

MYHACKATHON JOHOR BAHRU 2020
THEME 3: “ILMU PELITA HIDUP”

PROBLEM STATEMENT 1

Main objectives:

1. To enhance the education system and quality via digital medium/channels.
2. Enhancing capacity building and welfare for educators.

Context or background:

There are over 6 million school-going children in Malaysia whose education was disrupted by the Covid pandemic. Clearly, those with “means and privilege” were able to continue classes and switch to digital platforms very quickly, while many others scramble to organize lessons and homework via Whatsapp. The education delivery in Malaysia needs to be more digitally accessible and equitable to all levels of income and to both urban and remote locations in the country.

Problem statement: Ilmu 1

Digital solution for Online Learning System suitable for all – especially those with limited internet access or from low-income families.

Current status	Pain Points
• Learning institutions use online platforms to deliver lessons using Google Classroom, LMS, video conferencing tools and even WhatsApp. • Dramatic increase of internet access using mobile. • Require stable and continuous internet connection.	• Obtaining stable and continuous internet connection • Increase in costs for mobile-data to access the internet for daily school hours. • Real-time classroom hours is a challenge when children have to share internet devices with siblings or parents. • Some schools do not have a learning management system to administer and monitor lessons.

Target groups 1. Students especially in government school. 2. Teachers in government school.	Potential Impact 1. 4.7M students in govt schools. 2. 420K teachers in government schools
Desired state • Digital solution for Online learning that effectively overcome these challenges: Limited internet access. • Device limitation *Digital solutions may include alternate mediums such as Smart TV, smart devices etc.	

SOLUTION

Our idea for the problem statement above is to build a mobile application named ELC (Education Learning Class) that will make both teachers and students easier catching up about studies due to covid pandemic. Digital solutions for an online learning system which is suitable for all students especially to those with limited internet access and from low-income families are students can study and download the materials of their subjects through particular classes comfortably. They should not worry much about usage of mobile data because our mobile application is simple and accessible for all students who are making an effort to learn and we are building this mobile application with consideration of our target groups. Teachers also can upload their teaching materials into this platform with user-friendly features that we provide for all users both students and teachers. Although the application is not using much consumption of mobile data and WiFi, students at least need the internet connection to download ELC freely at Play Store or Google Store. We are suggesting the government provide free internet sim cards for each student from B40 and low-income families.

Goals:

1. Students learning is more manageable.

The reason why we are having this idea to build a mobile application is to make students' study schedule be more manageable. It might be hard for them to process everything since they are having very limited internet access and devices but from this application, we want to make it easy for them to study and manage their studies more carefully.

2. Students can interact and communicate with teachers easily.

Students and teachers can communicate through this application more easily if there is something for them to discuss so that homeroom teachers can cater their problems and understanding of study.

3. Improve user accessibility and flexibility of time to engage learners in the process of learning.

Both students and teachers can access the mobile application in order to engage with the studies online and it saves so much time going through the application.

4. Parents are notified of their children's homework.

Main features:

There are features that we have been discussing for our mobile application that will be used by teachers and students for online learning classes.

1. Login/Sign up option

Our target groups are teachers and students. It is reasonable for us to separate the login option and features in order to differentiate which account for teachers and students easily. For user profiles, it is compulsory for our users to update their profile so that teachers recognize which students take their classes and manage it smoothly. Students also need to do the same as what teachers did in order to allow teachers to identify their students of the class.

2. Forum and discussion platform

We are taking an example of UTM E-Learning website which can be managed by lecturers and students will use it if there are any forum or discussion going on. School students can use this discussion platform if they want to ask any questions regarding to homeworks and subjects without using much of the internet. Teachers need to look into

the forum and discussion section to avoid any mischeck. ELC will cater a notification for this section so that teachers and students will receive the feedback from each other at the same time.

3. Offline quiz

We came up with an idea to provide an offline quiz section that can be made through this application. The questions for each student would be slightly different due to the shuffle option that has been set by homeroom teachers. Students will receive correct answers with explanation of the question and marks will be shown after they are done answering the questions. Teachers can record the marks of their students since they can monitor students' progress of learning online.

4. Submission

Next, we are planning to establish another platform section in our mobile application which is a submission section for students to submit their homeworks. Students can hand in their homeworks by several options which can be submitted in pictures (.jpg) format or word (.docx) format. For the submission date, teachers can set the date and drag it to two or three days for students who have problems with their internet connection.

Add-on features:

1. Recording notes

Students have the option for them to choose to listen to the recorded notes provided in ELC or just carry on with the notes that have been prepared by teachers. This option is open for students who have poor internet connection in their areas. They can choose to read the notes by themselves without wasting their time waiting for a good quality of videos.

2. Notifications

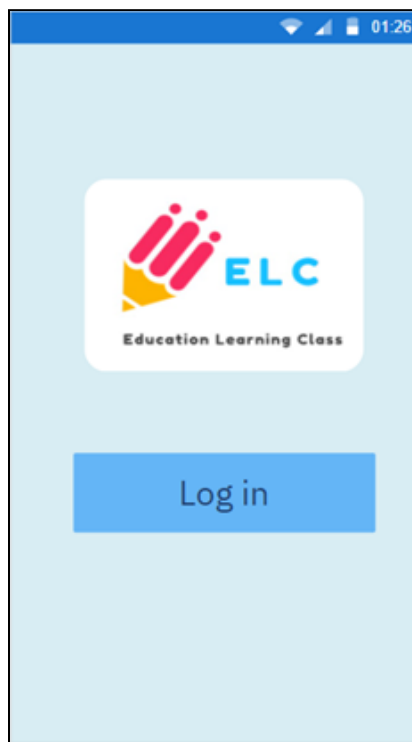
Next add-on feature is notifying the parents about their children's homeworks through Messenger. This is the reason why students need to update their profile by filling their parents' number phone when registering themselves on this application. From this feature, teachers can help and monitor students in need then contact their parents if there is no progress in homeworks, quizzes and notes that was given by homeroom teachers.

3. Tracking

ELC mobile application will provide a feature for teachers to keep tracking their students' homework progress. It will show how many percent that the student has done in each subject. We had this idea from Google Classroom which teachers or lecturers can view and observe their students' works with the progress shown in percent marker.

Prototype:

1. Front cover of the mobile application:



2. Login interface as student and as teacher



3. Student and teacher login interface



Student Login

ELC
Education Learning Class

Student Id

Name of School

SUBMIT

←

The screenshot shows a mobile app interface for student login. It has a blue header with the text 'Student Login'. Below the header is a white box containing the ELC logo and the text 'Education Learning Class'. There are two input fields: 'Student Id' and 'Name of School'. A blue 'SUBMIT' button is at the bottom right. A back arrow icon is at the bottom left. The status bar at the top shows the time as 01:28.



Teacher Login

ELC
Education Learning Class

Teacher Id

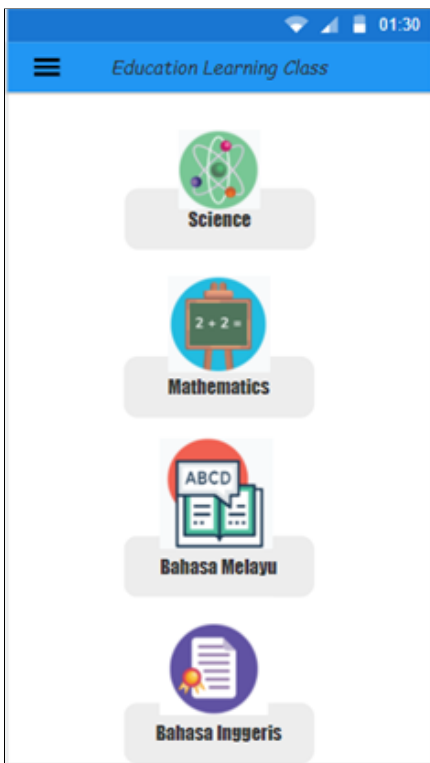
Name of School

SUBMIT

←

The screenshot shows a mobile app interface for teacher login. It has a pink header with the text 'Teacher Login'. Below the header is a white box containing the ELC logo and the text 'Education Learning Class'. There are two input fields: 'Teacher Id' and 'Name of School'. A blue 'SUBMIT' button is at the bottom right. A back arrow icon is at the bottom left. The status bar at the top shows the time as 01:29.

4. List subjects that taken by students and taught by teachers



5. List of homeworks and submission platform

