CONSTRUCTION OF A SIMPLE ELECTRIC GENERATOR

BY

OKURUT MARIKO

BU/UP/2017/1397

SUPERVISOR MR: SSENYUNZI RICHARD

A RESEARCH PROJECT REPORT SUBMITTED TO THE DEPARTMENT OF PHYSIC IN PARTIAL FULFILLMENT OF THE REQUIREMENT OF THE AWARD OF THE DEGREE OF BACHELOR OF SCIENCE EDUCATION IN BUSITEMA UNIVERSIT

DECLARATION

I Okurut Mariko hereby declare that this project report of constructing a simple electric generator using magnets is my own original work and has not been copied or adapted from any other work submitted before to Department of Physics for the award of Bachelors Degree of Science in education or any other qualification.

Signed …….

Date……

Okurut Mariko.

DEDICATION

I dedicate this project report to my lovely Parents Mr. Opolot Peter Odome and Ms.Angella Berita Monikha for their tireless effort if it wasn't them I would have not made it up to this level, to my grandmother and to my brothers and sisters.

ACKNOWLEDGEMENT

I would first and foremost like to thank God; without Him, my journey in the research project would not have been possible. I believe God places certain people and situations in our paths, and in my path He has placed some of the most amazing individuals who have touched my life journey. I would like to thank my report supervisor Mr. Ssenyunzi Richard for guiding me throughout the process. It has been a privileged to have him as my mentor and also the project coordinator Mr. Owalu Anthony for the guidance and endless support.

Busitema University, I want to thank you for accepting my research. It has been a great honor to work by your side. It has been tremendously impacted and changed me as an individual.

I would like in special thank the physics head of department Dr. Amabayo Emirant for managing the entire family of Physic and for being the loving father who has always been with us even in challenging situations.

I would like to also thank my colleagues, for making my journey meaningful and for sharing many great moments together. Mr. Odongo Samuel and our coordinator Mr. Waiswa Yasin, thank you for always encouraging me and for helping me to believe in myself, your constant encouragement has helped build my confidence and also my partner, Ms. Amoding Esther for encouraging me to never give up and for always being by my side every time.

I would at the same time like thank the tailor Mr. Owera Samson for allowing me to use his sewing machine and partially train me on how to use a sewing machine.

APPROVAL

This project report has been produced under my supervision and submitted with my approval

Signed…… Date……

Mr. Ssenyunzi Richard

Supervisor

Department of Physics

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ABBREVIATIONS

AC: Alternating current.

DC: Direct current.

Led: light emitting diode.

N: Number of turns.

emf: electromotive force

$\Delta\Phi$: Change in flux

Δt: change in time

α: Proportionality symbol

ABSTRACT

The study for the search of renewable sources of energy is now a major concern worldwide as replacement to the high demand of fossil fuels. Majority of the electricity that is generated uses the Faraday's law, the electro-magnetic induction. This law led to new technologies that even brought up the misconception of free energy. Energy only becomes free if we don't have to pay for the generation of it; hence we resort to sources of energy that we can convert into electricity. The researcher used magnets to generate power. The generator is attached to the handle of sewing machine which turns the magnets with help of wires welded on the nail to rotate the magnets to ensure consistency in speed. The process also demonstrates the conversion of mechanical energy into power. Results on different settings are compared to identify the best scenario that will generate usable amount of energy and adjustments on the design are made to meet the needs of the end users. The energy generated can be used in numerous applications such as powering small light emitting diodes and bulbs. This study focuses on the construction of the generator and evaluating the device to identify its possible applications and future enhancements. This may impact and attract future researchers to work more on the research of other sources of energy and faradays law.

Keywords – electro-magnetic induction; electricity, mechanical energy