DUAL LANGUAGE PROGRAMME (DLP) AND ENGLISH FOR TEACHING MATHEMATICS AND SCIENCE (PPSMI)

DR. ASHAIRI SULIMAN

SARAWAK STATE EDUCATION DEPARTMENT

Policies tend to be made in haste and on ad hoc basis, without democratic debates involving many interest groups

(Sufean 2007)

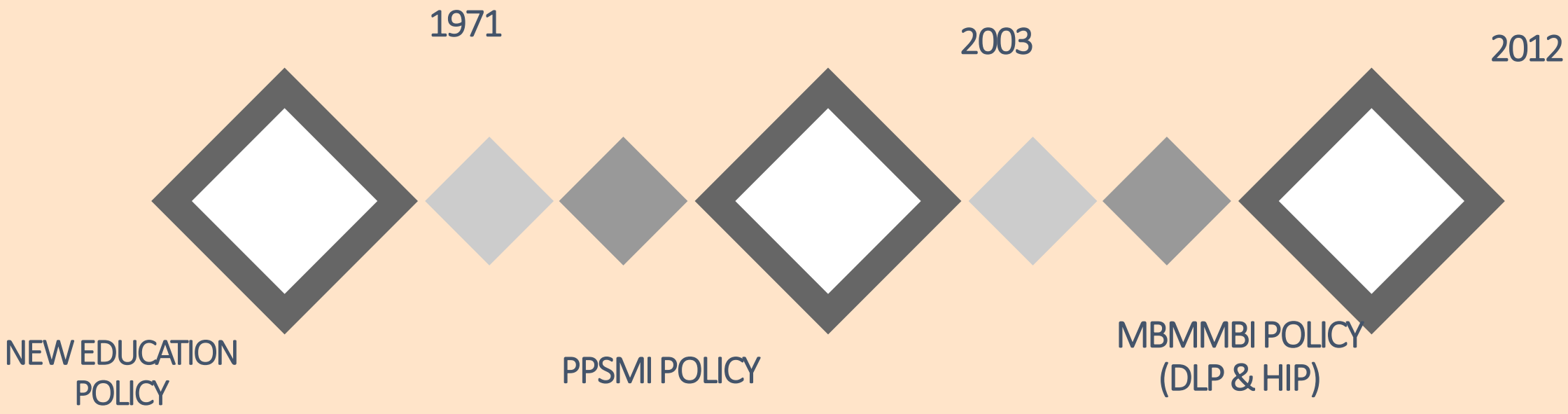
Malaysia has long adopted the top-down approach in its educational reform and this has led to an array of issues and inconsistency in the implementation

(Hwa 2017; Radzuwan, Shireena Basree & Kamariah 2017; Tagg 2016; Tee & Samuel 2017; Yusof, Hazri & Abdul Rashid 2012)

Malaysia language policies have been criticised due to minimal consideration input from the end-users besides less communication between the governments and the public

(Albury 2019; Kaplan 2001; Raduzwan, Shireena & Kamariah 2017)

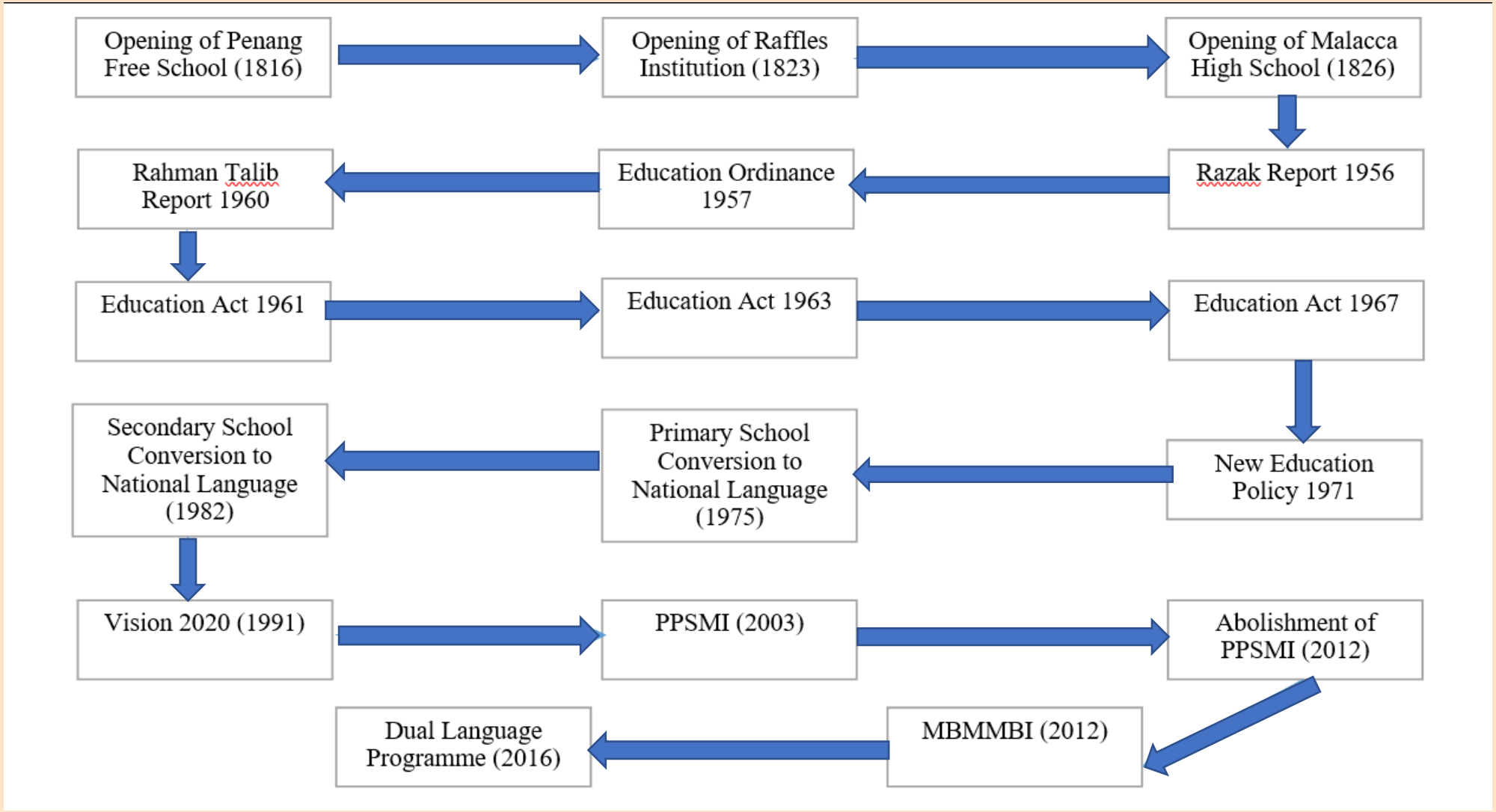
TO RECALL...



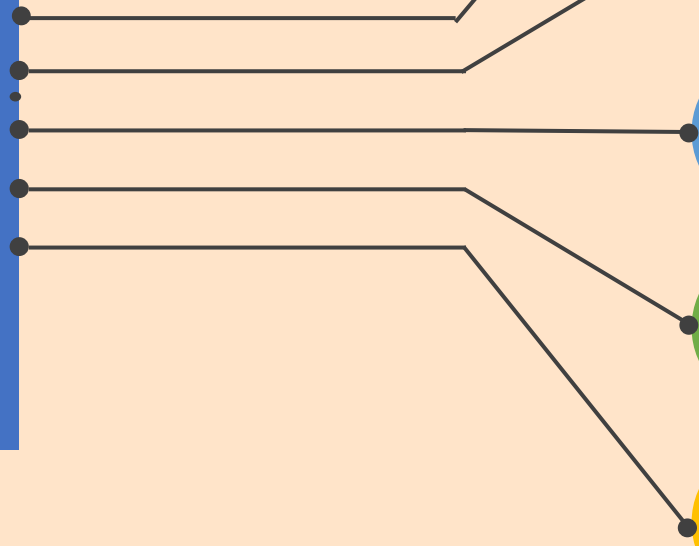
Medium of instruction is ubiquitous worldwide attracting a great deal of attention in language policy and planning as well as schooling system and becomes a top-down phenomenon introduced by policy makers and education managers

(Belhiah & Elhami 2015; Dearden 2014; Din & Wing 2007; Tollefson & Tsui 2018)

A GLIMPSE OF THE PAST



ENGLISH FOR TEACHING MATHEMATICS AND SCIENCE (PPSMI)



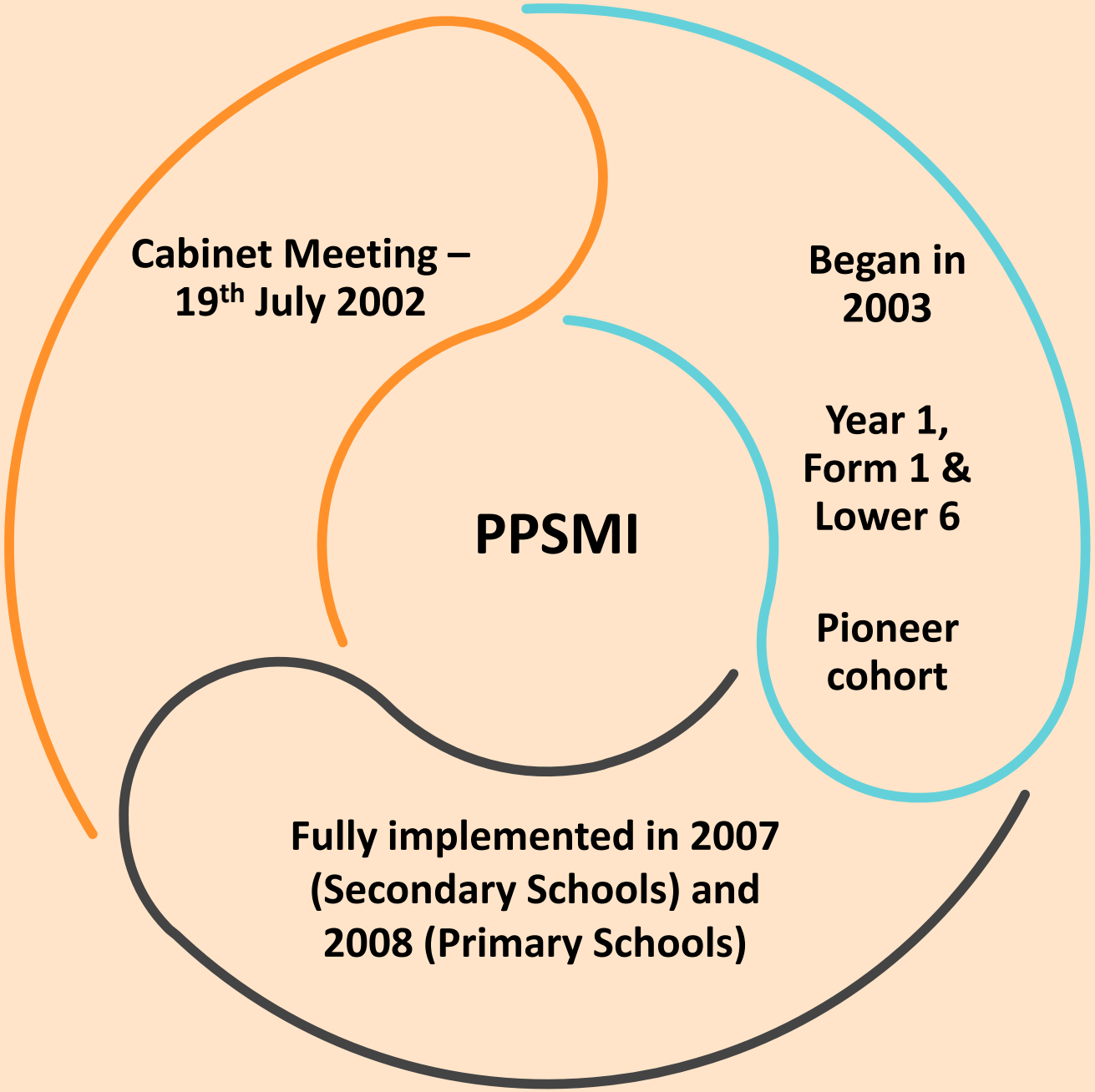
01 **Concern about the impact of globalisation – mastering English**

02 **Reformation is needed – Vision 2020**

03 **Obligate teaching in English from primary one to form six**

04 **The move is essential for economic and technological development**

05 **English is an important prerequisite in becoming a developed nation**



RM5 billion allocation ~ for teaching training, providing launching grants for schools as well as for educational aids which would include ICT equipment

RM978.7 million was spent in 2003 to purchase notebook computers, LCD projectors and other related equipment.

Textbook Division ~ Science and Mathematics textbook packages, Science and Mathematics glossaries, textbook, exercise and activity book, the pupils' CD-ROM (MyCD), the teachers' CD-ROM, the teachers' guide and Science practical book

WHY ENGLISH?

Enable students to acquire proficiency in English as second language is most successfully acquired when there is opportunity to engage in meaningful use of that language

Ong & Tan (2008); Munir (2008)

Using English in science and technology would enhance and facilitate the acquisition and access to science and technology more rapidly

Imran Ho & Muhammad Yahya (2006)

English as a strong second language and the international language of communication and mastery of it facilitates the acquisition of knowledge in these fields

Sharifah Maimunah (2002); Textbook Division (2008)

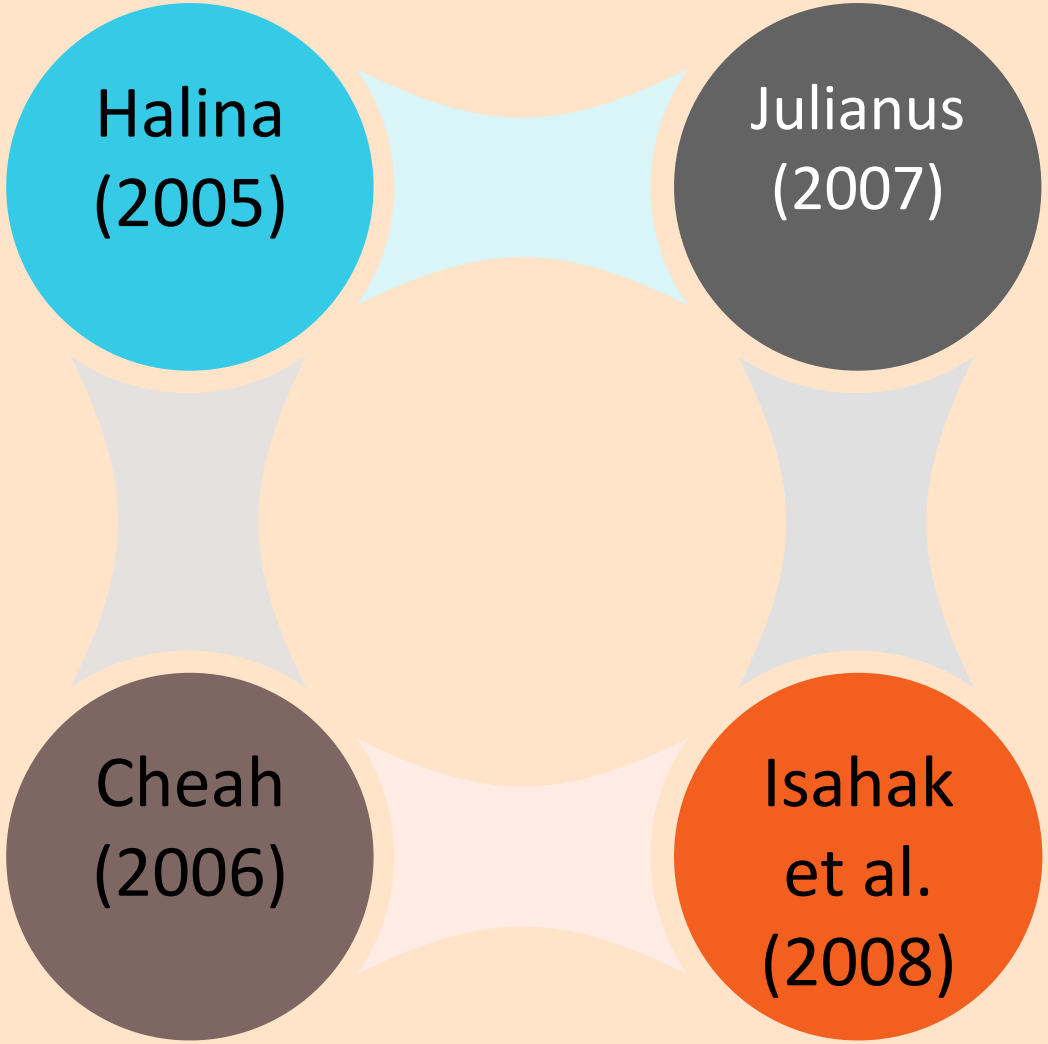
Enabling students to be able to collect information in Science and Technology which is written in English in order to keep pace with the latest development in Science and Technology.

Maznah & Zurida (2006)

ISSUES UNVEILED

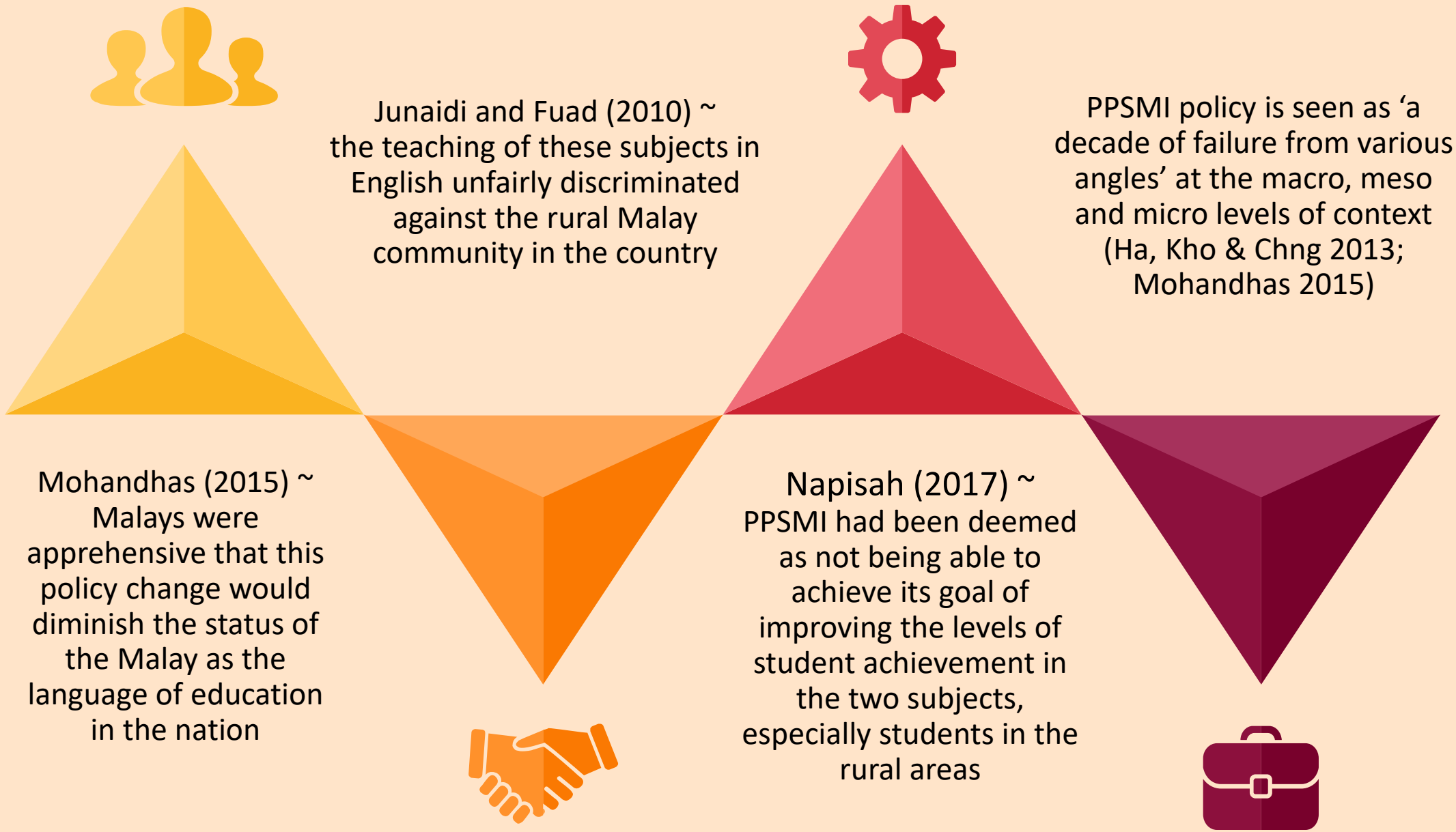
Science and Mathematics teachers faced problems in implementing the teaching of Science and Mathematics in English and one of the problems identified was related to the proficiency of the English language

19 out of 26 teachers said they preferred to teach using Bahasa Melayu because it would be easier for them and also because their students could at least understand what they were trying to teach

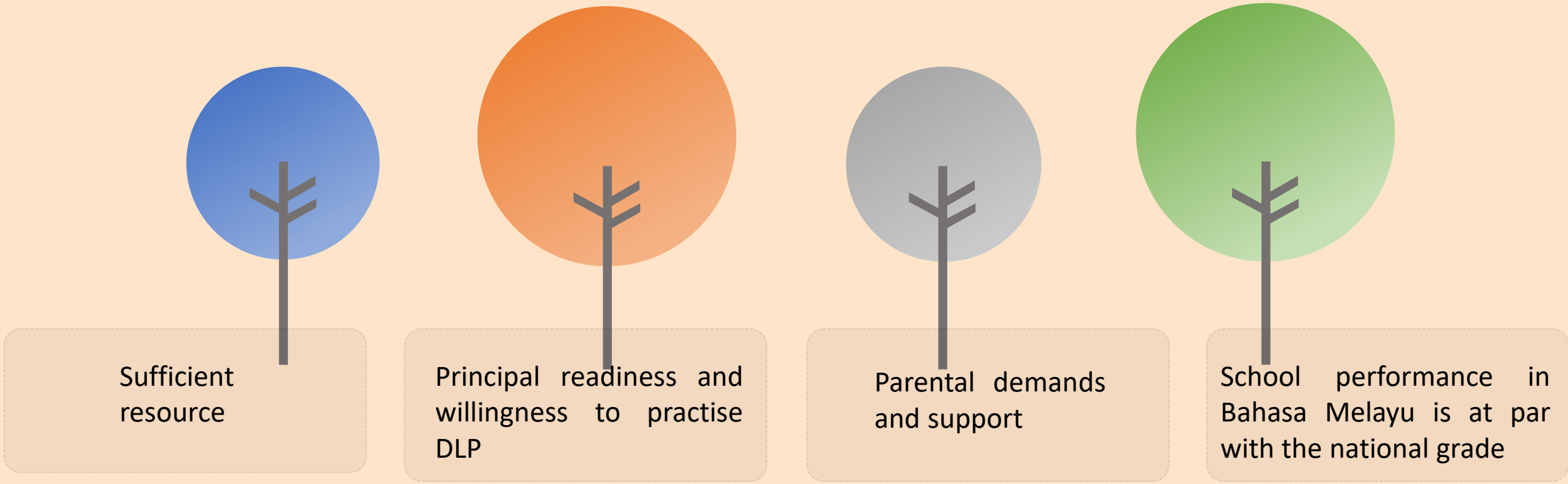


Students' lacking of proficiency in English and limited facilities in implementing PPSMI besides the level of proficiency among the teachers involved also contributed to the difficulties

85% students said their teachers code-switched in teaching the subjects besides an average of more than 80% students expressed that they did not understand Science taught in English, though they had been learning the two subjects since 2003.


Junaidi and Fuad (2010) ~ the teaching of these subjects in English unfairly discriminated against the rural Malay community in the country
PPSMI policy is seen as ‘a decade of failure from various angles’ at the macro, meso and micro levels of context (Ha, Kho & Chng 2013; Mohandhas 2015)
Mohandhas (2015) ~ Malays were apprehensive that this policy change would diminish the status of the Malay as the language of education in the nation
Napisah (2017) ~ PPSMI had been deemed as not being able to achieve its goal of improving the levels of student achievement in the two subjects, especially students in the rural areas

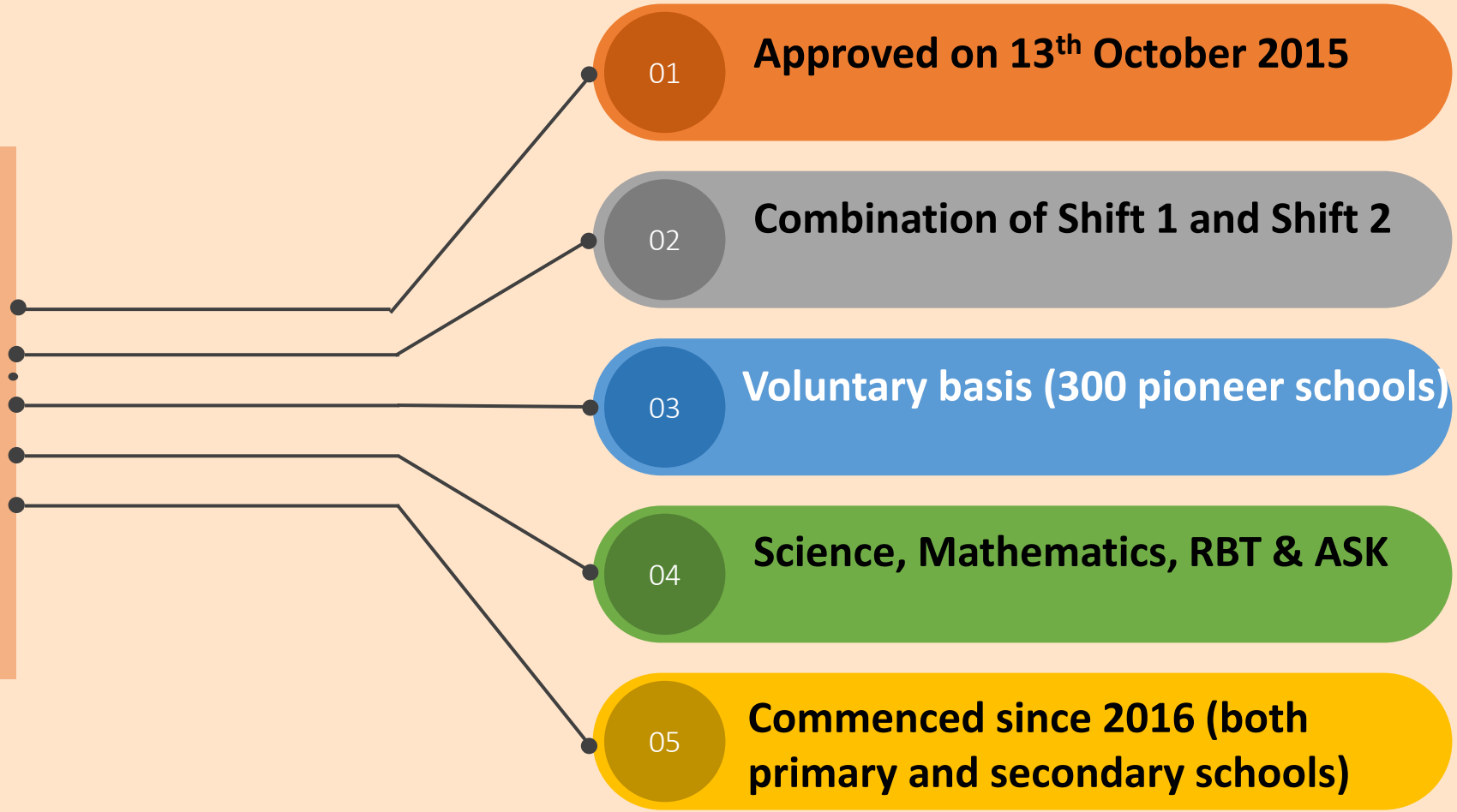
Dual Language Programme



Recognising all educational parties' concern in identifying radical plan to expedite students' English mastery, DLP comes in implementation

(Ministry of Education Malaysia 2017a)

DUAL LANGUAGE PROGRAMME (DLP)

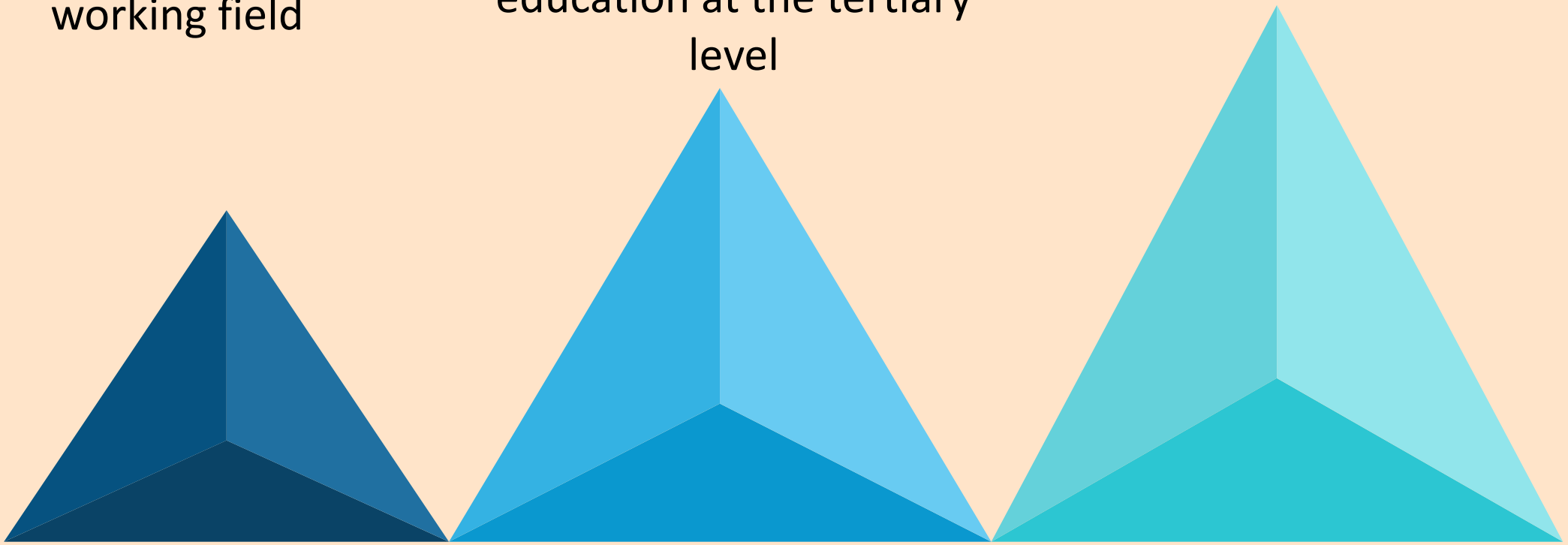


OBJECTIVES

Enabling students to compete globally via the access and knowledge exploration besides to develop students' marketability in the working field

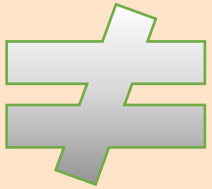
Assisting and capturing students' enthusiasm of science, technology, engineering and mathematics (STEM) education at the tertiary level

Increasing students' contact hours to the English language, that will solidify their command of the target language



BEAR IN MIND…..

DUAL LANGUAGE IN WESTERN CONTEXT



DUAL LANGUAGE IN MALAYSIAN CONTEXT

WHY ENGLISH AGAIN?

Dearden (2014)

English as a medium of instruction is inevitable and becoming a global phenomenon due to its adaptation by all levels of schools around the world

Kershaw (2018)

Mathematics expressions are very much similar between Swedish and English, making it easy for the students to understand

Hu & Gao (2018)

English is made the medium of instruction in the teaching and learning of science-related subjects by many Hong Kong secondary schools

Ihsan (2012); Melor & Saiful (2017)

Students prefer learning science and mathematics in English than the national language it facilitates their understanding better

Tachaiyaphum & Sukying (2017)

English language teaching and learning in Thailand has tried not only to develop English language skills but to also to teach subject matters through the medium of English to serve the demand of the programme

Fernandez-Sanjurjo (2019); Nguyen Danh (2015); Lee, Watt & Frawley (2015); Karabay (2017): Aoyagi et al. (2016)

Teaching and learning of science and mathematics using the English language is also practised in Spain Vietnam, Cambodia, Kazakhstan & Japan

ISSUES RAISED

Hue and cry of nationalists and vernacular schools' proponents (Hazita, 2016)

Resembles PPSMI, an experiment which was proved to be a failure incapable to increase the students' learning in science, mathematics and English (Isahak, 2016)

DLP defeats the Article 152 Federal Constitution and the Education Act 1996 (Zainal Abidin, 2016)

DLP was not planned properly based on an ad-hoc implementation without thorough discussion with the academicians, professionals, language activists, NGOs, principals, teachers and others involved (Abdul Raof, 2016)

Only 50% students were ready to learn science and mathematics in English (Ashairi, Mohamed Yusoff & Melor, 2017a)

ISSUES RAISED

60% students were negative towards learning mathematics in English (Teo & Roslinda, 2017)

Language proficiency as the major challenge in this programme aside from deficiency of provision and assistance (Jessica & Hamidah, 2017)

Teachers' readiness in terms of skill and interest is at the moderate level whereas their knowledge is at the high level (Norhisham, Norazilawati & Noraini, 2018)

DLP teachers were not ready to teach science and mathematics in English as they believed it is different from PPSMI (Nadiah & Melor, 2019)

Teachers were found to be unready in the DLP (Ministry of Education Malaysia, 2017b)

ZOOMING INTO MY OWN RESEARCH

SAMPLE OF THE STUDY

DLP STUDENTS

2162

DLP SN & M3 TEACHERS

435

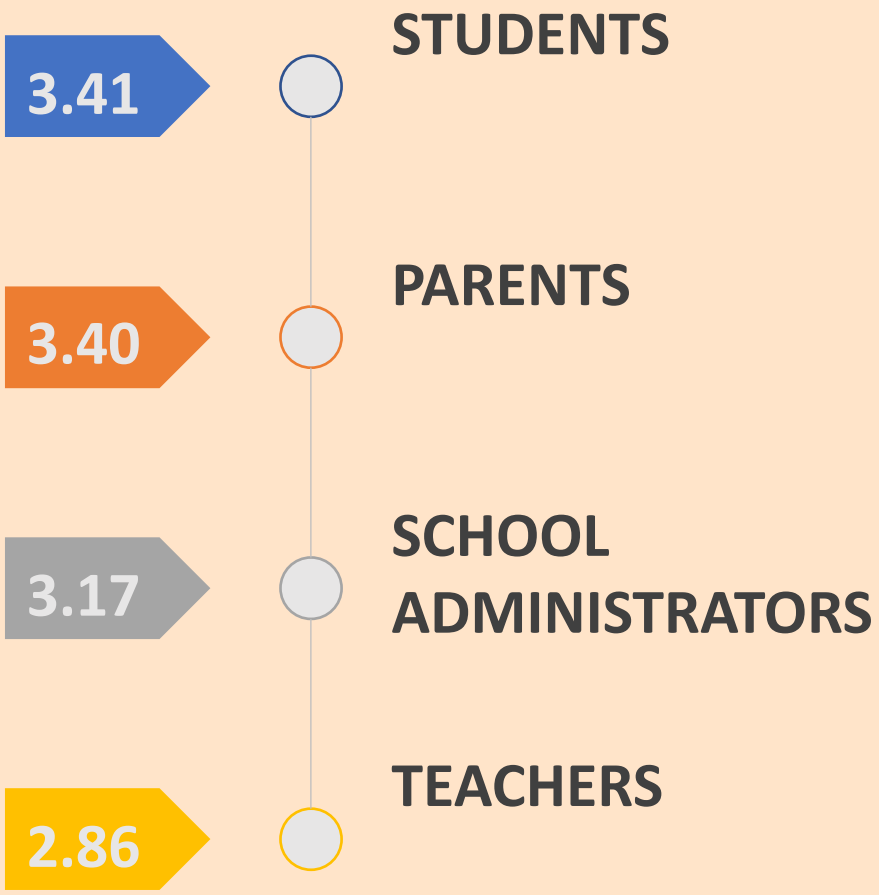
DLP ADMIN

80

DLP PARENTS

768

UNDERSTANDING OF THE PROGRAMME

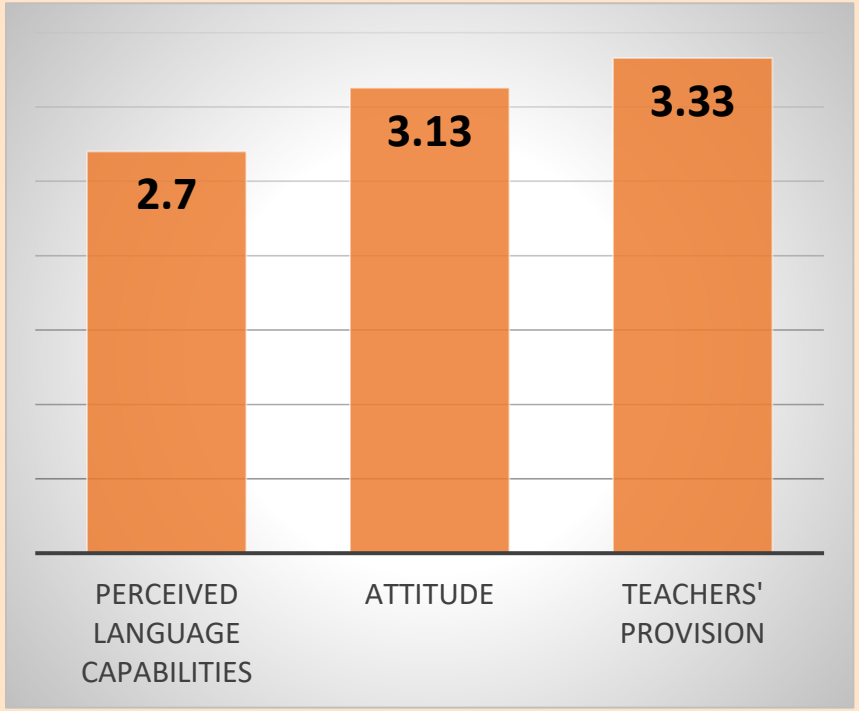


DLP increases the learning interest in Science	
Students	82.1%
Teachers	49.4%
School Administrators	71.3%
Parents	87.2%

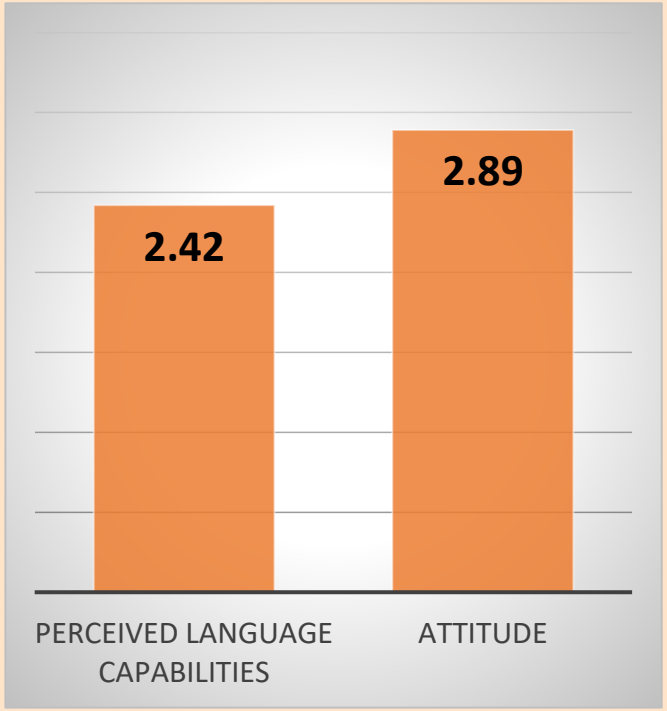
DLP strengthens English mastery	
Students	96.4%
Teachers	79.5%
School Administrators	95.0%
Parents	96.8%

READINESS IN THE PROGRAMME

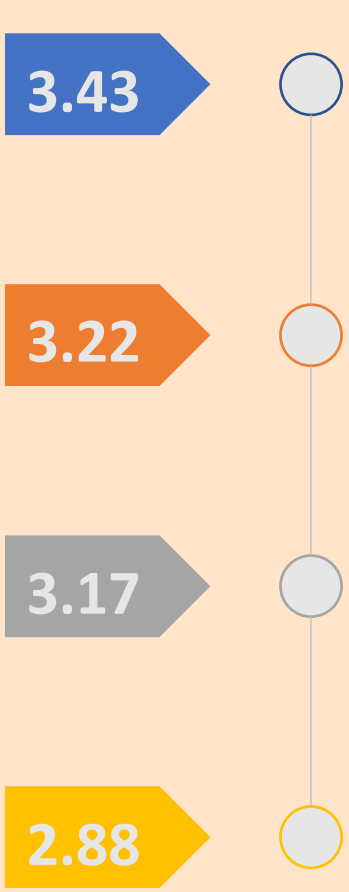
STUDENTS



TEACHERS



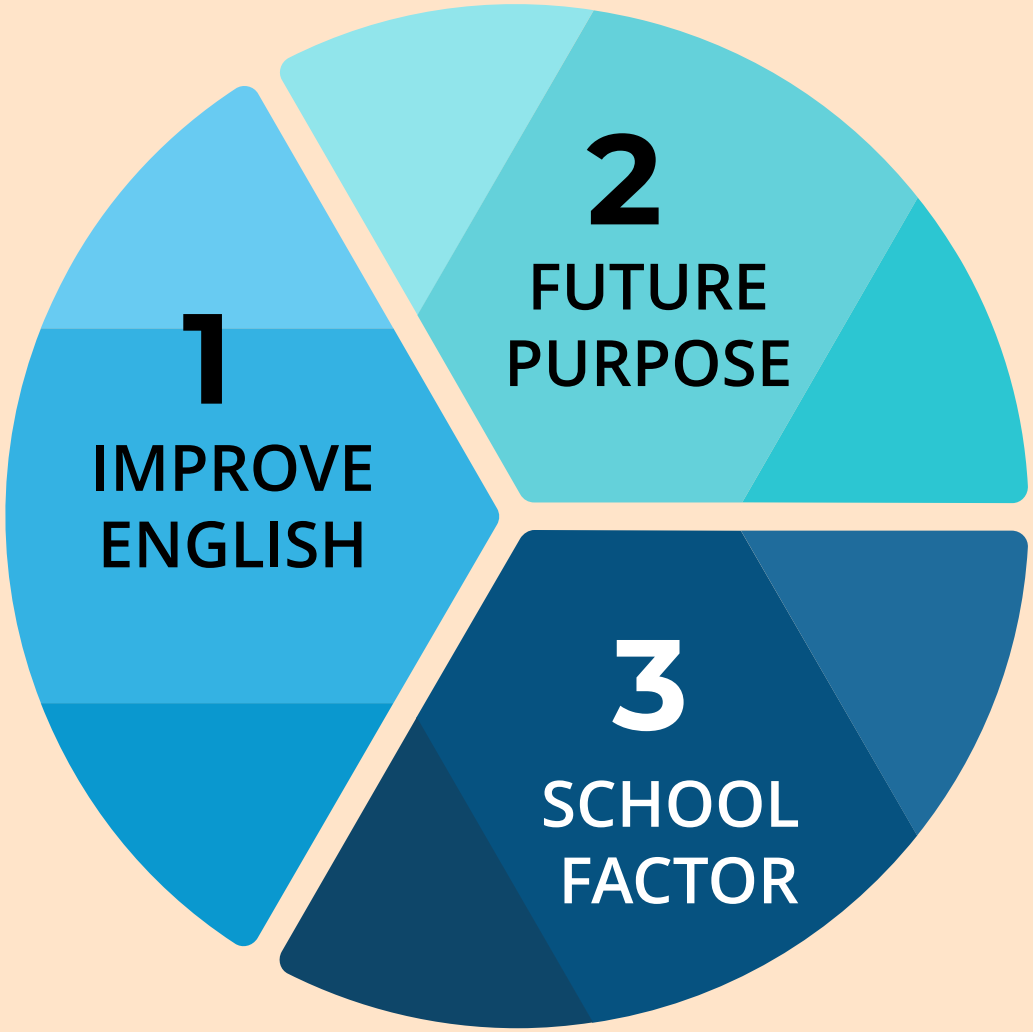
ACCEPTANCE TOWARDS THE PROGRAMME



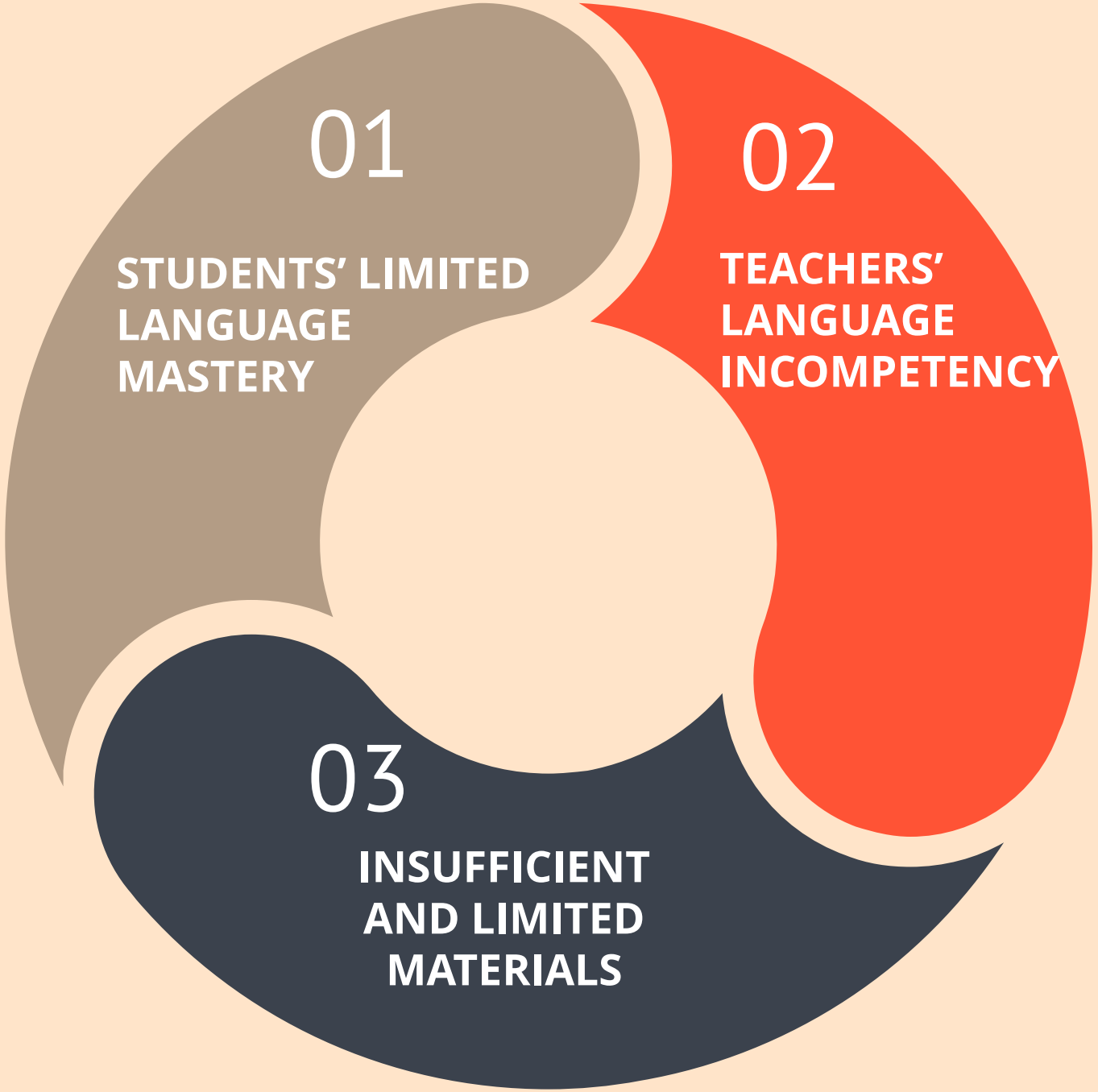
DLP is well received by the interest group	
Students	78.9%
Teachers	57.0%
School Administrators	87.6%
Parents	92.6%

DLP implementation should be continued	
Students	86.9%
Teachers	61.4%
School Administrators	85.0%
Parents	94.1%

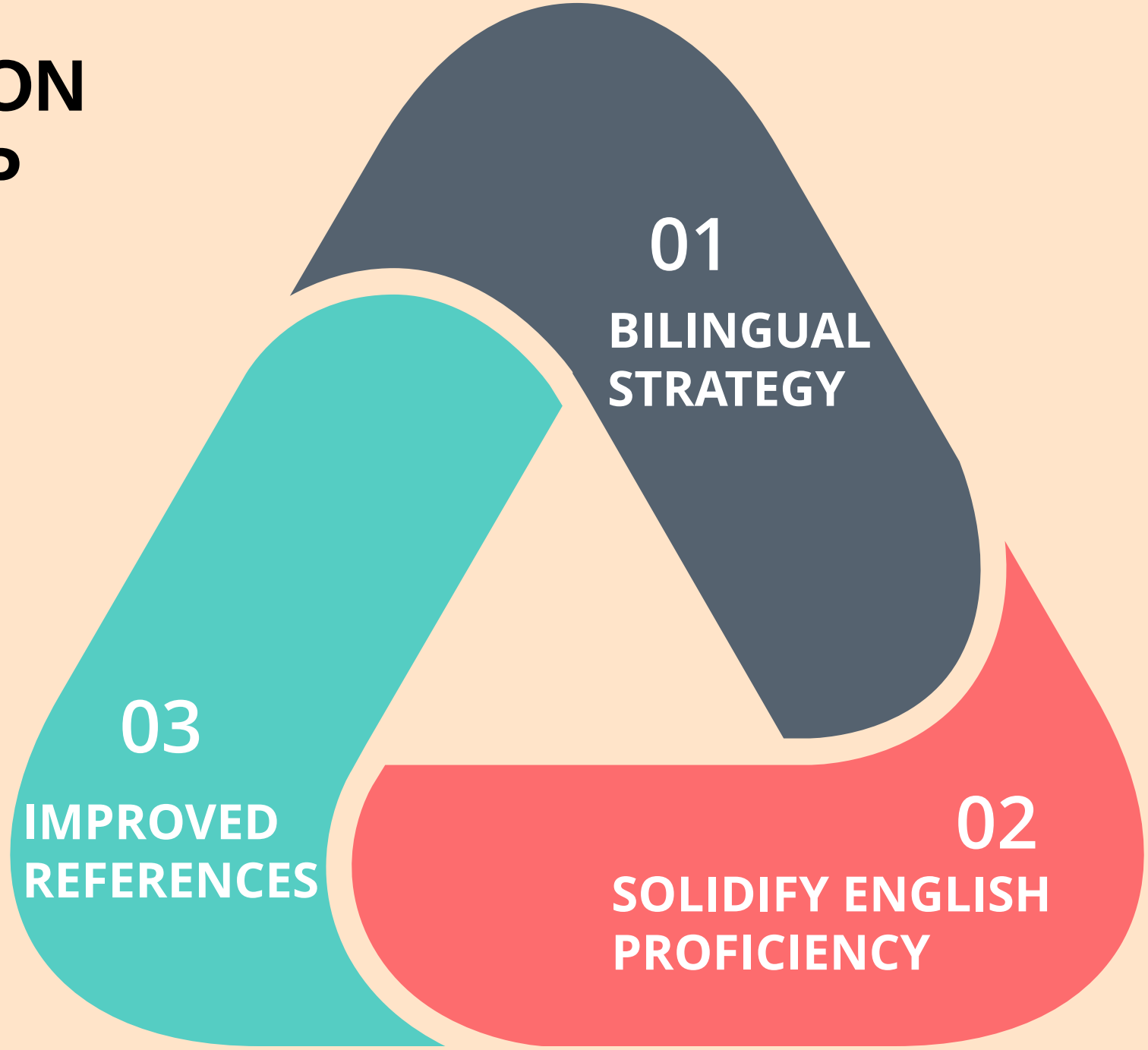
REASONS OF ENROLLING IN DLP



CHALLENGES IN DLP



RECOMMENDATION TO BETTER DLP



Either PPSMI or DLP may valorise the students' standard of English besides it assists their future marketability in the global avenue

Malaysian education policy has to provide diversity within the society of different interests and equip a horizontal stratification

A well implemented DLP provides access to optimal conditions of academic development


Thank
You