DOET Chapter 6: Design Thinking

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Solving the Correct Problem

➡ Understand the root problem

➡ Design Thinking

   ➡ Double Diamond Model of Design

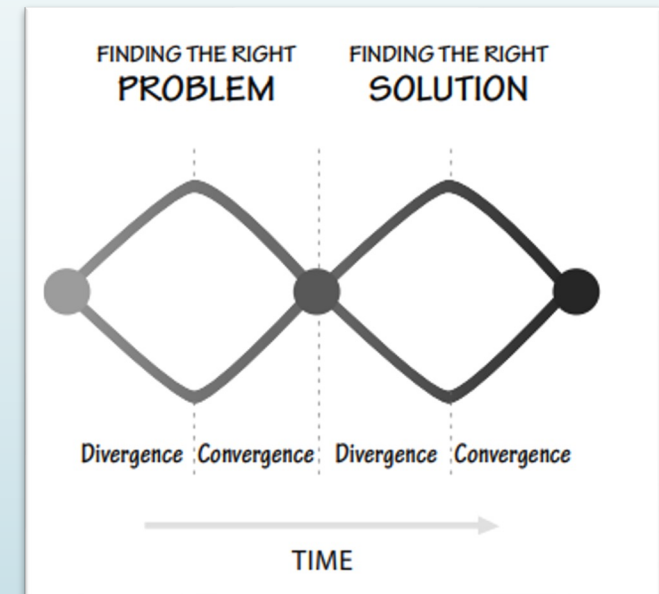   ➡ Human-Centered Design Process

Blockbuster Video

- Turned down a deal with Netflix

- Didn't understand the root problem

The Double-Diamond Model of Design

➡ Expand the scope of the problem

➡ Converge upon a single problem statement

➡ Expand again during the solution phase

➡ Converge upon a solution

➡ Make it iterative

FINDING THE RIGHT **PROBLEM**   FINDING THE RIGHT **SOLUTION**

Divergence | Convergence | Divergence | Convergence

TIME

Human-Centered Design Process

➠ Within the double-diamond model

➠ Four Steps

    1. Observation

    2. Idea Generation

    3. Prototyping

    4. Testing

Observation

➥ Watching your intended audience

➥ "Stalking"

➥ Market research

➥ Cultural differences

Idea Generation

➡ Try be open-minded

➡ Be creative

➡ Question Everything

Prototypes

➡ Build prototypes to test potential solutions

➡ Find similar solutions to potential problems

➡ Test and retest

➡ Iterative

Testing

- Use focus groups and people of the target population
- Observe how they interact with the product
- How many people to test?

Activity-Centered Design

➡ Useful when the product doesn't change much based on the audience

➡ Ex. Phones

Tasks Vs. Activities

➡ Activity: a high-level structure

➡ Ex. Getting your haircut

➡ Task: a low-level structure

➡ Ex. Start your car

➡ Ex. Pay the hairdresser

➡ Try not to focus on tasks- too limiting

ITERATIVE DESIGN VERSUS LINEAR STAGES

➡ Waterfall method: only one direction- no room for corrections or improvements

➡ Iterative Development: designing in iterations or divisions

  ➡ Best for early design phases of a product

Product Development

- Companies may ignore a human-centered approach in favor of keeping up with competition
  - Ex. New technologies
- Aim for the ideal (the double-diamond and the human-centered design process)
- Try to separate the development process from the designers

Designing for Special People

➡ It is impossible to design a product that will suit everyone

➡ Physical Anthropometry

➡ People don't want an associated stigma

➡ Ex. Orthopedic walking shoes

Establishing Standards

➡ Some improvements to technology are made through standardization

➡ Ex. Tv remotes

➡ Ex. Clock

Questions/Discussion