



Masterverksted vol 2

Teori: hva er det og åssen bruker jeg det?







What do you see?





Tommelfingerregel



Introduksjon

Bakgrunn

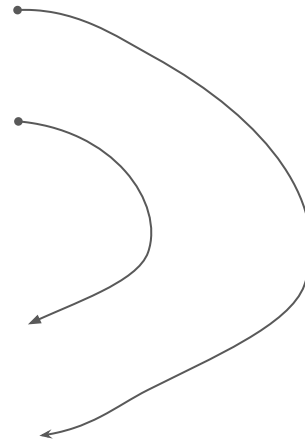
Teori

Metode

Analyse

Diskusjon

Konklusjon



3.6 Visualization checklist

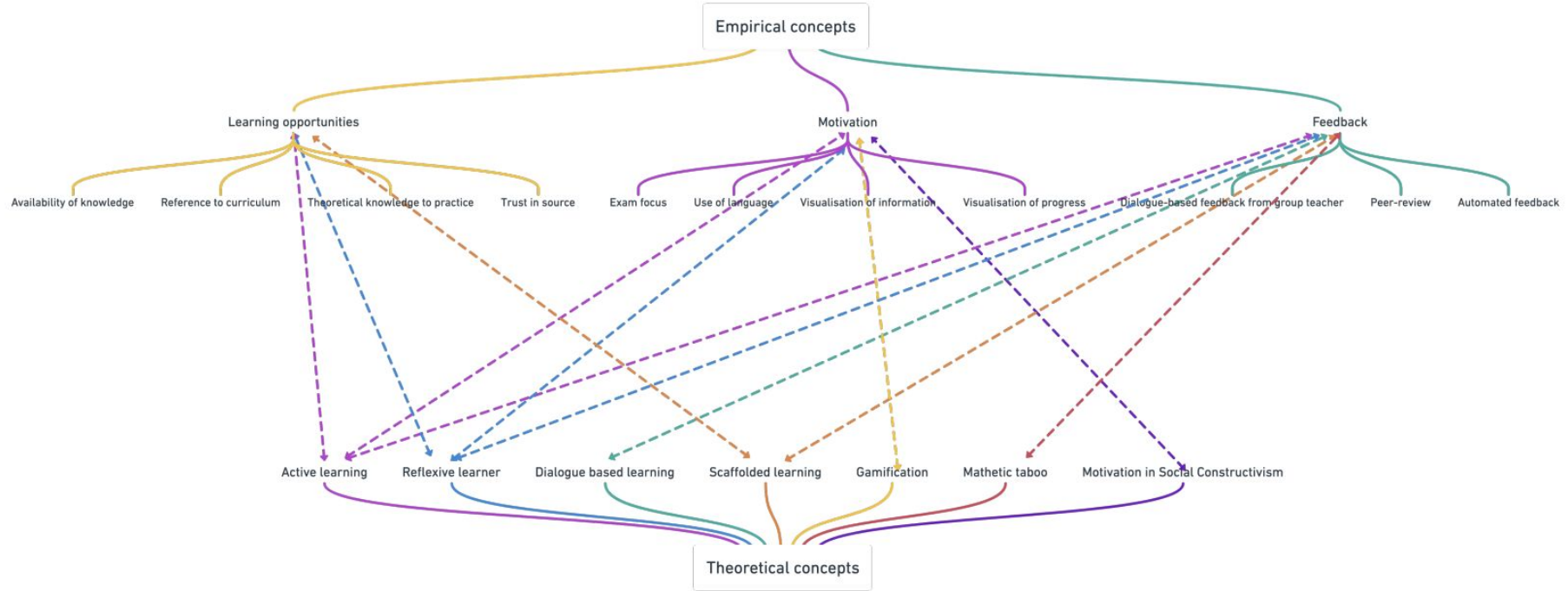
Based on the visualization theories that have been researched and discussed in this section I have put together a checklist of twelve main principles that I consider essential to refer to when designing visualizations. I have chosen these principles as they are central topics that are referred to by Tufte (1990, 1997, 2001) and the other authors multiple times. I have used these principles in conjunction with the data collected to create the first iteration of visualizations which I will presented to users of solar panels. Tufte (2001, p. 191) says that “the principles should not be applied rigidly or in a peevish spirit ... it is better to violate any principle than to place graceless or inelegant marks on paper,” so my own experiences and knowledge through this research will also be applied when creating the visualizations.

| Category | Title | Description | Source |
|-----------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Visual | Deviations | Use deviations to attract attention to important numbers or other details that should be brought forward | (Illinsky, 2012) |
| | Color | Be careful when using color, and if using color to show differences, use saturation within the same color, or lighter and darker colors | (Tufte, 2001) (Illinsky, 2012) (Ware, 2004) |
| | Chart type | Choose the chart that best suits the type of data you are representing | (Tufte, 2001) (Cleveland & McGinnis, 1988) |
| | Labeling | Use clear and detailed labeling for all parts of the visualizations | (Tufte, 2001) (Ware, 2004) |
| | Show the data | Focus on showing the data – not only something aesthetically pleasing | (Tufte, 2001) |
| | Chartjunk | Avoid chartjunk and overloading one chart with information | (Tufte, 2001) |
| Cognitive | User expertise | Know your user. Avoid making the user feel dumb by making the visualization too complicated, or too basic so feel underestimated | (Illinsky, 2012) |
| | Language | | (Illinsky, 2012) |

Both the cognitive and visual aspects of designing visualizations are important to consider, and the principles in the list all relate to each other in how the visualization should be designed. Yet, the designer should prioritize the cognitive principle of understanding who your user is as a first step in creating a useable and understandable visualization, which is why it has been placed at the top of the list. I merged the principle of language with user expertise, as they complement each other. When you know who your user is, you should design all the elements in the visualization towards who they are, such as choice of language, measurements in labels and level of abstraction. The visual principles of labeling and chart type can relate to designing for your user as well, which I will discuss in section 10.3.

Thea Snilsberg-Søfting, 2018

| Category | Title | Description | Source |
|-----------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Cognitive | User expertise | Know your user and their prior experience and motivation. Avoid making the user feel dumb by making the visualization too complicated, or too basic so they feel underestimated. Customize all elements in the design for the user, such as language and level of conception. | (Illinsky, 2012) |
| | Tell a story | Tell a story through the visualization either by presenting a predetermined story or by allowing the user to explore | (Tufte, 2001) (Bhancic, 2015) (Suwarsa, 2017) |
| Cognitive | Benefit from knowledge | Benefit from the knowledge that the user already has and can relate to | (Norman, 2013) (Tufte, 2001) |
| Cognitive | Truthful data | Avoid distorting the data by providing context to every piece of information, especially in graphs, by always considering the question “compared to what?”. Use size and proportion correctly | (Tufte, 2001) |
| Cognitive | Show the data | Find the balance between showing the data and adding elements for aesthetics | (Tufte, 2001) |
| Visual | Chartjunk | Avoid chartjunk and overloading the visualizations with information | (Tufte, 2001) (Ware, 2004) |



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The front page as an awareness mechanism

My empirical data shows that the editorial staff at VG often reference the front page when communicating. For instance, journalists will typically refer to a specific location on the front page when notifying the front page editors that a headline is misspelled. At a glance, this closely resembles the notion of a "shared view", as presented in [25], in that multiple actors perceive changes to the same object concurrently. There are conflicting views of whether such awareness mechanisms have any significant value beyond *synchronous collaboration* and small teams [25]. However, I align my view with that of Dourish and Bellotti [8], who argue that *synchronous* and *asynchronous* are not different modes of a system, but different ways of viewing awareness information. As shown in Section 6.2.5 on page 62, the front page editors I observed started their shift by scrolling up and down the front page in order to see what their colleagues had done. In these instances, the front page was not only the object of work; it also acted as a "persistent record" [8] of the front page editors activities. Furthermore, the front page editors are able to make sense of this "record" because they

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