System Usability Scale (SUS)

Yannik Höll & Franz Jäpel

April 26, 2022

Einteilung

1 Was bedeutet SUS

2 Einsatzgebiete

3 Testablauf

4 Vor- & Nachteile

5 Beispiel

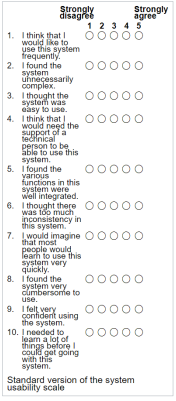
6 Zusammenfassung

7 Quellen

Was bedeutet SUS

- Fragebogen mit festen Fragen
- 8 Usability, 2 Learnability
- Punktzahl 1-5
- Formel für Gesamtpunktzahl: Sei u_n Punktzahl bei Frage n und G Gesamtpunktzahl, dann:

$$G = ((\sum_{k=1}^{5}(u_{2k-1}) - 5) + (25 - \sum_{k=1}^{5}(u_{2k}))) \cdot 2.5$$



		Strongly disagree 1	2	3	4	Strongly agree 5
1.	I think that I would like to use this system frequently.	○	○	○	○	○
2.	I found the system unnecessarily complex.	○	○	○	○	○
3.	I thought the system was easy to use.	○	○	○	○	○
4.	I think that I would need the support of a technical person to be able to use this system.	○	○	○	○	○
5.	I found the various functions in this system were well integrated.	○	○	○	○	○
6.	I thought there was too much inconsistency in this system.	○	○	○	○	○
7.	I would imagine that most people would learn to use this system very quickly.	○	○	○	○	○
8.	I found the system very cumbersome to use.	○	○	○	○	○
9.	I felt very confident using the system.	○	○	○	○	○
10.	I needed to learn a lot of things before I could get going with this system.	○	○	○	○	○

Standard version of the system usability scale

SUS Standardfragebogen
[1]

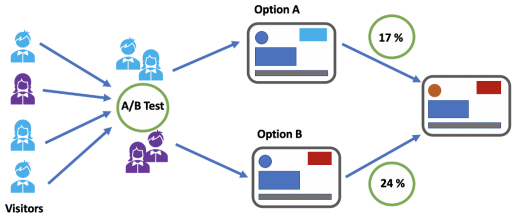
1. I think that I would like to use this system frequently.
2. I found the system unnecessarily complex.
3. I thought the system was easy to use.
4. I think that I would need the support of a technical person to be able to use this system.
5. I found the various functions in this system were well integrated.
6. I thought there was too much inconsistency in this system.
7. I would imagine that most people would learn to use this system very quickly.
8. I found the system very cumbersome to use.
9. I felt very confident using the system.
10. I needed to learn a lot of things before I could get going with this system.

Einsatzgebiete

- wenig Zeit oder finanzielle Mittel
- in Kombination mit anderen Tests
- meist mit konkreter Aufgabe (test-then-measure)
- nicht für Erkennung genauer Probleme

Use Cases

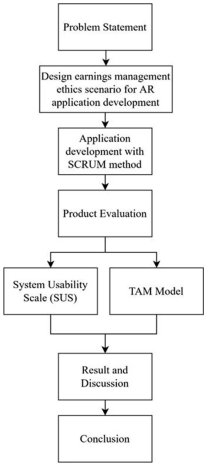
- Allgemeiner Vergleich mit ähnlichen Produkten
- Interface-Typen/Website-Versionen vergleichen
- Continuous Testing



A-B-Test [2]

Testablauf

1. Tester nutzt das System mit konkreter Aufgabe
2. Tester erhält den Fragebogen
3. Statistische Aufarbeitung der Ergebnisse
4. Vergleich mit anderen/ähnlichen Systemen



Beispielablauf [3]

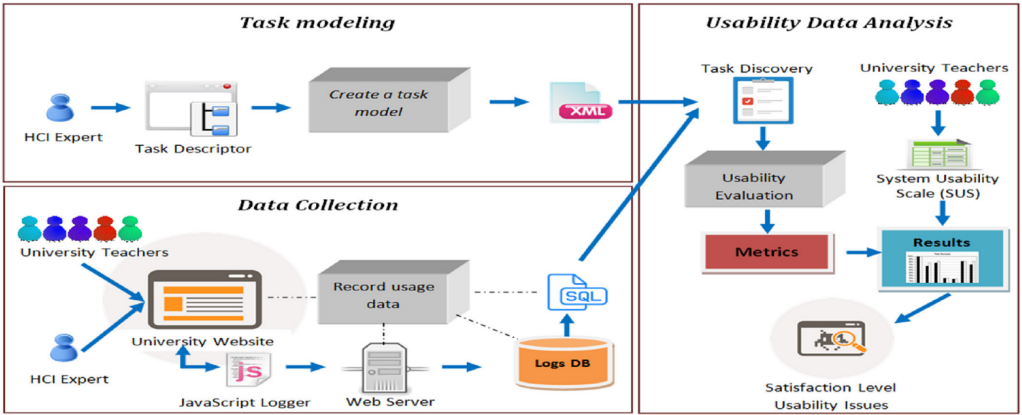
Vorteile

- Einfach vergleichbare Daten, gut für Statistik
- geringer Zeitaufwand
- gibt es schon seit 1993
- Zeitliche Trends erkennbar
- Selbsterklärend
- Keine Beobachtung während des Tests nötig
- Programmunabhängig

Nachteile

- Gründe für schlechten Score nicht vorhanden
- Vergleich zwischen Systemen nur qualitativ
- Geringe Korrelation Effektivität - Usability
- Vergleichbarkeit mit Test in anderen Sprachen nicht klar

Beispiel


Task modeling
HCI Expert
Task Descriptor
Create a task model
XML
Data Collection
University Teachers
University Website
HCI Expert
JavaScript Logger
Record usage data
Web Server
SQL
Logs DB
Usability Data Analysis
Task Discovery
University Teachers
Usability Evaluation
System Usability Scale (SUS)
Metrics
Results
Satisfaction Level
Usability Issues

[4]

Abschluss

- standartisierter Fragebogen
- einfache, schnelle Einschätzung
- kein Vorwissen oder Anleitung für Tester nötig
- nur eine sehr grobe Metrik

[5]

- System usability scale.
  https://en.wikipedia.org/wiki/System_usability_scale, zuletzt besucht 22.04.2022.
- How to conduct a/b testing?
  https://towardsdatascience.com/how-to-conduct-a-b-testing-3076074a8458, zuletzt besucht 22.04.2022.
- Joni J Young and Marcia Annisette.
  Cultivating imagination: Ethics, education and literature. *Critical Perspectives on Accounting*, 20(1):93–109, 2009.

Nouzha Harrati, Imed Bouchrika, Abdelkamel Tari, and Ammar Ladjailia.
Exploring user satisfaction for e-learning systems via usage-based metrics and system usability scale analysis.
Computers in Human Behavior, 61:463–471, 2016.

Confused bill cosby.
`http://memegenerator.net/instance/72623083/confused-bill-cosby-sus-admits-its-quick-and-dirty-still-most-use`
zuletzt besucht 21.04.2022.

James R Lewis.
The system usability scale: past, present, and future.
International Journal of Human–Computer Interaction, 34(7):577–590, 2018.

Philip Kortum and Mary Sorber.
Measuring the usability of mobile applications for phones and tablets.
International Journal of Human-Computer Interaction, 31(8):518–529, 2015.

S Camille Peres, Tri Pham, and Ronald Phillips.
Validation of the system usability scale (sus) sus in the wild.
In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, volume 57, pages 192–196. SAGE Publications Sage CA: Los Angeles, CA, 2013.

System usability scale (sus). https://www.usability.gov/how-to-and-tools/methods/system-usability-scale.html, zuletzt besucht 21.04.2022.

Measuring and interpreting system usability scale. https://uiuxtrend.com/measuring-system-usability-scale-sus, zuletzt besucht 21.04.2022.