

ABSTRAK

RIKI PRASTIAN. Pengembangan Alat Ukur Meteran Melalui *Digital Distance Meter* untuk Mengukur Hasil Tolakan pada Tolak Peluru. Medan : Program Studi Pendidikan Olahraga Pascasarjana Universitas Negeri Medan, Juli 2019.

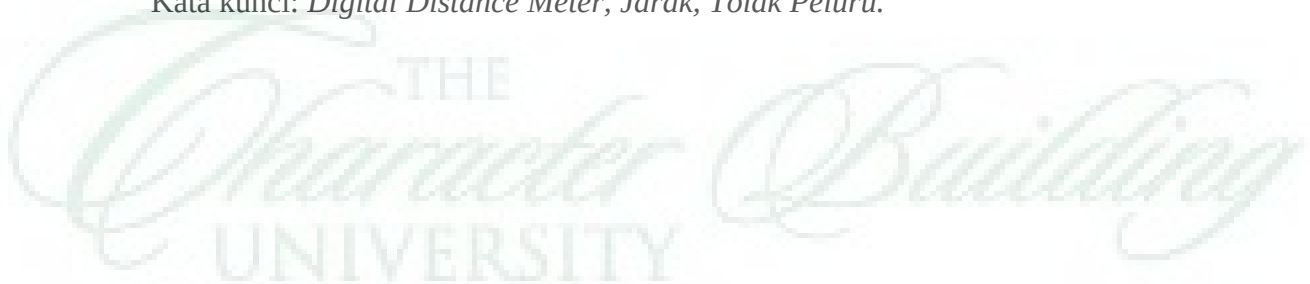
Penelitian ini bertujuan untuk mengembangkan alat untuk mengukur jarak tolakan dalam cabang olahraga atletik nomor tolak peluru berlandaskan *digital distance meter* dan untuk meningkatkan keakuratan penggunaan alat ukur sebagai pengukur jauhnya jarak tolakan pada tolak peluru.

Penelitian ini merupakan penelitian pengembangan (*Research and Development*). Penelitian dilakukan melalui tahapan: potensi dan masalah, pengumpulan data, desain produk, validasi desain, revisi desain, uji coba kelompok kecil, revisi produk, uji coba kelompok besar dan revisi produk. Uji coba lapangan dilakukan oleh siswa SMK Negeri 1 Patumbak. Pengumpulan data menggunakan alat ukur meteran dan *digital distance meter* untuk membandingkan hasil pengukuran alat ukur meteran dengan hasil pengukuran pada alat yang dikembangkan peneliti. Analisis data menggunakan analisis data kuantitatif. Data diolah dari instrumen penilaian berupa angket yang dinilai oleh validator, dihimpun melalui uji coba lapangan, dianalisis dengan teknik analisa kuantitatif yang bersifat penilaian menggunakan angka.

Hasil validasi alat oleh ahli materi persentase yang didapatkan 94% , dan validasi alat oleh ahli media persentase yang didapatkan 85,45%. Dari hasil penelitian menunjukkan validasi yang dilakukan oleh ahli materi dan ahli media termasuk dalam kriteria “sangat layak”. Hasil pengujian di Badan Kemetrolgian kapasitas alat dapat mengukur jarak hingga 45 meter dengan tingkat eror di bawah 50mm.

Digital Distance Meter sangat layak digunakan untuk mengukur jauhnya jarak tolakan pada tolak peluru.

Kata kunci: *Digital Distance Meter, Jarak, Tolak Peluru.*



ABSTRACT

RIKI PRASTIAN. Development of a Meter Measuring Instrument Through Digital Distance Meters to Measure the Results of Throws on Shot Put. Medan: Postgraduate Sports Education Study Program, State University of Medan, July 2019.

This study aims to develop a tool for measuring repulsion distance in athletic sports with a digital bullet number meter and to increase the accuracy of the use of a measuring instrument as a measure of the repulsion distance on a shot put.

This research is Research and Development. The research was conducted through stages: potential and problems, data collection, product design, design validation, design revision, small group trials, product revisions, large group trials and product revisions. The field trial was carried out by students at Patumbak 1 State Vocational High School. Data collection uses a meter and digital distance meter to compare the measurement results of a meter with the results of measurements on a tool developed by the researcher. Data analysis uses quantitative data analysis. Data processed from assessment instruments in the form of questionnaires assessed by validators, collected through field trials, were analyzed by quantitative assessment techniques using numbers.

The results of the tool validation by the material experts obtained a percentage of 94%, and tool validation by media experts the percentage obtained was 85.45%. From the results of the study, the validation carried out by material experts and media experts is included in the criteria of "very feasible". The test results at the Metrological Agency capacity tool can measure distances up to 45 meters with an error rate below 50 millimeters.

Digital Distance Meter is very suitable for use in measuring distances repulsion in the shot put.

Keywords: Digital Distance Meters, Distance, Shot Put.