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The Four-Domain Development Diagram: A Guide for Holistic Design of Effective Learning Experiences for the Twenty-First Century

The Four-Domain Develop Diagram: A guide for holistic design of effective learning experiences for the 21st century engineer, is not about an experiment; it is about a mental model of cognitive, affective, social and psychomotor development. More specifically, we attempted to synthesize known empirical and theoretical linkages into an interconnected, holistic picture. Our intent was to enable educators to visualize the "internal workings" of learning. The model draws from a range of disciplines and methodologies. For example, service learning practitioners observe that students more deeply engage in the learning process. Developmental psychologists theorize that the desire to learn is an innate psychological need promoted by certain environmental conditions, such as the freedom of choice. In synthesizing these various viewpoints, we adopted an epistemological position of valuing the insights in the literature without privileging one methodological approach over another. The result is a diagram that depicts a mental model of one's holistic development. The value of the model is that it opens up the opportunities for faculty to design learning environments that align with and further innate learning processes. While not exhaustive, the paper reviews the research on which the mental model is based. To our knowledge, this is the first mental model that provides a systemic view of the interactions between a learner's inner and outer worlds.

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