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The Relationship between Energy Literacy and Environmental Sustainability

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ABSTRACT
Sustainability, first identified as a characteristic of eco-systems, is the capacity to maintain a process indefinitely. Environmental sustainability receives significant public and government attention, triggered by concerns about climate change, decreasing energy supplies, and increasing food costs. Colleges and universities receive positive notice for their greening efforts, and the academy is expected to be a leader in efforts to improve sustainability. Therefore coursework and curricula must be developed to train students about sustainable resource consumption processes. This paper describes curricula materials related to energy literacy, defined as conceptual fluency with the economic and social components of energy use. These materials were developed and piloted over a three year period, and were tested with a pre- and post-course survey administered with questions based on the New Environmental Paradigm (NEP) and Environmentally Responsible Behavior (ERB). The findings of this study suggest that discussion of sustainability with disaster themes triggers anxiety that interferes with the development of ERB. In contrast, materials emphasizing the pragmatic necessity and benefits derived from sustainable practices relate to improvements in ERB. This suggests sustainability curricula should mitigate anxiety aroused by the topic, and instead emphasize pragmatic motivations for changing energy consumption patterns.

KEYWORDS
Sustainability, Energy Literacy, Information Technology Literacy, Social Impact of Technology, Climate Change

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