



Human Computer Interaction INFO3315, 2018

Mini-Assignment for Week 2

Due at 4.45pm, Wednesday Aug 8, 2018

Bring a printout of both concept maps to your tute.
(Keep a copy in your info3315 portfolio.)

Task 1 (in preparation for the tute/lecture):

Create a concept map to answer the focus question:

What does the term affordance mean?

To do this, read **all 4 definitions** of affordance. Then create a concept map based on **both** Definitions 1, 2 and **EITHER** 3a **OR** 3b (**NOT BOTH**) – see details below.

To create your maps, use CMapTools <https://cmap.ihmc.us/> (either the download version to run on your desktop or online Cmap Cloud version). Please make a copy to bring to class and submit an electronic copy on Canvas. Also keep it in your INFO3315 portfolio. ("Print Preview" gives a pdf.)

Your concept map should have **at most 15** of the most important concepts. Use only concepts that appear in your Definition 3a or 3b, including as many of the following it has. (Ignore ones not in your reading - you will meet them in the class activities).

- affordance, constraint, discoverability, Donald Norman, explicit affordance, false affordance, high affordance, low affordance, hidden affordance, false affordance, metaphorical affordance, negative affordance, pattern affordance, perceptible affordance, skeuomorphism, usefulness, usability

And use the following links:

- is opposite to, is a, defined

Rationale and explanation of the notes and formatting of this document and others to come:

Handouts for this subject include the rationale for the design of the teaching materials. To help you distinguish the rationale from the things you need to do, they are in a smaller font, indented and grey, like this text. The rationale for having a rationale (☺) is to help you see why each aspect is in the materials. The reason for the smaller font is to "code" the document so you can distinguish the parts. You are likely to need to refer to the instructions more often, so they are in a larger font.

As explained in the Week 1 tute/lecture, concept mapping is valuable for two reasons.

- First, it has been shown to be a very valuable way for learners to really learn from materials as they read them. If you want to follow that up, look at work by JD Novak such as: Novak, Joseph D., and Alberto J. Cañas. "The theory underlying concept maps and how to construct and use them." (2008).
- Second, it is a way to **externalise** and share your understanding of what you have read. This means your tutor will be able to see this and help you if you have misunderstood things. But even more importantly for this subject, where key lessons rest in the fact that different people see things differently, we expect that

different students will have equally valid but different understanding and concept maps will help you share this with other students in class activities. This will enable you to gain an enriched understanding.

In Task 1 this week, you create a concept map based on two tiny definitions of an important term and one longer one. Half the class uses a different long reading for their map, and so there will be interesting differences. In the tute/lecture in Week 2, you will work in small groups to compare your concept maps, to learn from each other and provide peer review. Then there will be an in-class quiz.

CMapTools comes from Novak who invented the method. It is true to the foundations of his research on using it for teaching and sharing understanding. You are asked to select around 10-15 concepts and no more than 15. This is because a key part of concept mapping is deciding what the most important concepts are. You have been provided with concepts you should use if they are in your reading. This is both to help you in this first concept mapping task and to make it easier for sharing and learning in class.

Since this is early in the semester and some people missed the first tute/lecture, here is a repeat of the information about how to do concept mapping:

- The most general/central **concept** should be at the top
- In general vertical position of a concept indicates level of detail (general at top, detailed at bottom)
- Similar things should be placed near each other
- Identify the key **concepts** first, write them in a list, and then place them on the paper
- Then draw linking lines, each with a label to form the **propositions**.
- Use links like: is a; has part; contributes %-age

Note that each proposition should make sense when you read it and it should present one idea you consider is important in the reading.

Definition 1 (read and use):

“When a control behaves as its appearance suggests.”

(<https://www.usability.gov/what-and-why/glossary/a/>) This is a useful online source for practitioners.

Definition 2 (read and use):

“the perceived and actual properties of the thing, primarily those fundamental properties that determine just how the thing could possibly be used (e.g. a chair affords sitting; glass affords seeing through, breaking; wood affords solidity, opacity, support, carving)?”

Norman, D. A. (1988). *The Design of Everyday Things*. New York: Doubleday.

This very influential book was written by Donald Norman, one of the founding fathers of HCI.

Definition 3a (read and only use if your SID is an **even** number):

Understanding Affordance in Digital Interfaces, Paula Borowska.

<https://www.paulolyslager.com/understanding-affordance-digital-interfaces/>

This reading was chosen because it introduces a set of useful terms clearly and simply.

Definition 3b (read and only use if your SID is an **odd** number):

Affordances, Mads Soegaard, Interaction Design Foundation.

<https://www.interaction-design.org/literature/book/the-glossary-of-human-computer-interaction/affordances>

This is another good definition. It is from a very useful online resource. If you are feeling brave, venture a little further and follow the link (to Victor Kaptelinin's chapter) at the top of this page to glimpse an even bigger picture beyond the scope of the homework.

Rationale for the next two mini-assignment tasks.

The next two tasks are in preparation for Assignment 1. This is in the theme of lifelong and life-wide learning for the particular challenges of learning to be healthy by getting enough physical activity. As a starting point for designing interfaces for this, you need to learn about the what it means to get healthy levels of exercise.

The Task 2 readings are important for that. The first is a government brochure which you should find easy to read. The second is an important academic paper. Some of the authors are leading public health researchers, including Bauman who is at Sydney University. The paper has over 9000 Google Scholar citations.

Task 3 is to give you a foundation for lab activities to deepen your understanding of these terms.

Task 2 (in preparation for the lab):

Create a concept mapping that answer the focus question:

How much activity is recommended for a young adult (18-35)?

Your concept map should have at most 15 of the most important concepts, based on:

1. Careful reading of: Physical Activity Guidelines for Adults at <http://www.beactive.wa.gov.au/index.php?id=473>
2. Skimming to identify key information, for the focus question, in the following academic paper:

Haskell, W.L., Lee, I.M., Pate, R.R., Powell, K.E., Blair, S.N., Franklin, B.A., Macera, C.A., Heath, G.W., Thompson, P.D. and Bauman, A., 2007. Physical activity and public health: updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. *Circulation*, 116(9), p.1081.

https://journals.lww.com/acsm-msse/Fulltext/2007/08000/Physical_Activity_and_Public_Health_Updated.27.aspx

Task 3 (in preparation for the lab):

Use the web to read definitions of the words below that came up in Week 1 and many people did not know. Write your own short definitions to share with others in the lab.

- Visceral
- Hedonic
- Gestalt

Checklist questions to review your concept maps:

Since this is the first mini-assignment, here is a checklist to help make sure you do what is needed.

- Does your concept map answer the **focus question**?
- Did you include the **relevant concepts from the list provided**?
- Does it have **at most 15 concepts**?
- Does it use the link-name provided where relevant?
- Within the 15-concept limit, does it have the **main ideas** in the reading to answer the question?
- Do the **propositions make sense**? (ie when you read “concept” “link” “concept”)
- *Are the propositions correct interpretations of the reading?*