

Cognitive Theory and the Design of Integrate Curriculum

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Abstract : The purpose of this paper is to propose a pedagogical model where engineering provides the interconnection to integrate the other topics of science, technology, engineering, and mathematics. The author(s) will first present a brief discussion of cognitive theory and then derive an integrated pedagogy to use engineering and technology, such as drones, sensors, camera, iPhone, radio waves as the nexus to an integrated curriculum development for the other topics of STEM. Based on this pedagogy, one example developed by the author(s) called "Drones and Environmental Science," will be presented that uses a drone and related technology as an appropriate instructional delivery medium to apply Piaget's cognitive theory to create environments that promote the integration of different STEM subjects that relate to environmental science.

Keywords : cognitive theories, drone, environmental science, pedagogy

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