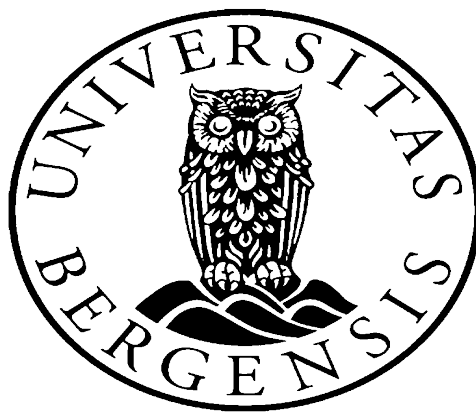


Interpretation and use of online weather forecasts



Anders Sivle
Anders.Sivle@met.no

Together with Stein Dankert Kolstø, Pål J. Kirkeby Hansen, and Jørn Kristiansen



Norwegian
Meteorological Institute
met.no



Background



Theoretical framework

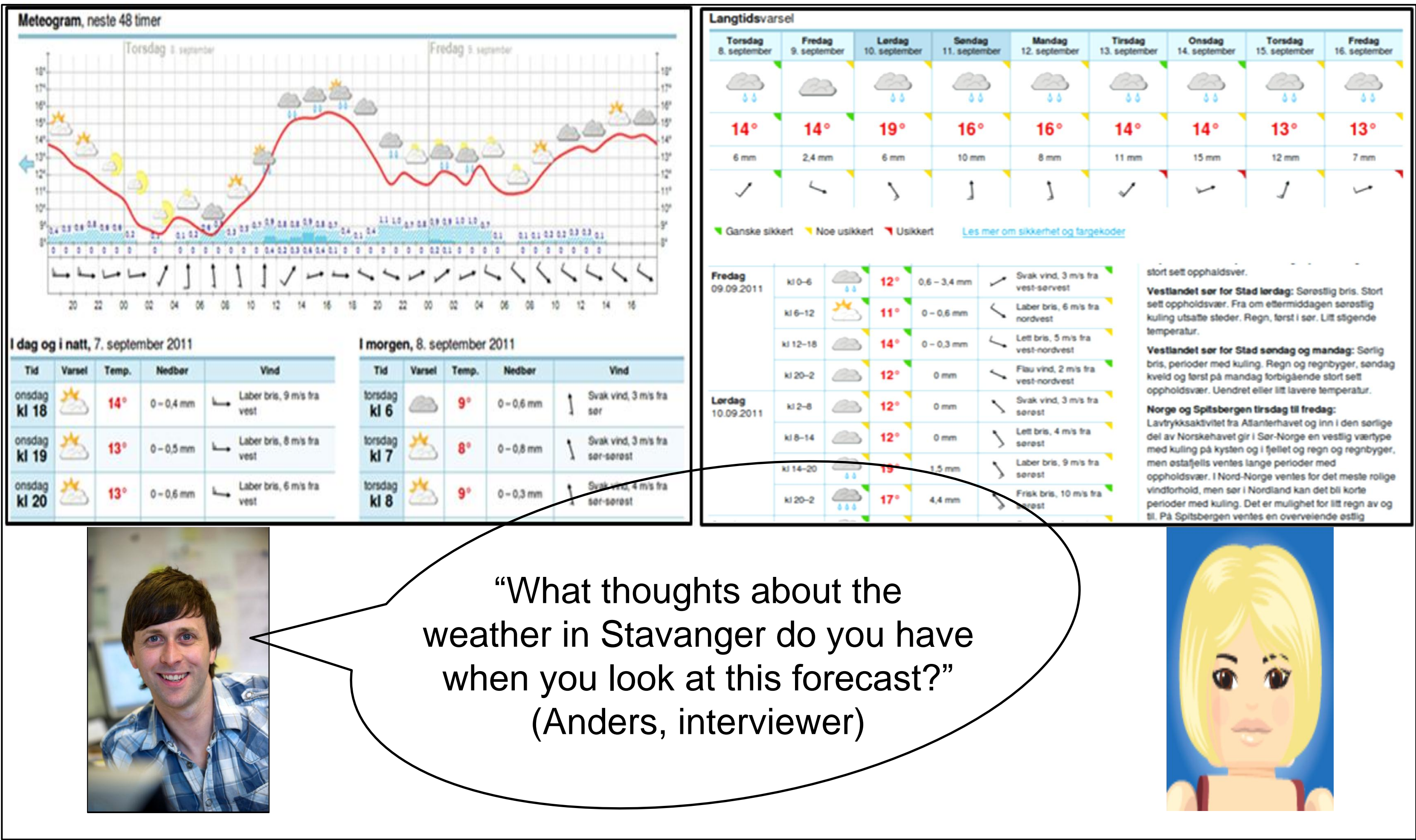
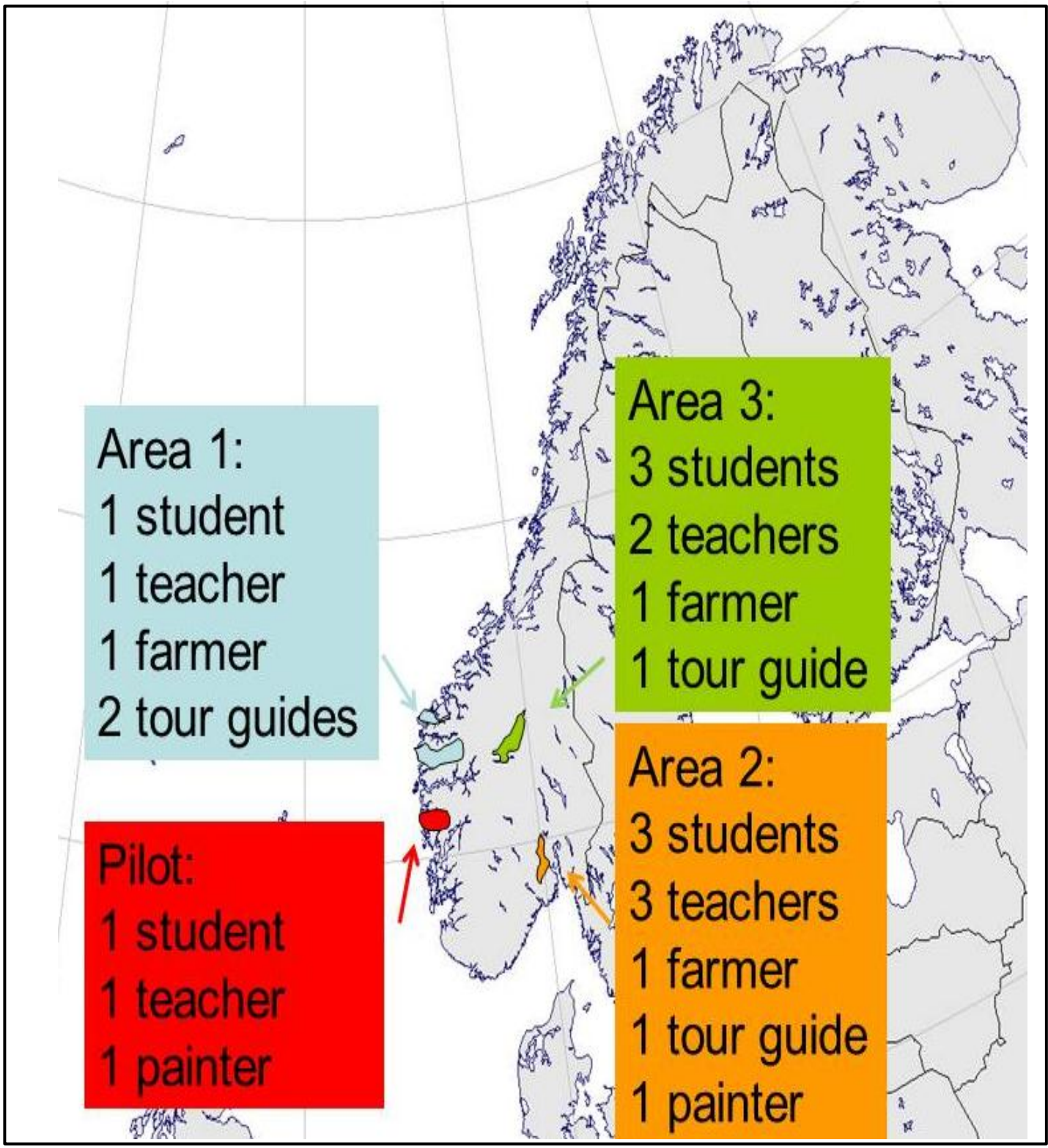
The web-service www.yr.no (YR) is the Norwegian Meteorological Institute's main channel for publishing weather forecasts to the public, and was used in this study. The forecasts on YR are multimodal scientific texts, composed of different abstract representations such as symbols, written text, maps, tables, and diagrams. Each representation is partial and often complementary to other representations, standing for different aspects of reality. Interpreting texts having a combination of several representations therefore be good for creating a broad understanding of a topic. At the same time, abstract representations makes it difficult for some people to understand what they read. Another characteristic features of scientific texts are to show caution, and to express uncertainty in the text; both prominent in weather forecasting.

When reading, the information is, according to constructivism, interpreted before it is stored. This interpretation is constructed in interplay between information found in the text, and previous knowledge. Consequently, the perception of forecast weather is subjectively constructed. This implies that a person not necessarily get the same perception as YR tries to communicate. Different interpretations of symbols are possible, and it is likely that the meteorological community will assign a different meaning to a symbol than will other user groups, as farmers or painters. This makes communication to different user groups demanding, but it also makes it necessary not to consider various user's interpretations as incorrect, but rather as informative in order to improve communication. (Reference: Andersen, Scheuer, Echeverría, and Teubal, 2009: Representational Systems and Practices as Learning Tools.)

Method

Semi-structured qualitative interviews

Sample of maximum variation



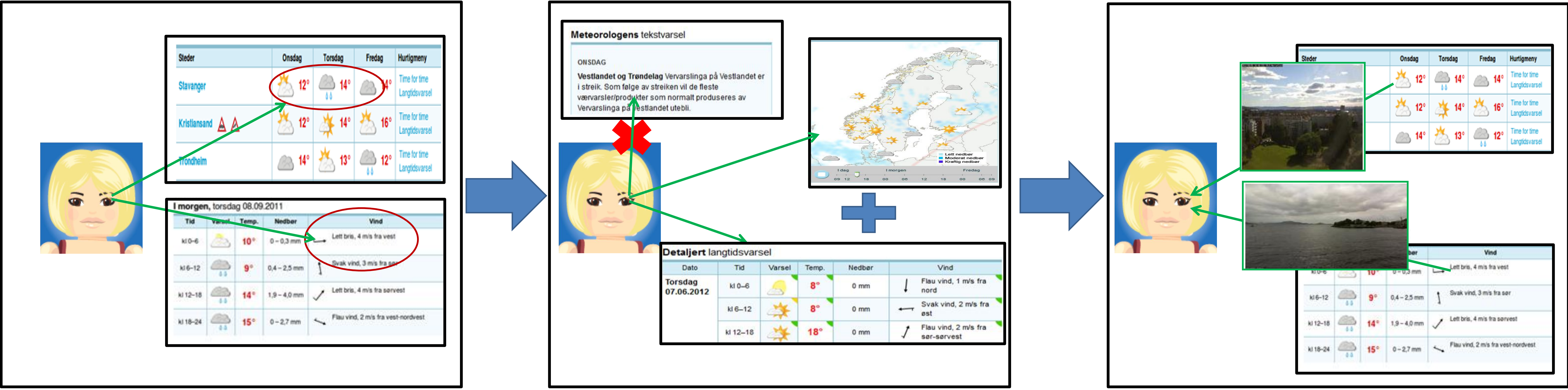
Data analysis

Systematic Text Condensation (Malterud, 2003)

1. Get known to data (make up impression)
2. Identify meaningful elements (make codes and main categories)
3. Organize codes in sub categories
4. Describe categories (use quotations)

Findings

The informants started out by looking at cloud symbols and wind direction, either to find out what weather it should be, or if they could trust the forecast. When interpreting all used experience with weather to construct meaning (to a much greater extent than textbook knowledge). The findings indicate that it is well known that weather forecasts are uncertain. However, degree of certainty is often interpreted different than signaled by the author of the forecasts. Some informants also combine information from several representations to clarify weather or decide degree of certainty. The written text forecast is the only representation rarely used at all, and effectiveness is identified as a reason.



1. All nuances of symbols are interpreted, like cloud color and number of drops. Some use wind direction to infer weather.
2. Representations are combined to clarify, and/or decide degree of certainty. Written text is rarely used.
3. All interpret symbols based on experiences with weather. Some also adjust the forecast.

