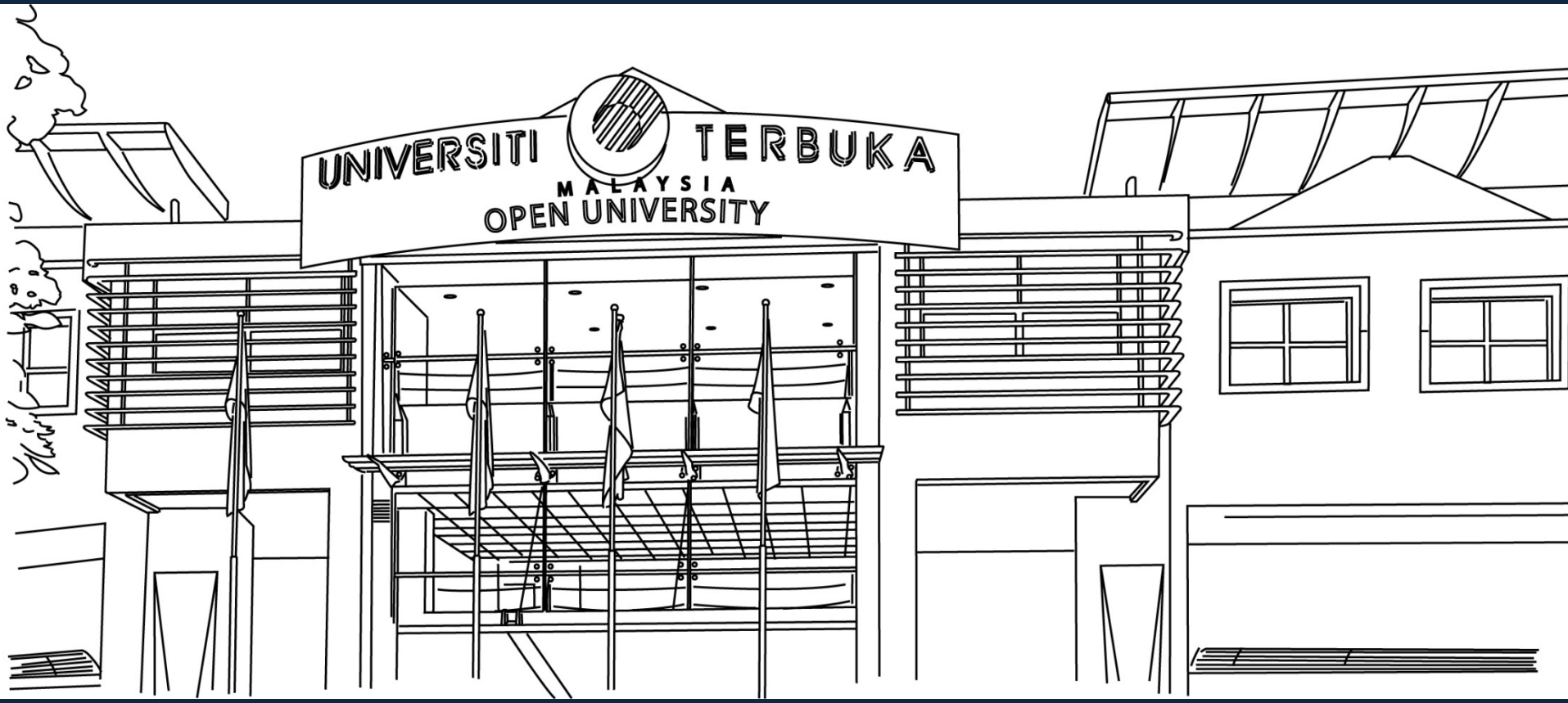
Revisiting Retro-Technology to Extend Educational Opportunity to Teachers in Remote Schools



by:
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Revisiting Retro-Technology to Extend Educational Opportunity to Teachers in Remote Schools

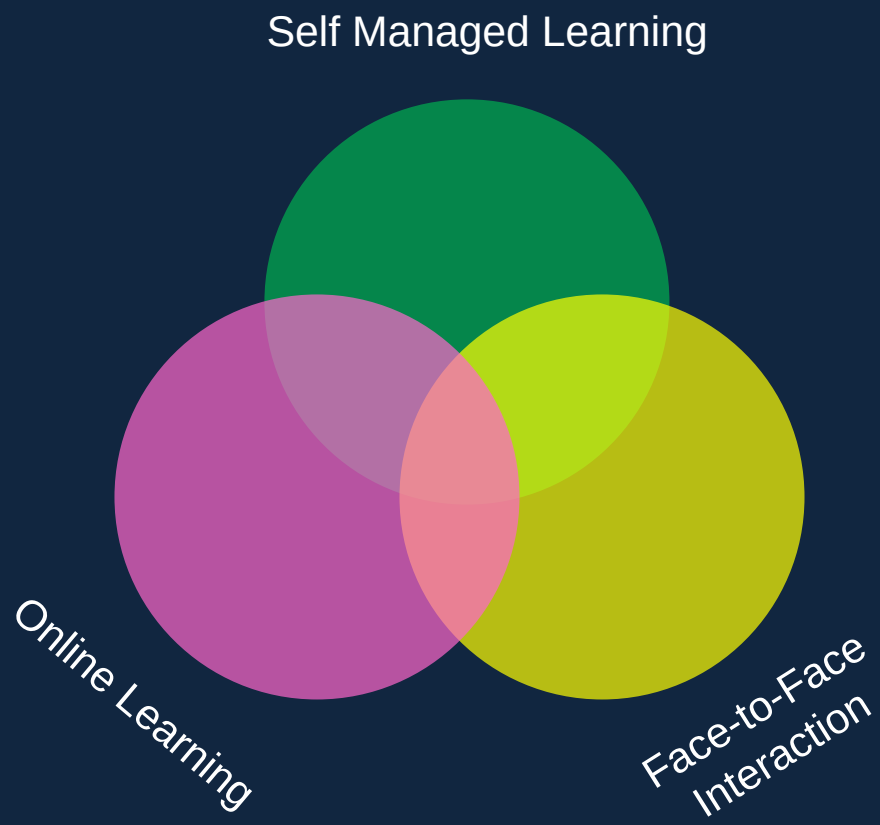
Extension of:
Widad, Othman. (Assoc. Prof) (2008, October 14). **Educational Opportunity for teachers in Remote School Through Open University Malaysia Learning Model.** Paper presented at *The 22nd AAOU Annual Conference, Tianjin, China.*

Objectives:

1.To offer new learning model for ‘pedalaman’ teachers
2.To add value to OUM- BPG SMP (Bachelor of Teaching) Programme
3.To build new capacity for OUM by offering cross-platform learning model.

Background

CURRENT LEARNING MODEL



OUM Blended Learning

The Open and Distance Learning (ODL) mode is used because of its three key characteristics; accessibility, flexibility and learner-centredness:

- Accessibility
  - Accessible to people who cannot attend regular classes due to social, structural or personal reasons.
  - Not limiting: people with disabilities can have access
  - Learning resources adaptable to different media
- Flexibility
  - Physical flexibility to study at a time and place that suits learners.
  - Educational flexibility to study in a manner appropriate for learners' needs.
  - Content, sequencing and structure of ODL programs are developed to support learners and are not strictly fixed like conventional academic institutions.
- Learner-Centredness
  - Provides education and training in a way that prioritize learners' needs, rather than institutional convenience.
  - Enables learners to pursue their studies in a way that is appropriate for their circumstances, learning goals and styles.
  - Provide good quality learning materials in appropriate, accessible media, and gives sufficient support to ensure learners have a good chance of successful learning.

The Way Forward

...with the emergence of fast, intelligent, inexpensive and high capacity learning technologies the practice of open distance learning, in the developed world, has been moving towards the 4th and 5th generation technologies where multimedia courseware embedded in a comprehensive web enabled learning management systems provide both synchronous, asynchronous and highly interactive learning environments.

-Dhanaraj, 2009-

Dhanarajan, G., T. M, Wang (2009). **Open Distance Learning: Managing Change-Building Capacity.** Paper presented at International Forum on Open and Distance Education, Beijing, China.

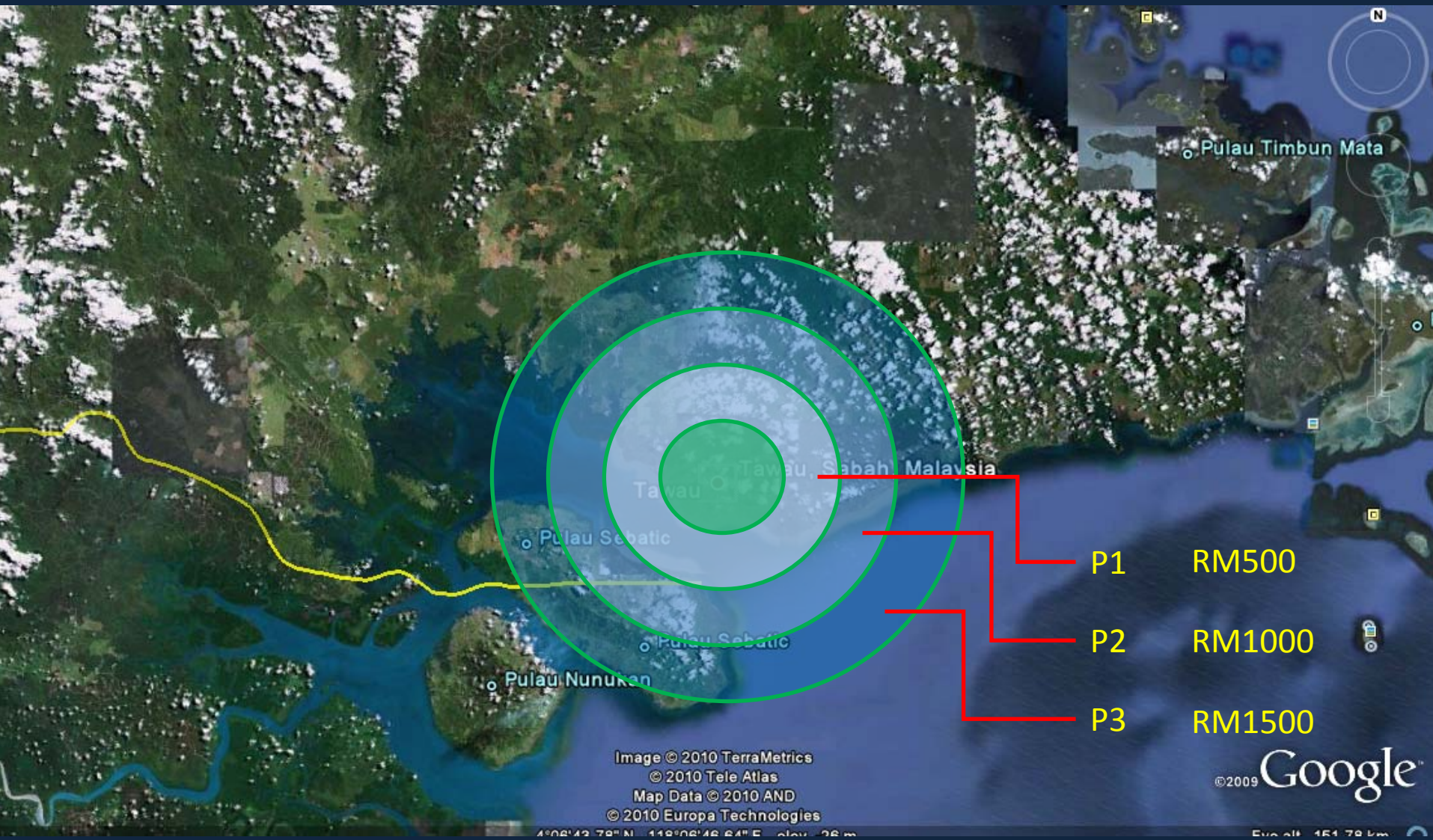
Constraints

The Remote ‘pedalaman’ Teachers

The remote teachers faced three constraints in their endeavour to further studies:

- **Their location in the remote areas which limits their mobility to learning centres for the fortnightly face-to-face tutorials;**
- **Their teaching duties which did not permit them to leave their young students during school days; and**
- **Inaccessibility to the internet.**

TED* Malaysia categorises the ‘remote interior’ (*pedalaman*) into 3 categories.



* Teacher Education Division

Paris –Dakar Rally

Fine-Tuned

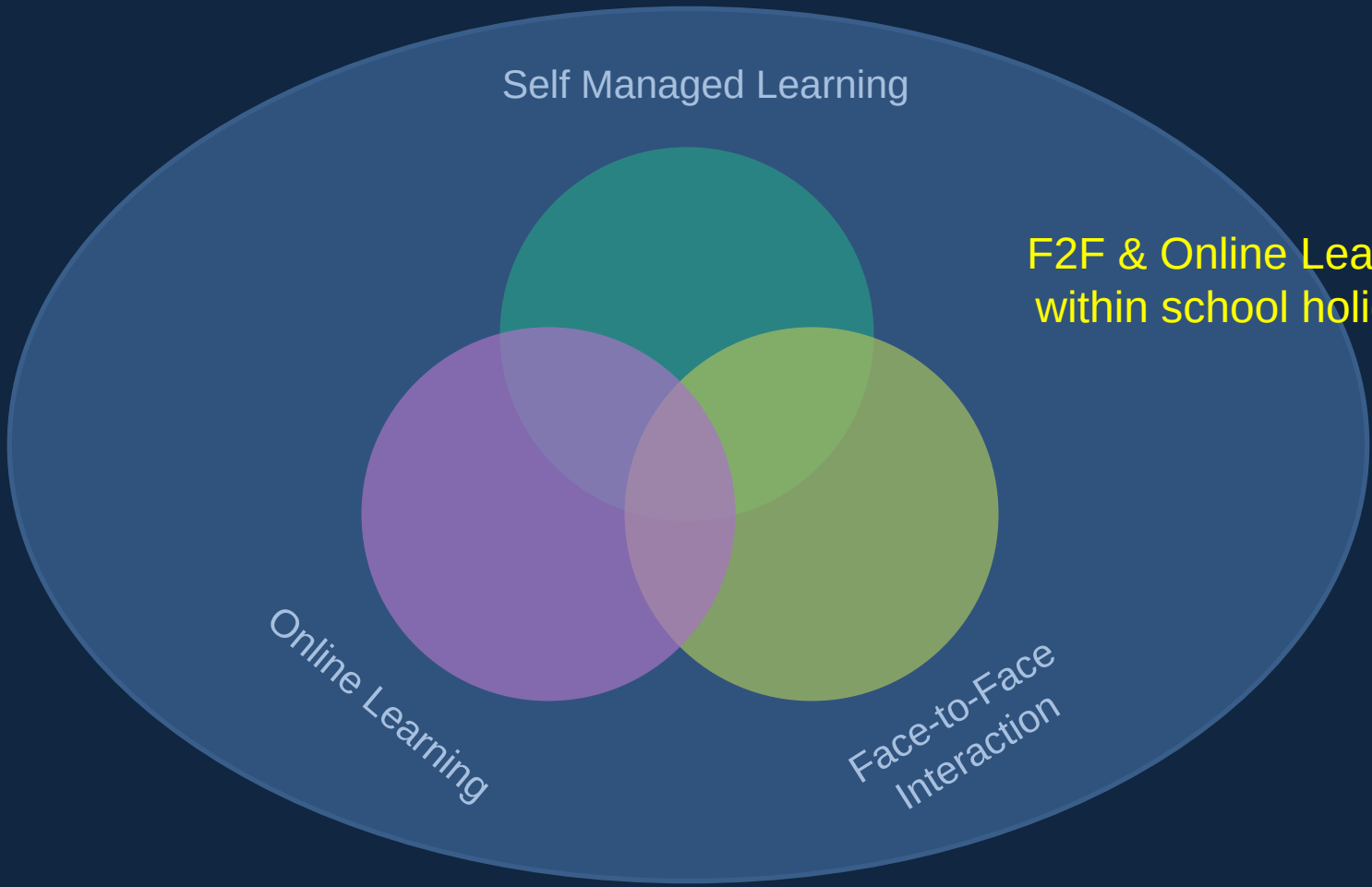
TUPE Model for ‘pedalaman’ teachers:

To address these constraints and challenges OUM’s blended learning model was further fine tuned into the TUPE Model:

- **Tutorials**
- **Revision**
- **Examination**

Teachers from the ‘*pedalaman*’ will be assigned to the nearest Teachers Training Institute (TTI) and study during the school holidays. Teaching and learning therefore is fully face-to-face during this time.

TUPE LEARNING MODEL



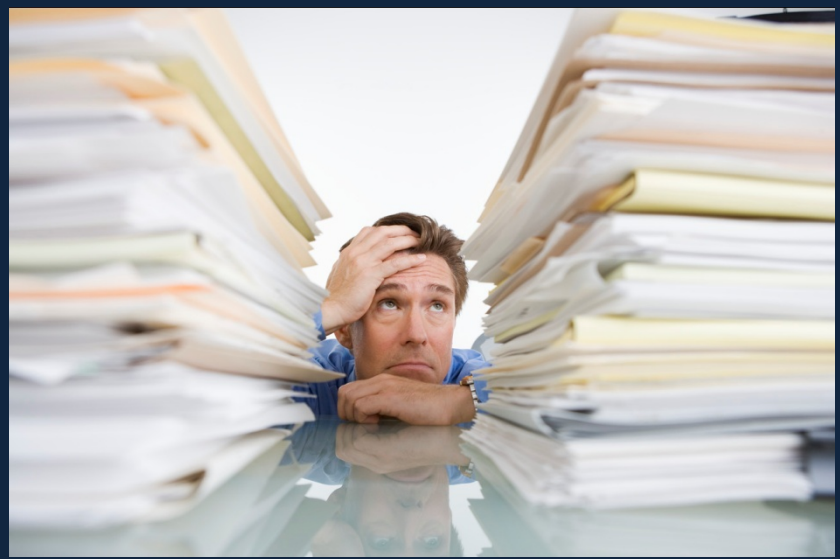
OUM (Pedalaman)Blended Learning

Challenges

TUPE Model is still restraining:

1.Access to ‘pedalaman’ students is limited to the time they are in the TTIs.

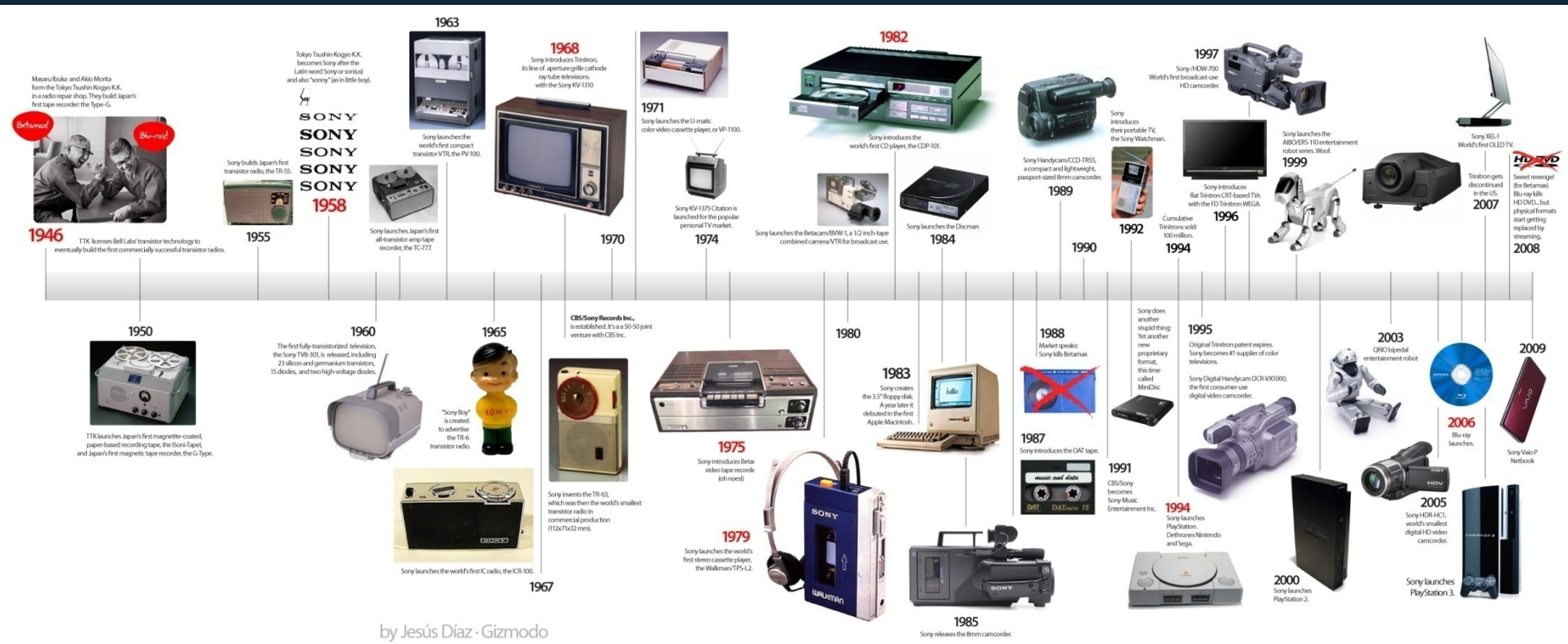
2.TUPE (Tutorials-Revision-Examination) overloading students.



How to move Forward?

fast, intelligent, inexpensive and high capacity learning technologies...Dhanaraj

- Infrastructures should be equally fast, intelligent and high capacity….
- except these are not available in the interior learning ecosystem.
- So how do we move forward?



THE WAY FORWARD IS BACKWARDS

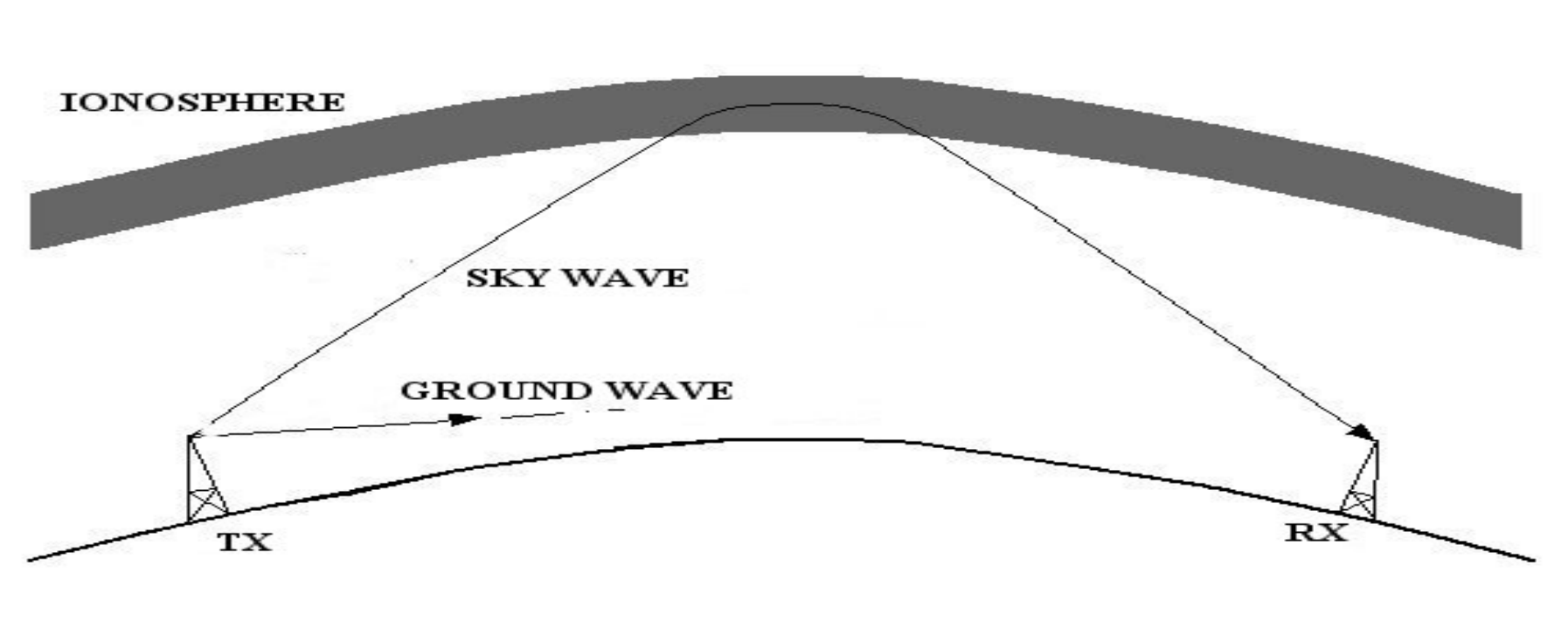
How?

TWO-WAY RADIO/ SW RADIO

Why?

1. Meets current needs
2. Cheaper to set up.
3. Reliable and able to reach remote places.
4. Able to run with minimum infrastructures.
5. Successfully used in these economies: Australia, Canada, India etc.
6. Can be easily upgraded to transmit/ receive data.

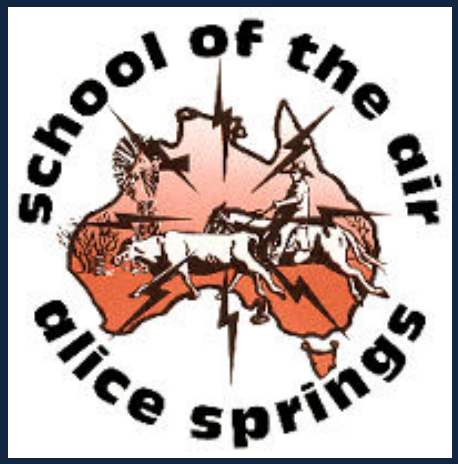
How it works?



Wide range of radio communications technology:
SW, VHF, UHF and Microwave

Travelling time from Transmitter (TX) – Ionosphere (reflecting layer) – Receiver (RX) usually a small fraction of a second.

Success story



The first radio broadcasts were made from the Royal Flying Doctor Base in Alice Springs, Northern Territory (NT), in 1951.

Radio was the backbone of communication from the commencement of school operations in 1951 until 2004.

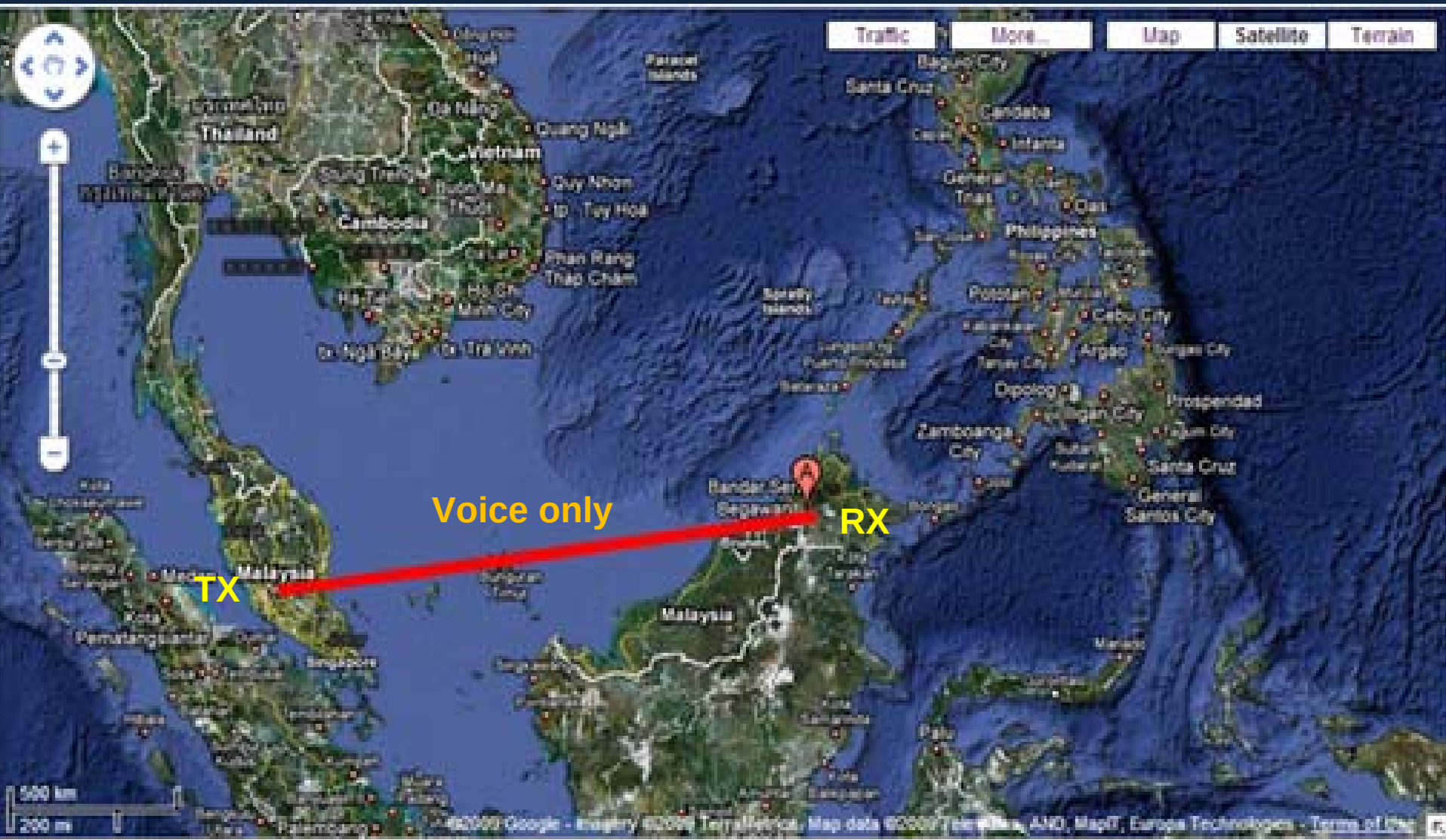
With the development of other technologies the school now makes extensive use of Satellite Technology.

The school runs its own ISP (Internet Service Provider). For those families that do have IDL they have the option of connecting to the school via their own computers and modem. This allows transfer of work, exchange of ideas and support of learning in a manner that is quicker than traditional mail services. The speed and reliability of such connections is still far from what people in major urban centres would experience.

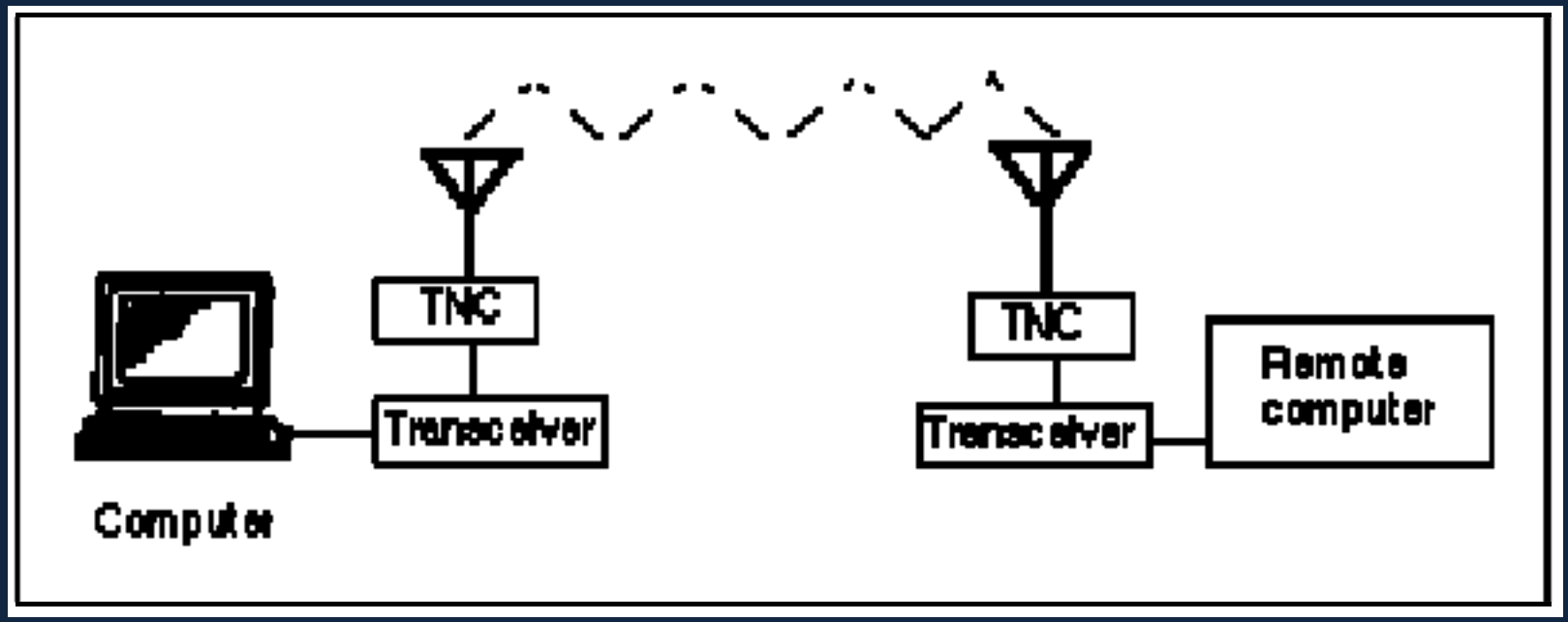
Most families now have access to television. The school conducted trials of direct television lessons beamed into the classroom in 1992. This was via satellite transmission but costs prohibited this being an ongoing facility.

Case study

Proposed experimental link up: Kuala Lumpur – Saliku, Keningau



Future Upgrade



From its first steps in Montreal, Canada, in 1978, to its current AX25 protocol implementation established in 1982 by the Amateur Radio Relay League of America, packet radio provides the means through which computer data may be transmitted, error free, on the radio frequency spectrum. It represents one of the fastest growing areas in amateur radio today.

In short, packet radio replaces the telephone line with a radio channel. Rather than connecting the modem to a phone line, a specially modified modem known as a Terminal Node Controller (TNC) connects the computer to the microphone and speaker circuits of a radio transceiver.

Future Future Upgrade ☺

Earlier:

FM

SW

VHF

UHF

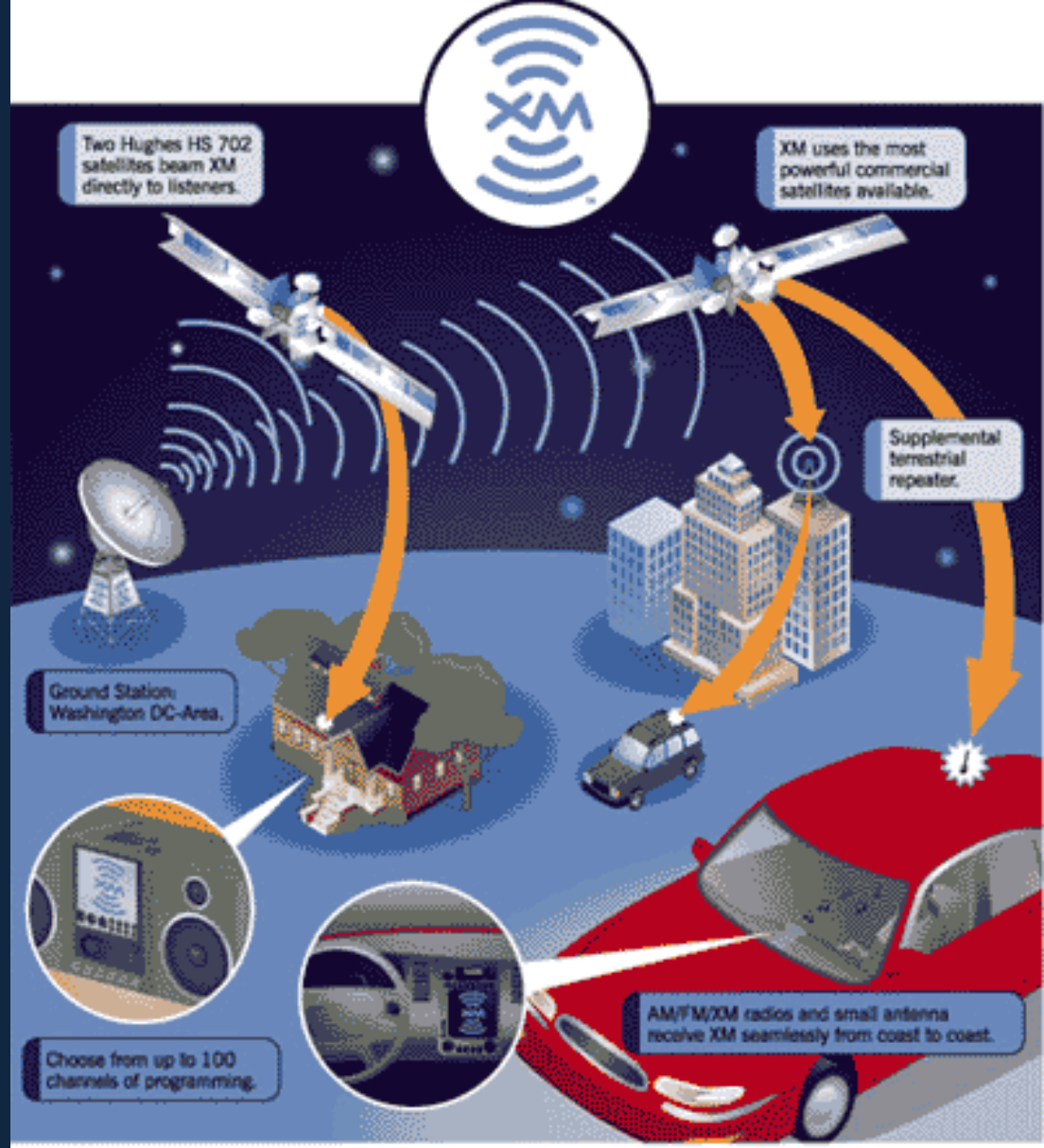
Microwave

Current:

XM

SIRIUS Satellite Radio

XM SATELLITE RADIO

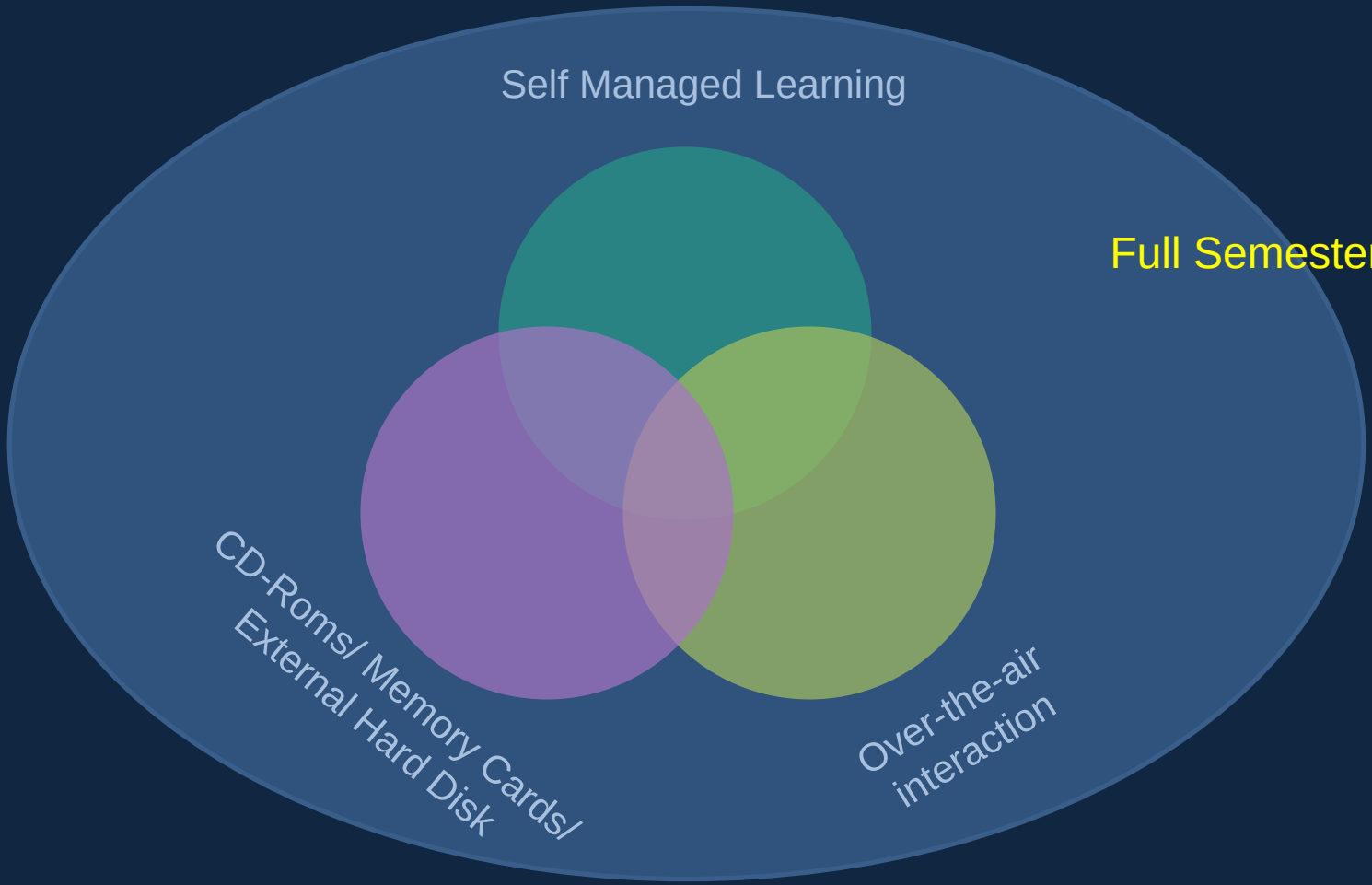


XM SATELLITE RADIO

From its state-of-the-art studios and uplink facility in the Washington, DC area, XM Satellite Radio will beam up to 100 channels of digital quality music, news and entertainment directly from two powerful satellites to people from coast to coast in their cars and at home. A small antenna and AM/FM/XM car radio, home audio system or portable radio will receive the signal.

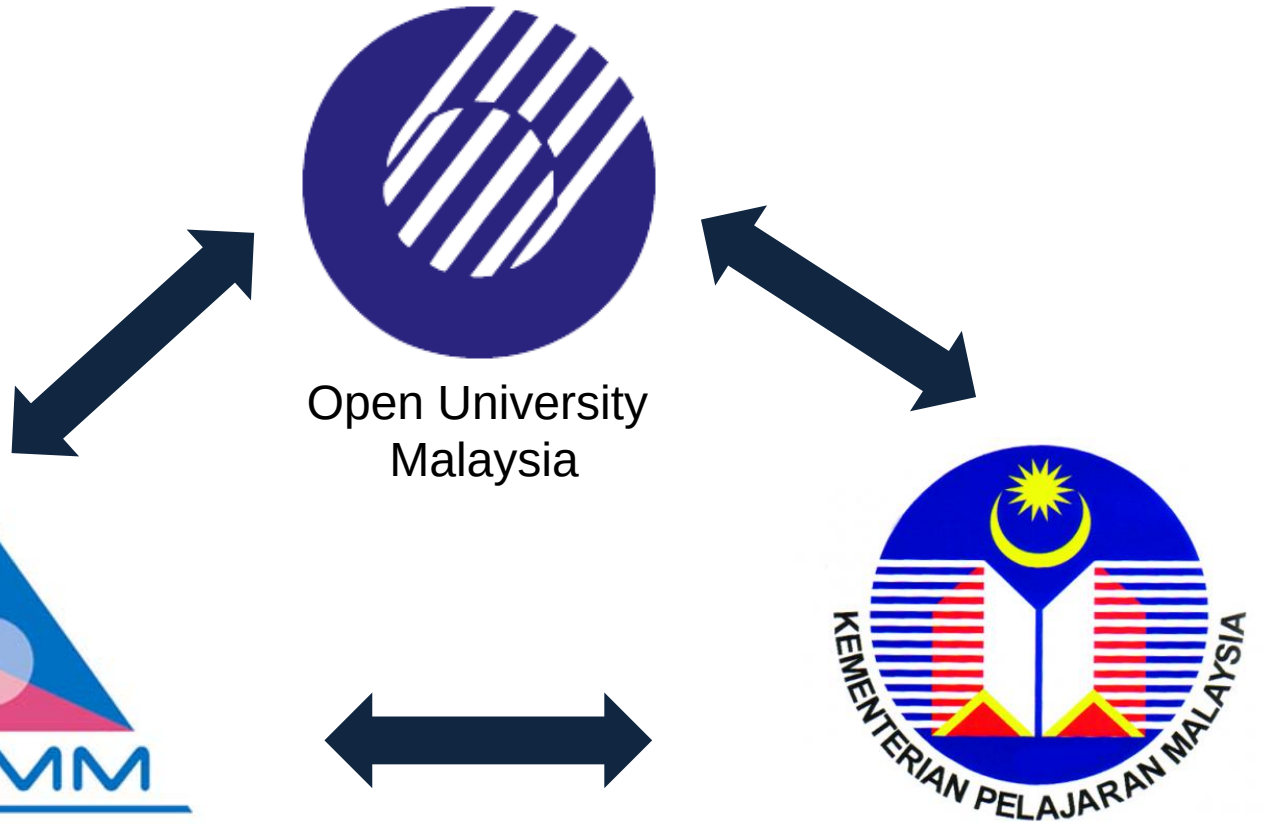
Proposed

PROPOSED LEARNING MODEL



‘Pedalaman’ Blended Learning

Collaborative Effort



Fact-Finding

SURVEYS

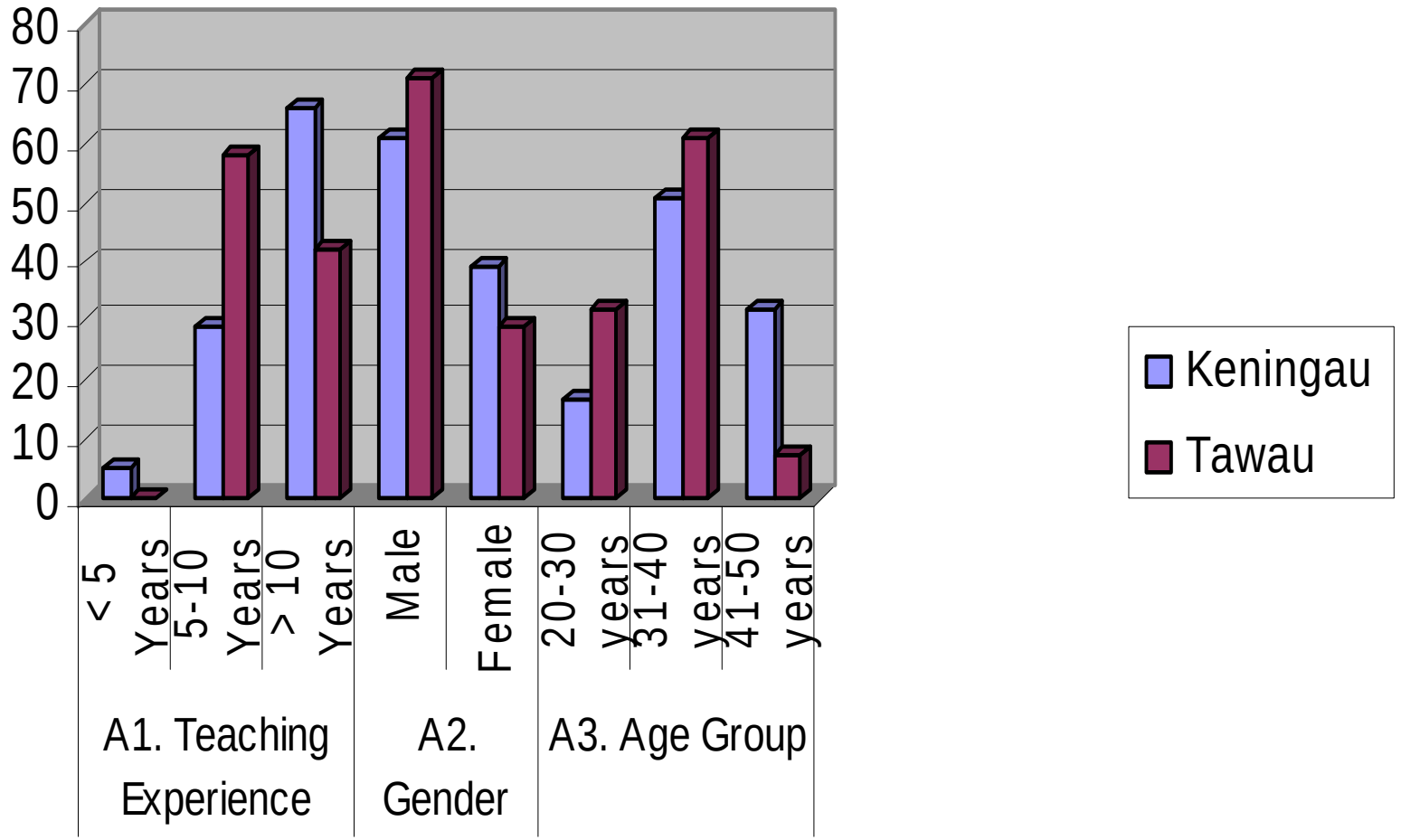
Surveys was carried out to gather data/ find out:

A. Learners' background
B. Infrastructures
C. Feedback on current mode of learning
D. Readiness for new learning mode

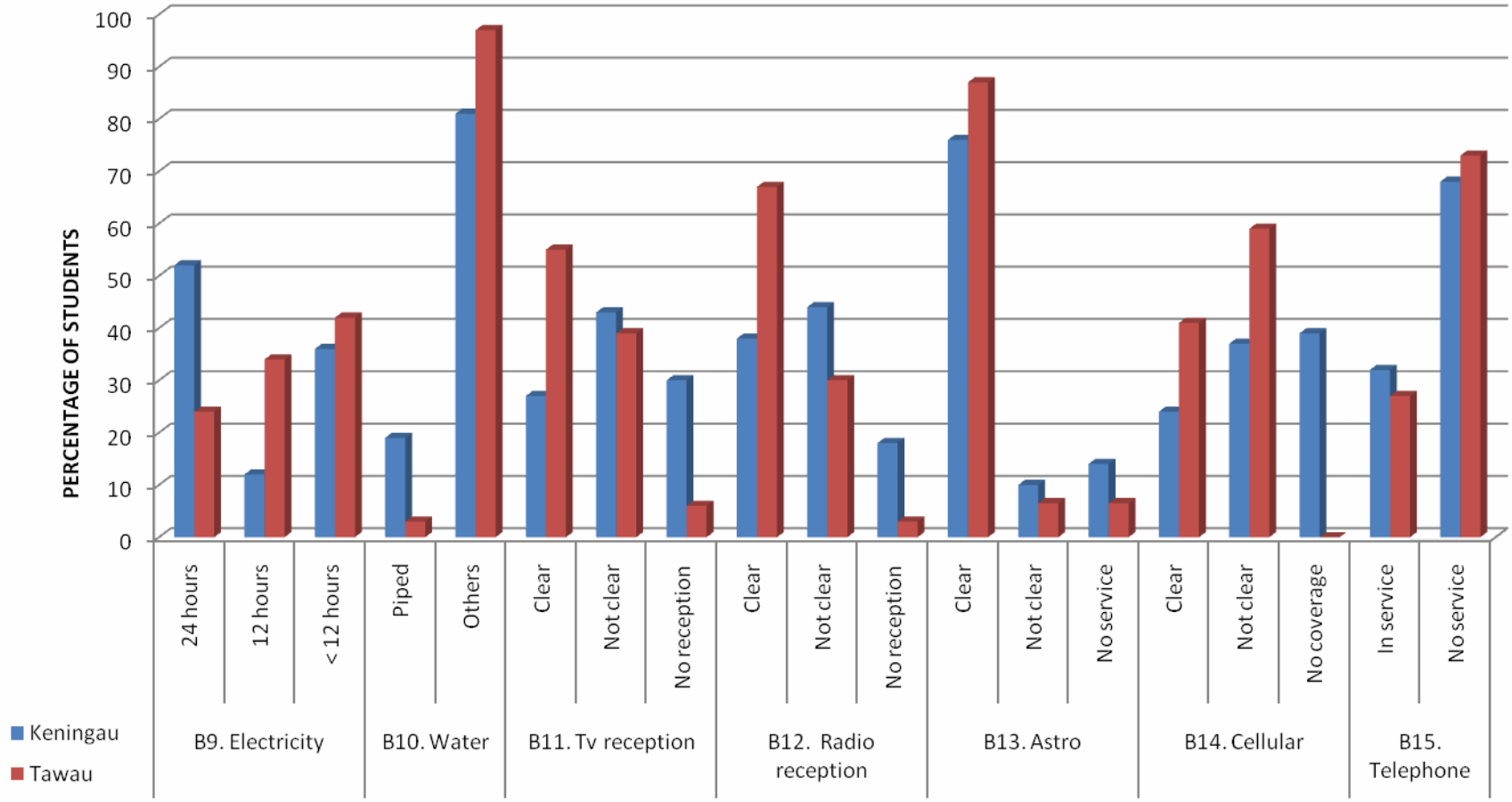
Surveys was carried out at 2 centres in Sabah:

1. Keningau – 203 respondents
2. Tawau – 31 respondents

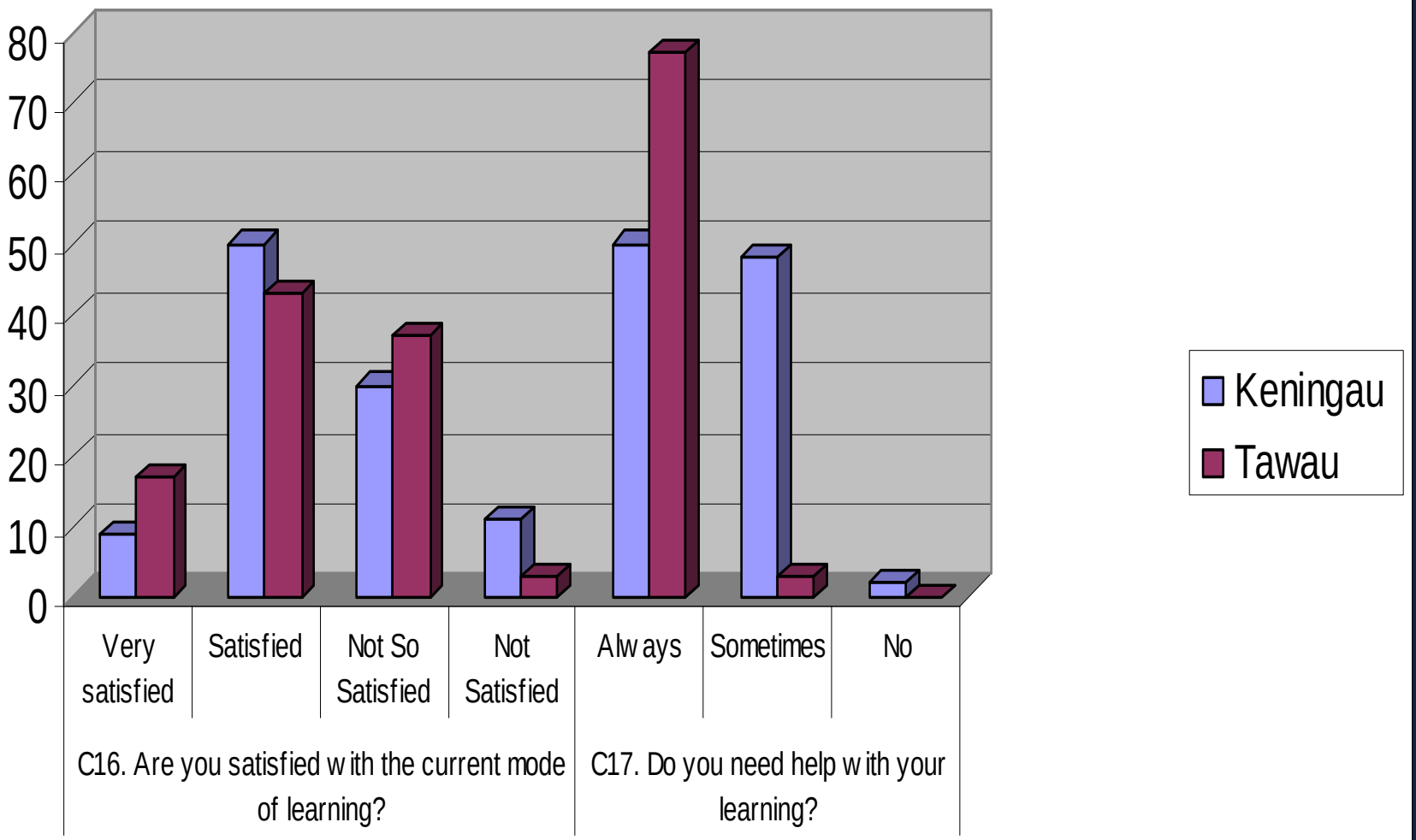
Background


80
70
60
50
40
30
20
10
0
< 5 Years
5-10 Years
> 10 Years
Male
Female
20-30 years
31-40 years
41-50 years
A1. Teaching Experience
A2. Gender
A3. Age Group
Keningau
Tawau

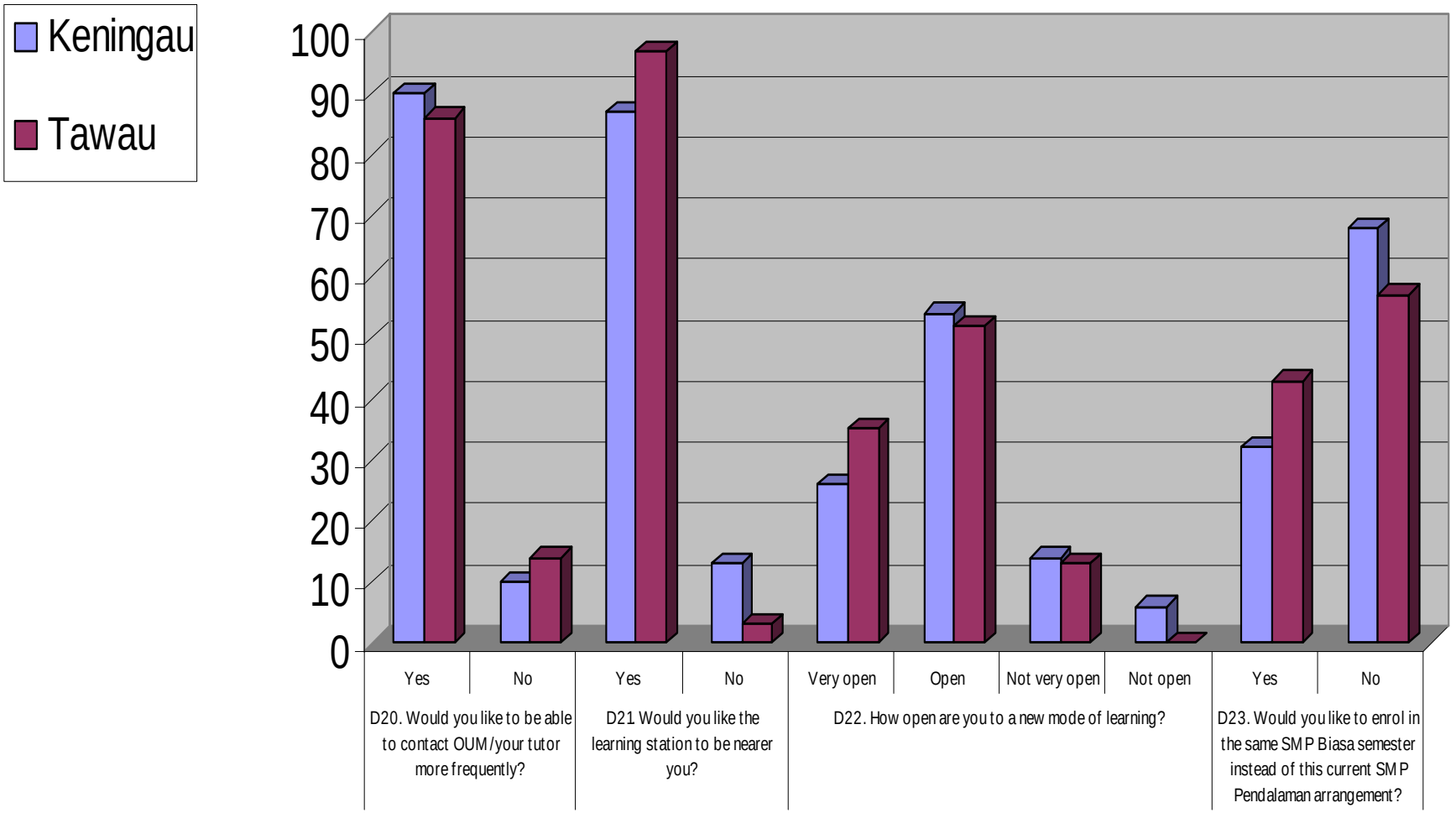
(Online) Infrastructures



Learning Issues



New Mode of Learning

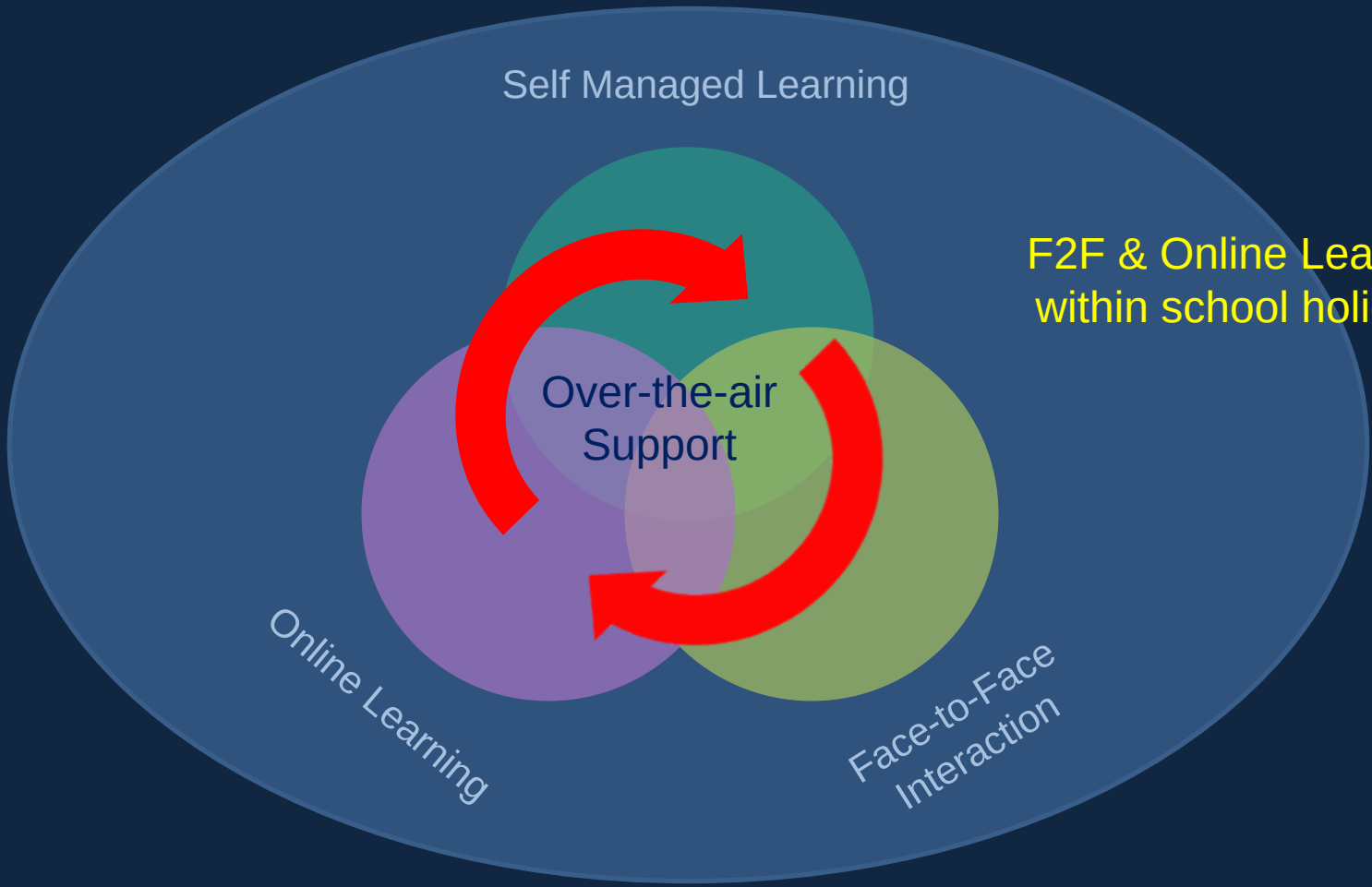


Conclusion

While learners welcome the idea of a more reliable and frequent interaction with their tutors and OUM, the need to interact with their peers socially and physically will supersede that.

Value Add

TUPE(R)A BLENDED LEARNING MODEL



OUM (Pedalaman)Blended Learning

If you are very interested to provide assistance, collaborate or want to know more about this project, feel free to contact me.

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Thank You