

# DEVELOPMENT OF MEDIA REALIA OF PLANETARY GEAR SET FOR IMPROVING UNDERSTANDING BASIC OF AUTOMATIC TRANSMISSION

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## ABSTRACT

This study was aimed to design and create a real model planetary gear unit of providing three kinds of basic planetary gear unit simulation configuration that is one of the locked components, there are two elements into one unity of motion and there are two inputs. Knowing the feasibility of media realia planetary gear unit made viewed from the functional unit as a medium conveyor material.

The research used research and development Model (R& D). The development carried out in this research involves creating a planetary gear unit model capable of simulating a working concept configuration with one locked component, two components into one unity of motion and two inputs. Research on the development of real-time learning media or replication of the actual planetary gear unit will be done through 10 stages: analyzing potential and problems, needs analysis, learning media product design, focus group discussion, product creation, limited testing (small classes), revisions product, trial usage / large class, product revision, and final product.

The result of this research was realization of realia media with acrylic material so that components can be seen clearly, including clearly visible and easy to understand forwarding round of three basic configuration of planetary gear unit. The basic configuration can be operated on the media by applying the brakes on the ring gear, carier and sun gear and applying the clutch between sun gear and carier, sun gear and ring gear and carier and ring gear. Based on the performance of the unit, it is known that the planetary gear unit can work well. The shaft can rotate well even though it is less soft, the clutch and brake can work in accordance with its function, as well as the gear movement of the constituent can rotate according to the original. This is reinforced by responses from material experts, media experts and users who agree that the planteray gear unit can work well, thus meeting the very feasible category.

Kata Kunci: *media realia, planetary gear unit*