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SMART ERGONOMIC TABLE (S.E.T)

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1.0   EXECUTIVE SUMMARY

In this developing era, all the things that we do are involving technology. Nowadays, there are increasing statistics about people which prefer reading on the screen rather than reading on the papers since our dependence on computers has grown. This can lead to a health problem called Computer Vision Syndrome (CVS). CVS describes eye-related and other problems caused by prolonged computer use. In medical circles, it is much said that the eyes lead the body because vision is the most powerful determinant of posture. The issues arises is due to prolonged computer use. For example, reading stand is still in traditional and classic design. Although we are aware that ergonomic stands have been invented, but there is still lack some of the important and technology features. The idea is to turn a classic reading stand into a Smart Ergonomic Table (S.E.T) where the technology is implementing in this product.

New product development is a multi-stages process of developing a new product to the marketplace. The new product can be classified into two categories which are completely new products and improvements on the existing products. S.E.T is an improvement on the existing products because S.E.T allows the company to enter the market by undergoing some significant improvements in terms of technology and it features. The company visualized as many ideas as possible since research and development process of ideation is gone through idea generation. In addition, the company is then narrowed down the ideas and chooses S.E.T as a new product. This stage is called as idea screening stage. Lastly, market survey is conducted to analyze consumers' needs and preferences. Hence, 96% of the respondents found that S.E.T is an interesting product.

The company set an online survey about the product (S.E.T) and 105 respondents were took part in the online survey. Based on the survey conducted, it can be concluded that S.E.T is accepted and highly demanded in the current market with the features. S.E.T made up from the best material and come along with the other interesting features that will ensure the potential customers will buy the product. On top of that, marketing strategy is necessary in order for planning the upcoming sales and product marketing activities and to ensure it will reach the targeted sales. We have implemented a few strategies that will be used for the test marketing. Furthermore, we have our own potential customers and location to market the S.E.T. Therefore, from the new product development survey, we strongly believe that S.E.T has the feasibility and viability in the market.

2.0 INTRODUCTION

2.1 PROBLEM STATEMENTS/ISSUES

In medical circles, it is much said that the eyes lead the body. Specifically, vision is the most powerful determinant of posture at work. According to Dr. Jeffery Anshel who is an expert in the field of visual ergonomics, he said that we will alter our body posture to accommodate any deficiency in the way we see. So, an adaptation of posture to ease the strain on the visual system happened. However, it may cause excessive postural accommodations that lead to the symptoms of neck and back discomfort. Hence, to maintain the proper posture, our visual target should be nearly parallel to our face and within our line of sight. The ideal viewing angles are at about 10° to 30° while the ideal viewing distances is within the range of 45 to 75 cm from the eyes. A poor angle leads to postural discomfort which are neck and shoulders discomfort where it forces our spine to compensate by bending. On the other hand, the wrong distance can contribute to eyestrain.

Other than reading on paper only, nowadays people are much more prefer reading on the screen since our dependence on computers has grown. This result to a health problem called Computer Vision Syndrome (CVS) that describes eye-related and other problems caused by prolonged computer use. The CVS is estimated affecting nearly 60 million people globally with a million new cases occurring each year (Sen & Richardson, 2007). The symptoms reported include eyestrain, tired eyes, irritation, burning sensation, redness, blurred vision, double vision, shoulders pain, neck, or back pain. These problems are more noticeable with computer tasks compare to other near work due to the letters on the screen are formed by tiny dots called pixels, rather than a solid image. This causes the eye to work harder to keep the images is still in focus.

Although we are aware that ergonomic stands have been invented but there is still lack of some important and technology features. Therefore, the innovation that can be added to the ergonomic stands is by using sensor technology. The reason is that sensors technologies are being developed with intelligent systems which one of it is self-correcting system. The ability for a system to see, feels, smell, hear, think or communicate and move may help in improving health. Since it is impossible to maintain good postures throughout working, thus there is a need to make an innovation on the table by adding sensor technology. This to ensure that the work materials and equipment are thoughtfully placed within the line of sight and within a

comfortable focus distance in order to give a positive impact on posture, and on the eyes.

2.2 METHODOLOGY: DATA COLLECTIONS (WHO, WHERE, WHEN, HOW)

The information was obtained from research journal. The data were gathered from a few research done in Malaysia which is the latest was in 2014. Normally, the problem occur to the population who are mainly doing near task like reading and working using computer for a long period of time such as office workers and students.

2.3 LIMITATIONS

The limitation when collecting data from research is that the data obtained maybe old and out of date. This is due to no new research publish regarding the problem specifically in Malaysia. Plus, there was limited access in viewing other research journal as some of the good journal was not open to access. Besides that, the interview method to the target population should be included in data collection as some specific questions being asked could have helped address a particular issue that will emerge later.