Heurísticas de Nielsen

Fonte: https://www.nngroup.com/articles/ten-usability-heuristics/

- 1. Visibility of system status
- 2. Match between system and the real world
- 3. User control and freedom
- 4. Consistency and standards
- 5. Error prevention
- 6. Recognition rather than recall
- 7. Flexibility and efficiency of use
- 8. Aesthetic and minimalist design
- 9. Help users recognize, diagnose, and recover from errors
- 10. Help and documentation

Introducing Usability Heuristics for Mobile Map Applications

Fonte: https://icaci.org/files/documents/ICC proceedings/ICC2013/ extendedAbstract/424 proceeding.pdf - paper IntroducingUsabilityHeuristicsforMobileMapApplications.pdf

- 1. Visibility of the contextual map functions and important locations.
- 2. Match between the system and the physical surroundings of the user.
- 3. User control over map functions
- 4. Consistency and standards
- 5. Error prevention
- 6. Recognition rather than recall
- 7. Flexibility, scalability and efficiency of use
- 8. Balanced and simplistic visual design
- 9. Recognizing, diagnosing and recovering from errors
- 10. Offering help

Analysis of the Usability of Mobile device Applications based upon Heuristics

1. Visibility of system status

The system should keep the users informed about what is going on through visual indicator within some reasonable time.

2. Match between system and the real world

The system should speak the user's language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

3. User control and freedom

Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Need to support undo and redo options.

4. Consistency and standards

Users should not have to wonder whether different words, situations, or actions mean the same thing.

5. Error prevention

Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

6. Recognition rather than recall

Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

7. Flexibility and efficiency of use

Accelerators – unseen by the novice user, may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

8. Aesthetic and minimalist design

Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility..

9. Help users recognize, diagnose, and recover from errors

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

10. Help and documentation

Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

11. Interruptions

An application should allow interruptions without any complications. In return, the user should find the application in a condition in which it was left, so that the user can continue working smoothly.

12. Waiting times

Long waiting times should be avoided while performing the tasks in an application. The interaction cost should be reduced as much as possible.

13. Focus

The attention of the mobile device user should always be focused on the essential content of an application. Need to optimize the text, which is appropriate for target group.

14. Joy of use

The fun/joy should not only refer to the positive emotions, but also contain an application concept in designing the avoidance of negative user experience.

15. Don't lie to the user

Eliminate erroneous or misleading links. Do not refer to missing information.

Heuristics for the Assessment of Interfaces of Mobile Devices

Fonte: Heuristics for the Assessment of Interfaces of Mobile Devices.pdf

- 1. Use of screen space
- 2. Consistency and standards
- 3. Visibility and easy access to all information
- 4. Adequacy of the component to its functionality
- 5. Adequacy of the message to the functionality and to the user
- 6. Error prevention and rapid recovery to the last stable state
- 7. Ease of input
- 8. Ease of access to all functionalities
- 9. Immediate and observable feedback
- 10. Help and documentation
- 11. Reduction of the user's memory load

Appropriating and Assessing Heuristics for Mobile Computing

Fonte: Appropriating and Assessing Heuristics for Mobile Computing.pdf

- 1. Visibility of system status and losability/findability of the mobile device
- 2. Match between system and the real world
- 3. Consistency and mapping
- 4. Good ergonomics and minimalist design
- 5. Ease of input, screen readability and glanceability
- 6. Flexibility, efficiency of use and personalization
- 7. Aesthetic, privacy and social conventions
- 8. Realistic error management

Heuristic Evaluation on Mobile Interfaces: A New Checklist

Fonte: https://www.hindawi.com/journals/tswj/2014/434326/ - Heuristic Evaluation on Mobile Interfaces: A New Checklist.pdf

- 1. Visibility of system status
- 2. Match between system and the real world
- 3. User control and freedom
- 4. Consistency and standards
- 5. Error prevention
- 6. Recognition rather than recall
- 7. Flexibility and efficiency of use
- 8. Aesthetic and minimalist design
- 9. Help users recognize, diagnose, and recover from errors
- 10. Help and documentation

11. Skills

12. Pleasurable and respectful interaction with the user

13. Privacy

Heuristic Evaluation: Comparing Generic and Specific Usability Heuristics for Identification of Usability Problems in a Living Museum Mobile Guide App

 $Fonte: \ \underline{https://www.hindawi.com/journals/ahci/2018/1518682/} \ - \ \underline{HeuristicEvaluation_Living} \ \ \underline{Museum} \ \ \underline{Mobile Guide App.pdf}$

- 1. Provide immediate notification of application status
- 2. Use a theme and consistent terms, as well as conventions and standards familiar to the user
- 3. Prevent errors where possible; assist users should an error occur
- 4. Display an overlay pointing out the main features when appropriate or requested
- 5. Each interface should focus on one task
- 6. Design a visually pleasing interface
- 7. Intuitive interfaces make for easier user journeys
- 8. Design a clear navigable path to task completion
- 9. Allow configuration options and shortcuts
- 10. Cater for diverse mobile environments
- 11. Facilitate easier input
- 12. Use the camera, microphone, and sensors when appropriate to lessen the users' workload
- 13. Create an aesthetic and identifiable icon

Designing for Technicians Working in the Field: 8 Usability Heuristics for Mobile Application Design

Fonte: Designing for Technicians Working in the Field.pdf

- 8-1. Ensure high contrast colour combinations are used for ease of visibility outdoors.
- 8-2. Design applications to reduce strain on device batteries
- 8-3. Provide users with multiple ways to provide input
- 8-4. Provide technicians with access to activity histories
- 8-5. Provide technicians with the technical documentation they need to do their jobs through the app
- 8-6. Ensure the application is able to locally save any relevant data
- 8-7. Provide technicians with an understanding of what the data they input will be used for
- 8-8. Design application workflow around the technicians' work practices instead of the technical structures of back-end systems

Appropriating Heuristic Evaluation for Mobile Computing

Fonte: Appropriating-Heuristic-Evaluation-for-Mobile-Computing.pdf

- 1. Visibility of system status and losability/findability of the mobile device
- 2. Match between system and the real world
- 3. Consistency and mapping
- 4. Good ergonomics and minimalist design
- 5. Ease of input, screen readability and glancability
- 6. Flexibility, efficiency of use and personalization
- 7. Aesthetic, privacy and social conventions
- 8. Realistic error management

Enhancing Usability Heuristics for Android Applications on Mobile Devices

Fonte: Enhancing Usability Heuristics for Android Applications on Mobile Devices.pdf

- 1. Visibility of system status
- 2. Match between system and the real world
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- 5. Error prevention
- 6. Recognition rather than recall
- 7. Flexibility and efficiency of use
- 8. Aesthetic and minimalist design
- 9. Help users recognize, diagnose and recover from errors
- 10. Help and documentation
- 11. Pleasurable and respectful interaction

12. Privacy