

Ergonomically design sitting arrangement for school children using anthropometric

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Abstract—The purpose of this study was to compare anthropometric data of school children with the dimension of furniture in the school and determine whether this type of furniture is well-designed and promotes good sitting posture at school by taking into account the dimensions of the children. Combinational equations defined the acceptable furniture dimensions according to anthropometric and match percentages were computed, according to either the existing situation where children use the size assigned for their grade or assuming that they could use the most appropriate of the sizes available..

Keywords— anthropometric, ergonomics, Static and dynamic anthropometric, postures.

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INTRODUCTION

The speed of development, rapid introduction of highly sophisticated computers, communication systems and the highly automated manufacturing systems are resulting in the dramatic changes in the way people work and use technology are all witness to this phenomenon. The philosophy of ergonomics operates on the premise “Better design for people. This document is a template. If the user is not comfortable with the design of an article, the individual product or a combination of relevant products of a system –or the layout patterns of these within a legitimate space obtained through various innovations.

Ergonomics is the science which uses Anthropometric data and designs the workstation which is comfortable and efficient to work at. Proper ergonomic design is necessary to prevent repetitive strain injuries, which can develop over time and can lead to long-term disability. Ergonomics is concerned with the ‘fit’ between people and their work. Anthropometric measures were collected with children sitting on a specially designed anthropometric chair. This design project stimulates a class in normal distribution situation. School desk and chair have to undertake student’s physical and psychological need. A class included different body figure range students. Students require different type of desk and chair to fit their body figure..

A. Anthropometry

The anatomy of human being that deals with the dimensions of human bodies is called Anthropometry. Anthropometric measures can be translated into seat design measures by using the anthropometric design motto.

Let the person reach.

Let the large person fit.