DESIGN THINKING OVERVIEW

FIND A SOLUTION TO THE PROBLEM

"How can we help premature babies India, given the lack of incubators"

(Stanford D.School)

USER-CENTERED DESIGN

In user-centred approaches, design takes into user needs and desires

Most of the time research on needs takes place through questionnaires or interviews

DESIGN AND INNOVATION

In the future, all problems will be design problems (Tim Brown, Change by Design)

- Education
- Health
- Poverty
- Energy
- Sustainability
- Natural resources management

DESIGN THINKING

Designers strive to understand the actual, real problem

To see the world from the user's standpoint

To design solutions from the user perspective

To take into account needs, desires, and feelings

DESIGN THINKING

Design thinking goes several steps further than user-centred design

In which simple research tools, such as questionnaires, are deployed

DESIGN THINKING

Designers try to understand **actual, real** user needs

User feelings and experiences from the deployment of a solution

Consider that users may not be able to express their needs

- E.g. The first car story by Ford (Tim Brown, Change by Design)

UNDERSTANDING THE PROBLEM

Designers put themselves "in the users' shoes"

They observe, empathize

They live in the user's environment to experience needs first-hand
- E.g. To design solutions for a small village, the designers live in the village for a few days

This allows understanding latent needs
- That users may not be able to express (Tim Brown, Change by Design)
- It allows understanding of functional and emotional aspects

UNDERSTANDING THE PROBLEM

Observe users in their everyday activities

Observe unusual, subconscious acts that demonstrate a need
- E.g. users use a book as doorstop (Tim Brown, Change by Design)
- Users label the cables under the table in different colors to easier identify them

- These show latent needs that users solve with simple hacks

UNDERSTANDING THE PROBLEM

Observe a team of non-characteristic users

- E.g. To design kitchen utensils observe
- Children, who need ease of use
- Chefs, who need easy cleaning of utensils

- How can we get ideas for maximizing usability?

UNDERSTANDING THE PROBLEM

Observe different situations

- E.g. The pits for tire changing in formula 1, a team of specialists working in high precision conditions

- How can we get ideas for designing an emergency room?

UNDERSTANDING THE PROBLEM

Try to understand the actual, not perceived, problem

ANOTHER DIFFICULT DESIGN PROBLEM

"How can we bring electricity to sub-Saharan Africa, where no power distribution lines exist"

To introduce a solution, think about how inhabitants will use electricity

- To light a house?

- To power a TV?

THE VALUE OF DESIGN THINKING

By understanding the **real,** as opposed to perceived, needs

Designers can solve difficult problems, even if a solution does not appear to exist at first sight

- E.g. Consider the example of incubators

DESIGN THINKING AND ICT

"50% of the world does not use internet. How can we bring internet to everyone?"

To introduce a solution, think about how the internet will be used

- For communication, education, else?

WHO USES DESIGN THINKING

Entrepreneurship: For designing commercial products

Social entrepreneurship: For designing solutions to complex social challenges

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https://dschool.stanford.edu/#post-hero

COMMERCIAL EXAMPLE: AIRBNB

AirBnb was not always successful
- Users did not rent the apartments

They used design thinking to upgrade services

They hypothesized that the problem was unclear pictures

The used a professional camera to capture clear pictures and improved the text
- A simple adjustment made all the difference

ANOTHER DIFFICULT DESIGN PROBLEM MALNUTRITION IN SOUTH EAST ASIA

Malnutrition was widespread

Designers observed that some very poor families had well fed children

They observed everyday practices

Villages collected rice from the rice fields
- They also collected small organisms, such as shrimp, providing protein

Designers taught all parents this technique with excellent results