

ABSTRACT

DEVELOPMENT OF INTERACTIVE MULTIMEDIA POWERPOINT IN A SCIENTIFIC APPROACH TO IMPROVE UNDERSTANDING OF MATHEMATICAL CONCEPTS ON THE SUBJECT OF STATISTICS

By

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The purpose of this research is to know the effectiveness and response of learners in the use of interactive multimedia PowerPoint in scientific approach to improve understanding of the concept of statistics. This research uses development research method which refer to ADDIE (Analyze, Design, Development, Implementation, Evaluation) model. Subjects in this study were students class IX SMP Al-Azhar 3 Bandar Lampung school Year 2017/2018. Data were collected through observation, questionnaires and tests. The data were analyzed using quantitative and qualitative descriptive analysis techniques.

The conclusions of this research are: (1) development of interactive multimedia learning PowerPoint in scientific approach to improve understanding of mathematical concepts in the subject of statistics covering 5 stages of analysis, design, development, implementation and evaluation. The product then tested the validity level through the results of analysis of the test activity. Stages of testing activities include needs analysis, review of material experts, review of media instruction designers, readability tests, individual trials and limited trials. (2) the effectiveness of the use of interactive multimedia PowerPoint is achieved with the result that 74% of learners have reached KKM, (3) the response of learners to multimedia-based multimedia learning media PowerPoint in the scientific approach in learning mathematics is interesting and easy to understand with the results questionnaire calculations with an average of 3,68.

Keywords: *interactive multimedia, PowerPoint, Scientific approach, statistics*

ABSTRAK

PENGEMBANGAN MULTIMEDIA INTERAKTIF POWERPOINT DALAM PENDEKATAN SAINTIFIK UNTUK MENINGKATKAN KEMAMPUAN PEMAHAMAN KONSEP MATEMATIKA PADA POKOK BAHASAN STATISTIKA

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Tujuan dalam penelitian ini adalah mengetahui efektivitas dan respon peserta didik dalam penggunaan multimedia interaktif *PowerPoint* dalam pendekatan saintifik untuk meningkatkan pemahaman konsep statistika. Penelitian ini menggunakan metode penelitian pengembangan yang mengacu pada model ADDIE (*Analyze, Design, Development, Implementation, Evaluation*). Subjek dalam penelitian ini adalah peserta didik kelas IX SMP Al-Azhar 3 Bandar Lampung Tahun Ajaran 2017/2018. Data dikumpulkan melalui observasi, angket dan tes. Data dianalisis dengan menggunakan teknik analisis deskriptif kuantitatif dan kualitatif.

Kesimpulan penelitian ini adalah: (1) pengembangan multimedia pembelajaran interaktif *PowerPoint* dalam pendekatan saintifik untuk meningkatkan pemahaman konsep matematika dalam pokok statistika meliputi 5 tahapan yaitu tahap analisis, perancangan, pengembangan, implementasi, dan evaluasi. Produk kemudian diuji tingkat validitasnya melalui hasil analisis kegiatan ujicoba. Tahapan kegiatan ujicoba meliputi analisis kebutuhan, review ahli materi, review ahli desain media pembelajaran, uji keterbacaan, uji coba perorangan dan uji coba terbatas. (2) efektivitas penggunaan multimedia interaktif *PowerPoint* tercapai dengan hasil 74% peserta didik telah mencapai kriteria ketuntasan minimal (KKM), (3) respon peserta didik terhadap media pembelajaran berbasis multimedia interaktif *PowerPoint* dalam pendekatan saintifik dalam pembelajaran matematika adalah menarik dan mudah dipahami dengan hasil perhitungan angket dengan rata-rata 3,68.

Kata Kunci : multimedia interaktif, PowerPoint, pendekatan saintifik, statistika