

**ELECTRO MECHANICAL FOOT MASSAGER:  
A TECHNICAL FEASIBILITY STUDY**

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THESIS/SP 621.9 C25 1994

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A Thesis  
Presented to  
the Faculty of the Graduate School  
Marikina Institute of Science and Technology  
Marikina, Metro Manila

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts in Teaching



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March, 1994

## ABSTRACT

This work centered on the design, construction, evaluation, and development of a massager device called Electro-Mechanical Foot Massager. The project was conceived out of observation that hospital equipment and devices used in exercising and reactivating paralyzed human foot require huge fees that are oftentimes beyond the pocket reach of the ordinary man. Thus, an alternative exercising device which could function and perform at par with expensive hospital gadget would, hopefully, be welcomed by the patient suffering from the said illness following any mild heart stroke.

This technical feasibility study had for its objectives the following:

1. Contribute to the national government policy on productivity and self-reliance;
2. Develop technical research and competencies among technical and vocational trainers and trainees (students);
3. Add to the cause of medical and physical therapy by utilizing parts and materials locally available.
4. Design and construct an electro-mechanical foot massager;
5. Test and evaluate the device workability and effectivity in providing relief and hopefully reactivate the human body parts, particularly the feet, under pain; and

6. Improve the massager device structurally, and thus, maximize its workability and application.

The completed project **revealed** the following findings:

1. It is technically-feasible to design, construct, evaluate, and develop the electro-mechanical foot massager device out of locally available materials such as wood, metal and electrical components.

2. The project merely required the knowledge and technical skills of a shop instructor with the least assistance by senior students in electrical and/or electronics technologies.

3. The life and usability of the device lie on the proper care and maintenance of the user.

Upon the above findings, the researcher advances the following conclusions:

1. With the completion of the electro-mechanical foot massager device shows yet another economic opportunity for shop teachers and students to contribute to the cause of medical and physical therapy and answer the needs and demands of hundreds of individuals suffering from inutile leg and feet following a serious heart stroke. The project merely calls for some advance skills of the maker in the areas of electricity and/or electronics.

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## Chapter I

### INTRODUCTION

This chapter consists of the origin and justification of the study, the objectives of the study, and the scope and delimitation of the study.

#### A. Origin and Justification of the Study

Education links to life. Theories and principles learned in schools became meaningful as they help resolve problems perplexing man and society. Technical training, in particular, equips man with knowledge and skills needed to address the pressing needs and necessities of the economic man. Technical education and training, unquestionably, answer today's needs of man, the community and the world.

The benefits of technical education are multifarious. These include increased properties, bigger wages, elevated family life style, prestige and esteem, power or authority.

Among the third world countries, technical education and economic opportunities are viewed as vital partners. One relates to the other. This is one reason why many would relate one's socio-economic profile with his kind of education and training. Indeed, at no other time than today, technical training ought to jibe with the economic social, physical, political, and other vital needs of the