

# **TRS Website Evaluation Report**

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## Overview

To evaluate the usability of the redesigned TRS website, we conducted a comparative usability study involving two groups of participants all of whom who were TRS members. Group A (12 participants) interacted with the original website, while Group B (10 participants) tested the new design. Participants in each group were a mix of ages: 16 currently employed (5 for < 10 years, 11 for 11-30 years), 6 retired).

Participants were recruited and screened online before being scheduled for the evaluation session. Each session was run individually and recorded for subsequent analysis by the evaluation team. We scheduled 30–45 minutes per session with all participants asked to complete a set of common tasks (see Appendix). Based on discussions with members of the TRS team and pilot testing, it was decided to allow each participant a three-minute limit per task. If, after this time, they had failed to locate a suitable answer, they were prompted to move to the next task. After attempting all tasks, a post-task satisfaction survey was conducted.

Data collection captured three core aspects of usability: effectiveness (operationalized as task success), efficiency (measured as speed on task), and satisfaction (reported on a standardized scale, benchmarked to industry norms). Use of three measures reflects the trade-offs in user experience between outcome, effort, and attitude which are known to vary across users. An ideal user experience ranks high on all three criteria. Participants were also free to comment on their experience with the design throughout the session and noteworthy comments were captured by the evaluators.

## Main Findings

**The new website was 12.5% more effective, 46% more efficient, and rated 24 pts higher on satisfaction.** Unsolicited comments on the new interface were positive.

Our evaluation indicates the new TRS website design led to strong improvements across all key success metrics. User success rates improved, with a higher percentage of users able to complete important actions without assistance on the new design. Furthermore, users typically completed tasks faster and more consistently on the new website with notable time savings on the more complex tasks. Satisfaction ratings were significantly better with the new website, exceeding industry benchmarks. Impressionistic data from free-form comments suggest the redesigned site also led to less user frustration, easier navigation, and more intuitive task flow.

# User Experience Metrics

## Effectiveness

For purposes of this evaluation, task success was assessed as the ability of the user to find the target information or location. If they were unable to find the desired information after three minutes, or expressed a desire to stop before this, the task was deemed incomplete. Summary completion rates for both groups on each task are presented in Figure 1.

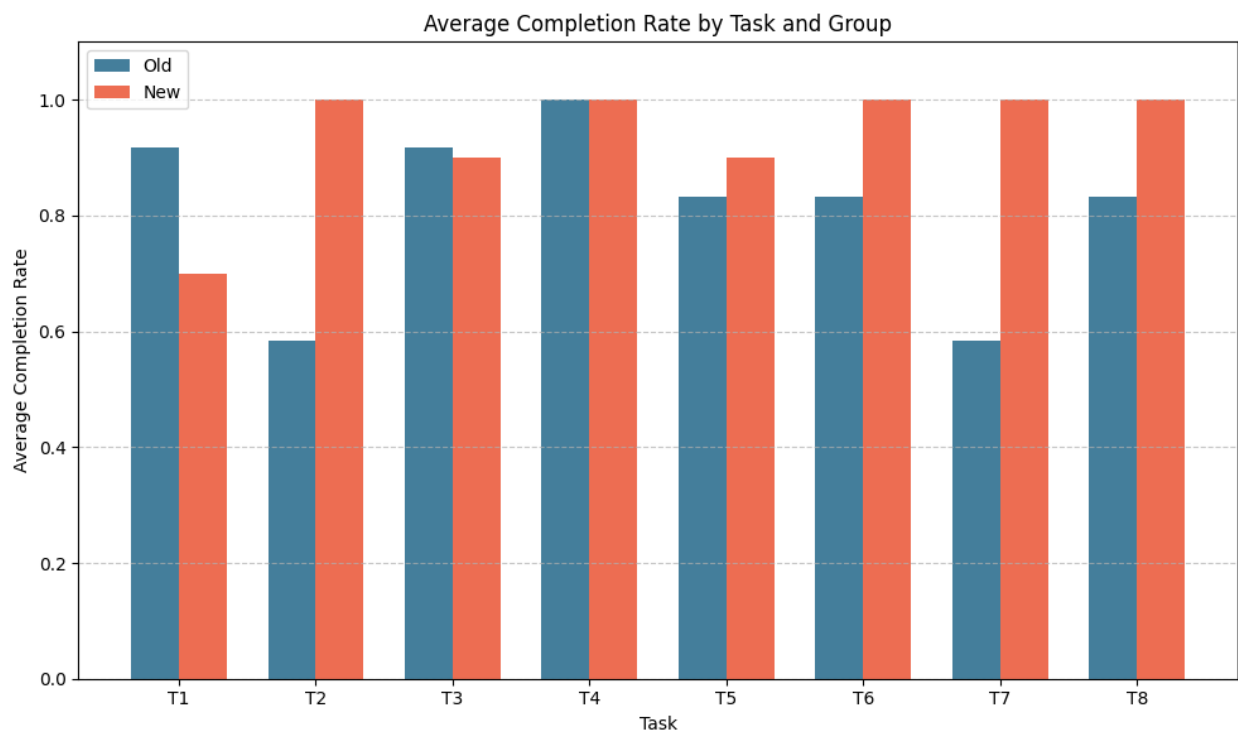


Figure 1. Average completion rate per task across Group A (old) and Group B (new design)

Taken as a set, average completion rates across all tasks increased from 82% for the original site to 95% for the new design, indicating the new design results in improved effectiveness.

With the old interface, only one task was successfully completed by all users (Task 4, Register for a Retirement Benefits Presentation). This suggests the old design was ineffective for some users across most typical tasks. Particularly problematic were Task 2 (Estimate benefits) and Task 7 (Find a video) where almost half of the participants failed to locate the correct information. In comparison, all users of the new design successfully completed 5 of the 8 tasks, indicating the design was effective for most users across most tasks. In the new design,

only one user failed to complete Task 3 (Update your address) or Task 5 (Learn about Preventative Care) while three users failed to complete Task 1 (Find the date of next annuity payment). These areas of the new design might warrant attention for further improvement.

It is important to note that placing a time limit on completion can deflate effectiveness scores as users in more natural, non-test situations may be willing to invest more time resolving their search. However, failure to complete these types of information search tasks within the time limit does suggest that the navigation and layout of the site are not optimized for all target location.

## Efficiency

For purposes of this evaluation, efficiency was operationalized as time on task, with lower time to completion considered evidence of a better user experience. Summary average completion times per task for each design are presented in Figure 2 below.

Users of the new interface were 46% faster (more efficient) than users of the original design. Participants finished 7 of 8 tasks faster on the new website. More specifically, in half the tasks, the new design resulted in completion times that were at least 50% faster, with Task 6 (Register for a health event) being completed 80% faster than on the old design.

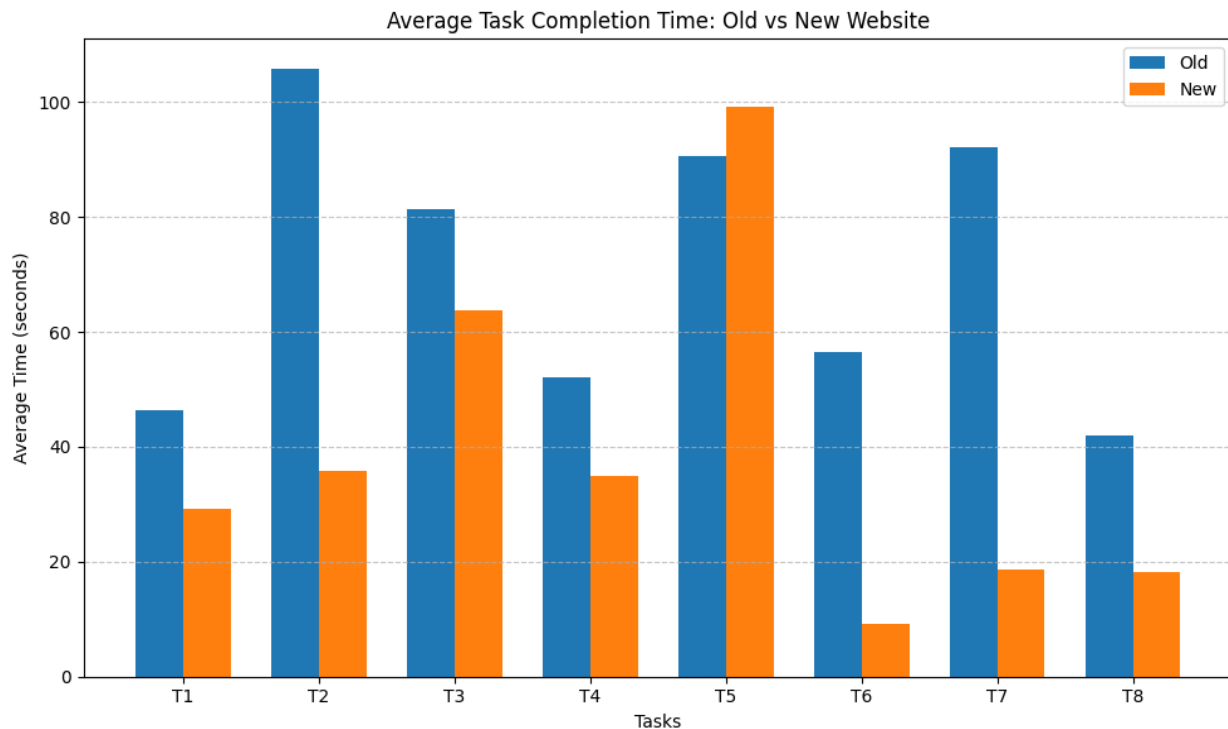


Figure 2. Average time per task across Group A (old design) and Group B (new design)

Only one task, (#5, Learning about preventive care) showed no efficiency improvement on the new site. Again, this may be a design issue in need of further attention. Taken as a set, the new design represents a substantial improvement in efficiency for most users on most tasks.

## Satisfaction

We estimated user satisfaction with the [System Usability Scale \(SUS\)](#), a widely recognized measure of users' perceptions of ease of use. This tool consists of a 10 item, 5-point Likert-scale survey that asks users to rate the complexity, consistency or difficulty of an interface, and to estimate their own confidence in using a site or product successfully. All users completed the SUS immediately after finishing their task set.

Summary scores, including upper/lower confidence intervals, for each design are presented in Figure 3 below.

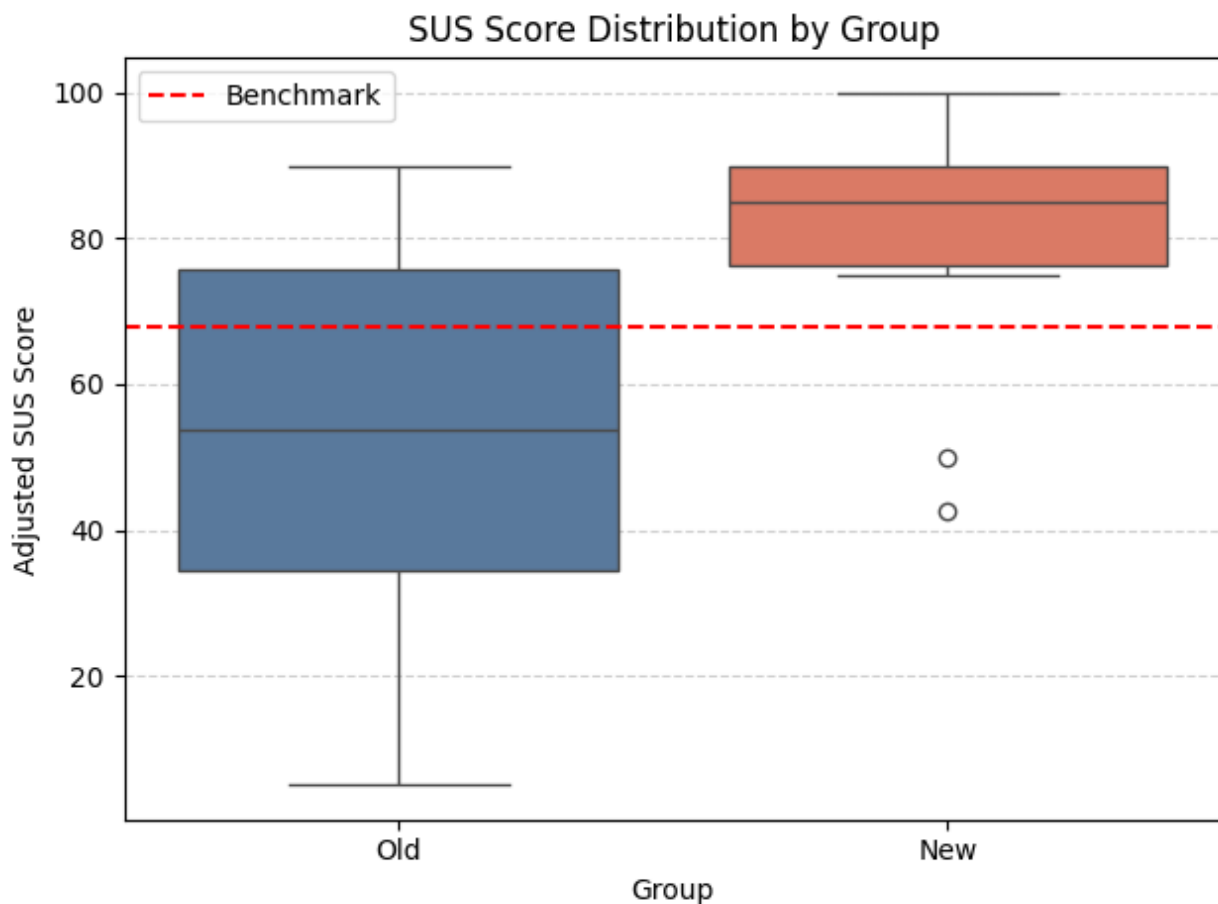


Figure 3. Summary SUS response for old and new interfaces.

SUS is an industry standard tool with a long record of use which has enabled UX evaluators to establish a benchmark for satisfaction. Responses are converted to a final score on a 0-100 scale, with a higher score considered more desirable. To this end, we know that average consumer interfaces score 68, thus any design can be assessed in comparison to this benchmark (the dotted line in figure 3) to provide a broader interpretation of the satisfaction score obtained.

The original design's SUS score was 53.13, suggesting a very poor level of satisfaction, well below the average for consumer interfaces. The new design received a much-improved SUS score of 79.5, suggesting not only that users were far more satisfied with the new design, but they rate it more usable than average. Also noteworthy here is the reduction in response variation among users of the new design, meaning there is greater consistency of response among these users, with all users reporting higher than average satisfaction scores. In contrast, users of the old design report widely varying levels, skewing to the negative.

Though conversion of SUS scores to grades or percentiles is not agreed upon in the UX field, informal mappings would characterize the redesign as moving the reported satisfaction levels of the TRS site from a grade of D to an A-.

## **General impressions**

As well as the measures reported above, participants' verbal comments and physical behavior was recorded during the test sessions, providing the evaluators with impressionistic data on the users' experiences, particularly for points of friction where the task flow is disrupted negatively. Below are some comments from users in each group (A= old, B=new design)

The search function on the old design gave many users problems. As participant A6 put it: "I typed exactly what I wanted in search and it gave me nothing useful", while participant A3 said of the results: "This is way too much information to search through." In contrast, there were no negative comments about the search function among participants using the new interface.

In terms of navigating rather than searching the site to locate information, we heard comments such as "I'm just clicking around hoping I'll land on the right page." (participant A7) or "The terms are all confusing, I'm not even sure I'm looking in the right place" (participant A10) which indicate uncertainty from users of the old site. In contrast, the improvements in navigation were frequently commented upon by users of the new interface: "This was easy. I knew it would be under the Health section," (participant B7) or "Oh, the annuity payment is right upfront on the homepage — isn't this what we were looking for?" (participant B1).

Functionality was not always obvious to some users e.g., one user of the old interface did not recognize that the screen they were viewing had a play button on a video, remarking "Oh... that

was a button? I thought it was just an image.” (participant A1). Again, this type of comment was not observed with the new design suggesting clear improvement for this type of user.

However, it is worth noting there may be some ‘unlearning’ involved for experienced users when it comes to the new site. Once users have invested time and effort gaining familiarity with a design, there can be a cognitive cost in shifting. As one participant in the new group said: “I kind of liked the older navigation, maybe just because I was used to it. This is my first time on the new site, but I think I’d like it better once I get used to it.” (participant B3). Generally, participants showed fewer signs of frustration on the redesigned site, suggesting a smoother, more user-friendly experience. Coupled with the effectiveness and efficiency scores obtained, we do not believe unlearning will be a significant problem.

Despite being informed explicitly in recruitment and introduction to the evaluation session that they would not be required to login to complete any of the tasks, many users expressed an expectation to do so to complete several tasks. This suggests that most members anticipate logging in each time they visit the site.

## **Conclusion**

The new TRS site design resulted in considerable improvements on all key usability metrics. Users are able to find information more effectively, more efficiently and report greater satisfaction with the interactive experience. There remain one or two areas for possible improvement in navigation, but the redesign offers a significant improvement in user experience for most TRS members.

## Appendix

### Tasks

Initial assessment based on discussion with TRS team Very Easy (1) -> Very Hard (5)

1. Updating address on file with TRS - 2

Pension > know your benefits > manager your member account > keep your information current

<https://www.trs.texas.gov/pension-benefits/know-benefits/manage-account/keep-info-current>

2. View Payment Schedule - 2

Pension > retirees' resources > annuity payment schedule

<https://www.trs.texas.gov/pension-benefits/retiree-resources/annuity-payment-schedule>

3. Estimate service retirement benefits - 5

Pension > calculators

<https://www.trs.texas.gov/pension-benefits/calculators>

4. Register for a Retirement Benefits Presentation - 2

Pension > Retirement Sessions & Counseling

Learning Resources > Event Calendar > Ready To Retire Presentation

<https://www.trs.texas.gov/pension-benefits/counseling-sessions>

5. Register for a Health Event- 2

Health care benefits > Health Care Events

<https://www.trs.texas.gov/health-benefits/events>

6. Learn about preventive care covered under TRS-ActiveCare - 3

Health > Active Member Health > Learn About Coverage > Benefits At a Glance > Covered Preventive Care

<https://www.trs.texas.gov/health-benefits/active-members/coverage/benefits/preventive-care>

7 Find a video on TRS website about Refunding TRS Account -5

Learning Resources > Featured Videos

<https://www.trs.texas.gov/learning-resources/videos>

8. Find Contact Info for TRS Ombuds or a Specific TRS Team - 1

Home > Contact TRS > TRS Office of Ombuds

<https://www.trs.texas.gov/contact/ombuds>