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Smarten Auto: Smart learning vaginal touch automatic tool

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In Indonesia, midwives have nine competencies, one of which is the care of childbirth. One of the skills in childbirth care is vaginal touch. Vaginal touch was being done to detect complications and monitor the condition of labor whether it is physiological or includes pathologies. To improve the skills of midwife students in determining vaginal touch, a learning model and quality learning process is required. In fact, the current model of vaginal touch learning is available in the form of separate cervical dilatation phantom and labor phantom. Smarten Auto is one of the innovations of midwifery phantom that can train students skills in determining vaginal touch. Smarten Auto consists of one phantom that can represent ten cervical openings, labor station, and head fetal presentation which is operated automatically using motor and connected with android application. Smarten Auto works when android app users are connected to Smarten Auto bluetooth signals. Then the command from the app will be captured via bluetooth Hc05. Arduino uno as a microcontroller system will move the motor according to the desired opening after going through the calibration process using a rotary encoder sensor. Smarten Auto has a setting button and LCD display screen and uses a framework of acrylic material that is covered using a fabric that has been designed in accordance with the pelvic and the genitalia external.

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