Universiti Teknologi MARA
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ACADEMY OF LANGUAGE STUDIES

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**Role of Pilot testing in the use of Learning Tool for Year 6 Elementary School Student**

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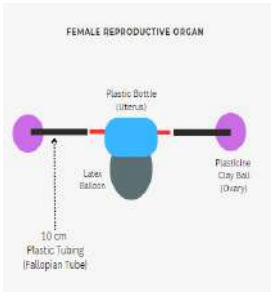
## Introduction

Science, Technology and Innovation become integral part of school curriculum in primary as well as secondary education. Sekolah Kebagsaan Kuala Pilah has invited us to conduct and facilitate a program for this purpose. Under year 6 syllabus, reproductive and nervous system is included as part of Science Subject. We propose to focus on Human Reproductive System as main theme of the program by exposing student with several Learning Tool to help them to understand the subject well. At the end of two months of preparation, we conducted a Pilot Test to ensure that the methods, material and timing are well comprehend by the student, 12 students among UiTM staff children is involved in this Pilot Study. The outcome of this Pilot Study is crucial in the sense that we are able to identify issues related to the program. The actual program was taken place in SK Kuala Pilah on 8th September 2023 with full coperation given by the school officials. The Survey that taken place after the program were also granted by Kuala Pilah's Education Office.

## Assessing Feasibility

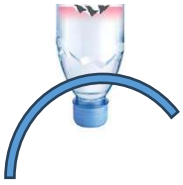
We envision giving students an hour to put all of those components together and integrate them to create a "Human Reproductive Model Organ" in the actual research. They have to construct the male and female reproductive system model. Firstly, we gave them a 500 ml plastic bottle of mineral water. That bottle has to be split in half. They must use a cutter to cut the plastic bottle, therefore they must be very careful to prevent accidents. It took a lot of time to complete this portion of the activity. As a result, we find that cutting the bottle before the research actually took place was the only way to make it feasible to create both male and female reproductive models in one hour.

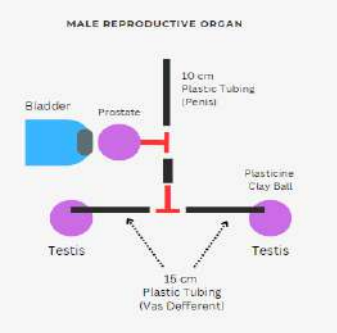
| Before Pilot Test | Issues | Rectification |
|---|---|---|
|  | The use of sharp knife<br>Time taken to complete the task | Precut the bottle<br>  |
| | | |

| | | |
|---|---|---|
|  | Use of sharp instrument to cut an opening/hole for the connection | 2 opening ready for each part  |
|   Manual Instruction of Final assembly | | |

**Identifying and Refining Research Methods**

The next stage is to create a model of the male reproductive system using the top from a mineral water bottle. To make two latex balloons behave as the testes in the male reproductive organ, they must attach two tubes on both side of the bottle using a plasticine clay to connect the testis to the prostate component. Many the material is not sticky enough to hold the tube properly. build four holds to insert plastic tubing into. For the actual program,, we provide the student with a half cut bottle ready with holes for insertion of the tubes. The potential injury that may occurs is totally avoided.

| Before Pilot Test | Issues | Rectification |
|---|---|---|
|  | Sharp Instrument<br><br>Non effective material | The tube just need to be inserted trough the holes to complete the model  |

| | |
|---|---|
| Final assembly |  |

**Testing Data Collection Tools**

Furthermore, one of the primary goals of pilot testing is to evaluate the effectiveness of data collection tools such as surveys, questionnaires, or interview guides. We provided them a questionnaire to complete at the end of the pilot test. The survey was written in English. Some of them struggle to understand English well. Therefore, in the real study, we translate the questionnaire into Malay to make it easier for the students.

**Minimizing Risk**

Using a cutter or scissors during this activity put kids at risk for harm. Therefore, in order to decrease risk, students are not allowed to bring scissors or cutters during the actual study. It helps to prevent accidents when engaging in the activity.

**Building Researcher Confidence**

Pilot testing not only benefits the research process but also boosts the confidence of the researchers involved. By successfully navigating the pilot phase, researchers gain valuable experience and insights that can bolster their competence and readiness for the main study. This newfound confidence can lead to more effective decision-making and problem-solving throughout the research process.

**Conclusion**

Pilot testing is a vital step in the research journey that should not be underestimated or overlooked. It offers numerous advantages, including the refinement of research methods, the validation of data collection tools, and the assessment of feasibility. Additionally, pilot testing enhances participant comfort, aids in statistical planning, minimizes risks, and builds researcher confidence. By investing time and effort in a well-executed pilot test, researchers can significantly increase the likelihood of conducting a successful and impactful research study.