
Overview

This sub-discipline is concerned with the competencies involved with the analysis of human needs (HCI) so that IT/technology systems, services and assets can then be designed with humans in mind. In order for IT/technology to be successful and allow the maximisation of their potential benefits, there must be a thorough understanding of all of the different needs that humans can have from a system, service and/or asset, not just in terms of its outputs, but the format of outputs, the dissemination of outputs, the type and methods of input, of data transfer and of communication.

Human needs (HCI) analysis may be undertaken as part of a wider business analysis or may be undertaken as the result of a need to improve processes and procedures, particularly those supported by IT/technology.

Analysing human needs (HCI) requires particular competencies, both technical and personal and the transferable competencies associated with communication should be a precursor to acquiring competencies in this sub-discipline.

The outcomes of human needs (HCI) analysis are used to inform the design of IT/technology systems, services and assets, when a balance may have to be attained between human and business needs.

Performance criteria

Carry out, under supervision, preparations for human needs analysis activities

You must be able to:

- P1 Correctly identify who are the target users/audiences for human needs analysis assignment, accurately sourcing, documenting and using all relevant information relating to them and their needs
- P2 Correctly identify any individuals or groups of target users for any human needs analysis assignment who may have particular needs, sourcing, documenting and using all relevant information relating to those needs
- P3 Accurately document the required user interfaces
- P4 Correctly gather all relevant information relating to IT/technology architectures together with analysis deliverables in order to inform human needs analysis activities and their deliverables
- P5 Negotiate effectively and empathetically with the target users for any particular human needs analysis assignment, in respect of their needs and priorities
- P6 Assist others in analysing the needs of the target users

Analyse, under supervision, all relevant operational capabilities required for human needs analysis assignment

You must be able to:

- P7 Correctly identify and critically analyse the potential operational capabilities for any system, service or asset that is the subject of a human needs analysis assignment
- P8 Correctly identify and objectively analyse the potential technologies that may be used for any system, service or asset that is the subject of any further business requirements that have been identified so that they may be used to inform human needs analysis activities
- P9 Accurately use and critically analyse any existing interfaces/interactions that are appropriate to any human needs analysis assignment
- P10 Accurately collate and critically analyse all relevant information relating to the potential operating environment for any systems, service or asset that is the subject of human needs analysis assignment

Report findings from human needs analysis activities

You must be able to:

- P11 Clearly report all relevant findings from any investigations undertaken into human needs as part of a human needs analysis assignment to sponsors, stakeholders, superiors and other individuals, so that they may be used to inform human needs analysis activities
- P12 Assist others in presenting the findings produced from human needs analysis assignment

Human Needs Analysis Level 3 Role

Knowledge and understanding

You need to know and understand:

Carry out, under supervision, preparations for human needs analysis activities

- K1 Negotiate with the target users for any particular human needs analysis assignment
- K2 Identify
 - K2.1 what information needs to be included in any particular human needs analysis assignment
 - K2.2 who are the target users/audiences for human needs analysis assignment
 - K2.3 the potential operational capabilities for any system, service or asset that is the subject of a human needs analysis assignment
 - K2.4 any individual users or groups of target users that have particular needs that will have to be considered as part of any human needs analysis assignment
- K3 Source and gather
 - K3.1 information relating to the potential operating environment for any systems, service or asset that is the subject of human needs analysis assignment
 - K3.2 information relating to IT/technology architectures together with analysis deliverables in order to inform human needs analysis activities
 - K3.3 information relating to the target users for any human needs analysis assignment
 - K3.4 information relating to any individuals or groups of target users for any human needs analysis assignment who may have particular needs
 - K3.5 information relating to the target social, operational and environmental conditions for any human needs analysis assignment
 - K3.6 information relating to the needs of the target users
- K4 Document
 - K4.1 the required user experiences
 - K4.2 information relating to IT/technology architectures together with analysis deliverables in order to inform human needs analysis activities
 - K4.3 information relating to the target users for any human needs analysis assignment
 - K4.4 information relating to any individuals or groups of target users for any human needs analysis assignment who may have particular needs
 - K4.5 information relating to the needs of the target users
- K5 Operate with reference to
 - K5.1 the systems development lifecycle, as appropriate to human needs analysis activities
 - K5.2 organisational strategy, policies and standards in human needs analysis activities
 - K5.3 IT/technology architecture models

- K5.4 the sensitivities of individuals and groups of target users
- K5.5 organisational culture and the prevailing culture of the proposed audience/users during human interaction and interface (HCI) analysis activities
- K6 the role and value of human needs analysis in improving the quality and effectiveness of human interaction in processes and IT/technology systems
- K7 What is
 - K7.1 by human needs analysis and the stages of activity that constitute it
 - K7.2 by personal/particular needs in the context of human needs analysis
 - K7.3 the relationship between human needs (HCI) analysis, other analysis activities, benefits realisation and business process redesign/re-engineering within an organisation
- K8 What are the
 - K8.1 basics of cognitive theory and the effect of perception on HCI
 - K8.2 limitations of current technologies in mirroring human to human communication
 - K8.3 advantages of current and emerging technologies for communication between both humans and machines and for human to human communication
 - K8.4 different characteristics and needs of clients, users, both technical and non technical, individuals and groups, and potential audiences
 - K8.5 types of communication technologies e.g. one to one, one to many, broadcast and pull/push 'on-demand' that form the basis of human/technology communication
 - K8.6 available technologies and emerging technologies that can be used for enabling effective HCI
 - K8.7 processes, tools and techniques that can be used to record, analyse and document the HCI needs of users
 - K8.8 the skills and characteristics that are needed to perform tasks involved in interaction enabled by IT/technology, including physical characteristics as well as such items as concentration spans and language
 - K8.9 standards and naming conventions that can be used in human needs analysis work
 - K8.10 potential implications to an organisation of human needs analysis deliverables being incorrect, incomplete, inadequate and/or inappropriate
- K9 The fact that
 - K9.1 the effectiveness of any IT/technology system, service and/or asset depends on the adoption of it by users
 - K9.2 take up/adoption of any IT/technology system, service and/or asset by users depends on the perceived usability of it
 - K9.3 human needs analysis deliverables provide the basis for HCI design

- activities
- K9.4 human needs analysis must consider the need for the integrity, privacy/confidentiality and security of data and information
- K10 Why
- K10.1 the needs of the target users must be incorporated into any system/solution/service design
- K10.2 ergonomic needs must be considered in human needs analysis
- K10.3 human needs analysis must be carried out to support the identified business
- K10.4 requirements
- K10.5 human needs must be verified with sample target users to validate their appropriateness
- K11 Who are the target users in any human needs analysis assignment
- K12 The importance of
- K12.1 collating and analysing the HCI needs of users in order to inform future decisions on HCI design
- K12.2 accurately eliciting the HCI needs of target users
- K12.3 documenting user needs in order to inform future HCI design activities
- K12.4 undertaking human needs (HCI) analysis in line with organisational strategy, policies, procedures and standards
- K12.5 the systems development lifecycle as it relates to human needs analysis activities
- K12.6 using naming conventions and standards, where appropriate, in human needs analysis activities

Analyse, under supervision, all relevant operational capabilities required for human needs analysis assignment

You need to know and understand:

- K13 Identify the potential technologies that may be used for any system, service and/or asset that is the subject of any particular human needs analysis assignment
- K14 Use
- K14.1 any existing interfaces/interactions that are appropriate to any human needs analysis assignment
- K14.2 information relating to the potential technologies that may be used for any system, service or asset that is the subject of any particular human needs analysis assignment
- K14.3 information relating to the potential operating environment for any system, service or asset that is the subject of any particular human needs analysis assignment
- K14.4 information relating to IT/technology architectures together with analysis deliverables in order to inform human needs analysis activities

and their deliverables

- K14.5 information relating to the target users for any human needs analysis assignment including their literacy levels and skills
- K14.6 information relating to any individuals or groups of target users for any human needs analysis assignment who may have particular needs
- K14.7 the systems development lifecycle, as appropriate to human needs analysis activities
- K14.8 information relating to the target social, operational and environmental conditions for any human needs analysis assignment
- K15 Analyse
- K15.1 any existing interface/interactions relevant to a human needs analysis assignment
- K15.2 the potential operating environment for any system, service or asset that is the subject of a human needs analysis assignment
- K15.3 the potential technologies that may be used for any system, service or asset that is the subject of any further business requirements that have been identified so that they may be used to inform human needs analysis activities
- K15.4 findings from any investigations undertaken into human needs as part of a human needs analysis assignment
- The need for monitoring
- K15.5 the progress of any particular human needs analysis assignment
- K15.6 the accuracy, currency, completeness and appropriateness of any human needs analysis deliverables
- K15.7 the alignment of human needs analysis deliverables with the business requirements
- K16 The processes, tools and techniques which can be used to monitor the
- K16.1 progress of any particular human needs analysis assignment
- K16.2 accuracy, currency, completeness and appropriateness of any human needs analysis deliverables
- K16.3 alignment of human needs analysis assignments with the business requirements

You need to know and understand:

Report findings from human needs analysis activities

- K17 Report findings from any investigations undertaken into human needs as part of a human needs analysis assignment
- K18 The importance of
- K18.1 validating findings from human needs analysis with sample target users using a range of techniques
- K18.2 considering the requirements for integrity, security and privacy/confidentiality of data in human needs analysis

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Human Needs Analysis Level 3 Role

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