



Experience Design: Learners & Users



Trigger Warning

Today's topics include circumstances that can lead to poverty and violence, how they affect learning, and how we can mitigate the effects.

Outline

Understanding Users: Maslow's Hierarchy of Needs

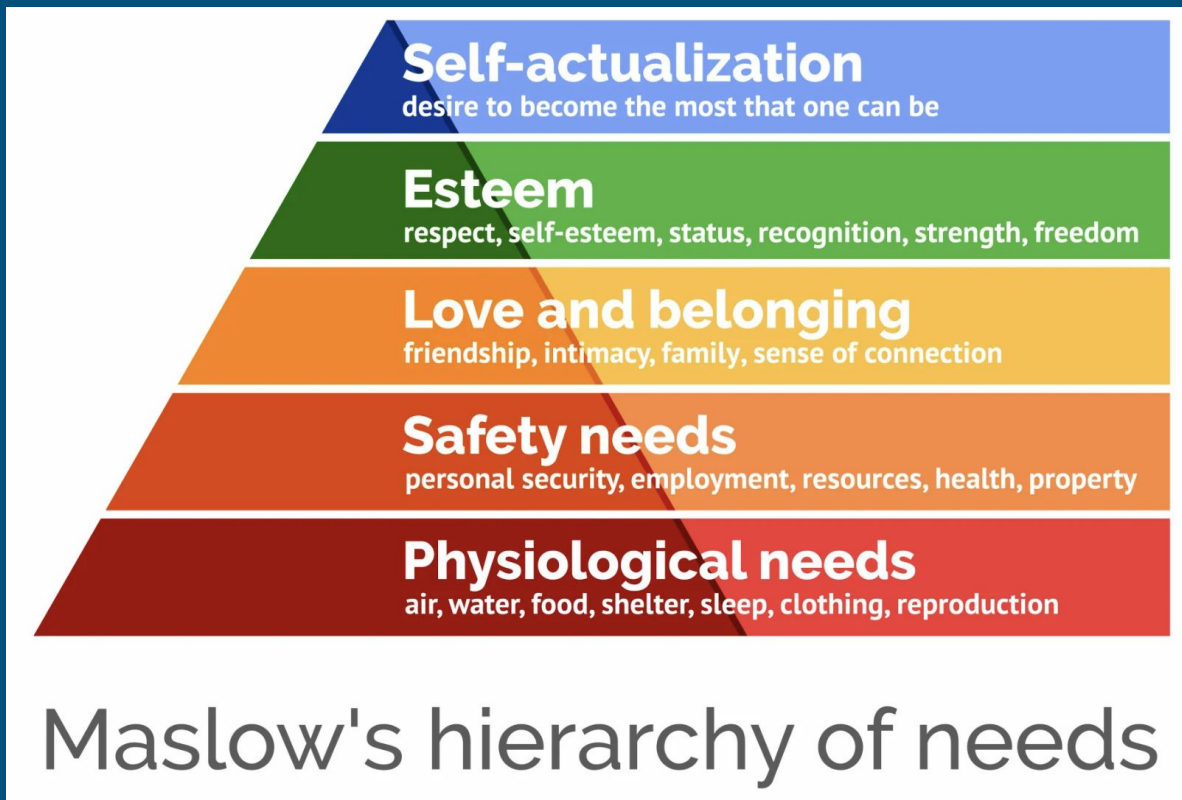
Designing for a User: Affordances

Avoiding Design Pitfalls: User Profiles



Understanding Users





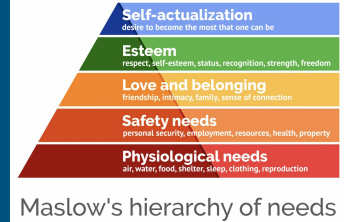
Hierarchy of Needs



Maslow's hierarchy of needs

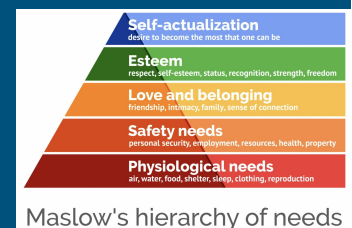
- What outside life circumstances could negative effect learning and why?
 - Food insecurity
 - Housing insecurity
 - Poor health
 - Stress or anxiety created by circumstances at home
 - Distance to school
- Bullying at school

Hierarchy of Needs: Positive factors



- What factors could contribute to positive learning?
 - Strong friendships
 - Strong self confidence
 - Recreational activities can help skills and psychology
 - Having advice on how to excel
 - Connecting with teachers or mentors

Hierarchy of Needs



- What outside life circumstances could negative effect learning and why?
 - Fearing for safety takes up mental energy at school
 - Insecure about intelligence - less willing to ask questions
 - Lack of sleep, illness, less energy, distracting
 - Not feeling loved -> distracted, thinking about your loneliness / sadness
 - lack of belonging makes it harder to connect to students in classroom and collaborative learning
 - Hunger - some children just can't think straight
 - No clean clothes - embarrassment and not paying attention or truancy
 - less access to schools, less well-funded schools, fewer resources

Hierarchy of Needs



Maslow's hierarchy of needs

- Effects on learning
 - Trauma is distracting
 - Hunger is distracting
 - Fear is distracting
 - Pain is distracting
 - Bullying has academic consequences
 - Students who don't belong
 - Stereotype threat: internal
 - Bias, discrimination: external
 - Students who are curious learn more
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Different poverty influences



Maslow's hierarchy of needs

Food and housing insecurity
Access to technology
Family responsibilities
Lack of confidence / self esteem due to seeing others more “successful”
Harder to build friendships with wealthy peers
Less time for schoolwork
Health - more school absences

Motivation to use education to remove yourself from poverty

Can create a sense of community with others in similar circumstances

Jobs provide experience & skills

Responsibility / time management

Different poverty influences



Maslow's hierarchy of needs

Hunger

School quality / resources based on local taxes

Lack of clean clothes

Access to menstrual products (truancy)

Less safe neighborhood

Access to enrichment as well as computers / internet

Less help for school work bc of long working hours, less education of parents

Less heating -> less sleep

Needing a part-time job to help family

Imposter syndrome, not feeling they deserve extra help

Embarrassed they can't afford things others can

Different security influences



Maslow's hierarchy of needs

Anxious & distracted because you are worried

Violence at home may cause violence in school

Staying silent and not being curious

School as a refuge - spend more time there, avoid going home

Different security influences



Maslow's hierarchy of needs

Anxiety - distracting

Lack of trust in authority figures (e.g. teachers)

Truancy - path the school isn't, hiding bruising,

Different belonging influences



Maslow's hierarchy of needs

Different belonging influences



Maslow's hierarchy of needs

Distracted

Collaborative work might
be less effective

Bullying may lead to
missing school

Decrease motivation

Different esteem influences



Maslow's hierarchy of needs

Breakout #1:

What programs could help with deficiencies?



Maslow's hierarchy of needs

In School

After-school care

Hygiene product pickup

Device check-out

Peer matching programs

Help with filling out forms for outside programs

Out of School

Subsidized public transportation

Connecting to social workers, counselors

Neighborhood watch / Safe Corridor

Record your answer on Gradescope: Week 1B In-Class Participation

Affordances:

Designing for a User

Affordances



Blind Spots: Novices vs Experts



How did / would this activity feel to
someone who doesn't read music?

https://www.youtube.com/watch?v=_4IRMYuErhI

Guitar Hero Musical Notation



Breakout #2: Design Failures

What design failures have you experienced that were *successes for others but not for you*

What design failures have your experienced or read about that resulted from the *design team not being representative of specific populations?*

Record your answer on Gradescope: Week 1B In-Class Participation

Design fails from designer blind spots / absences

- Left-handed fails
- UChicago old buildings don't have good enough elevators
- Sizing of women's everything (especially pants)
- Voice assistants understanding accents
- Facial recognition for people with darker skin
- Camera auto lighting for people with darker skin
- Using phones with gloves

Design successes for females / ethnic minorities

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Affordances Boggle

- I will show you something
- **Items:** Make a list of all of the uses for that thing, using only hand tools. I will take answers and bin into categories.
- **Score:** The fewer people that have answers in that category, the more points it receives.

Affordances Boggle



Boggle Reflection

- Did you learn anything from the activity?
- How do we use this to be better designers?

User Profiles

Purpose: Give you a more concrete, specific person to design for

To design for:

Someone **like** you

Someone **unlike** you

Many people unlike you

User profile attributes:

User Profiles

Purpose: Give you a more concrete, specific person to design for

To design for:

Someone **like you**

Someone **unlike you**

Many people unlike you

User profile attributes:

Variety of challenges

Variety of backgrounds

Variety of academic skills

Variety of personality traits

Variety of interests

Caveat: We **don't** want profiles to be sexist or racist based on stereotypes,
We **do** want ones based on realistic circumstances.

Example: A profile of a girl who is bad at math or Asian boy who is a math whiz
(bad - reinforces false beliefs about genetics and harmful stereotypes)

Example: A profile of an immigrant family that fled gang violence in El Salvador
(good - makes you think deeply about someone's challenging situation)

Breakout #3: User Profiles

Design a user profile for yourself as a middle-school student*

* (you are allowed to fudge details you do not want to share)

Reference: [Prof. Franklin's User Profile](#)

Record your answer on Gradescope

Breakout #4: User Profiles

Design a user profile for a well-known fictional character like:

Glinda

John Wick

Black Panther

Katniss Everdeen

Daenerys Targaryen

(one of your choice)

Reference: [Rapunzel's profile](#)

Record your answer on Gradescope

How do we use a profile?

Target interests (wow, Rapunzel has a ton of inside, individual hobbies)

Provide support for challenges (e.g., Rapunzel has never used a computing device)

Provide challenges, general support, incentives / rewards based on personality type