

PEN SANITIZER

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ABSTRACT

Coronavirus (covid-19) is an infectious disease caused by a newly discovered virus from the state of Wuhan in China. This pandemic virus is killing millions of people all over the world. Most people infected with the covid-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those who have underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease and cancer patients are more likely to face their death in a couple of weeks. The best way to prevent and slow down the transmission is to protect yourselves and others by washing your hands frequently by using hand sanitizer or soapy water by not touching your senses. In overcoming this serious issue we have invented pen-sanitizer to protect us from the social context. This pen-sanitizer can be known as the most effective way in our daily routine especially in offices, banks, schools and in most social signing places. It will help protect us from stop sharing the pen being placed in social places. By using the newly invented pen-sanitizer we can frequently sanitize our hand by not waiting too long just to get a pinch of sanitizer to sanitize our hand in multi public places and stores. This is our first invention to overcome the pandemic and can get easily at cheaper prices.

Keywords: Covid-19, pen sanitizer, pandemic, disease

1. INTRODUCTION

Currently, the world is hit by a pandemic known as Covid-19. Coronavirus disease 2019 (COVID-19) is defined as illness caused by a novel coronavirus now called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; formerly called 2019-nCoV), which was first identified amid an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China. [1] It was initially reported to the WHO on December 31, 2019. On January 30, 2020, the WHO declared the COVID-19 outbreak a global health emergency. On March 11, 2020, the WHO declared COVID-19 a global pandemic. To the best of our understanding, the virus is primarily spread through contact and respiratory droplets. Under some circumstances airborne transmission may occur (such as when aerosol generating procedures are conducted in health care settings or potentially, in indoor crowded poorly ventilated settings elsewhere). It can also spread through touching the surface that was infected by the virus previously. WHO recommends the following set of measures to prevent person-to-person spread of COVID-19 such as limit close contact between infectious people and others. We have to ensure a physical distance of at least 1 metre from others. In areas where COVID-19 is circulating and this distance cannot be guaranteed, we are required to wear a mask. We have to clean hands and cover coughs and sneezes with a tissue or bent elbow at all times. To protect ourselves and others against COVID-19, we have to use alcohol-based hand sanitizer or wash our hands with soap and water. If we can, we have to use an alcohol-based hand sanitizer. Though such rules have been set, yet there are few issues which still can cause the infection of this virus.

The innovation was done based on some issues that were considered in order to battle against the Covid-19 transmission. Two issues were focused on this innovation. They are:

- i. Hand sanitizer bottles have to be carried along everywhere.
- ii. Infection of Covid-19 through touching sense due to usage of the same pen used by others.

Focusing on these two main issues, the pen sanitizer was innovated for four objectives. The objectives of creating this pen sanitizer are to:

- i. To prevent Covid-19 infection through touching sense.
- ii. To prevent Covid-19 infection among school kids
- iii. Can carry anywhere because it is small in size and portable in our pockets.
- iv. To reduce the cost of buying an expensive hand-sanitizer since it is in the form of a pen.

2. METHOD

This innovation is planned to be done based on the current global issue, Covid-19. The pen sanitizer is innovated focusing on people from all social classes. Since it is a pandemic that is controlling the whole world now, thus all the people are trying their level best to protect themselves from being infected. Everywhere we are observing that people are required to follow the SOP and it is the same for all over the world. So, people are always equipped with a sanitizer bottle and pen wherever they go. Thus, in order to follow the SOP rules and at the same time escape the pandemic, an innovative way is discovered. The idea of creating this pen sanitizer is based on the following cycle.

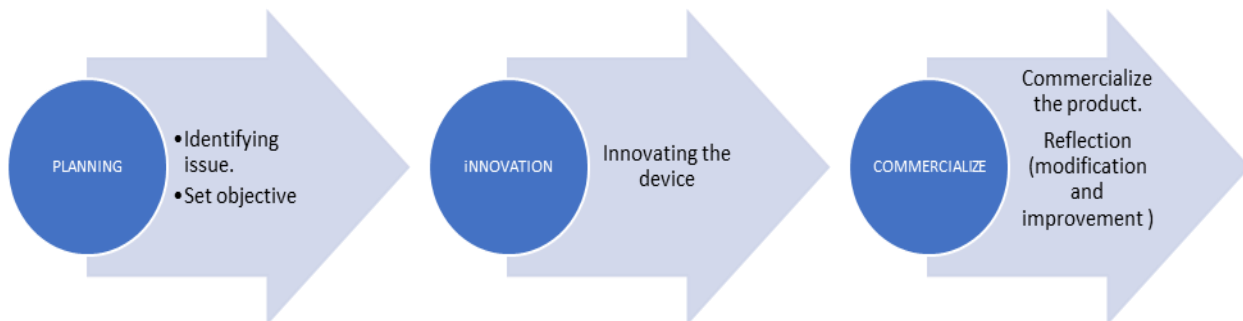


Figure 1. Cycle of the innovation of Pen Sanitizer

3. FINDING

This innovation is useful for all groups of people globally. The cycle on how this innovation was done is elaborated in the diagram below. This is all about how the pupils worked as a team in fixing their findings. First of all, they place the pen nib in a holder, add in the container on the top of the pen holder, fill it with soapy hand sanitizer, add the sticker and finally close the holder with the sanitizer cap. Now the pen hand sanitizer is ready to be used freely. This pen sanitizer is considered to be an innovation because it has few novelties in it. A normal pen is modified into a small carriage and sanitizing liquid will be refilled in it. This pen can be used to write and also to sanitize our hands at the same time. It is also made with low cost. The pen sanitizer that was innovated is shown in the pictures below.



Figure 2. Sequence of the Pen Sanitizer is made

4. CONCLUSIONS

As a conclusion, the innovation was done based on the current global issue that is Covid-19 pandemic. The World Health Organization has set few rules for people to follow in order to escape from this infection. One of the main rules is do not touch and use of hand sanitizer often. Stick to these rules, an easy way of following the SOP has been identified and the result is the innovation of this pen sanitizer. The product was created by focusing on two main issues that is spreading of Covid-19 virus through touching sense and carrying sanitizer bottles to all places. Thus, aiming to overcome these issues, pen sanitizer is made and it has few benefits such as low cost and affordable for all social classes, portable and easy to carry, usable

everywhere, refillable and less space required to carry them since it can be kept in pocket. Moreover, this product has a great value of commercialization since it can gain attention from all groups of people. Other than that, it is affordable for all to buy since it will be sold at low cost. This product has a great value of commercialization whereby it can easily gain the attention of all groups of people. Moreover, it is very cheap and affordable for all social classes and can be sold worldwide.

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Kelulusan daripada pihak YBhg. Profesor dalam perkara ini amat dihargai.

Sekian, terima kasih.

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