

## **An Investigation of the Effects of Noise on Cognitive Tasks**

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### **Abstract**

The effects of noise on performance are not a clear-cut and previous field studies have not been conclusive. By choosing the right studies, one can show that noise produces a decrement, no effect, or even an improvement in performance. This study will investigate the effects of three factors namely, the type of noise (at four levels, phone ringing, airplane, speech, and printer), the level of noise intensity (at two levels, 54 dB and 98 dB) and the gender of the participants. Ten male and ten female subjects were participated resulting in factorial-nested design. The task was consisting of solving simple arithmetic problems. The findings show that gender was the most significant factor with females being more affected by noise. Significant two-way interactions between type of noise and intensity masked the main effects but when separate tests were performed, intensity was found to be very significant. The results were in part consistent with previous findings with respect to the negative impact of noise on performance. However, Noise was shown to have no significant effects, whether positive or negative, in some of the conditions reported in this investigation.

### **Keywords**

Noise effects, type and intensity of noise, cognitive tasks.

### **Biography**

**Farag Elfeituri** is a Professor in the Department of Industrial & Manufacturing Systems Engineering at the University of Benghazi, Benghazi, Libya. He earned a B.S. degree in Industrial Engineering from University of Benghazi, Benghazi, Libya and an M.A. Sc. in Industrial Engineering, and a PhD in Manufacturing Systems Engineering both from University of Windsor, Windsor, Ontario, Canada. He has published numerous journal and conference papers. Dr Elfeituri research interests are in the areas of occupational ergonomics and maintenance and reliability engineering.

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