



UNIVERSITI  
TEKNOLOGI  
MARA

Cawangan Melaka

**PUBLICATION DATE | 1 SEPTEMBER 2021**

**i-JaMCSIIX** Exploring ideas **2021**   
International Jasin Multimedia & Computer Science Invention and Innovation Exhibition

**International Jasin Multimedia & Computer Science  
Invention and Innovation Exhibition  
(i-JaMCSIIX 2021)**

**15 FEBRUARY 2021 - 31 MARCH 2021**

**VIRTUAL COMPETITION • INNOVATION & INVENTION • PUBLICATION OPPORTUNITIES**

**EXTENDED ABSTRACT**

**UITM CAWANGAN MELAKA KAMPUS JASIN**

**ISBN:**

**978-967-15337-0-3**

**WEBSITE**

**| <https://jamcsiix.wixsite.com/2021>**



**i-JaMCSIIX** Exploring ideas  
**2021**  
International Jasin Multimedia & Computer Science Invention and Innovation Exhibition



---

**COPYRIGHT © 2021**

i-JaMCSIIX

Universiti Teknologi MARA Cawangan Melaka Kampus Jasin

77300, Merlimau, Melaka

Web: <https://iamesiix.wixsite.com/2021>



**PUBLISHED BY:**

i-JaMCSIIX

Universiti Teknologi MARA Cawangan Melaka  
Kampus Jasin

77300 Merlimau, Melaka

Tel: 062645000

Email: [jamcsiix@uitm.edu.my](mailto:jamcsiix@uitm.edu.my)

Web: <https://iamcsiix.wixsite.com/2021>

ISBN: 978-967-15337-0-3

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without permission of the copyright holder.

## **ORGANIZING COMMITTEE**

<b>PATRON</b>	ASSOC. PROF. DR. ISMADI MD BADARUDIN
<b>ADVISOR 1</b>	NOR FADILAH TAHAR @ YUSOFF
<b>ADVISOR 2</b>	DATO' TS. DR. MOHD NOR HAJAR HASROL JONO
<b>PROJECT LEADER</b>	TS. NURUL NAJWA ABDUL RAHID @ ABDUL RASHID
<b>PROJECT LEADER 2</b>	ANIS AFIQAH SHARIP
<b>TREASURER 1</b>	SITI MAISARAH MD ZAIN
<b>TREASURER 2</b>	NURUL ZAHIRAH ABD RAHIM
<b>SECRETARY 1</b>	NOR AIMUNI MD RASHID
<b>SECRETARY 2</b>	NUR NABILAH ABU MANGSHOR
<b>PUBLICATION</b>	<b>DR. RAIHAH AMINUDDIN</b> DR. NOR AIZA MOKETAR DR. SITI FEIRUSZ AHMAD FESOL
<b>JURY</b>	<b>TS. RAIHANA MD SAIDI</b> DR. ELIN ELIANA ABDUL RAHIM NOR INTAN SHAFINI NASARUDDIN
<b>REGISTRATION</b>	<b>FADZLIN AHMADON</b> HAJAR IZZATI MOHD GHAZALLI SITI AISYAH ABDUL KADIR
<b>PROMOTION</b>	<b>MOHAMAD ASROL ARSHAD</b> ZUHRI ARAFAH ZULKIFLI FADILAH EZLINA SHAHBUDIN
<b>MULTIMEDIA</b>	<b>NORSHAHIDATUL HASANA ISHAK</b> HAZRATI ZAINI NUR FARAHAH MOHD JOHARI FAIQAH HAFIDZAH HALIM MOHAMMAD BAKRI CHE HARON MUHAMMAD HAMIZ MOHD RADZI
<b>AWARD</b>	<b>FARAH NADZIRAH JAMRUS</b> FADHLINA IZZAH SAMAN NURULHUDA ZAINUDDIN HAZWA HANIM MOHAMED HAMZAH MOHD HAFIFI MOHD SUPIR ADI HAKIM TALIB
<b>CERTIFICATE</b>	<b>NUR SYUHADA MUHAMMAT PAZIL</b> MARIATHY KARIM UMMU MARDHIAH ABDUL JALIL NOOR WAHIDA JAMIL
<b>TECHNICAL &amp; PROTOCOL</b>	<b>DR. AHMAD FIRDAUS AHMAD FADZIL</b> ALBIN LEMUEL KUSHAN MOHD NABIL ZULHEMAY
<b>SPONSOR</b>	<b>TS. NURUL NAJWA ABDUL RAHID @ ABDUL RASHID</b> SHAHADAN SAAD FARIDAH SAPPAR SYAFNIDAR ABDUL HALIM SITI NURAMALINA JOHARI
<b>LANGUAGE EDITOR</b>	NUR AQILAH NORWAHI MOHD AMIRUL ATAN

## **BRONZE SPONSOR**

AINON SYAZANA AB HAMID

ANITA MOHD YASIN

BUSHRA ABDUL HALIM

FARIDAH SAPPAR (Ts.)

FATIMAH HASHIM

HAZRATI ZAINI

MASTURA MANSOR

MASWATI SUFFIAN

NOORAZILAH IBRAHIM

NOR ADILA KEDIN

NOR AIZA MOKETAR (DR.)

NOR AZIDA MOHAMED NOH

NOR INTAN SHAFINI NASARUDDIN

NURUL HIDAYAH MAT ZAIN (Ts. DR.)

NURUL NAJWA ABDUL RAHID @ ABDUL RASHID (Ts.)

NURULHUDA GHAZALI (Ts.)

RAIHAH AMINUDDIN (DR.)

SALEHAH HAMZAH

SHAHITUL BADARIAH SULAIMAN

SITI AISYAH ABDUL KADIR

SITI NURAMALINA JOHARI

SITI RAMIZAH JAMA

SURYAEFIZA KARJANTO (DR.)

SYAFNIDAR ABDUL HALIM

UMMU MARDHIAH ABDUL JALIL

ZAINAB OTHMAN

ZURAH ABU

## **LIST OF REVIEWERS**

FADILAH EZLINA SHAHBUDIN

FADZLIN AHMADON

FARAH NADZIRAH JAMRUS

HAJAR IZZATI MOHD GHAZALLI

HAZRATI ZAINI

NOR AIZA MOKETAR (DR.)

NOR INTAN SHAFINI NASARUDDIN

NURUL NAJWA ABDUL RAHID @ ABDUL RASHID (Ts.)

RAIHAH AMINUDDIN (DR.)

RAIHANA MD SAIDI (Ts.)

SHAFAF IBRAHIM (Ts. DR.)

SITI FEIRUSZ AHMAD FESOL (DR.)

SITI MAISARAH MD ZAIN

SITI NURAMALINA JOHARI

SURYAEFIZA KARJANTO (DR.)

## CONTENTS

<b>ID</b>	<b>PROJECT TITLE</b>	<b>PAGE</b>
JM008	Automation in Pneumonia Detection	1
JM017	Terengganu Cultural Trail: Using Videography in a Participant-observer Study to Enhance Cultural Heritage Appreciation Among Children.	5
JM019	Cassava Leaf Disease Detection System using Support Vector Machine	8
JM021	Learning Mathematics using Fun-Math Mobile Application for Pre-School	12
JM024	OSH-DBG as a Method of Digital Problem-Solving for Learning Construction Safety and Health Course	16
JM026	“What to Cook?” Mobile Application	19
JM028	Learning Arabic Communication Skill Through Mobile Application	23
JM034	Enhanced Gamification in Study Skills	27
JM039	Flexible Learning Using ANATEKS Flexi e-Content Medium: An Innovative Effort in Times of Covid-19 Pandemic	31
JM043	Web-Application for Securing Message Using LSB Algorithm Steganography and Hybrid Encryption	35
JM045	Web-Based Science Lab Inventory System for Faculty of Pharmacy in UiTM Bertam	39
JM046	Dental Treatment Orientation for Children using Role Playing Game	43
JM047	EZ Forecast 2.0: A System of Univariate Models	47
JM048	Arduino-based Farm Feeder Helper	51
JM050	PictoEZodit (E-Comic In Teaching Practice)	55
JM054	i-CHEMTORIALS (Interactive Chemistry Tutorials)	59

JM056	Chemical Composition and Biological Activity of Momordica charantia (Bitter Melon)	63
JM059	Lima Sekawan: An Entrepreneurial App Based Introductory Tools for Kids	66
JM064	A Study on Factors Toward Household Willingness on E-Waste Recycling in Seremban	69
JM070	PEFE (Plant Eco-Friendly Energizer)	73
JM071	An Intelligent of ANN Towards Agarwood Oil Compounds Pre-processing Based on Stepwise Regression Method to Improve the Oil Quality	76
JM080	Paddyville: Learning Paddy Cultivation through Role-Playing Game	80
JM089	Agarwood Oil Quality Classification Using One Versus All Strategies in Multiclass on SVM Model	84
JM099	The Development of E-Content 'Sci-Anime2021'for PDPR during Covid-19 Era	87



## The Development of E-Content ‘Sci-Anime2021’ for PDPR during Covid-19 Era

Humaira Batrisyia Norzaimi<sup>1</sup>, Iqlima Zulaikha Norzaimi<sup>2</sup>, Qaisara Madiha Norzaimi<sup>3</sup>, Wahida Abdul Rahman<sup>4</sup> and Ku Liana Farhany Ku Abdul Halim<sup>5</sup>

<sup>1</sup>Sekolah Kebangsaan Kubang Gajah, Km 7 Jalan Arau, 02600 Arau, Perlis, Malaysia.

mairaisya2020@gmail.com, m-12086163@moe-dl.edu.my, m-13363989@moe-dl.edu.my, wahida811@uitm.edu.my, lieana7987@yahoo.com

**Abstract**—E-Content is any form of learning material available digitally which a learner (students) access or interacts with teachers or among themselves to achieve related learning outcomes. E-Content is becomes popular because it allows flexibility in terms of time, place and pace of learning. However, in Malaysian education especially at primary school level, the development of E-Content is not widely developed due to the limitless of internet coverage, knowledge gap among teachers and awareness about E-Content. Therefore, the development of Sci-Anime2021 was introduced in order to help students specifically *Tahap 2 Kurikulum Standard Sekolah Rendah (KSSR)* students to increase their understanding towards certain topics in Science subject. Sci-Anime2021 separated to three major components, which are the development process of Sci-Anime2021, final product E-Content Sci-Anime2021 and assessment in Sci-Anime2021. This E-Content developed by using combination of smart phone applications (FlipaClip & CapCut). Animations in Sci-Anime2021 were created by using FlipaClip whereas video editing process was conducted using CapCut. Finally, the assessment was prepared using EdPuzzle. Then, the link of assessment will be posted in Google Classroom. Google Classroom will be a platform to discuss and interact with teacher and other students regarding the assessment and E-Content. Therefore, the development of Sci-Anime2021 will be able to help students during current *Pengajaran dan Pembelajaran di Rumah (PdPR)* in Covid-19 era. The learning process will be more fun and interactive through animation, which includes text, video, images and sounds.

**Keywords**—E-Content, PdPR, assessment, video editing, Covid-19

### I. INTRODUCTION

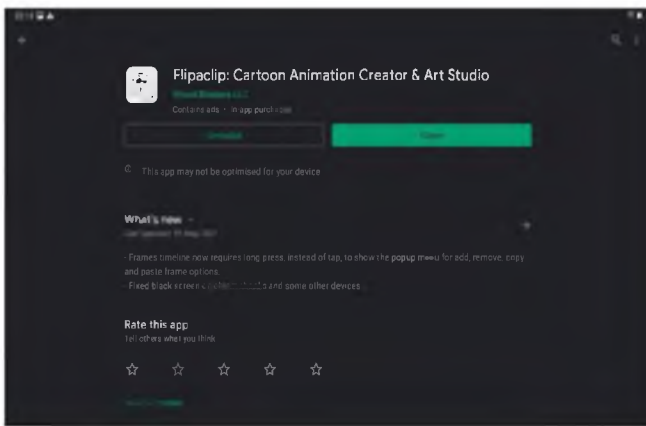
Education provides the pathway to reach their destiny. Education helps in inculcating social responsibilities as well as to developed people manner and behaviour. The main core of education is to learn. Learning is a process of acquiring knowledge or skills through study, experience, or being taught [1]. However, during pandemic Covid-19 outbreak, mostly schools were shut down including primary schools, secondary schools, college and university [2]. Our education system in Malaysia are toward e-learning process including the usage of e-content during *Pengajaran dan Pembelajaran di Rumah (PdPR)*. PdPR was introduced by Ministry of Education, Malaysia during Movement Control Order (MCO) 1.0 in year 2020 and it was continue until today [3, 4]. In PdPR, the information regarding syllabus and subject matters were send through Gamification (Quizziz, Kahoot), videos, audio clip, ebooks, Google Meet and Microsoft Teams (live streaming) [3]. Knowledge from teacher to students was delivered through various platform that normally used by other teacher or academician. The intention to attract students especially primary school students to stay focus during PdPR is become the main issues during learning process as primary school students tend to loss their focus during teaching and learning. Until nowadays, there is less tool or e-content that was developed by specific person in order to increase the interest of the primary school students during PdPR process. Therefore, the innovation of e-content especially for science subject for *Tahap 2 Kurikulum Standard Sekolah Rendah (KSSR)* students was developed in order to

increase their interest towards science subject. E-content was innovated and developed by primary school students of Sekolah Kebangsaan Kubang Gajah, Arau, Perlis (Year 2, 4 and 6) and it was named Sci-Anime2021. This E-content is in the form of animation and it was developed by using smart phone application (FlipaClip and CapCut). Then, the assessment was developed by using EdPuzzle and the discussion among teachers and their peers will be conducted through Google Classroom.

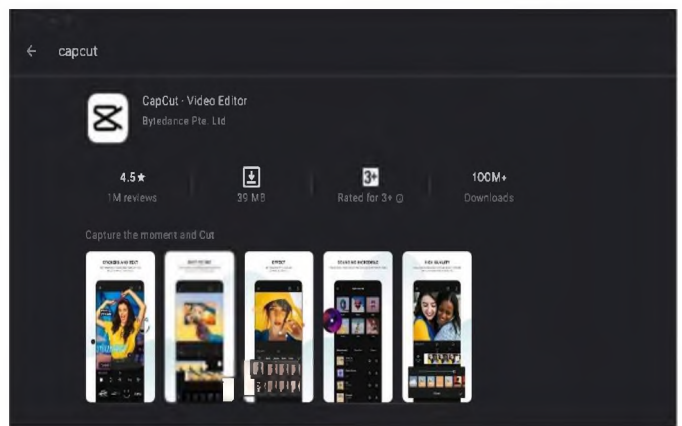
## II. MATERIALS

### A. Smart Phone Applications Preparedness

FlipaClip free version was downloaded in Google Play Store (**Fig. 1.**) through Samsung Tab S6 Lite. The functions of FlipaClip application are to provide children digital tools to draw and create the frames of a storyboard and transform them into animated videos, cartoons, and GIFs. It includes digital drawing tools like brushes with different tips and colours and the option to insert text [5]. Apart from that, CapCut application was downloaded in Google Play Store (**Fig. 2.**). CapCut application is a free all-in-one video editing application that helps people to create incredible videos. CapCut was launched in the Chinese market as *Jiaying*. The application has been in the Top 10 Worldwide (Non-Game) Most Downloaded Apps in 2019.



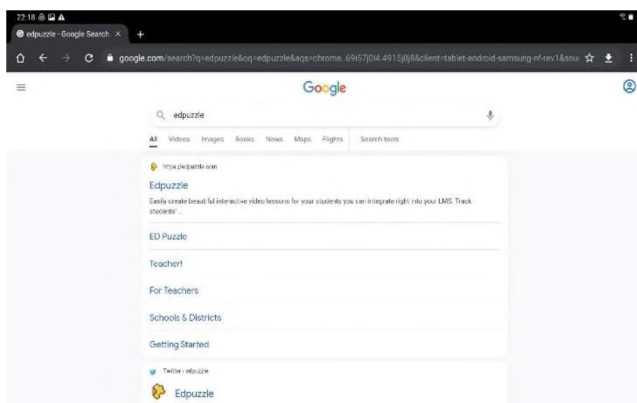
**Fig. 1.** Download Flipaclip application in Google Play Store



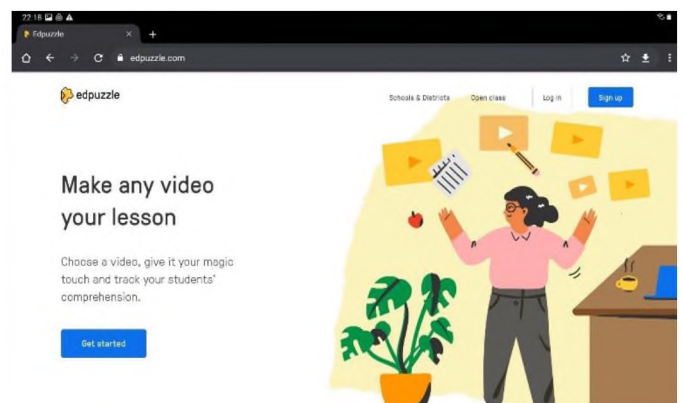
**Fig. 2.** Download Capcut application in Google Play Store

### B. EdPuzzle for Assessment Purpose

*EdPuzzle* is a free assessment-centered tool that allows teachers and students to create interactive online videos by embedding either open-ended or multiple-choice questions, audio notes, audio tracks, or comments on a video. The overall purpose of *Edpuzzle* is to facilitate increased student engagement with video content. EdPuzzle tool was search via Google search engine (**Fig. 3.**) and the sign up for the EdPuzzle account has been done completely via EdPuzzle website (**Fig. 4.**).



**Fig. 3.** Searching EdPuzzle tool via Google search engine.

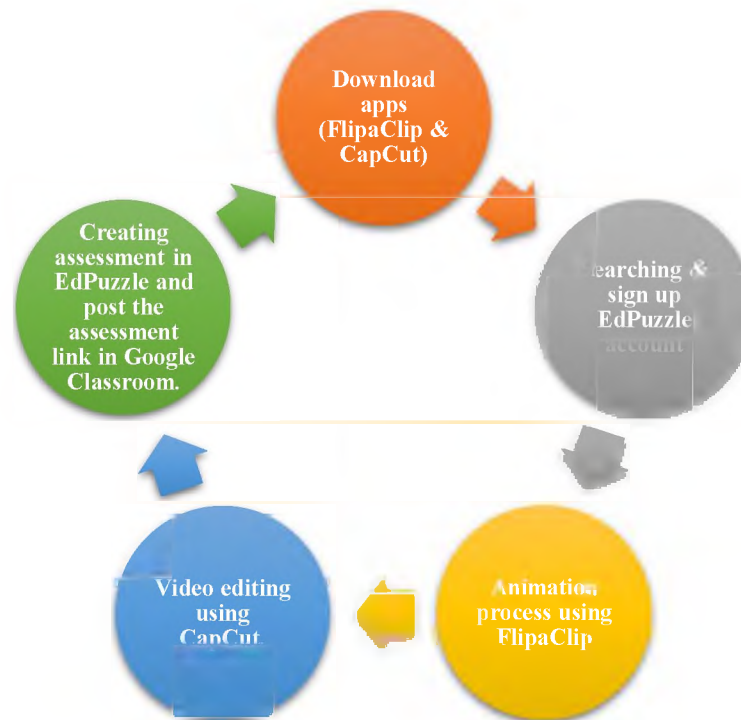


**Fig. 4.** Sign up for EdPuzzle Account

### III. METHODS

#### A. Development of Sci-Anime2021 E-Content for Science Subject

**Fig. 5.** below shows the process of Sci-Anime2021 development for 'Daya' topic in Science subject of Year 6. *FlipaClip* and *CapCut* applications were downloaded in *Google Play Store*. Apart from that, *EdPuzzle* tool has been searched via Google search engine. Then, the sign up process for *EdPuzzle* account has been done through *EdPuzzle* website. The animation process has been done by using *FlipaClip* application. Then, the video editing process was proceed by using *CapCut* application. During video editing process, students can insert their voice and give explanation about the topics. The length of the video can also be controlled by using this application. At the same time, some of the parts can be removed by using this application. Finally, *EdPuzzle* tool is used to create an assessment consisted of multiple-choice questions (MCQ).



**Fig. 5.** Flow chart of e-content *Daya* topic for science *Tahap 2*, KSSR.

### IV. RESULTS AND FINDINGS

Topic *Daya* for Science subject Year 6 KSSR was chosen for Sci-Anime2021 e-content development. Previously, this topic is too 'dry' and full of scientific facts. Students tend to loss their focus when learning this topic. By introducing the animation elements, teachers should be able to attract the student's attention during PdPR process. The learning process will be more fun and interactive as it involves animation and online assessment via *EdPuzzle* website. The engagement of the students with their teachers also improved compared before the development of Sci-Anime2021 module.

### V. CONCLUSIONS

Sci-Anime2021 for 'Daya' topic in Science subject of Year 6 KSSR has been successfully developed by using the combinations of smart phone applications (*FlipaClip* and *CapCut*). The assessment in Sci-Anime2021 has been fully developed by using *EdPuzzle* tool. In future, hopefully Sci-Anime2021 e-Content innovation will be able to used and applied to all primary school students in Malaysia during PdPR process.

### ACKNOWLEDGMENT

Author would like to thank to Faculty of Applied Sciences, UiTM Cawangan Perlis for their contribution in mentoring primary school students of Sekolah Kebangsaan Kubang Gajah, Arau, Perlis. Their initiative and collaboration with community in Arau especially students from Sekolah Kebangsaan Kubang Gajah, Arau will inspired other higher educational institution to share their ideas and knowledge towards the development of innovation among primary school children especially innovation in teaching and learning.

## REFERENCES

- [1] iInderpreet Kaur, M. J., & Raskirat, M. (2020). PERSPECTIVES OF E-CONTENT: A SYSTEMATIC REVIEW. *International Journal of Advanced Science and Technology*, 29(6), 2698 – 2715
- [2] Putri, R. S., Purwanto, A., Pramono, R., Asbari, M., Wijayanti, L. M., & Hyun, C. C. (2020). Impact of the COVID-19 pandemic on online home learning: An explorative study of primary schools in Indonesia. *International Journal of Advanced Science and Technology*, 29(5), 4809-4818.
- [3] Thannimalai, T., & Baloh, S. (2021). Cabaran PDPR bahasa Tamil di sekolah luar bandar [Challenges of Tamil language PDPR in rural schools]. *Muallim Journal of Social Sciences and Humanities*, 5(2), 183-190.
- [4] Mazlan, R. (2017). Tahap Pengetahuan, Pemahaman Dan Kesiapan Guru Bahasa Melayu Dalam Melaksanakan Kajian Pengajaran (Level Of Knowledge, Understanding And Readiness Malay Language Teachers To Implementing Lesson Study). *Jurnal Pendidikan Bahasa Melayu*, 7(2), 30-40.
- [5] Li, C. (2020). Tools of Engagement for Language Acquisition.