

An effective methodology for honing students' skills in building prototypes using modern modeling techniques in industrial design

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Abstract

(The importance of) the research is represented for industrial design students and the design of the products in reaching a new effective methodology that improves the teaching of Prototyping preliminary subject by studying the case and applying this methodology to students of the Industrial Design Department at Helwan University, students of the product design department at 6th of October University, and students of the Product Design Department at the University Badr in Cairo and reached distinguished results that were not before. The (research objectives) also are to reach an effective methodology for refining students' skills in the primary modeling for students of advanced teams in industrial design and product design, training students to use the proposed methodology in the material show of products models.(The research is called) The research claims that the proposed methodology for teaching Prototyping models will improve, develop and raise the level of students and make them able to simulate the physical characteristics of the final product with high accuracy and professionalism.

The most important (results) were to provide students with the ability to simulate the physical properties of products, almost real simulation of shape, color, texture, blocks, sizes, weight and use as well as a semi -real test sample of the product. As for the research (recommendations): The researcher recommends completing the improvement of the teaching of 'primary models', defining students first -hand with digital modeling machines, and the conditions for the 3D Model delivery to it so that it would be operated without problems.

Keywords:

Methodology; design; Advanced prototyping