

Investigating the Efficacy of Virtual Experiences on Stress Reduction
(Technical Report)

The Controversy over Digital Education Technology
(STS Research Paper)

An Undergraduate Thesis Portfolio
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by

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Preface

What conditions lead to more productive environments? The proliferation of technology in workplaces and schools can improve productivity, but can also cause stress and distractions. By identifying the conditions that contribute to and that impede productivity, managers, teachers, and students can optimize technology's benefits.

Can virtual reality micro-vacations decrease stress in the workplace? Study participants were guided through a virtual reality (VR), 2D, or GeoDome "micro-vacation" experience with natural or urban sub-conditions. Participants completed a Cognitive Demand Battery to induce minor stress or fatigue prior to their given experience. Biometric and mood data were collected throughout the study to measure changes in stress before, during, and after the experience. VR data was not collected due to project limitations, but it was found that the nature environments resulted in lower stress levels than the urban environments and the GeoDome experience was slightly more relaxing than the 2D experience.

Should digital educational technologies be used in U.S. primary and secondary education? Accessibility advocates, technology companies, and others argue that educational technologies enhance learning, improve education access, prepare students for future careers, and contribute to the economy. But some stakeholders, developmental psychologists, privacy advocates, and others contend that devices are costly, increase distractions, harm physical and social development, and compromise privacy. Students, teachers, and parents are divided. Educational technologies can improve learning environments, but measures are necessary to mitigate undesirable effects.

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