

# PROJECT REPORT : MATHABLE PROGRAMME

6 JANUARY 2023

BUKU JALANAN CHOW KIT, KUALA LUMPUR



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## Summary

Our program title is "Mathable" and the main goal of this program is to encourage students to take an interest in mathematics by providing them with fun ways to learn about math. So, we conducted a gallery walk to make sure that everyone can learn about math in a more enjoyable way. Following that, we divided tasks amongst ourselves in order to find valuable, easy-to-understand content for our audience and to ensure our program ran smoothly. As a result, we looked for the topics that students find difficult to understand and found activities and games to help them understand the topics better. All of this was done to ensure that we had a firm grasp of the material before presenting it to the students.

To meet the program's aims, we designed four checkpoints with different topics. Four groups of students were created, and each group would take turns visiting each gallery. A facilitator would teach students from each group the topic for fifteen minutes for each checkpoint. In this project, we focused on learning math concepts such as angles, fractions, multiplication, and coordinates.

## Objectives

1. To give students opportunities to learn mathematics in a low stake setting and in the most fun way
2. To enable students to understand the use and importance of mathematics in everyday life
3. To increase students' motivation and interest in learning mathematics

## Target community (for project with sulam requirement)

Our target community for this Mathable programme is 16 upper primary students from Buku Jalanan Chow Kit (BJCK).

## 1.0 Introduction

Mathematics is not something that students are unfamiliar with. This subject should be taught to children as early as kindergarten. However, this mathematics subject becomes more difficult, and the math problems learned become more complex once you entered high school and then university. Based on a study conducted by Arsaythamby Veloo\* and Shamsuddin Muhammad, entitled "The Relationship Between Attitude, Anxiety and Habit Of Learning With Additional Mathematics Achievement", this shows that students who have a positive attitude and are motivated to learn mathematics have good mathematics scores and for the opposite, they have poor math scores (2011). As a result, a person's attitude and enthusiasm in mathematics play a vital part in

understanding and mastering mathematics and only by then the students may appreciate mathematics in their life. Meanwhile, students' enthusiasm and attitude towards mathematics depends on the learning environment and also their understanding of the use of mathematics in everyday life.

Hence, this Mathable programme was designed to assist children in developing enthusiasm and a positive attitude toward Mathematics. The goal of this programme is to raise a generation that values mathematics in their daily life. To accomplish this, they must be instilled with a desire to understand mathematics. So, the "Mathable" programme was designed with a gallery walk concept programme that is focused on 21st century learning and is characterised by entertaining learning. It focuses on establishing a joyful learning environment for Mathematics while also assisting students in understanding ideas in mathematics in an easy method, thereby eradicating all unfavourable misconceptions about this subject.

## **2.0 History Background**

Mathable aims to give upper primary students in Buku Jalanan Chow Kit (BJCK) the chance to learn math in a low-stakes environment and in the most enjoyable way.

Briefly explained, Buku Jalanan Chow Kit is an NGO who works to give all children in the Chow Kit area equal access to educational opportunities. BJCK creates a safe area and resource centre where the kids of Chow Kit may go to play, hang out, read, and engage with good role models in a stimulating and comfortable environment. Moreover, it serves as a location for the community tuition programmes and the home-schooling programme for displaced or stateless children who couldn't attend a public school. As of now, Buku Jalanan Chow Kit have created a lot of activities for the children such as Sekolah BJCK where it is a home school program for displaced children who are unable to enrol in government school which is held from Monday to Friday. They also held Weekender Night Class for the underprivileged children every Friday and Sunday at night. Interestingly, they also have their own football club and are coached by NEXUS FC and a lot more exciting activities for the kids.





Conduct the activity according to the tentative																				
Obtain the list of participants' names																				
Take pictures and record videos of the project																				
<b>CLOSING</b>																				
Prepare the project report																				
Prepare individual reflections																				
Submit the report to the SIM2007 lecturer																				

## 7.0 Program Schedule

### Program Tentative

TIME	ACTIVITY
7.45 am - 9.00 am	Off to Buku Jalanan Chow Kit
9.00 am	Expected to arrive at Buku Jalanan Chow Kit
9.00 am - 9.15 am	<ul style="list-style-type: none"> <li>• Ice breaking session with facilitators</li> <li>• Program briefing</li> </ul>
9.15 am - 11.00 am	<ul style="list-style-type: none"> <li>• Divide the students into several groups</li> <li>• Activity starts :  Station 1 : Topic "Angle"  Station 2 : Topic "Fraction"  Station 3 : Topic "Multiplication"  Station 4 : Topic "Coordinate"</li> </ul>

11.00 am	Activity is expected to end
11.00 am - 11.10 am	Discussion and Conclusion
11.10 am - 11.30 am	Closing ceremony

### Types of Activity and Method of Implementation

NO	ACTIVITY NAME	METHOD OF IMPLEMENTATION
1	Guess the angle	<ul style="list-style-type: none"> <li>- Clock are used as a medium to play the game.</li> <li>- Tutor will determine a starting point which is <math>0^\circ</math> at any number (1-12).</li> <li>- Students are asked to guess where the position of a random angle (<math>30^\circ</math>, <math>60^\circ</math>, <math>90^\circ</math>, ..., <math>360^\circ</math>) given by the tutor.</li> <li>- If the student points at the wrong answer, the tutor will reveal the correct angle at that position and the student need to guess again until he obtains a correct answer.</li> </ul>
2	Wheel of fraction	<ul style="list-style-type: none"> <li>- After finishing the explanation on how to change the improper fractions to mixed fractions and vice versa, each group need to spin the wheel with number 1 to 8 on it.</li> <li>- Each number represents a unique question about changing the form of fractions.</li> <li>- Tutor will read the question out loud and give 5 minutes for the students to find the answer.</li> <li>- After 5 minutes have passed, the tutor will choose a student to explain the steps to get the answer to the other students.</li> </ul>
3	Multiplication War	<ul style="list-style-type: none"> <li>- Every team will play two multiplication games from play store. Multiplication Table-Math and Multiplication Times Table IQ.</li> <li>- Tutor will choose either one of the games to play according to level of the students in multiplication.</li> </ul>

		<ul style="list-style-type: none"> <li>- Every student will play a round of games according to their turn.</li> <li>- For the first round, tutor and friends are allowed to help answering the question.</li> <li>- The next round, no help is allowed and student need to solve the questions alone.</li> <li>- Games will be repeated up to 3-4 times until all the students improves their score.</li> </ul>
4	Hit the Coordinate	<ul style="list-style-type: none"> <li>- Every student will do 2 quizzes.</li> <li>- The first quiz is they need to find where the point is based on the given coordinate.</li> <li>- The next quiz is they need to find the coordinate where the point is plotted on the xy-plane.</li> <li>- They are doing this quiz alone and cannot asked their friend.</li> </ul>

## 8.0 SWOT Analysis

<b>STRENGTH</b>	<b>WEAKNESS</b>
<ul style="list-style-type: none"> <li>• Have members with strong basic knowledge of Mathematics</li> <li>• Students show great interest in learning</li> <li>• Good cooperation from Buku Jalanan Chow Kit</li> </ul>	<ul style="list-style-type: none"> <li>• Have problem to control the students because they were too energetic</li> <li>• Do not have enough time for each station</li> <li>• Spaces provided are not really convenient</li> </ul>
<b>OPPORTUNITY</b>	<b>THREAT</b>
<ul style="list-style-type: none"> <li>• Got to build good relationship with Buku Jalanan Chow Kit</li> <li>• Students are able to get a new and fun way to learn Mathematics</li> </ul>	<ul style="list-style-type: none"> <li>• Language barrier : students weak in Mathematics' vocabulary</li> <li>• Teachers might have different teaching strategies and confusing the students</li> <li>• Transportation problem to BJCK : safety reason</li> </ul>





<ul style="list-style-type: none"> <li>• Good chances to learn to communicate with younger (primary) students</li> </ul>	
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## 9.0 Target

At Buku Jalanan Chow Kit, we managed to meet the desired target of participation from the students involved.

## 10.0 Achievements and Activities

NO	ACTIVITY	PICTURES
1.	<p>ICE BREAKING SESSION WITH THE FACILITATORS</p> <ul style="list-style-type: none"> <li>• FACILITATORS FAMILIARIZATION</li> <li>• STUDENT SELF INTRODUCTION</li> </ul>	
2.	GROUP CHEERS	

3. SHORT PROGRAM BRIEFING FROM THE HOST OF THE PROGRAM



4. DIVIDING THE GROUPS



5. A GALLERY WALK SESSION

- STATION 1: ANGLE
- STATION 2: FRACTION
- STATION 3: MULTIPLICATION
- STATION 4: COORDINATE

Station 1: Angle



Station 2: Fraction



Station 3: Multiplication



Station 4: Coordinate



6. FEEDBACK FROM STUDENTS





7. CLOSING CEREMONY

- SPEECH BY PROGRAM COORDINATOR
- SPEECH BY REPRESENTATIVE FROM BUKU JALANAN CHOW KIT



8. PRIZE-GIVING SESSION



9. PHOTOGRAPHY SESSION



For more photos and videos :-

[https://drive.google.com/drive/folders/1QjRqaeTxKYq4s5gKu4p0B\\_l2Z6aAcQgz?usp=sharing](https://drive.google.com/drive/folders/1QjRqaeTxKYq4s5gKu4p0B_l2Z6aAcQgz?usp=sharing)

## 11.0 Financial ( Income - Financial Resources and Expenses)

### Income

NO	DETAILS	TOTAL (RM)
1	Contribution Of Committee Members	79.00

### Expenses

NO	DETAILS	UNIT PRICE (RM)	QUANTITY	TOTAL (RM)
1	Transportation (LRT)	2.60	9	23.40
2	Teaching Materials	10.00	2	20.00
3	Souvenirs for BJCK	20.00	1	20.00
4	Souvenirs for students	0.60	26	15.60
TOTAL				79.00

## 12.0 Cost and Time Saving

The cost of food for the Mathable Program project, which was carried out at the Buku Jalanan Chow Kit, was decreased with the cooperation of the project members eating their own breakfast before travelling to the project venue. Next, to save time and money, the project participants took the LRT to Buku Jalanan Chow Kit rather than an e-hailing service because there could be traffic and it would cost at least RM 60 to get there.

## **Conclusion**

Conclusively, this community initiative had a significant impact on Mathematical Science students since it made us realise the need of helping the community for a brighter future and inviting the people to enjoy mathematics. Furthermore, we believe that all of our activities will provide beneficial information to our participants. We also hope that the children will gain a better knowledge of the fundamental ideas of mathematics and enjoy learning them. Furthermore, we learned the value of interacting and communicating with the community, particularly with youngsters.



## **Personal Reflection (for students with sulam requirement)**

### **Nor Aqilah Shahirah Binti Mohd Fazli**

Mathematics has been my favourite subject since I was four as I have fun learning it compared to other subjects. Hence, when we have to do an activity with society related to the appreciation of Mathematics, I felt like this was a chance for me to change people's perspectives on this subject. Truthfully, this was my very first time handling a project. As a result, I was always concerned that I would overlook anything important. So, I sought assistance from professionals with project management experience. We also encountered a few challenges, such as transportation issues, but we handled them well. During this project, I learned that communicating with primary school students is very different from communicating with adults. We must use language that are simple enough for the children to understand what we are attempting to convey. I also realised that every child has the right to a quality education since our community partner is Buku Jalanan Chow Kit, a centre that provides education for children who are unable to attend school due to a variety of issues.

### **Nurul Syawanie Balkis Binti Nuzaman**

Mathematics is my favourite subject since primary school. I love the way all my mathematics teachers teach this subject. From primary school until now, I enjoy being able to teach anyone who need help to solve problems that involve mathematics. This is my first time to teach student from upper primary, before this I just teach my friends. I am grateful that that they can understand what I teach them. I could see they are enjoying learning mathematic so much until some of them were scrambling to answer the quiz given. I hope to be given another opportunity to hold more programs related to mathematics.

### **Batrisyia Hasanah Binti Nursyamsi**

I love mathematics since I am young. I had fun teaching the kids and played games with the kids. Before the project, I am quite nervous and anxious. Can I teach them well? This is the first time I am teaching mathematics to primary students. Although they are quite noisy and hyper, it was fun teaching them. I am glad they are following well and keep saying it was fun as well. I hope that the kids will get more knowledge and get to know that mathematics are not difficult by our project.

### **Aisyah Khadijah binti Badrul Hisham**

Most people find Mathematics hard and is not an easy subject for them to score. Since primary school, I have always loved doing Mathematics. Even though sometimes I find it hard to solve the problems, I had fun learning about it and at least I would want other people to change their perspectives towards Mathematics. To make it easier, we should start implementing the mindset that Mathematics is fun from a young age. That is why I agreed when we as a group decided to take upper primary students as our target community to do this programme. Before the programme, I feel very nervous to handle the kids and I'm

worried the kids will not enjoy the activities that we've prepared for them but Alhamdulillah during the day of the programme, all the kids were very responsive and energetic. They had fun learning all the topics and they didn't find it hard at all. In all honesty, it is quite challenging to handle the kids but thanks to my other eight members, we handled them well and the program went as planned. As the programme ends, I hope all the students there will forever remember what we taught them and continue to find joy in learning Mathematics.

### **Nurul Athirah binti Arman**

Most people find Mathematics to be a hard subject. Even I also find that Mathematics is not an easy subject but I'm having fun learning it. Hence, I am hoping we could change the perspective towards Mathematics among primary school students from this 'Mathable' programme. To accomplish our objectives, we tried to make the learning process fun and included games for them to understand better. After conducting this programme, I found that teaching Mathematics is not an easy task as we need to make sure that students understand the concept properly and are able to solve Mathematics problems. However, I am grateful that the students gave a good response to my teaching. Other than that, I also had fun playing games with them as they are very energetic. In the future, I would like to join this kind of programme again and get closer to the community.

### **Siti Nur Aisyah binti Bakri**

For some, Mathematics is a very troublesome subject and petty. But, I managed to find a way to learn it with more fun and it became my release-tension subject. Being able to solve a question, is some sort of satisfaction for me. Hosting a programme, I enjoyed seeing the pupils have the interest and desire to learn Mathematics. I was tired but it healed me as seeing them being curious and able to express their opinion and peculiarity. They gave great cooperation and good teamwork between them. Hence, I believe that this program is not only to fulfil the subject requirements but also beneficial for the pupils.

### **Siti Nur Solehah binti Ghazali**

Mathematics is one of the subjects that being hated by most of the students to because it is so challenging to comprehend. The main reason I accepted to take on the project was to inspire the children to love mathematics by making the learning process enjoyable. In my opinion, it is true that most individuals find it challenging to comprehend, but if we know the strategies to learn it, it will be quite simple. Therefore, I believe it is our collective job as mathematics students to develop a love of and excitement for the subject.

### **Nur Ayunni Binti Mohd Noor**

From the beginning, our group started out getting along really well. We agreed on a few goals right away, that helped us focus on reviewing different ideas for this program. We immediately settled into our roles and spend as much time engaging in this project. Throughout the program, I learned and experienced how

to enhance myself in terms of communication and social skills, and our group were able to communicate with the students and encourage them to learn mathematics. At the end of this program, we as a group felt very proud of ourselves of what we accomplished in this program. We had successfully formed a good relationship with students and teachers in Buku Jalanan Chow Kit, come up with some creative ways to get students to learn mathematics and change their perspective on it. Additionally, I hope that in the future I'll be able to participate in more programs that focus on mathematics.

### **Arina 'Ayuni Binti Azahar**

Because of its complicated way to find solutions in a calculation, people often categorize mathematics as a subject that is made only for genius and gifted people. The fact is that we use Mathematics skills in our daily life routine. For instance, we use it to know the final price after a discount sale in the shopping mall or to slice a cake in a class so that it can be shared equally with 10 students. This project allowed me to share my knowledge of mathematics with the students in 5<sup>th</sup> grade. While tutoring them, it is inevitable that some students need more than 15 minutes to fully understand how to solve a math problem. Because of that, I realized that each student has a different pace in catching up with the method that I taught them about switching the improper fractions to mixed fractions form. So, I tried to not speak too fast and let them take their time to understand the topic until they can solve the question by themselves. After all, that's when you find Mathematics interesting; when you fully understand it. Hence, I believe this project has succeeded as one of the alternatives for students to take more interest in learning mathematics.

## **References**

- Buku Jalanan Chow Kit. (2017). *Buku Jalanan Chow Kit Empowerment Through Education*. <https://bukujalananchowkit.wixsite.com/website>
- Veloo, A., & Muhammad, S. (2011). The Relationship Between Attitude, Anxiety and Habit Of Learning With Additional Mathematics Achievement. *Journal of Educators & Education/Jurnal Pendidik dan Pendidikan*, 26.

# **APPENDIX**

**A. LIST OF NAMES OF PARTICIPANTS FROM UNIVERSITI MALAYA**

<b>NO</b>	<b>NAME</b>	<b>MATRIC NO.</b>
1	NOR AQILAH SHAHIRAH BINTI MOHD FAZLI	U2001102
2	BATRISYIA HASANAH BINTI NURSYAMSI	U2103459
3	AISYAH KHADIJAH BINTI BADRUL HISHAM	U2103650
4	NURUL ATHIRAH BINTI ARMAN NURUL	U2000918
5	NURUL SYAWANIE BALKIS BINTI NUZAMAN	U2103647
6	ARINA 'AYUNI BINTI AZAHAR	U2000938
7	NUR AYUNNI BINTI MOHD NOOR	U2103232
8	SITI NUR AISYAH BINTI BAKRI	U2002137
9	SITI NUR SOLEHAH BINTI GHAZALI	U2000439

**B. LIST OF NAMES OF PARTICIPANTS FROM BUKU JALANAN CHOW KIT**

<b>NO</b>	<b>NAME</b>	<b>AGE</b>
1	NUR AIN BINTI ASMAN	13
2	MUHAMMAD ZAHID BIN RAZALI	13
3	AIDIL HAIMAN	14
4	MUHAMAD NAJIB ALVIAN SHAH BIN MUHAMMAD ALI	15
5	ROBIATUL RAUDAH	12
6	BATRISYIA NUR RAMADHANI ABDUL CHOLIK TAKAT	12
7	ELISYA ARI FEBRIANTI	12
8	MUHAMMAD RAJA SUBHAN KHAN MANZOOR	13
9	SAIFULLAH MAHMUD BIN ANUWARUL	13
10	FAISAL RIDHA BIN ILHAM	12
11	SAIFUL RIDHA BIN ILHAM	12
12	KHAIRUL ANUAR BIN ABDULLAH	13