

## Anthropometry of the Hand and Product Design

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### Abstract:

**Statement of the problem:** Given the importance of the hand in many tasks requiring the manipulation of objects, the information gathered in this study may help in the development of a human hand model that is simple and straightforward to use for all product designers. A set of key anthropometric characteristics that are pertinent to the creation and design of human digital models have been suggested by recent research. Nevertheless, there is a severe absence of the dimensions of available data that allow designers to operate as effectively and efficiently as possible. Designing consumer goods for commercial usage has been incredibly slow when it comes to user anthropometry research. **Objective:** The purpose of this study is to define, characterize, and illustrate hand measurements and their implications and associations for product design. In order to facilitate a better knowledge of hand dimensions and their relationships, the study has also examined the anatomy and structure of the human hand for employing real key measurements and Parameters. Therefore, an widespread study has been dedicated to anthropometric data collection methods covering traditional and most sophisticated techniques. For convenience and preference, it also creates a link between user and product sizes. Furthermore, it draws implications for design that are particular to user groups, generalizes these implications for a range of goods, and illustrates these implications throughout the product development cycle. **Methodology:** The study employed both analytical descriptive and deductive approach in order to developing a product design criterion based on and implementing hand anthropometry. **Results:** A summary of all the variables linking hand anthropometry to product design and potential future developments in this area concludes the study. Product designers should be able to readily match product interfaces with human capabilities and competencies thanks to the data sets offered and comparisons made.

### Keywords:

Hand Anthropometry, Hand Anatomy, Product Design, Photogrammetry, 3D Body Scanning

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