

Component 7: Working with HIT Systems

Unit 5: Fundamentals of Usability in HIT Systems – What Does It Matter?



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Unit 5: Objectives

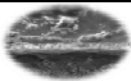
- Define usability and its relationship to HIT systems.
- Explain the impact of HIT usability on user satisfaction, adoption, and workarounds including error rates and unintended consequences.
- Provide alternatives to HIT usability bottlenecks.

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Usability Defined



- “The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.” *ISO 9241-11*
(Ergonomic Requirements for Office Work with Visual Display Terminals (VDTs) – Part 11 Guidance on Usability. ISO/IEC 9241)
- Usability is the study of the ease with which people can employ a particular tool or other human-made object in order to achieve a particular goal.

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Jakob Nielsen

- Usability – a quality attribute that assesses how easy user interfaces are to use
- 5.6 Components:
 - Learnability
 - Efficiency
 - Memorability
 - Errors
 - Satisfaction
 - Utility



<http://www.usability.gov/basics/>

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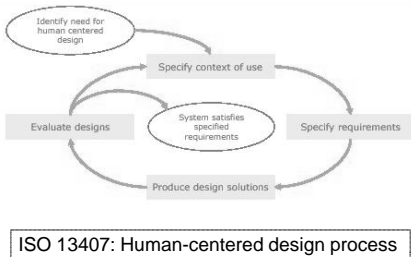


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User-Centered Design




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User-Centered Design

- Study** – Observe people in their own environments to assess unmet needs—on top of market research
- Understand** – Explore how people deal with specific healthcare problems
- Develop** – Design prototypes of new technology solutions
- Pilot** – Field-test prototypes, listen to the results, iteratively re-design
- Deliver** – Turn prototypes into new platforms that meet people's needs
- Evaluate** – Evaluate impact; restart cycle



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"If you dislike change, you're going to dislike irrelevance even more"

Eric Shinseki: 7th US Secretary of Veterans Affairs

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Usability in HIT

- Understanding the user base
 - Mobile workers
 - Highly disruptive & stressful situations
 - Cognitive overload
 - Restriction of physical space – portability important
 - Time compression
 - Frequent turn-over (patients & providers)
 - Workarounds are common



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This completes
Part 1 of Unit 5
