

# Influence of User Interface Layout on Usability: A Comparison Between Japanese and European Users – Pilot Test

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# Outline

Background

Method

  Prototype

  Initial Test Design

Results

  Test Design Results

  Pilot Test Results

Future Work





Figure 1a: [1]



Figure 1b: [1]

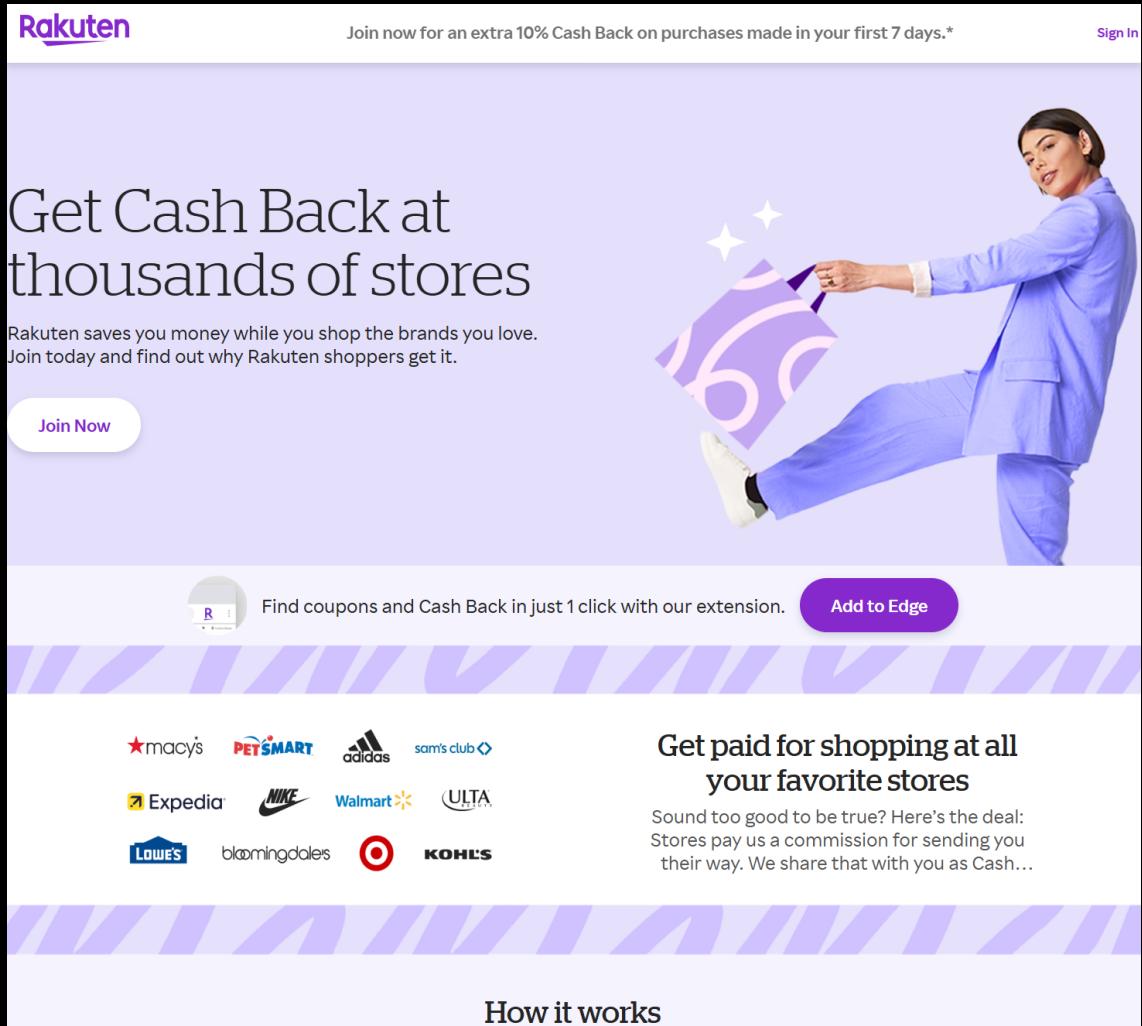


Figure 2a: [2]

**Rakuten**

キーワード検索

**Rakuten Mobile** 楽天モバイル WEBお申込みなら いつでも、どこでも、かんたんに

ようこそ楽天市場へ 会員登録で楽天ポイントが貯まる、使える。

[楽天会員登録\(無料\)](#) [ログイン](#)

**P R E M I U M D A Y S**  
ラグジュアリー・デザイナーズ・コスメ公式ブランドがお得に

エントリーで ポイント最大 **10倍**

THE NORTH FACE MARC JACOBS  
THREE RALPH LAUREN  
and more

Rakuten Fashion

**R SPU!** 楽天市場のお買い物が ポイント **17倍**  
11/1から対象サービス追加 楽天Kドリームス

[予告] 10/24(木)20:00スタート お買い物マラソン 事前エントリー受付中!  
2,000円OFFなど 限定クーポン配布中!

Welcome to Rakuten Ichiba  
English guide

ようこそ楽天市場へ! 初めての方限定 2,000円 OFFクーポン

事前エントリー受付中! ポイント最大 **46倍** お買い物マラソン

おせち 今年の売れ筋 おせち

楽天スーパーDEAL

人気商品ランキング 10月22日(火) 13:50

リアルタイム 総合 ふるさと納税 学び・サービス・保険 ペットフード・ペット用品 おもちゃ・ゲーム

リアルタイムランキング

1位	2位	3位	4位	5位	6位	7位

Figure 2b: [3]

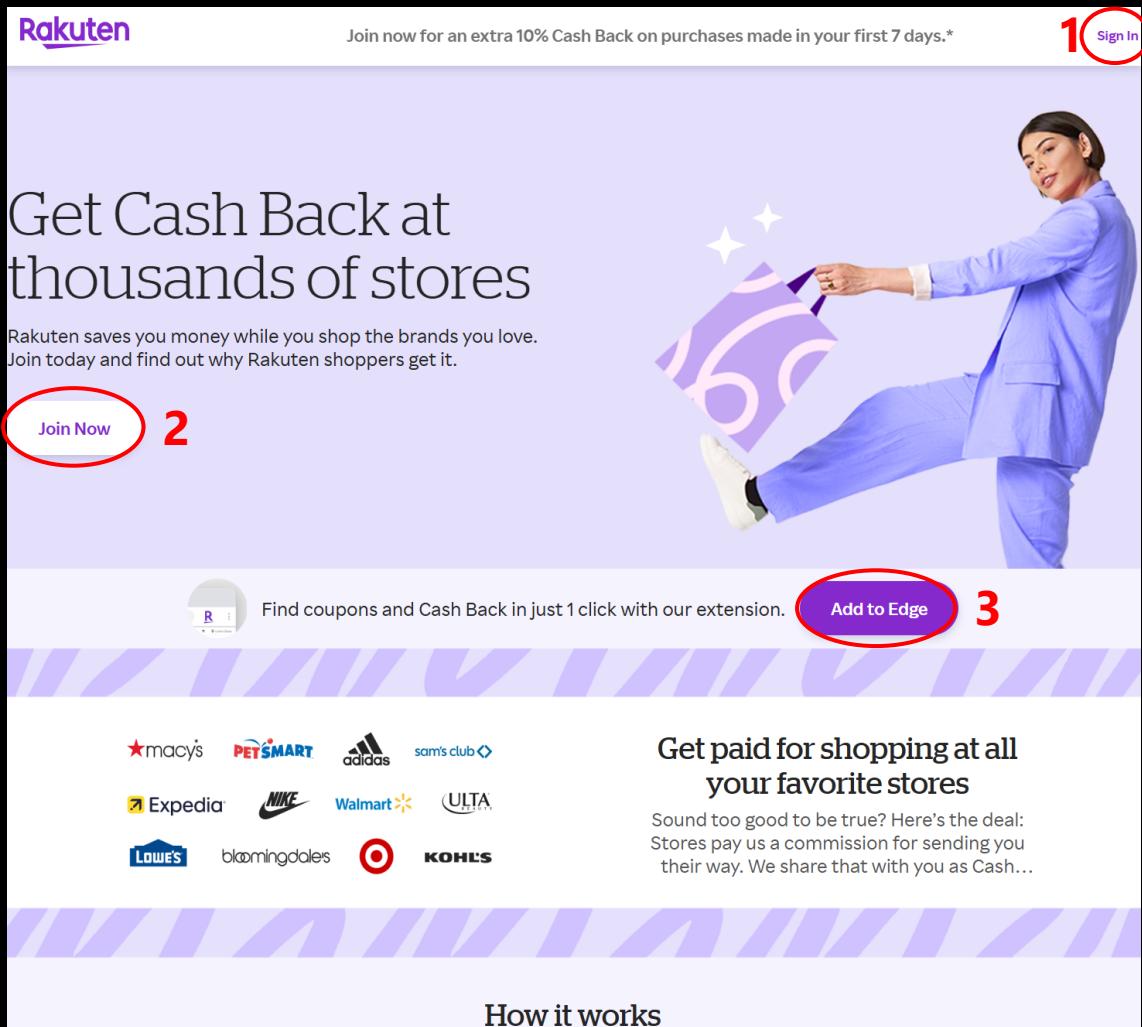


Figure 2a: [2]

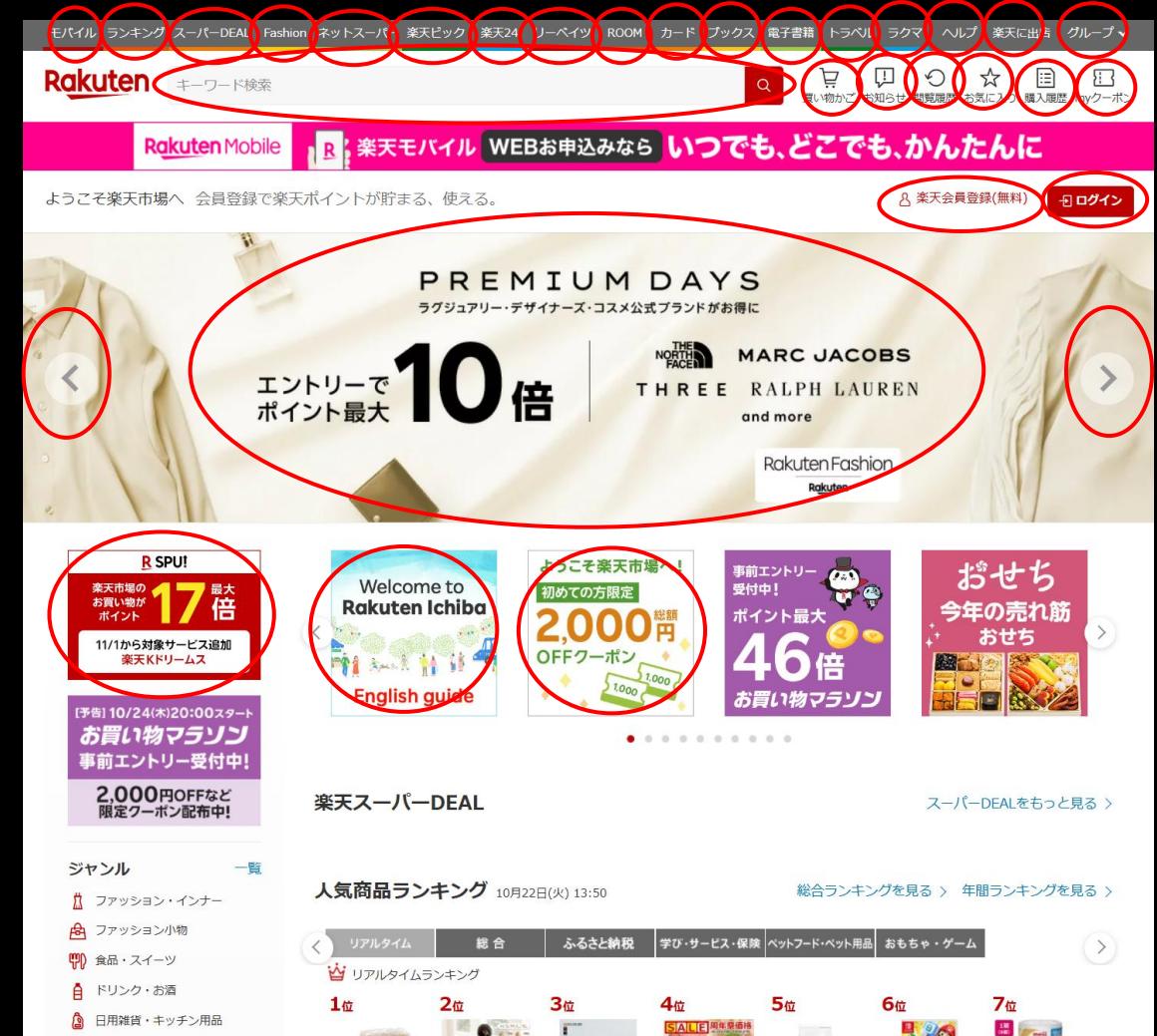


Figure 2b: [3]

BACKGROUND

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# Background

Lack of localized design guidelines  
-> Designers fallback to minimalism [5]

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# Background

- Layout
- Wording
- Icons
- Kawaiification [4]

## BACKGROUND

## METHOD

## RESULTS

## FUTURE WORK

# Prototype

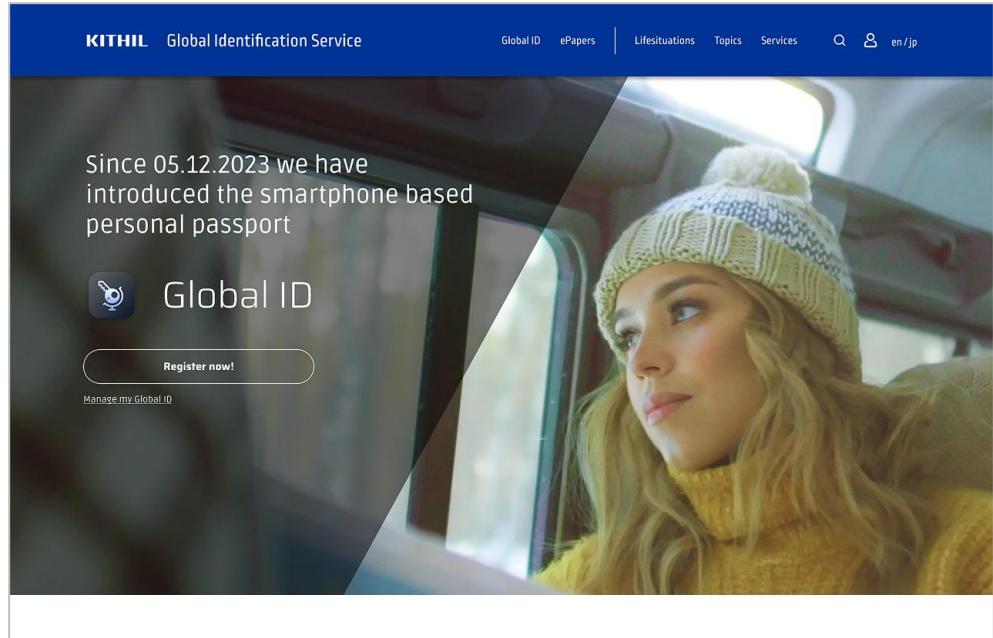


Figure 3a: [6]

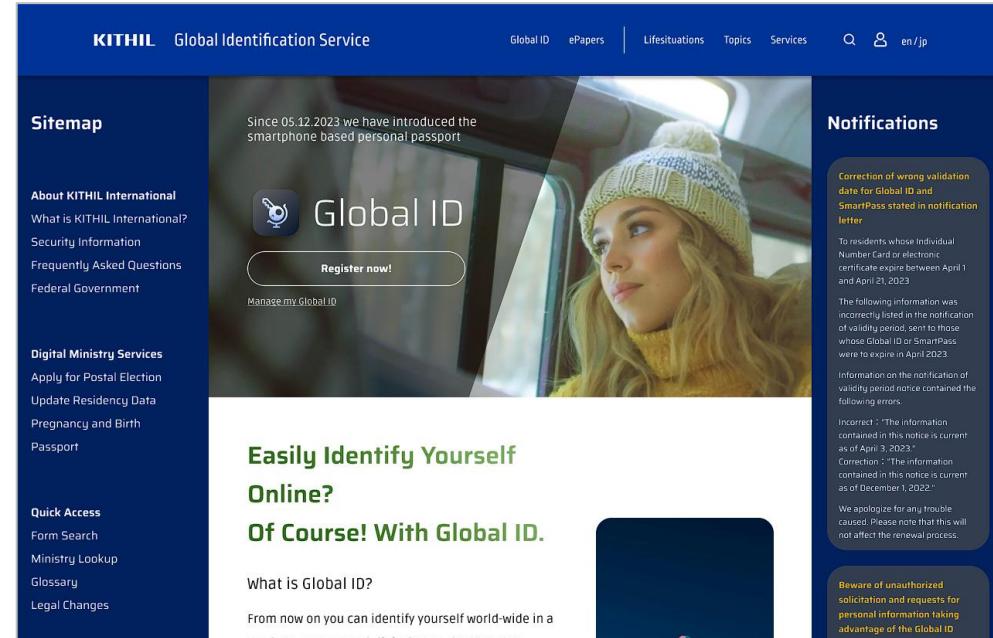


Figure 3b: [7]

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# Test Design

Action	Time
Introduction	5 min
2x Tasks (System A)	10 min
Questionnaire	10 min
2x Tasks (System B)	10 min
Questionnaire	10 min
Outro	5 min
<b>Total</b>	<b>50 min</b>



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# Test Design

## Questionnaire

8 Open-Ended Questions

7 Likert-Style Questions

System Usability Scale (SUS)

Statistical



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# Results » Test Design

- Test was up to 100 minutes
- English proficiency gap
- Test design not fit for large scale

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# Results » Test Design Changes

- Test was up to 100 minutes
- English proficiency gap
- Test design not fit for large scale

## 1. Use standardized questionnaire

Questionnaire	
old	new
8 Open-Ended Questions	<b>Laugwitz et al.'s 26-Element Likert Scale</b>
7 Likert-Style Questions	
System Usability Scale (SUS)	System Usability Scale (SUS)
Statistical	Statistical

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# Results » Test Design Changes

- Test was up to 100 minutes
  - English proficiency gap
  - Test design not fit for large scale
1. Use standardized questionnaire
  2. Task descriptions in English **and Japanese**
  3. Enable autonomous testing

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# Results » Pilot Data

DISCLAIMER: STATISTICALLY INSIGNIFICANT!

## JAPANESE    AUSTRIAN

SUS SCORE

1-col: 57,5	1-col: 85
3-col: 37,5	3-col: 70

TIME TASK 1

1-col: 95 sec	1-col: 62 sec
---------------	---------------

TIME TASK 3

3-col: 125 sec	3-col: <del>637 sec</del>
----------------	---------------------------

3-col: Font too small

3-col: Too much information  
→ abstraction through sub-pages



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# Future Work

1. Formal Study
2. Investigation of other factors
  - i. Wording
  - ii. Icons
  - iii. Kawaii [4]
3. Consolidated Usability Guideline



# References

- [1] T. Masuda, R. Gonzalez, L. Kwan, and R. E. Nisbett, "Culture and Aesthetic Preference: Comparing the Attention to Context of East Asians and Americans," *Personality and Social Psychology Bulletin*, vol. 34, no. 9, pp. 1260–1275, Sep. 2008.
- [2] Rakuten.com (2024). "Welcome to Rakuten". Retrieved October 22, 2024, from <https://www.rakuten.com/>
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- [4] D. Berque, H. Chiba, and B. Wilkerson, "Design and Cross-cultural Evaluation of a Kawaii (Cute) Roomba Vacuum," in *Culture and Computing*, ser. Lecture Notes in Computer Science, M. Rauterberg, Ed. Cham: Springer Nature Switzerland, 2023, pp. 475–490.
- [5] M. Nordhoff, T. August, N. A. Oliveira, and K. Reinecke, "A Case for Design Localization: Diversity of Website Aesthetics in 44 Countries," in *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, ser. CHI '18. New York, NY, USA: Association for Computing Machinery, Apr. 2018, pp. 1–12.
- [6] Figma (2024). "ICID-State\_of\_the\_Art-Austria-V0.1". Retrieved October 22, 2024, from [https://www.figma.com/proto/tSeCgY5BvAH9BGH9HbXcKn/ICID-state\\_of\\_the\\_art-Austria-V0.1?node-id=1-75&node-type=canvas&t=LrffAWufeJaZKZyO-1&scaling=min-zoom&content-scaling=fixed&page-id=0%3A1&starting-point-node-id=1%3A75&hide-ui=1](https://www.figma.com/proto/tSeCgY5BvAH9BGH9HbXcKn/ICID-state_of_the_art-Austria-V0.1?node-id=1-75&node-type=canvas&t=LrffAWufeJaZKZyO-1&scaling=min-zoom&content-scaling=fixed&page-id=0%3A1&starting-point-node-id=1%3A75&hide-ui=1)
- [7] Figma (2024). "ICID-State\_of\_the\_Art-Austria-3col-V0.1". Retrieved October 22, 2024, from [https://www.figma.com/proto/YKdlZwG4EU66VC1xPafjlH/ICID-state\\_of\\_the\\_art-Austria-3col-V0.1?node-id=1-75&node-type=canvas&t=ovyGNK3S6JhSBdfy-1&scaling=min-zoom&content-scaling=fixed&page-id=0%3A1&starting-point-node-id=1%3A75&hide-ui=1](https://www.figma.com/proto/YKdlZwG4EU66VC1xPafjlH/ICID-state_of_the_art-Austria-3col-V0.1?node-id=1-75&node-type=canvas&t=ovyGNK3S6JhSBdfy-1&scaling=min-zoom&content-scaling=fixed&page-id=0%3A1&starting-point-node-id=1%3A75&hide-ui=1)



# Thank you for coming to my presentation!

INFLUENCE OF USER INTERFACE LAYOUT ON USABILITY: A COMPARISON BETWEEN JAPANESE AND EUROPEAN USERS – PILOT TEST

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# Questions or Feedback?

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