ABSTRACT

3D printing technology is rapidly evolving through Additive Manufacturing (AM) methods, which enable CAD model-based component manufacturing with the advantages of design flexibility, personalization, high precision, and time and cost efficiency. This technology has been applied in various sectors, including education and industry, to support innovation in learning and production. Telkom University provides Makerspace as a center for student creativity in using 3D printing. However, the management of workspace in Makerspace still faces obstacles, such as unorganized storage of tools and filaments, less organized workbenches, and inefficient workstation layouts. This research aims to design a more structured and efficient 3D printing workstation with the main focus including improving the management of tools and materials, optimizing filament storage, and improving machine layout to increase work efficiency. The research method used is Mix Methode. Data was collected through observation, interviews, documentation, and literature studies. Data were analyzed using Time and Motion Study and analysis of interview results. The workstation design uses the SCAMPER method with the Design Thinking framework. With this approach, a new workstation design is produced that is more organized and increases the work efficiency of 3D printing activities.

Keywords: *3D Printing, Workstation, Makerspace, Public Facility, Time and Motion Study.*