

ABSTRACT

Working mothers in the breastfeeding period have a dual role, i.e., her role at work and as a nursing mother at the same time. In carrying out this dual role, the provision of supporting facilities such as a lactation room at the workplace is important, where its presence is more focused as a place for mothers to express breast milk since it is unfeasible for them to bring the baby. The government has also regulated the criteria for procuring this facility. Apart from having to comply with regulations, it is expected that the design of the facilities can also accommodate the needs regarding the preference of a working mother when expressing breast milk, i.e., those who want to stay productive at work while expressing the milk. Accordingly, the objective of this paper is to design a lactation facility suitable for this.

This research was conducted to design IoT-based lactation facilities in the workplace by using the Quality Function Deployment (QFD) method combined with the *Kansei Engineering* (KE) method. The object of research is the lactation room on the campus of Telkom University with the subject being academics who are or have had breastfeeding experience. The technique used in subject selection is non-probability sampling with the type of convenience sampling. The first stage of this research is to use the QFD method to obtain a *Needs statement* and build a House of Quality. Furthermore, the KE approach is also carried out to explore the emotional aspects of the user, in this case, a working mother who is breastfeeding. The application of the QFD-KE method combination is expected to create a lactation room that suits the user's needs and preferences. Finally, the *smart lactation room* concept was also introduced through the adaptation of IoT technology using RFID which were applied to support usability aspects in the form of integration of lactation facilities.

Keywords—Lactation Room, QFD, IoT, Smart lactation room, Kansei Engineering