

E.M. ZELINSKI. *From the margins to the mainstream: Integration at the nexus of aging, technology, and disability*. *Gerontechnology* 2012;11(2):214; doi:10.4017/gt.2012.11.02.059.00 **Purpose**

The aim is to identify issues in developing technology at the nexus of aging with, and aging into, a disability. The need for interdisciplinary cross-talk and understanding has never been greater due to an aging population, trends towards increases in disability, and increases in the number of disabled individuals who survive into old age. Recent medical advances that allow for survival after previously fatal medical events, such as cardiac arrest, are creating a new population of disabled and aging individuals for which technologies have not yet been developed. The following concerns are considered: much research relevant to technology development to support disabled persons or older adults moving into disability ignores the need to integrate in-depth multidisciplinary perspectives. Within disciplines, we *think* we are addressing the problems but much work fails to meet the mark because our understanding is conditioned by our training and disciplinary assumptions, a lack of appreciation of the problems that other disciplines consider, the context in which we work, and a lack of theoretical focus. In many cases there is a lack of sound research design, including longitudinal strategies that take effects of aging into account.

Method The issues of major international journals that address disability, rehabilitation, assistive technology, and aging were examined for the year 2011 for the presence of articles that crosscut issues of aging, technology, and disability. **Results & Discussion** Only 1 percent of articles addressed two of the three areas, and none all of them. Most of the articles on disability associated with medical conditions that increase in prevalence with age, like stroke, did not address age related changes within the disability. Few studies included age in data analyses as an individual difference that might affect outcomes. None of the studies used longitudinal designs. The studies that did consider usability and adoption principles did not evaluate age-related changes that might affect outcomes. The currently published research does not address aging, disability, and technology in integrated approach. Yet the need for this approach is urgent and expanding. The shift from treatment of acute to chronic medical conditions in the context of worldwide demographic changes has important implications for the quality of life of individuals aging into, and with, a disability. Much development of technology to support these individuals is in its infancy. Some research groups in the US have recently been working to address these problems. Best-practice models that successfully integrate the relevant disciplines at the nexus of aging, disability, and technology are identified. Advances arising from this integration including ambient intelligence systems to monitor behavioural change, assistive technologies, and rehabilitative games approaches using virtual reality will be described. Future directions to enhance integration to meet future needs of technological development will be discussed. **Conclusion** Current literature shows there is very little work being done at the nexus of aging, disability, and technology. Suggestions for developing research and practice will be made.

Keywords: health & self-esteem, disability and aging, interdisciplinary technology, research design

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