أونيۏرسيتي تيکنولوڬي مارا
UNIVERSITI
TEKNOLOGI MARA
MALAYSIA

SMART BED SHEET STRETCHER

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1.0 EXECUTIVE SUMMARY

VINO Company has new product to introduce to the consumers which is the Smart Bed Sheet Stretcher. Our company is targeting in supply for bed stretcher since it is people morning routine to tidy up the bedsheet. Smart Bed Sheet Stretcher is a customer-friendly which is helps people saving time and ease to keep their bed sheet tidy. This study was conducted to develop a product that is automatic to tidy up messy bed sheet. It also discovers how many potential consumers are interested in the product. Also, this paper will highlight the design of the product and reasoning behind the special features chosen.

2.0 INTRODUCTION

2.1 PROBLEM STATEMENT

Office workers and students are the group of people who tend to stay up until late night to complete their work which will eventually cause them to have problem on waking up earlier in the morning. Therefore, most of them are tend to have a rushing morning and thus ignore the messy bedsheet which due to the insufficient time to get ready to go to work or class. There are products available in the market such as manual bedsheet stretcher and advanced bedsheet stretcher which ease those people in the morning. However, the manual bedsheet stretcher is not fully tidy up the bedsheet which the bedsheet will stay wrinkled upon person getting up from it. For the advanced bedsheet stretcher, it comes with automatic comforter stretcher which involves high cost which might be unaffordable for some people such as students.

2.2 DATA COLLECTION

After all the problems and issues had been identified, our team aim to invent a new product that may solve these problems. To ensure our new product will be successfully enter the market, we first try to approach our potential customers to get information on the problem and needs on the product's features that they would like to have. We distributed the online questionnaires to collect their opinion about the people's needs in addition to their suggested price of the products. We started to give out the questionnaires since 1st October 2018. The online questionnaire was distributed among University students and office workers all over Malaysia. We then considered all the feedbacks given in order to have better understanding about the products that meet the customers' needs and satisfaction.

2.3 LIMITATIONS

While developing our product, our team discover a few limitations that restrain the development and growth of our company. First, the survey that we did on our product is an online based survey which is online questionnaire. The lack in our survey is that our team did not have a proper demonstration to our customer which can lead to low interest and trust to some customers. Next, Bluetooth as one of the product's special features is known to only works within a small range of distance which is less than 10 meters. Other limitation that we noticed during our product development is that there is already a lot of competitors from other companies such as Amazon, eBay etc. but none of them have the additional features that we would like to focus.

3.0 TECHNOLOGY DESCRIPTION

- This automatic bed sheet stretcher is equipped with button that attached at the side of the bed and digital LCD
- The digital LCD provide alarm and bluetooth system
- The users can set the alarm like the other common alarm
- For the bluetooth system, it ease the users by control the button from a far to stretch the bed sheet
- This can ease the users especially for those who are rushing or do not have enough time to tidy up the bed sheet
- The digital LCD also designed with digital screen which show if the bed sheet had been stretched or not
- The stretcher is attached into each corner of the bed, then connected with the button and digital LCD

4.0 NEW PRODUCT DEVELOPMENT

4.1 DEFINITION

Smart Bed Sheet Stretcher is an automatic bedsheet stretcher incorporates with smart electronic system such as bluetooth and alarm which will be innovated to facilitate those people who are having a rush morning. It is ideal for those who wants to keep their bedsheets tidy in a rush morning. This Smart Bed Sheet Stretcher consists of four elastic suspenders attached with one rechargeable remote that can tighten or loosen the bed sheet with only one click.

4.2 CLASSIFICATION OF NPD

- This product is an improvements on existing products.
- There are a lot of bed sheet stretcher in the market place, but none of them is equipped with smart technology like auto stretched button and bluetooth wireless control.
- This product is an addition to the existing lines which will be targeted to different market segments.
- The current bed sheet stretchers nowadays only available with fix stretcher which we cannot control it and need to tidy up the sheet manually.
- Thus, our new product innovation will improvise the system by just push the button, then the stretcher will tidy up the bed sheet automatically, or can control the button from far by bluetooth connection.
- Besides, this product is completed with digital LCD beside the button which has bluetooth connection and alarm.
- If the person situated far away from the bed (but still inside the house), he/she can push the button via bluetooth.

4.3 NEW PRODUCT DEVELOPMENT PROCESS

1. Research and development

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2. Product design

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3. Concept testing

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4. Build prototype

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5. Test marketing

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6. Commercialization