

Knowledge & Mapping

MIS3506 –Fall 2025

Lavin



Microsoft Bing

Images

Amy

Rewards



Add Bing Chrome extension

Search bar



Water colors



Will isolate at WH



Outdoor mask mandate?



Loses Soros ruling



Cemeteries swept out



'Pandemic fatigue'



Fauci warns on Trump



Type here to search



2:22 PM
10/6/2020





www.ARNGREN.net

23 Butikker

Teknologi & Gadgets

el-biler til barn [Index](#)

(Fra 07.11.2004)
< Frithjof i sin Fly-Bil

Search [el-retur](#)
[Slik Betaler du](#)

[Drone-Bike](#)
Løfteevne: 8kg
kr. **19.998,-**

[Avatar-Gunship](#). Er d
este Helikopteret noensi
Vi

Index

- Akvarium
- Alarm
- Alkotester
- ATV (el.)
- Bildeviser
- Bil (elektrisk) gas
- Bilbane
- Conrad-elektronik
- Digital-Kikkert
- Disko-Lys
- Dummy-Kamera
- DVD-Spiller
- Elektronikk & DAB
- EL-Scooter & Bil
- Figurer
- Golf-biler (m/skilt)
- Hobby & RC
- Hoverpod
- HP-Måler (Bil)
- Isbitmaskin
- Kamera (trådløst)
- Kino (bærbar)
- Kompass (Bil/Båt)
- Laser-Jamer (Bil)
- Luft-Jekk
- Lykt (oppladbar)
- Mobil-telefon-1, 2
- Motorsykkel-Mini
- Omformer (110V)
- Oversetter (44 sprk)
- PC-mini (9"), 2.
- Rakett-Fly
- RC Produkter
- Robot-Hund
- Robot-Støvsuger

Se alle våre el-Kjøretøy til Barn og Ungdom. Norges største utvalg

el-biler til barn **Nyhet!**

12V
24V
48V
4WD fra kr. **1.798,-**

3-hjul Cargo-el-Bike

Ingen alders-grense
el-scooter
PEDALS

Alle **Produktene** på denne siden lagerføres hos **ARNGREN** i Oslo. Se Lagerkoden etter Prisene (lev. 2 - 5 dager) :

- Er på Lager
- Kommer før 3 uker
- Lengre enn 3 uker

elsykkel

Fatbike-1500w

el-bil kr. **89.998,-**

el-ATV

el-scooter

BMW-i8

Mercedes SUV m/ Gummi-Hjul fra kr. **2998,-**

el-ATV

Bensin-ATV

EL-Biler til Barn, Ungdom & Voksne

G-Tog

el-Bil ; Cross-Rider **Nyhet** **4WD** fra kr. **89.998,-**

Fatbike-500w

el-sykkel m/Oljestyrt

el-moped med skilt (16 år) **19.998,-**

el-ATV med skilt (16 år)

el-bil (16 år & moped-Lappen) fra kr. **34.998,-**

Lyd, Røk, Lys

Kraftig 3-Hjuls **Nyhet!**

RC Tank i Metall (55 cm)

- Elektriske-Kjøretøy

- Elektrisk-ATV**
- Roboter**
- el-biler til barn/ungdom**
- Solcelle-produkter**
- Forbruker Elektronikk**
- Batterier & Ladere, etc**
- Fjernstyrte produkter**
- Disko-Lys**
- Rakett**

3-Hjuls el-sykkel

Fotball-Trener fra kr. **2.598,-**

Elektrisk-Scooter Fra kr. **9.998,-** (300)

Elektriske Biler

Styreenhet & Fordelere til Bil

RC Fly-Båt 70 cm lang

El-Bil; Comarth 2WD/4WD. 2 ell fra kr. **89.998,-**

Kjøpsloven Angreskjema

Avatar-Gunship. Er d
este Helikopteret noensi
Vi

Nyhet!

Elektronikk

Tilb

Roboter Elektronikk

el-jeep 9998,-

100km/t

Elektrisk-ATV 6000 watt kr. **59.998,-**

EL-Scooter 5000 watt kr. **29.998,-**

Ta alltid ut 230Vac Adapteren når du ikke er tilstede, eller sover

Video

20 -

Knowledge

- In the Head

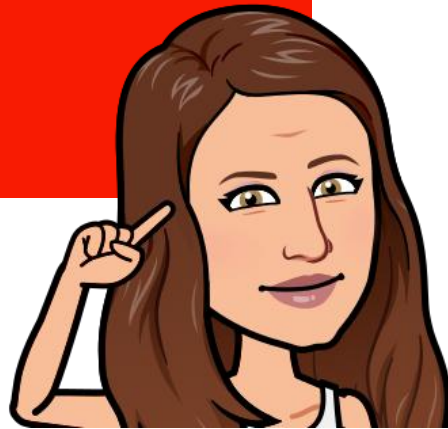


- In the World



Internalized information that
users recall to perform tasks

Knowledge



- *In the Head - Characteristics*

- Memory
- Efficient – Readily available
- Requires Learning
- Ease of use at first encounter is low
- Designer has freedom – better UX

Information provided in the
environment – operate without
prior memorization

Knowledge



■ *In the World - Characteristics*

- Information is Perceivable
- Interpretation substitutes for learning
- Less efficient if you have to stop to learn
- Ease of use at first encounter is high
- Can be ugly – requires a deep skillset

Knowledge



- *In the World*

- *Knowledge Of (Easy!)*

- Declarative Knowledge
 - Facts and Rules

- *Knowledge How (Not so Easy!)*

- Procedural Knowledge
 - Tacit Knowledge

Tradeoffs



If the user doesn't have it
memorized... could take a
while to interpret needs



First impression could be
tricky



Lack of freedom for the
designer

How can you as the designer improve the User's Experience armed with this knowledge?

- Put cues in the design
- Effective mapping
- Understand cultural constraints
- Find the middle ground
- Signifiers, constraints and mappings
- Good conceptual model

Balancing **Knowledge in the Head** for faster more efficient user by repeat users with **Knowledge in the World** to make systems intuitive for new users can greatly enhance the UX and usability

Constraints

- In the World – Natural Constraints
 - Restrict behavior
 - Physical features
 - Right tighty/lefty loosey
- In the Head – Cultural Constraints
 - Reading in different cultures
 - Behavioral constraints/Restrictions on behavior
 - Colors

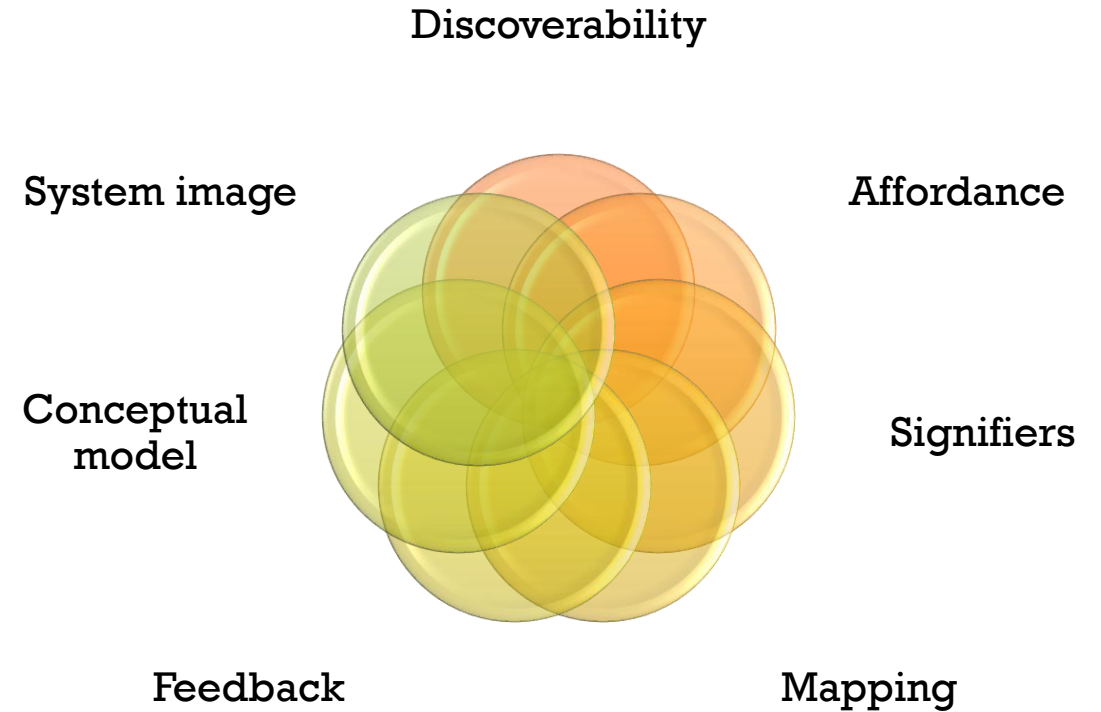
Knowledge in the world: Constraints



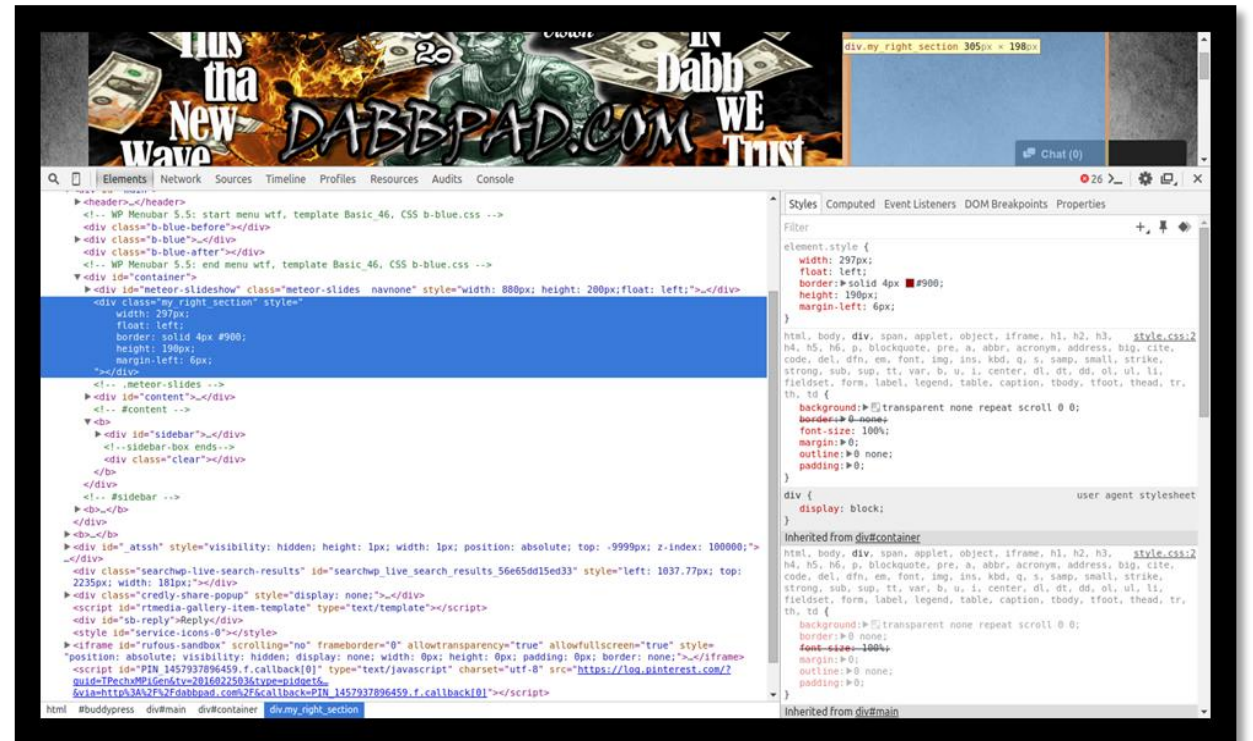
Mapping

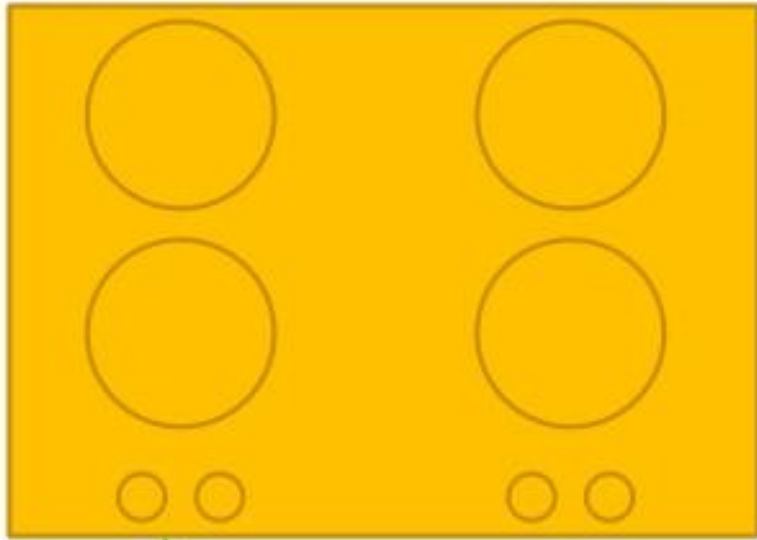
Relationship between the elements of two sets of things

A device is easy to use when the set of possible actions is visible

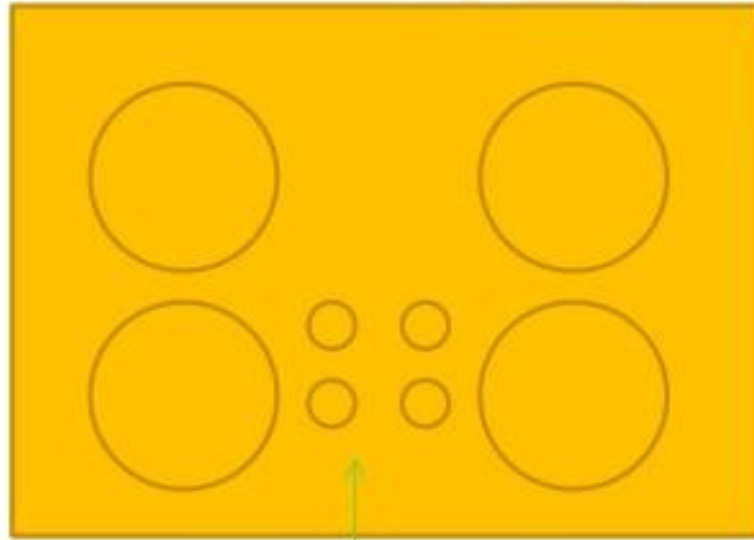


Mapping Examples



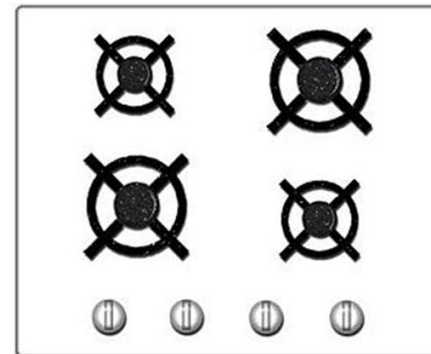


Requires memory or cognitive processing

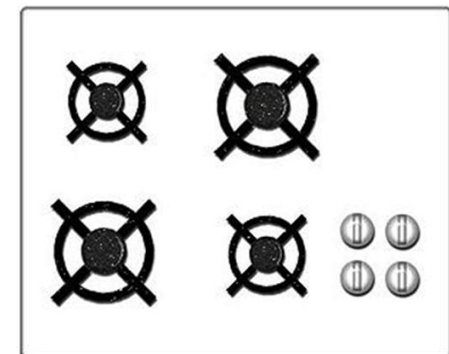


Knowledge is embedded in the interface

Poor mapping



Good mapping



Best: Controls are mounted directly on the item

Second Best: Controls are as close as possible to the object being controlled

Third Best: Controls are arranged in the same spatial configuration as the object being controlled

Mapping



Why is understanding the concept of Knowledge in the Head & Knowledge in the World critical to good design?

ICA

Exploring Knowledge Domains:

In the Head vs. In the World

Objective: The objective of this activity is to explore the concepts of "knowledge in the head" (individual knowledge) and "knowledge in the world" (externalized knowledge) through various examples and discussions. This activity aims to deepen the understanding of how knowledge is acquired, stored, and utilized both internally and externally.

1. Brainstorming Session (10 minutes):

1. Divide into small groups of 3-4 students.
2. Using index cards, brainstorm examples of knowledge in the head and knowledge in the world. Think broadly across various domains such as science, history, culture, technology, etc.

2. Sharing and Discussion (15 minutes):

1. Each group should share one example of knowledge in the head and one example of knowledge in the world.
2. Discussion around the examples provided. Discuss the advantages and limitations of each type of knowledge.
3. Consider:
 1. How does knowledge in the head differ from knowledge in the world in terms of accessibility and reliability?
 2. What are some examples where knowledge in the world enhances or complements knowledge in the head?
 3. In what situations is knowledge in the head more beneficial than knowledge in the world, and vice versa?