Key point chapter one interaction design

* Interaction design is concerned with designing interactive products to support the way people communicate and interact in their everyday and working lives
* It is concerned with how to create quality user experiences
* It requires taking into account a number of *interdependent factors*, including context of use, type of activities, cultural differences, and user groups
* It is multidisciplinary, involving many inputs from wide-reaching disciplines and fields

Which conceptual model is best?

* Direct manipulation is good for ‘doing’ types of tasks, e.g. designing, drawing, flying, driving, sizing windows
* Issuing instructions is good for repetitive tasks, e.g. spell-checking, file management
* Having a conversation is good for children, computer-phobic, disabled users and specialised applications (e.g. phone services)
* Hybrid conceptual models are often employed, where different ways of carrying out the same actions is supported at the interface - but can take longer to learn

understanding and

Conceptualizing interaction

* Important to have a good understanding of the problem space
* Fundamental aspect of interaction design is to develop a conceptual model
* Interaction modes and interface metaphors provide a structure for thinking about which kind of conceptual model to develop
* Interaction styles are specific kinds of interfaces that are instantiated as part of the conceptual model
* Paradigms, theories, models and frameworks can also shape a conceptual model

Cognitive aspects

الجوانب المعرفية

* Cognition involves several processes including attention, memory, perception and learning
* The way an interface is designed can greatly affect how well users can perceive, attend, learn and remember how to do their tasks
* Theoretical frameworks, such as mental models and external cognition, provide ways of understanding how and why people interact with products
* This can lead to thinking about how to design better products

Social Interaction

* Social mechanisms, like turn-taking, conventions, etc., enable us to collaborate and coordinate our activities
* Keeping aware of what others are doing and letting others know what you are doing are important aspects of collaborative working and socialising
* Many technologies systems have been built to support telepresence and co-presence

Emotional Interaction

* Emotions and the user experience
* Expressive interfaces
  + how the ‘appearance’ of an interface can affect users
  + Frustrating interfaces
  + what are they and how to reduce them
* Persuasive technologies and behavioral change
  + how technologies can be designed to change people’s attitudes and behavior
  + Anthropomorphism
  + The pros and cons
* Models of emotion
* Emotional interaction is concerned with how interactive systems make people respond in emotional ways
* Well-designed interfaces can elicit good feelings in users
* Expressive interfaces can provide reassuring feedback
* Badly designed interfaces make people angry and frustrated
* Anthropomorphism is the attribution of human qualities to objects
* An increasingly popular form of anthropomorphism is to create interface agents and robot pets
* Models of affect provide a way of conceptualizing emotional and pleasurable aspects of interaction design

Data Gathering

* Three main data gathering methods: interviews, questionnaires, observation
* Five key issues of data gathering: goals, choosing participants, triangulation, participant relationship, pilot
* Interviews may be structured, semi-structured or unstructured
* Questionnaires may be on paper, online or telephone
* Observation may be direct or indirect, in the field or in controlled setting
* Techniques can be combined depending on study focus, participants, nature of technique and available resources

Interface

* Many innovative interfaces have emerged post the WIMP/GUI era, including speech, wearable, mobile, brain and tangible
* Many design and research questions need to be considered to decide which to use
* An important concern that underlies the design of any kind of interface is how information is represented to the user so they can carry out ongoing activity or task