

Visual Aid and Imagery Ramification on Decision Making: An Exploratory Study Applicable in Emergency Situations

Authors : Priyanka Bharti

Abstract : Decades ago designs were based on common sense and tradition, but after an enhancement in visualization technology and research, we are now able to comprehend the cognitive ability involved in the decoding of the visual information. However, many fields in visuals need intense research to deliver an efficient explanation for the events. Visuals are an information representation mode through images, symbols and graphics. It plays an impactful role in decision making by facilitating quick recognition, comprehension, and analysis of a situation. They enhance problem-solving capabilities by enabling the processing of more data without overloading the decision maker. As research proves that, visuals offer an improved learning environment by a factor of 400 compared to textual information. Visual information engages learners at a cognitive level and triggers the imagination, which enables the user to process the information faster (visuals are processed 60,000 times faster in the brain than text). Appropriate information, visualization, and its presentation are known to aid and intensify the decision-making process for the users. However, most literature discusses the role of visual aids in comprehension and decision making during normal conditions alone. Unlike emergencies, in a normal situation (e.g. our day to day life) users are neither exposed to stringent time constraints nor face the anxiety of survival and have sufficient time to evaluate various alternatives before making any decision. An emergency is an unexpected probably fatal real-life situation which may inflict serious ramifications on both human life and material possessions unless corrective measures are taken instantly. The situation demands the exposed user to negotiate in a dynamic and unstable scenario in the absence or lack of any preparation, but still, take swift and appropriate decisions to save life/lives or possessions. But the resulting stress and anxiety restricts cue sampling, decreases vigilance, reduces the capacity of working memory, causes premature closure in evaluating alternative options, and results in task shedding. Limited time, uncertainty, high stakes and vague goals negatively affect cognitive abilities to take appropriate decisions. More so, theory of natural decision making by experts has been understood with far more depth than that of an ordinary user. Therefore, in this study, the author aims to understand the role of visual aids in supporting rapid comprehension to take appropriate decisions during an emergency situation.

Keywords : cognition, visual, decision making, graphics, recognition

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