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**PENGEMBANGAN MODEL PENDIDIKAN DAN PELATIHAN
TEKNISI ROBOT DI INDUSTRI
YANG BERWAWASAN *ENGINEERING PSYCHOLOGY***

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Abstrak: Recently, there were many industries that have been using robot to improve their productivity. Operating robot needed expertise technician that should have knowledge of engineering psychology. The objective was that the technician had more roles in maintaining the reliability of the production system in educating and training welder robot technician, started from industrial need analysis, program development, development of interactive animated multimedia, development of evaluation tool, validation, implementation, and program evaluation. Need analysis was placed in manufacture industry, which have been using machine of welder robot in DIY, used directive of observation based on engineering psychology. The developed program included brief curriculum, syllabus or education-training preparation in every meeting, and material in learning module. Multimedia was developed using audio-visual recorder and software of animating (VCD Cutter, 3D max, Macro Media). Evaluation tools competency oriented included knowledge, skill, and attitude. Validation was done by experts and relevant academicians. Implementation was done by experts X industry that started to develop machine of welder robot arms, with 20 audiences. The success of the program was evaluated from the improvement of material acknowledgement, tendency of attitude change, and basic skill in operating machine of robot arms. Data were collected through instrument and observation that processed with descriptive-qualitative, t-test, and descriptive-qualitative analysis. Resulted impact was technician improved to own better knowledge and skill in operating the welder robot.

Kata kunci: robot, engineering psychology

Seiring dengan kemajuan iptek di bidang otomasi, dan adanya tekanan dari perdagangan global, maka timbul iklim persaingan bisnis yang ketat antar industri di dalam dan luar negeri. Salah satu usaha untuk memperkuat daya saing di pasar global, adalah dengan mengoptimalkan proses produksi, agar dapat menghasilkan barang yang memiliki kualitas, harga, keselamatan dan kesehatan, kebersihan, serta pelayanan pelanggan, (PDQSCS; *Price, Delivery, Quality, Services, Clean-lines, Safety*) yang memiliki nilai keunggulan kompetitif. Hal tersebut dapat diantisipasi dengan cara bahwa hampir semua industri menengah ke atas di Indonesia saat ini sudah dipastikan telah menerapkan sistem otomasi dengan mengoperasikan robot. Secara ekonomi, penggunaan sistem otomasi dengan mengoperasikan robot akan sangat menguntungkan, terutama bagi manusia dan pihak industri. Sistem otomasi dengan menggunakan mesin lengan robot tersebut, banyak digunakan untuk mengerjakan segala proses produksi yang bersifat rutin atau massal dan