo, CO	\$42,619	\$59,136	\$16,517	27.9%

About Your Family

Adults in Family
1 Adult Working

Children in Family
0



After User Testing and Redesign



Living Wage vs. Postsecondary Graduate Earnings

Discover how earnings for a program of study compare against the living wage for metropolitan areas in a state.

About Your Studies

Graduating Institution
Northern Illinois University

Degree Level
Baccalaureate

Program of Study
All Instructional Programs

Graduation Cohort
All Cohorts

After Graduation

Earnings Period
5 Years

Destination State
Illinois

Adults in Family
1 Adult Working

Children in Family
0

Variance Between Median Earnings and Living Wage

Median annual earnings of graduates in the selected program: **\$59,136**

Metropolitan Area	Living Wage for This City	Variance from Program Earnings	% Variance from Program Earnings
Bloomington, IL	\$42,307	\$16,829	28.5%
Carbondale-Marion, IL	\$40,498	\$18,638	31.5%
Champaign-Urbana, IL	\$42,453	\$16,683	28.2%
Chicago-Naperville-Elgin, IL	\$51,750	\$7,386	12.5%
Danville, IL	\$39,749	\$19,387	32.8%
Decatur, IL	\$41,371	\$17,765	30.0%
Kankakee, IL	\$44,533	\$14,603	24.7%
Peoria, IL	\$41,891	\$17,245	29.2%
Rockford, IL	\$42,453	\$16,683	28.2%
Springfield, IL	\$42,869	\$16,267	27.5%

A green row indicates the program earnings are greater than the living wage for a city.

A red row indicate the program earnings are less than the living wage for a city.

Technical documentation: <https://pseo-coalition.quarto.pub/living-wage-vs-postsecondary-graduate-earnings-tool/>

