KEMENTERIAN PENGAJIAN TINGGI

POLITEKNIK MALAYSIA
SULTAN SALAHUDDIN ABDUL AZIZ SHAH

LAPORAN INOVASI PITEX SESI JUN 2020

UNIT PENYELIDIKAN DAN INOVASI

TAJUK PROJEK:

INTELLIGENT BED

JABATAN:

KEJURUTERAAN AWAM

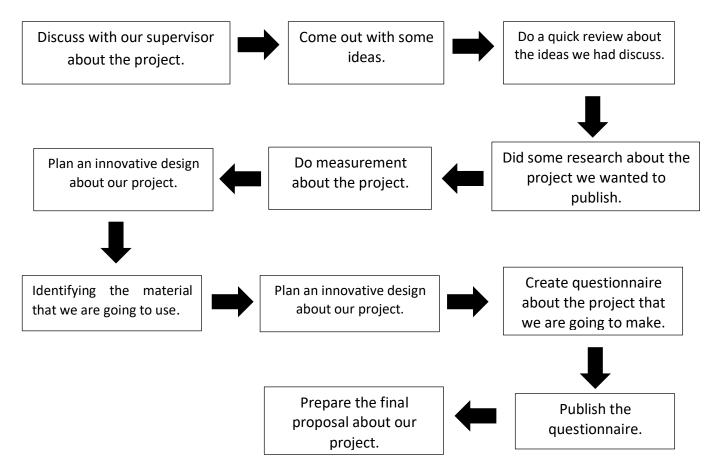| NAMA PELAJAR & NO MATRIK	1. NUR AQILAH BINTI MOHD FARID (08DBK18F1001) 2. ANIS NAJIHAH BINTI NORAZMAN (08DBK18F1002) 3. MUHAMMAD EIEMAN QAYYUM BIN MUHAMMAD RIDHWAN LEE (08DBK18F1021) 4. NOR SYAKIRIN BINTI AWANG YAHYA (08DBK18F1031)
NAMA PENYELIA	PUAN NOR AQILA BINTI KAMAROL ZAMAL

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1.0 PROBLEM STATEMENT

The existing bed does not have study desk to be attached.

In every room in the house, the bed as a basic necessity. The room has to be filled with clothes closets, study desks and bookshelves for students to use. With this in mind, our team is planning a multi-purpose furniture set project limited space. In addition, the presence of this set of furniture reduces the movement of students to the table and the bed.

As we know bed is only available with bookshelves and most desks, beds or other furniture are sold separately. This causes the space in the room to be narrower and movement less restricted.

2.0 METHODOLOGY

This chapter will discuss about our flow of the Final Year Project. The flowchart is generally drawn in the early stages. Meanwhile, the method is to achieve the objective of the project that will accomplish a perfect result. We had made some research to obtained information about our product such as material to use.

2.1 FLOW CHART

| Discuss with our supervisor about the project. | → | Come out with some ideas. | → | Do a quick review about the ideas we had discuss. |

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| Plan an innovative design about our project. | ← | Do measurement about the project. | ← | Did some research about the project we wanted to publish. |

↓

| Identifying the material that we are going to use. | → | Plan an innovative design about our project. | → | Create questionnaire about the project that we are going to make. |

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| Prepare the final proposal about our project. | ← | Publish the questionnaire. |

3.0 SOLUTION PROPOSAL

3.1 CREATIVITY

In our group opinion about creativity, we use the ordinary single bed for our first research and we found that most for a single bed doesn't has a study desk attached to it. So in order to make our group bed which is "Intelligent Bed" more creative we has attached a study desk to it. With the attached study desk within the bed it will be easier for the users because a long time of study, the users can take a rest. We also use wood stain which is dark red wood stain and wood sealer.

3.2 QUALITY

For the quality of our product, we used rubber wood because this wood is suitable for indoor uses. The quality of the rubber wood are environmental friendly. Rubber wood belongs to the maple family, a true hardwood. In fact, rubber wood is one of the most durable woods used to manufacture furniture. It is strong, flexible and resistant to fungus, bacteria and mould.

3.3 VALUE OF PRODUCT

For the product value, we believe our product value will be increase because we has added a study desk to it. It also will attract people to buy it.

4.0 BENEFIT OF INTELLIGENT BED

4.1 COMMUNITY

- Can strengthen the relationship between the seller and the buyer.
- Interact with each other during the process buying.
- Can provide comfort to the users because our product that we produced with ergonomics and appropriate size measurements.

4.2 COUNTRY

- Can improve the image of the country because our product are high quality and multifunction

4.3 ECONOMY

- The existence of agencies that are suppliers of product. With the presence of product supplier agencies it is the cause of the country economic growth.

4.4 ENVIRONMENT

- Our product are long lasting and durable. It can protect the environment from the occurrence of waste in terms of the use of timber.

5.0 IMPLEMENTATION PROCESS / METHOD OF USING

5.1 IMPLEMENTATION PROCESS

An observation and survey were carried out to know what can be improved from the existence single bed for our product. Besides, some reading also had been done to know what the suitable size for a single bed and good design for the desk from book that we referred; "The Woodworker's Handbook by Roger Horwood". Therefore, the size of this product is 1150mm×2200mm×950mm while the size for the desk is 600mm×685mm and the material that we used are pine wood and rubber wood.

We chose pine wood because pine is a renewable resource and easy to work with and also aesthetic natural design. Rubber wood also has a good advantage. For instance, the furniture which is made from the hardwood tends to be long-lasting and durable. Then, most of the cutting process used sliding table saw. Other machines that we used were sanding machine and table saw.

For finishing, we used dark red wood stain and sealer paint to produce a good looking Intelligent Bed. All of this worked had done successfully in our workshop at polytechnic.

5.2 METHOD OF USING

As we know, the existing single beds are only for lying down or resting the body after being tired of doing work. However, the single bed that we produced are to be attached with a study desk that can be kept in the headboard to facilitate users who want to relax for a while after tired of doing revision or doing work and also can save space even the place looks small.
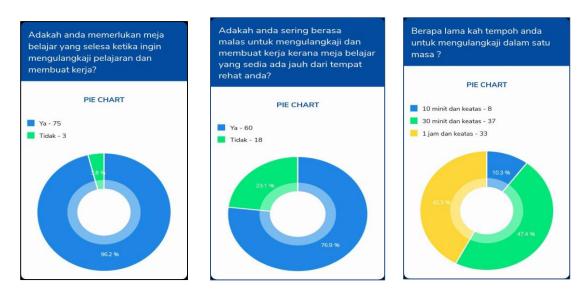
The way to use the study desk at the headboard is to pull the side of the table top to be taken out then open the legs of the table. While for the bookshelf at the headboard, just put on some books on it.

6.0 CONCLUSION

Intelligent Bed is a single bed equipped with a table and bookshelf at the headboard. The combination of these three furniture is able to make the bed look different from the others thus able to further facilitate the work of users. The choice of wood stain colour will add a classic aura to the bed because it does not change the original colour of the wood and can provide comfort to the user because the colour effect is very neutral and does not hurt the eyes. The materials used such as rubber wood and pine wood are a great combination in terms of durability, lifespan and product quality. Intelligent Bed is suitable for use by all ages but is more recommended for single people, and school and institutional students.

7.0 APPENDIX

- This is our result after we made the questionnaire.

Adakah anda memerlukan meja belajar yang selesa ketika ingin mengulangkaji pelajaran dan membuat kerja?

PIE CHART
- Ya - 75
- Tidak - 3

96.2 %

Adakah anda sering berasa malas untuk mengulangkaji dan membuat kerja kerana meja belajar yang sedia ada jauh dari tempat rehat anda?

PIE CHART
- Ya - 60
- Tidak - 18

23.1 %
76.9 %

Berapa lama kah tempoh anda untuk mengulangkaji dalam satu masa ?

PIE CHART
- 10 minit dan keatas - 8
- 30 minit dan keatas - 37
- 1 jam dan keatas - 33

10.3 %
42.3 %
47.4 %

Pernahkah anda berehat sekejap ketika mengulangkaji pelajaran?

PIE CHART
- Ya - 77
- Tidak - 1

98.7 %

Pernahkah anda tertidur ketika mengulangkaji pelajaran?

PIE CHART
- Ya - 63
- Tidak - 15

19.2 %
80.8 %

- This is our 3D drawing "Intelligent Bed".

3D VIEW