



Non-meteorological factors affecting audience attention and retention of television weather broadcasts

R. Drost (1), J. Trobec (2), C. Steffke (3), and J. Libarkin (4)

(1) Department of Geological Sciences & Division of Science and Mathematics Education, 206 Natural Science, Michigan State University, East Lansing MI 48824, USA (drostrob@msu.edu), (2) Chief Meteorologist, KELO-TV, Sioux Falls, SD 57104, USA (jay@trobec.net), (3) Department of Geological Sciences & Division of Science and Mathematics Education, 206 Natural Science, Michigan State University, East Lansing MI 48824, USA (steffke@msu.edu), (4) Department of Geological Sciences, Director for Educational Research, Center for Integrative Studies in General Science 206 Natural Science, Michigan State University, East Lansing MI 48824, USA (Libarkin@msu.edu)

Television has been reported as one of the most frequently accessed sources of weather information (Lazo, et. al. 2008 & Drost 2012). The role of the local weathercaster serves as the link between that source and the public. This study aimed to identify and measure areas of interest that best attracted viewer attention during weather forecasts. Viewer retention was also evaluated in order to determine the role of weathercaster gesturing. Two variations of a typical weather forecast were viewed by a total of 36 participants during an eye tracking session. The first forecast variation contained bodily gestures (gesture+) by the newscaster while the second variation contained minimal gesturing (gesture-). Both forecast variations were recorded so that each provided identical weather information over the same televised forecast length. The only difference being each forecast variation was the presence (gesture+) or absence (gesture-) of weathercaster gesturing toward the forecast text. 36 participants viewed the forecasts on an eye tracker and data was collected on their overt visual attention during the forecast variations. Following each eye tracking session, participants completed a retention survey on questions related to the forecast variation which they viewed. The data was used to identify and measure areas of interest the participants attended to during actual weather forecasts and to ascertain how well that information is retained as a function of gesturing by the weathercaster. This study results suggested that weathercaster's gesturing during forecasts does not impact viewer attention or retention of the weather information presented. Additional studies were performed to test whether the onscreen appearance of a weathercaster helps or hinders retention of information on a full-screen graphic (a 7 day forecast), and the effectiveness of severe weather broadcasts involving the display of multiple graphics sources (e.g. maps, radar, text crawl) on the television screen simultaneously.