



HEALTH EDUCATION ASSESSMENT MODULE (MOPEN-PK)

KUMARAN GENGATHARAN (LEADER)

SUKOR BIN BERAM
RAMESH RAM RAMALU
AZLINA AMAT YASIN

NORZALINA BINTI NOOR
YOONG SOO MAY
NUR SUHANA BINTI HAMZAH



MoPen PK

MODUL PENTAKSIRAN
PENDIDIKAN KESIHATAN
MOPEN-PK

Mengikut

- BUKU TEKS
- DSKP
- KBAT

• DOMAIN PEMBELAJARAN

HASIL INOVASI
KUMARAN GENGATHARAN
B.Ed (IPRM), M.Ed (UPSI) & Phd (UPSI)

UNIT 3 : PENGURUSAN MENTAL DAN EMOSI



TULIS PERASAAN YANG SESUAI BERDASARKAN SITUASI DALAM GAMBAR DI BAWAH: SP 4.1.1 & TP 1

1 2 3

MALU GEMBIRA TAKUT

MARAH SEDIH



ISI TEMPAT KOSONG DENGAN MENGENAL PASTI PERASAAN YANG SESUAI BERDASARKAN SITUASI BERIKUT: SP 4.1.2 & TP 2

- Saya mempunyai seorang adik perempuan. Saya _____ bermain bola dengan adik.
- Saya gagal dalam ujian Sains. Saya berasa _____.
- Saya ternampak ular tedung. Saya berasa _____.
- Emak _____ adik kerana koyakkan buku latihan abangnya.

SEDIH.
GEMBIRA.
TAKUT.
MARAH.

SP 4.1.1 & TP 1: Mengetahui pelbagai emosi iaitu gembira, sedih, takut, marah dan malu.

: Menguasai Tidak menguasai

SP 4.1.2 & TP 2: Memahami kepentingan meluahkan emosi yang sesuai mengikut situasi.

: Menguasai Tidak menguasai

Menguasai Domain: Kognitif Psikomotor Afektif

Domain Mastery

HALAMAN BUKU TEKS: 73

Unit Title

Instructions

Learning Standards & Mastery Level

Assessment Exercise

Answers

Brief Reporting

References

Will Present **MoPen PK** from the aspect :

✓ OBJECTIVE

✓ RESEARCH METHODOLOGY

✓ NOVELTY AND UNIQUENESS

✓ BENEFIT TO MANKIND (COMMUNITY)

✓ ORIGINALITY

✓ COST EFFECTIVENESS & COMMERCIALIZATION POTENTIAL

✓ OR CODE

✓ AWARDS, CONFERENCE, PUBLICATION & COPYRIGHT

OBJECTIVE'S OF MOPEN-PK WHY IT'S BEEN DESIGN AND DEVELOPMENT

- Exam system has been abolished for lower primary students.
- 66.7% of teachers do not produce assessment materials due to time constraints and excessive workload (Norazilawati, Noorzeliana, Mohd Sahandri and Saniah, 2015),
- Othman, Siti Esah, Ahmad Fuaad, Azali and Omar (2013), stated that most teachers who teach Health Education subjects are still unskilled in constructing assessment items.
- Assessment does not evaluate comprehensively (Darst & Pangrazi, 2006; Abdullah Sani, 2003 & Freeman, 2001).
- Innovation's are more to the core subject. Innovation for Health Education subjects are very low.
- Downloaded sheets are uncertain with reliability and validity.

RESEARCH METADODOLOGY

Researchers have used design and development (DDR) research methodology pioneered by Richie and Klein (2009). There are three phases in the formation of MoPen PK

- Phase one - Needs Analysis
- Phase Two - Design and development
- Phase Three - Implementation and evaluation

➤ **NEEDS ANALYSIS PHASE**

40 teachers were used for the pilot study. The reliability value of Alpha Cronba .849 has been accepted. Following that, a questionnaire was given to 298 Kedah Health Education teachers to find out the needs of MoPen PK. As many as 98% agreed with the development of the module.

➤ **DESIGN AND DEVELOPMENT PHASE**

20 experts selected from various fields. Constructs and items have been constructed using Bloom's Taxonomy theory (1956) and have been agreed upon by these experts. To get the fullness of the Fuzzy Delphi approach was used while the steps of the Mayer 1988 development model were adapted to develop the MoPen PK.

➤ **IMPLEMENTATION AND EVALUATION PHASE**

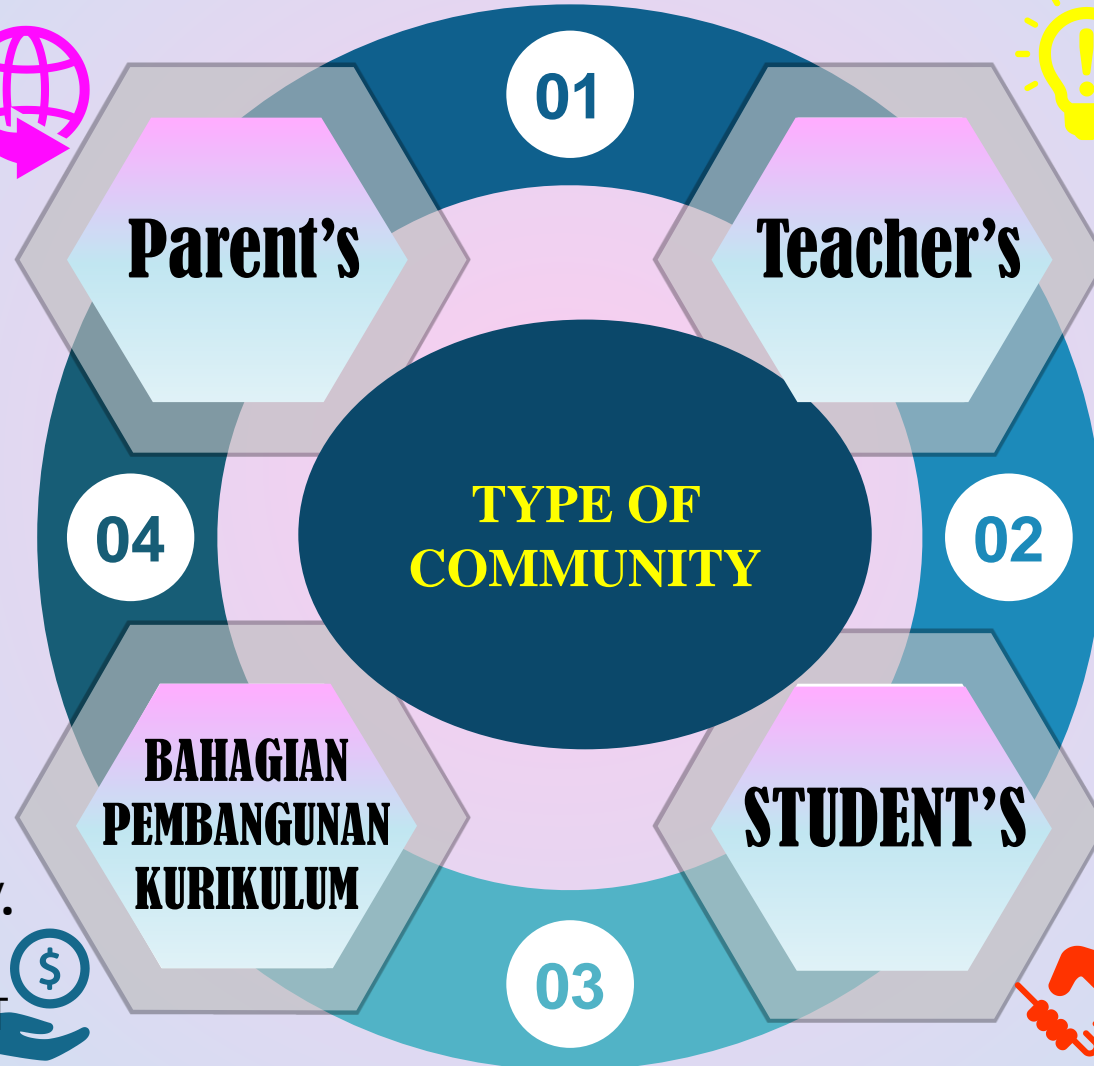
The effectiveness and usability of MoPen PK has been implemented. 60 students were used for quasi-experiments to find out the effectiveness of MoPen PK while semi-structured interviews were conducted to find out the applicability of the innovation to MoPen PK operators who have assessed lower primary student's for eight weeks.

NOVELTY AND UNIQUENESS

- **MoPen PK has been design and develop with using modern method.**
- **All the assessment question is designed using Theory of Taxonomy Bloom's 1956.**
- **Constructs and items in MoPen PK obtained by 20 experts using the Fuzzy Delphi approach.**
- **A creative innovation for the subject of Health Education.**
- **Made as a Flip Book and can be accessed using QR code anywhere and anytime.**
- **Complete Package for classroom assessment.**
- **Introduce a different way of assessment than before.**
- **Provide activities comprehensively and flexibly according to the suitability of lower primary student's.**

BENEFIT'S

- CAN PERFORM ASSESSMENTS ON THEIR CHILDREN AT ANY TIME BY USING QR CODE.
- BE ABLE TO KNOW THE LEVEL OF KNOWLEDGE OF THEIR CHILD ON THE SUBJECT OF HEALTH EDUCATION.
- CAN BE USED AS ADDITIONAL TRAINING MATERIAL AT HOME.



- SAVE TEACHER TIME
- LIGHTEN THE WORKLOAD OF TEACHERS.
- CAN SERVE AS A STUDENT'S ASSESSMENT RECORD FOR HEALTH EDUCATION .
- TEACHER'S CAN IDENTIFY STUDENT WEAKNESSES IN HEALTH EDUCATION SUBJECTS.

- TO BE A TREASURE TROVE OF CURRICULUM DEVELOPMENT.
- CAN GIVE TO THE SCHOOL AFTER CONFIRMING CONTENT SUITABILITY.
- BE A GUIDE FOR TEACHERS WHO WANT TO PROVIDE AN ASSESSMENT MODULE FOR ELECTIVE SUBJECTS



- ASSESSMENT ARE DESIGNED ACCORDING TO THE AGE OF LOWER PRIMARY STUDENTS.
- IMPROVING STUDENTS' KNOWLEDGE IN HEALTH EDUCATION SUBJECT.
- CAN STRENGTHEN THE LEARNING DOMAIN OF LOWER PRIMARY STUDENT.



BENEFIT'S TO STUDENTS

EFFECTIVENESS (QUASI EXPERIMENT)

Ujian Pen
Kontrol

Ujian Pe
eksperi

UNIT 1 : KESIHATAN DIRI DAN REPRODUKTIF

A NAMAKAN ANGGOTA TUBUH DALAM GAMBAR DI BAWAH :
SP 1.1.1 & TP 1
MOHD - AZAM

PERUT ZAKAR MATA TANGAN KAKI

SP 1.1.1 & TP 1 : Mengetahui anggota tubuh lelaki dan perempuan : Menguasai Tidak menguasai
Menguasai Domain : Kognitif Psikomotor Afektif
HALAMAN BUKU TEKS : 64 & 65

UNIT 1 : KESIHATAN DIRI DAN REPRODUKTIF

A NAMAKAN ANGGOTA TUBUH DALAM GAMBAR DI BAWAH :
SP 1.1.1 & TP 1
Nur Balaris

PERUT ZAKAR MATA TANGAN KAKI

SP 1.1.1 & TP 1 : Mengetahui anggota tubuh lelaki dan perempuan : Menguasai Tidak menguasai
Menguasai Domain : Kognitif Psikomotor Afektif
HALAMAN BUKU TEKS : 64 & 65

AFTER INTERVENTION WITH MOPEN PK →

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PRE TEST 2/5
(CONTROL GROUP)

POST TEST 2/5
(EKSPERIMENT GROUP)

PRE TEST 3/5
(CONTROL GROUP)

POST TEST 5/5
(EKSPERIMENT GROUP)

EFFECTIVENESS (ANCOVA RESULTS)

Interaksi antara dua kumpulan intervensi (Homogeneity of Variance)

Test of Between Subjects Effects					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	18274.297 ^a	3	6091.432	875.485	.000
Intercept	310.541	1	310.541	44.632	.000
Kumpulan	3.482	1	3.482	.500	.482
Skorpra	21.544	1	21.544	3.096	.084
Kumpulan * Skorpra	19.839	1	19.839	1.992	.164
Error	388.636	56	6.938		
Total	290960.000	60			
Corrected Total	18663.933	59			

R Squared = .979 (Adjusted R Squared = .978),
Computed using alpha = .05.

Levene's Test of Equality of Error Variances^a

Dependent Variable			
F	dfl	df2	Sig.
.001	1	58	.976

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.
Design: Intercept + Skorpra + Kumpulan.

Test of Between-Subjects Effects

Dependent Variable: Skor pasca ujian bertulis

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	18260.438 ^a	2	9130.219	1289.787	.000
Intercept	304.805	1	304.805	43.058	.000
Skorpra	25.172	1	25.172	3.536	.064
Kumpulan	8019.129	1	8019.129	1132.828	.000
Error	403.493	57	7.079		
Total	290960.000	60			
Corrected Total	18663.933	59			

R Squared = .978 (Adjusted R Squared = .978),
Computed using alpha = .05.

Based on the findings, there was a significant difference between the experimental group (mean = 84.1, standard deviation = .605) and the control group (mean = 50.61, standard deviation = .605). The mean difference between the two groups was 34 points scale with 95% confidence interval ranging. In addition, the effect of size between groups is high with the statistical value of eta squared $\eta^2 = 0.952$. Therefore, MoPen PK which has been developed is effective in **improving students' knowledge of Health Education subjects.**

BENEFIT'S TO TEACHER'S

USABILITY

MoPen PK has been used by a teacher to teach level one students for eight weeks. He was interviewed to find out the usability of MoPen PK. A total of 6 usability MoPen PK has been told by him:

- Save time for teachers to assess student's for Health Education subjects.**
- Can save as evidence for Health Education subject's offline.**
- Lighten the workload of teachers in terms of the production of assessment materials.**
- Can increase teacher confidence in classroom assessment.**
- Able to know the weaknesses of students in the subject of Health Education.**
- Can strengthen the domain of students in terms of Cognitive, Affective and Psychomotor.**

USABILITY (SEMI STRUCTURAL INTERVIEW)

Kod-kod bagi tema temubual

Tema	Kod
KECEKAPAN MODUL	
Meningkatkan pengetahuan murid	KM- pm
Mengetahui kelemahan murid	KM- km
Memantapkan domain pembelajaran murid	KM- dp
CIRI MODUL	
Lengkap	CM- lk
Padat kandungan dengan bahan pentaksiran	CM- pk
Meningkatkan keyakinan dan semangat	CM- yds
KEPUASAN GURU	
Sesuai untuk pentaksiran	KG - sp
Ringankan beban kerja	KG - bk
Dapat simpan sebagai rekod pentaksiran	KG - rp

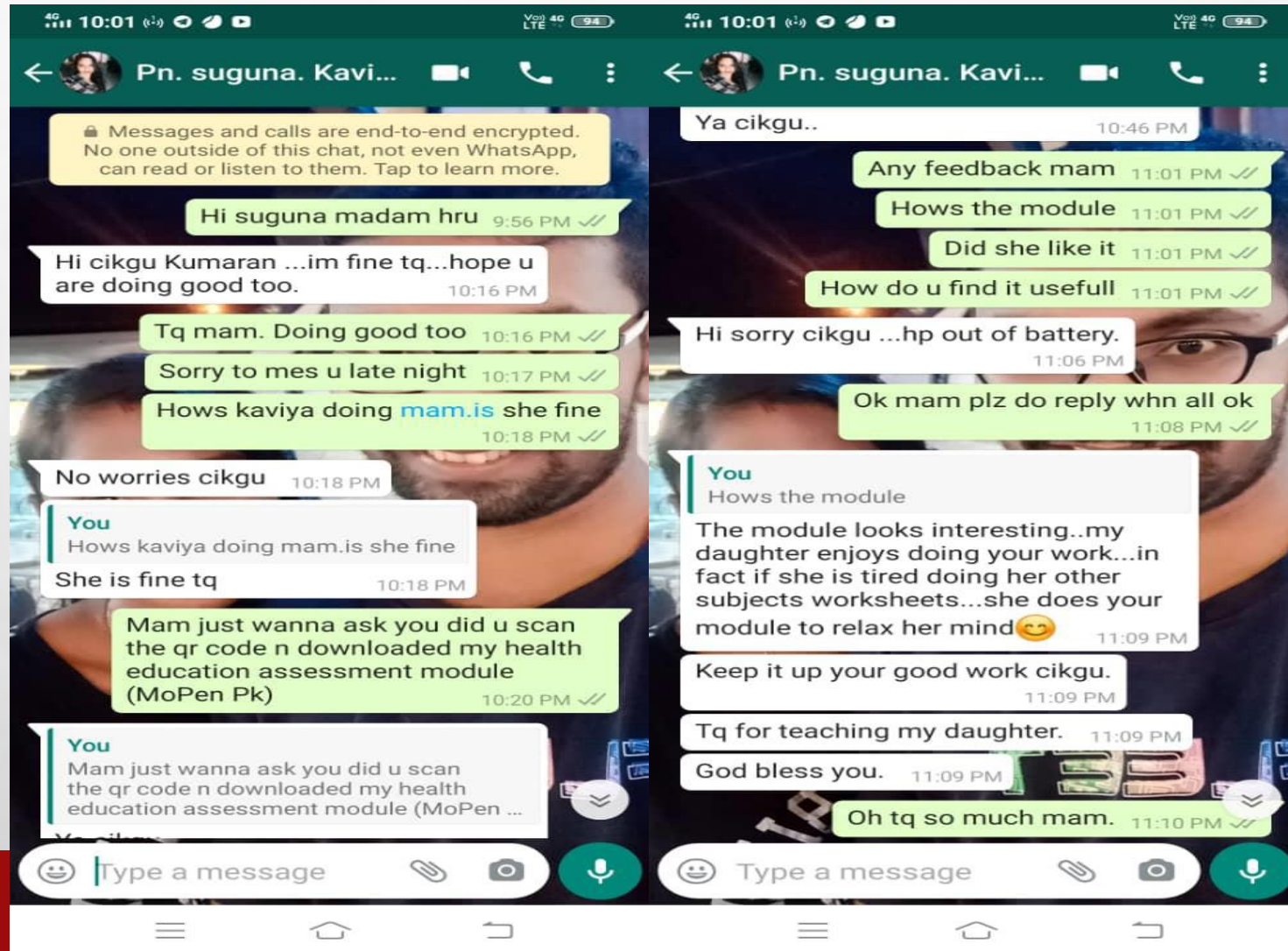
The semi-structured interview has transcribed in Malay Language and codes for the theme of the interview has been generated.

SEMI-STRUCTURED INTERVIEW WITH MODULE OPERATOR (TEACHER)

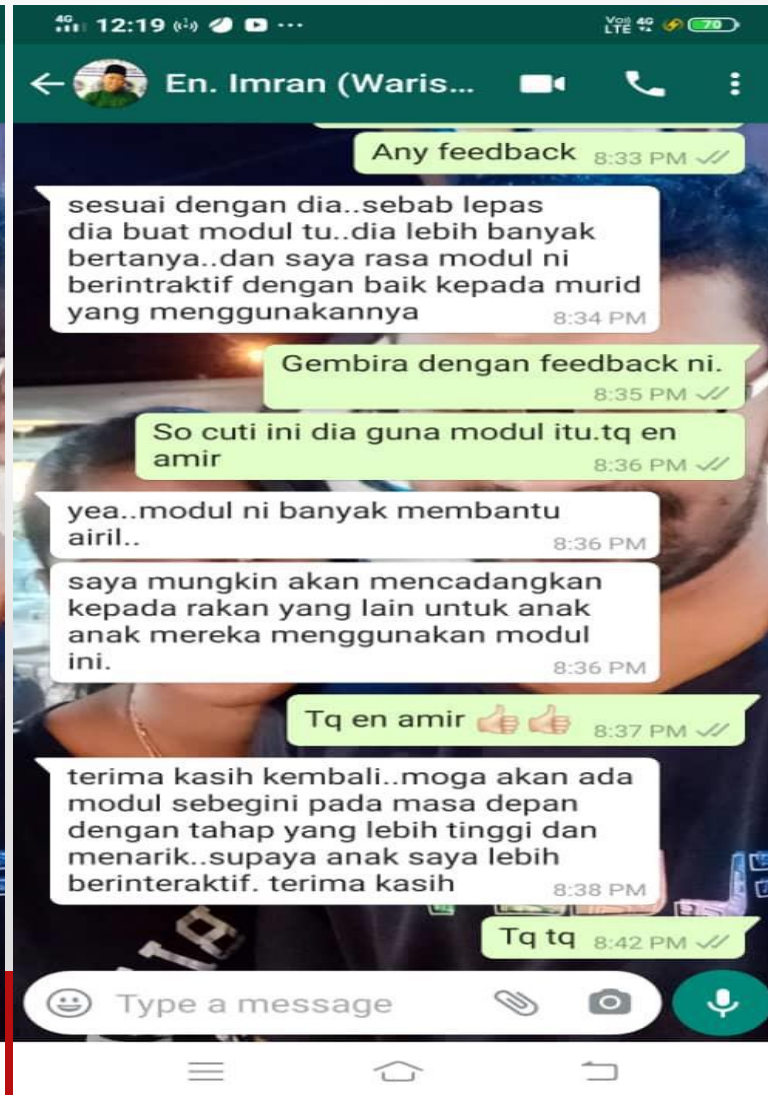
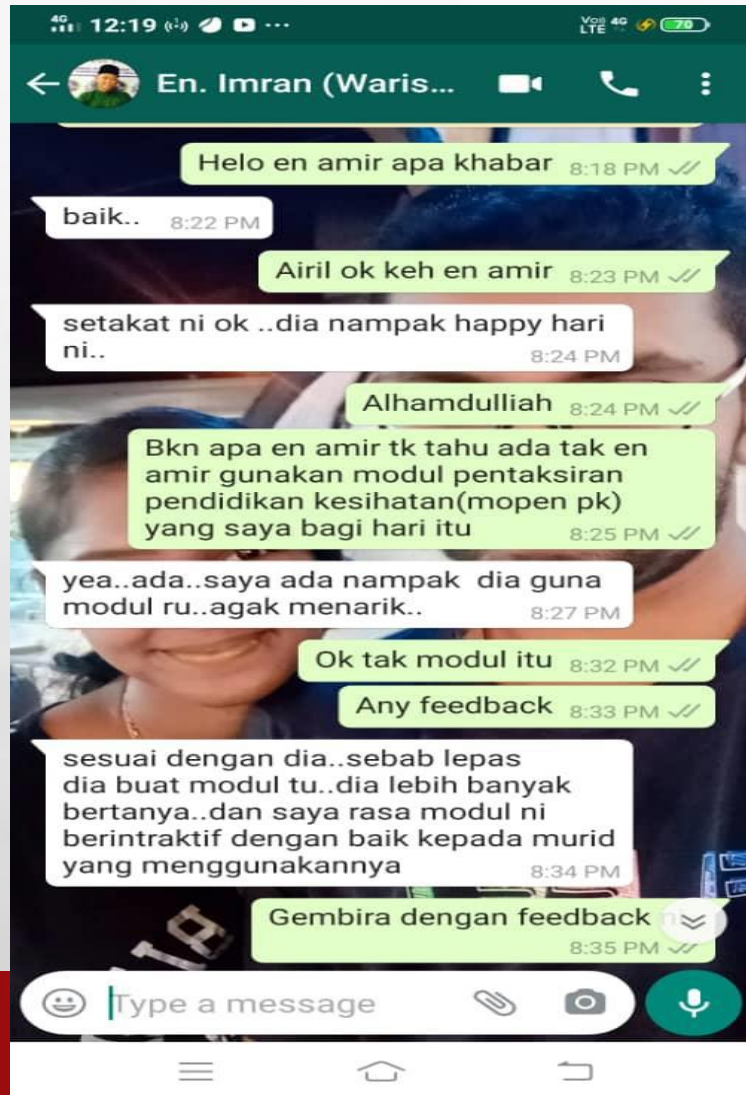


BENEFIT'S TO PARENT'S

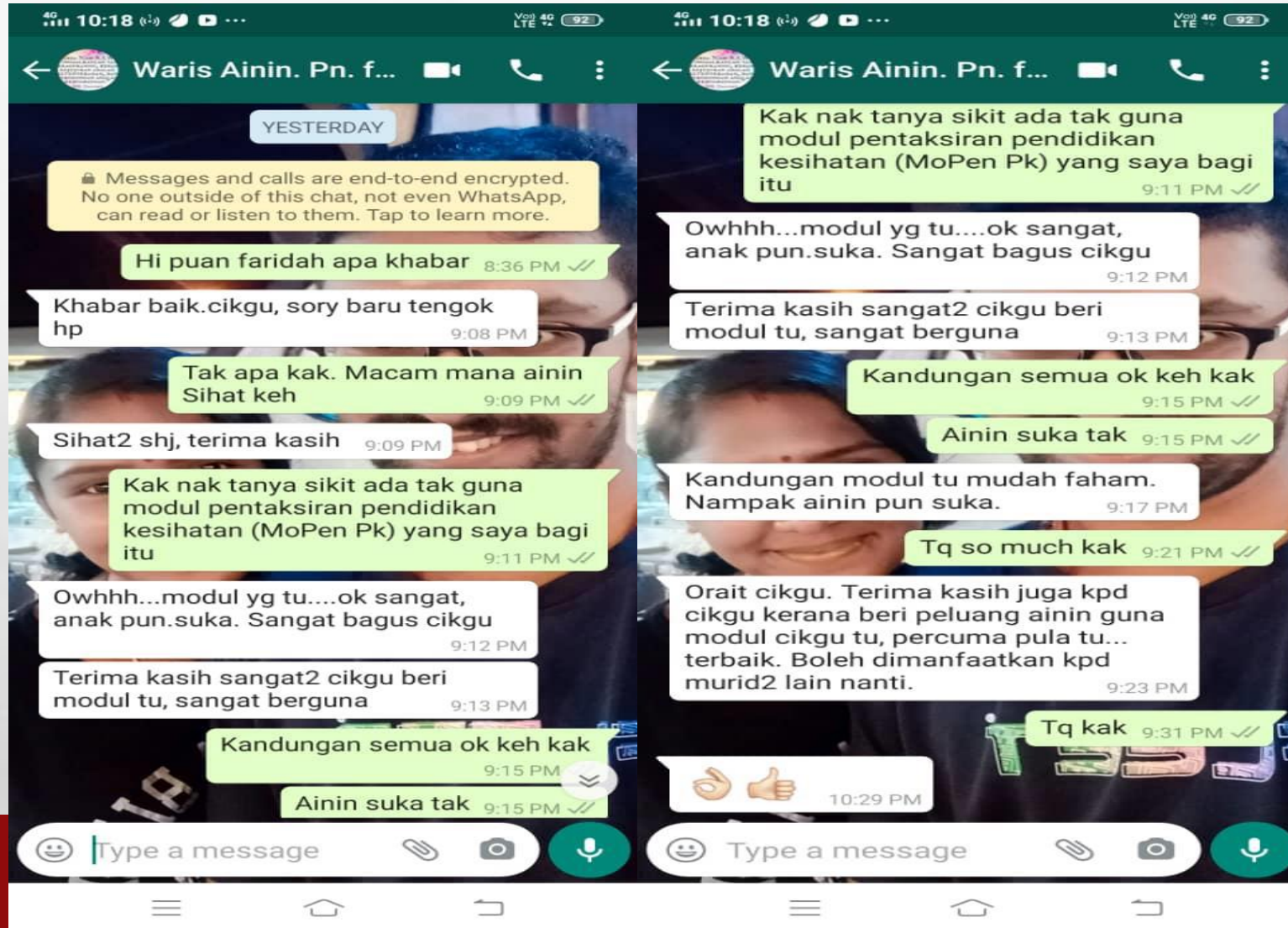
PARENT TESTIMONIALS



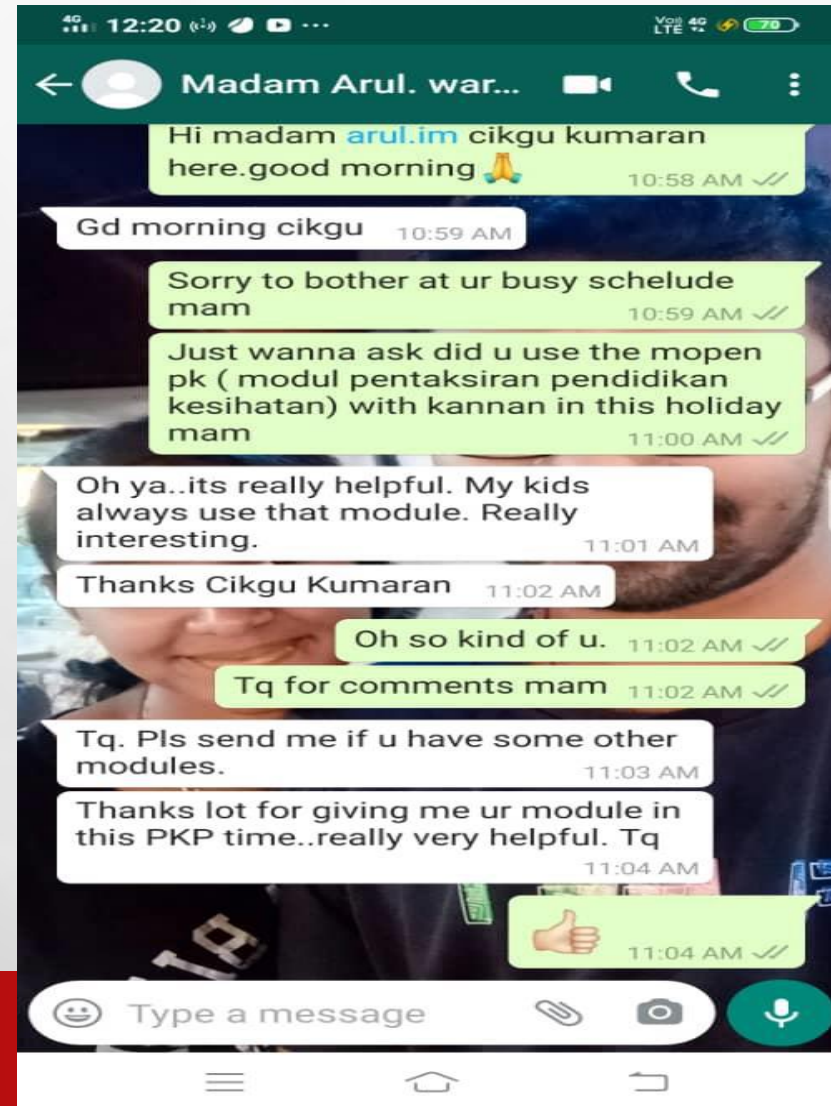
PARENT TESTIMONIALS



PARENT TESTIMONIALS



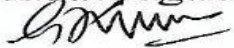
PARENT TESTIMONIALS



CONFIRMATION OF ORIGINALITY

COMMENTS OF HEADMASTER AND MOPEN PK OPERATOR (TEACHER)

Tandatangan Peserta



Kumaran Gengatharan

Tandatangan Guru Besar



CHE ROSLI BIN IBRAHIM
Guru Besar
Sekolah Kebangsaan Bedong
08100 Bedong, Kedah Darul Amair

Cop Sekolah



Komen Guru Besar:

Modul ini telah dibekalkan oleh saya & ruffin dan
sesuai untuk murid tahun 1 subjek pendidikan
kelekitan.


Komen Guru Pengendali Modul:

Mopen PK ini sangat sesuai untuk melaksanakan
PBB (Pembelajaran Berstruktur) dan amat sesuai
untuk murid-murid tahun 1.

COST EFFECTIVENESS

- It took 6 months to complete the MoPen-PK.
- Cost to design and develop MoPen-PK - RM 300.
- Can be used as softcopy (QR) and hardcopy.
- QR Code is provided so that teachers can access MoPen PK anywhere and anytime
- Innovator want to commercialise the MoPen-PK for **RM 10**.
- Innovator still ask for quotation from book shops and publishers to know the market prize of MoPen- PK.
- Quatation from publishers shows that MoPen- PK can be **sold up to 9 to 12 ringgit**

COMMERCIALIZATION POTENTIAL



**MULTI EDUCATIONAL
BOOK ENTERPRISE**

To,
Mr.Kumaran Gengatharan 11/01/2021

REF: QUOTATION FOR PRINTING

We have great pleasure in submitting our best quotation for your kind attention.

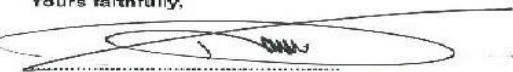
1. Title: Modul Pentaksiran Pendidikan Kesihatan (MoPen-PK)


Size:	A4
Pages:	64 pages
Paper:	Simili 80gsm
Text Printing:	4 color x 4 color
Cover:	Art Card 230gsm
Cover Printing:	4 color
Binding:	Perfect Binding
Quantity:	15,000 copies
Price:	RM8.00 per copy

Propose of selling price: RM12.00 per copy

We hope our price is competitive and we assure you for our quality printing and services at all times.

Thank You,
Yours faithfully,


(MOHAN PALANIANDY)
SOLE PROPRIETOR



No. 22A-2, Jalan PJS 8/4, Mentari Business Park, Bandar Sunway, 46150 Petaling Jaya.
Tel : 03 5636 2568 Fax : 03 5636 0825

**MULTI EDUCATIONAL BOOK
ENTERPRISE**
(PUBLISHERS OF TEXT BOOKS
AND EXERCISE BOOKS) –
PROPOSED PRICE MoPen PK =
RM 12

COMMERCIALIZATION POTENTIAL



SASBADI SDN. BHD. (199288-K)
Lot 12, Jalan Teknologi 3/4,
Taman Sains Selangor 1,
Kota Damansara,
47810 Petaling Jaya,
Selangor Darul Ehsan, Malaysia.
Tel: +603 6145 1188
Fax: +603 6145 1199
Website: www.sasbadi.com
Email: enquiry@sasbadi.com

Tarikh: 30 Disember 2020

Encik Kumaran Gengatharan
Sekolah Kebangsaan Bedong,
08100 Bedong,
Kedah.

Tuan

SEBUT HARGA UNTUK MODUL PENTAKSIRAN PENDIDIKAN KESIHATAN (MOPEN PK)

Dengan segala hormatnya, saya merujuk perkara di atas.

2. Pertama sekali, pihak kami ingin berterima kasih kerana memilih syarikat kami untuk menerbitkan bahan tulisan anda yang bertajuk **MODUL PENTAKSIRAN PENDIDIKAN KESIHATAN (MOPEN PK)**.

3. Pihak kami telah mengambil keputusan untuk memberikan sebut harga ini berdasarkan spesifikasi yang terdapat pada bahan yang anda telah hantar kepada pihak kami. Spesifikasi buku anda seperti berikut:

Bil. muka surat	: 50 Muka surat
Jenis cover	: Keras (Muka hadapan), Sederhana Nipis (Halaman dalam)
Saiz	: A4 (80gm)
Jenis	: Penuh Berwarna
Bil. cetakan	: 1000
Jenis binding	: Binding Penuh (Perfect Binding)

4. Kos untuk mencetak satu modul tersebut sebagai buku latihan anggaran dalam tujuh ringgit (RM 7). Oleh itu kami anggarkan modul tersebut boleh dijual untuk harga **Sembilan Ringgit Lima Puluh Sen (RM9.50)** di Semenanjung Malaysia dan **Sebelas Ringgit Lima Puluh Sen (RM 11.50)** di Sabah dan Sarawak.

5. Akhir kata, kami berharap untuk bekerjasama dengan anda dalam menerbitkan modul tersebut.

Sekian, terima kasih

(HO CHIN SIEW)
Pdtor Pengurusan Eksekutif

SASBADI SDN BHD
(PUBLISHERS OF WORK AND EXERCISE BOOKS) –
PROPOSED PRICE MoPen PK =
RM 9.50 (SEMANANJUNG) &
RM 11.50 (SABAH & SARAWAK)

COMMERCIALIZATION POTENTIAL

GYK TOP CHOICES ENTERPRISE
26 Jalan Putra Bahagia 8/2P Putra Heights
47650 Subang Jaya Selangor
Tel/Fax: 03 5103 7150 Mobile: 012 686 7205

Dr Norzalina Bt Noor
Pusat Bahasa Moden dan Pengajian Umum,
Universiti Pendidikan Sultan Idris,
35900 Tanjong Malim, Perak

Date: 11 Jan 2020

QUOTATION

Modul Pentaksiran Pendidikan Kesihatan (MoPen PK)

Description	Quantity	Price/copy	Amount
Extent: 54 pages + 4 pp Cover Size: A4 Printing: Cover and Text: 4C Material: Cover: 230 gsm art card + gross lamination Text: 80 gsm simili Binding: Perfect	500	RM12.30	RM6150
Harga Cadangan	1	RM13.90	
Total			RM6150

Thank you.



Director

GYK TOP CHOICES ENTERPRISE
(PUBLISHERS OF WORK AND
EXERCISE BOOKS) –
PROPOSED PRICE MoPen PK) –
HARGA CADANGAN MoPen PK =
RM 13.90

QR CODE (ICT USE IR 4.0)

FOR ANDROID & iOS
USER



FOR WINDOWS & macOS
USER

CONFERENCE

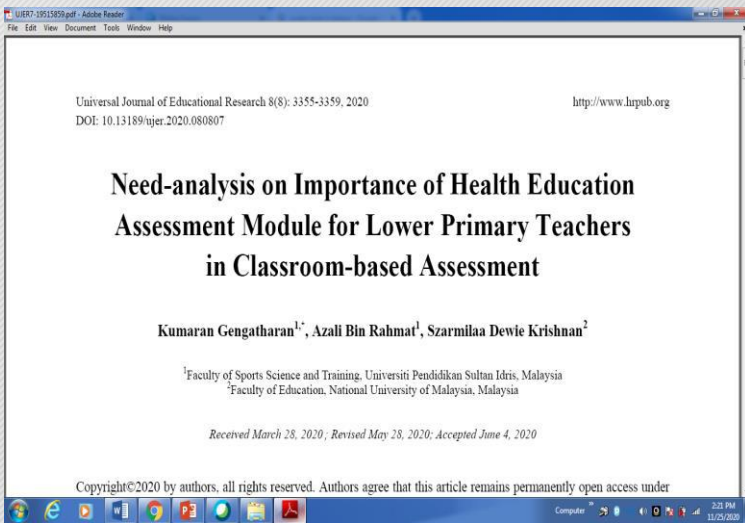


Presentation related to **MoPen PK Methodology** (DDR) at The 2nd International Seminar and Innovation Competition on Physical Education and Sport UPSI, TSU & UNY 2019

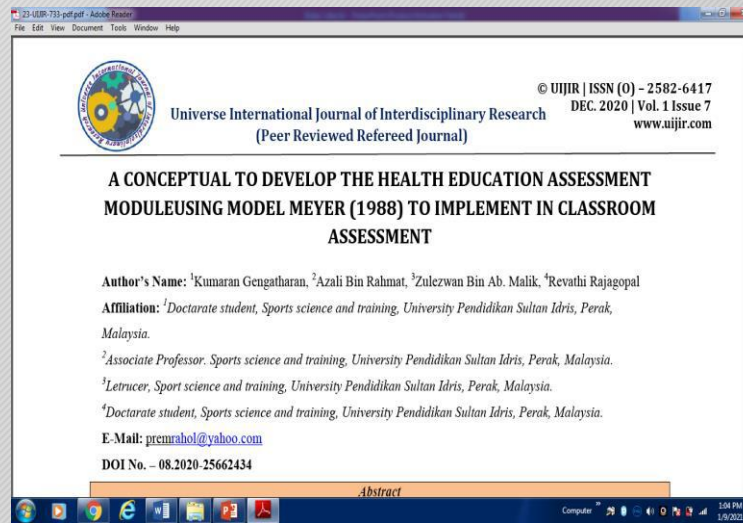


Presentation related to **MoPen PK development phase** at International E-Conference Sport Science, Physical Education & Health 2020

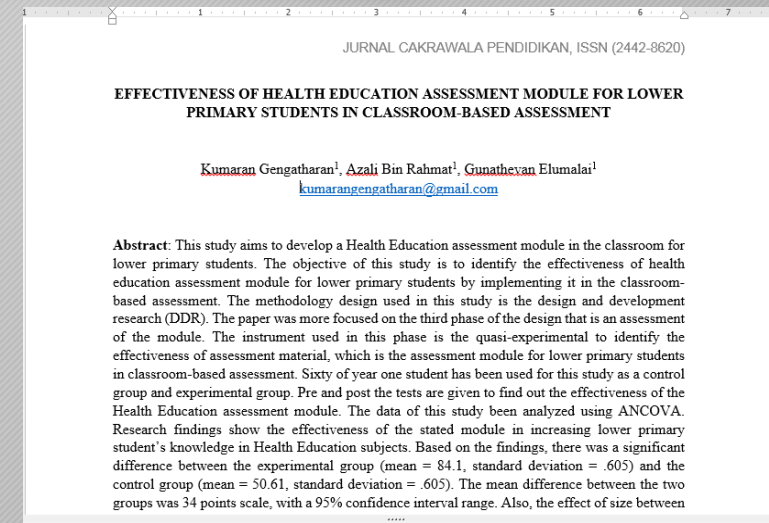
PUBLICATION



The publication of **SCOPUS** is related to the Need Analysis phase of MoPen PK



The publication is related to the development phase of MoPen PK



The publication of **SCOPUS** is related to the Evaluation phase of MoPen PK (On Progress)

WINNING OF MOPEN-PK



MoPen-PK won **DIAMOND (BEST IN STUDENTS CATEGORY)**
in 5th International Innovation, Design And Articulation (I-Idea) 2021

MoPen-PK won **GOLD**
in 5th International Innovation, Design And Articulation (I-Idea) 2021

WINNING OF MOPEN-PK



MoPen-PK won **BEST AWARD (BEST IN EDUCATION CLUSTER)** in International Innovation Arsvot Malaysia (IAM 2021)

MoPen-PK won **GOLD** in International Innovation Arsvot Malaysia (IAM 2021)

WINNING OF MOPEN-PK



MoPen-PK Won **THE MOST OUTSTANDING AWARD** In International Digital Innovation and Invention Challenge 2021



MoPen-PK Won **GOLD** In International Digital Innovation and Invention Challenge 2021

WINNING OF MOPEN-PK



MoPen-PK Won **THE MOST LIKED VIRTUAL PRESENTATION ON YOUTUBE AWARD** In International Multidisciplinary Innovation Competition 2021

MoPen-PK Won **GOLD** In International Multidisciplinary Innovation Competition 2021

WINNING OF MOPEN-PK



MoPen-PK Won **GOLD** In Inspire To Innovate International Innovation Competition (i2i) 2021



MoPen-PK won **GOLD** in National Seminar Penyelidikan dan Inovasi Pendidikan 2021

MoPen-PK won **GOLD** in National Innovation Competition of Education & Technology 2020

AWARD'S FOR MOPEN-PK



PERKAM AWARD
FOR
OUTSTANDING CREATIVITY
AND NOVELTY OF
MOPEN PK

AWARD'S FOR MOPEN-PK



**YOUNG DESIGNER AWARD
(ANUGERAH PEREKA CIPTA
MUDA)
FOR CREATING MOPEN PK**

AWARD'S FOR AUTHOR



BEST PRESENTER AWARD TO
PRESENT THE IMPORTANCE
AND SPECIALITY OF MOPEN
PK IN INTERNATIONAL
INNOVATION COMPETITION

AWARD'S FOR AUTHOR

InSc Awards 2020

Connecting Scholars Since 2014

Institute of Scholars

An ISO 9001:2015 certified Institute by International Accurate Certification, Accredited by UASL

Bringing ideas into reality.....



Certificate

Young Researcher Award 2020


awarded to

Kumaran Gengatharan

Master in Education (Sports Science), Ph.D Pursuing
Doctorate Student
Department of Sport Science and Coaching,
University Pendidikan Sultan IDRIS (UPS),
Perak, Malaysia

For the work with following details:

Publication Type: Journal
Paper Title: Need-Analysis on Importance of Health Education Assessment
Module for Lower Primary Teachers in Classroom-Based Assessment
Journal Name: Universal Journal of Educational Research
Volume: 8
Issue No. : 8
Month of Publication: June
Year: 2020
Page No. : 3355-3359
ISSN: 2332-3213


Nanjesh Bennur
Director, InSc

YOUNG RESEARCHER AWARD
FOR WRITING RELATED TO
NEED ANALYSIS OF MOPEN
PK

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PERBADANAN HARTA INTELEK MALAYSIA
Intellectual Property Corporation of Malaysia

Payment Slip

Application Number:	LY2021000050
Application for:	CR-1: NOTIFICATION OF WORKS
Title of Work:	Modul Pentaksiran Pendidikan Kesihatan (MoPen-PK)
Type of Work:	LITERARY
Filing Date:	08/01/2021
Applicant Name:	KUMARAN A/L GENGATHARAN
Work Deposit Type:	Document
No of Pages:	50
Copyright Work Fee (RM):	30
CR-1 Fee (RM):	15
Total (RM):	45



**No MyIpo :
LY2021000050**



CONCLUSION

MoPen PK is an innovation in the form of assessment for the subject of Health Education which, comprehensive and covers the elements of PAK21, KBAT, TMK and Didik Hibur is a package that can help teachers strengthen the classroom assessment process in schools that will determine the future of children this country.

APPRECIATION

ASSOC.PROF AZALI BIN RAHMAT.

DR. ZULEZWAN BIN AB. MALIK.

ASSOC.PROF GUNATHEVAN ELUMALAI.

STUDENTS AFFAIR DEPARTMENT, UNIVERSITI PENDIDIKAN
SULTAN IDRIS, PERAK.

MALAYSIA INNOVATION, INVENTION AND CREATIVITY
ASSOCIATION.

MALAYSIA MINISTRY OF EDUCATION.