

## Time and Energy Saving Kitchen Layout

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**Abstract :** The two important resources of any worker performing any type of work at any workplace are time and energy. These are important inputs of the worker and need to be utilised in the best possible manner. The kitchen is an important workplace where the homemaker performs many essential activities. Its layout should be so designed that optimum use of her resources can be achieved. Ideally, the shape of the kitchen, as determined by the physical space enclosed by the four walls, can be square, rectangular or irregular. But it is the shape of the arrangement of counter that one normally refers to while talking of the layout of the kitchen. The arrangement can be along a single wall, along two opposite walls, L shape, U shape or even island. A study was conducted in 50 kitchens belonging to middle income group families. These were DDA built kitchens located in North, South, East and West Delhi. The study was conducted in three phases. In the first phase, 510 non working homemakers were interviewed. The data related to personal characteristics of the homemakers was collected. Additional information was also collected regarding the kitchens-the size, shape, etc. The homemakers were also questioned about various aspects related to meal preparation-people performing the task, number of items cooked, areas used for meal preparation, etc. In the second phase, a suitable technique was designed for conducting time and motion study in the kitchen while the meal was being prepared. This technique was called Path Process Chart. The final phase was carried out in 50 kitchens. The criterion for selection was that all items for a meal should be cooked at the same time. All the meals were cooked by the homemakers in their own kitchens. The meal preparation was studied using the Path Process Chart technique. The data collected was analysed and conclusions drawn. It was found that of all the shapes, it was the kitchen with L shape arrangement in which, on an average a homemaker spent minimum time on meal preparation and also travelled the minimum distance. Thus, the average distance travelled in a L shaped layout was 131.1 mts as compared to 181.2 mts in an U shaped layout. Similarly, 48 minutes was the average time spent on meal preparation in L shaped layout as compared to 53 minutes in U shaped layout. Thus, the L shaped layout was more time and energy saving layout as compared to U shaped.

**Keywords :** kitchen layout, meal preparation, path process chart technique, workplace

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