

Utilizing Innovation Attributes for Classifying and Analyzing Literature on Ubiquitous and Pervasive Computing in Education

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Abstract

The paper seeks to explore and synthesize the academic literature on the use of ubiquitous and pervasive computing technologies in education. With the objective of adequately assessing the vast range of research on this topic, we developed a conceptual framework that explains and classifies academic literature in the fields of ubiquitous and pervasive computing using the five attributes of innovation proposed by Everett Rogers. This allows us to develop a logical taxonomy to classify the literature available in the fields of ubiquitous and pervasive computing and its applications in education. Based on this research we throw light on the manner in which various research streams are hanging together, fusing, evolving and paving the path for new research. We believe that research on these ‘emerging’ phenomena such as ubiquitous and pervasive computing have the potency to benefit from ‘standing on the shoulders’ of what has already been accomplished in the field of technology enhanced learning.

Keywords: Ubiquitous Computing, Pervasive Computing, Education, Literature Review, Innovation