

Abstract

It has been stated that the topic of design is not conducive to assessment by concept inventory. While design problems are more ambiguous than problems in analytical subjects, such as physics, statics, or thermodynamics; the broader design education community of scholars might agree on a set of concepts that are essential to the fundamental understanding of design. Following a review of textbooks, industry interviews, and other literary sources, this paper will propose a set of commonly accepted overarching concepts that might form a nucleus of an engineering design concept inventory. This is intended primarily to initiate a dialog among the design engineering education community about the future development of a design concept inventory and its applicability in assessing the design content knowledge of undergraduate engineering students prior to entering the profession as graduate engineers.