Main Streaming School Innovations: Case Study on Malaysia’s Virtual Learning Environment

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Bridging Role between Policy & Practice

Need to undertake a quantum leap in Malaysia’s education system as shown by evidence from TIMSS & PISA Study.

Education Policy Review by UNESCO found Malaysia to be lagging behind in ICT in Education

The 1BestariNet Initiative

**Technology Component**
- Broadband connectivity between 2 to 10 Mbps

**Pedagogy Component**
- The pedagogy component concerns the use of Frog Virtual Learning Environment in teaching and learning

**Management Component**
- The management component concerns the establishment of a Programme Management Office
Basis for Virtual Learning Environment

Frog VLE for every teacher, student and parent in Malaysia

- Universality
- Proven Technology
- Collaborative Learning
- Replication of “real-life” learning
- No child left behind policy
- Ubiquitous learning

MOE Malaysia
Evaluation Framework

Formative 1
Formative 2
Formative 3

VLE Implementation

Summative

Formative - summative evaluation framework (Scriven (1967))
Key - provide information for programme improvement
Findings: Students’ Perceptions

Primary vs Secondary

(mean = 4.18; S.D. = .713; n = 89) vs (mean = 3.81; S.D. = .789; n = 134)

• Secondary students tended to perceive significantly higher than primary school pupils.
• The 2 groups’ means are significantly different (t= -3.593; df=211; p < .05).
• Attributed to VLE being better utilised at the secondary school level as the construct is based on the use of VLE as a learning tool.

Tool for learning

(mean=4.29; n=223; SD=.788)

• VLE being an interesting tool for learning is rated highest among the items.

Collaboration in assignments

(mean=3.79; n=223; SD=1.02) – within; (mean = 3.79; n=223; SD=1.03) - outside

• Collaboration among peers in doing assignments both within the classroom and outside the classroom is rated lowest, i.e. with mean=3.79 (n=223; SD=1.02) for collaboration within classroom and mean = 3.79 (n=223; SD=1.03) respectively.
Success factors in using VLE

1st Factor

• “Functionality of VLE as a pedagogical tool”
• Contributes 62.60% to the variance

2nd Factor

• “Physical attributes of VLE”
• Contributes 5.11% of the variance

3rd Factor

• “Tool for collaboration”
• Contributes 4.21% of the variance

Factor Analysis – Principal Component Method
Percentage of Variance Method
Challenges: Broadband Connectivity

Stability in connectivity

Primary: (Mean=2.04; n=254; SD=.975);
Secondary: (Mean=1.97; n=172; SD=.982)

- Unstable connectivity an issue which must be resolved quickly.
- Overall mean of 2.01 (n=426; SD=.977) for all schools.
- 4.2% (18) indicated “No Connectivity”, 29.8% (127) indicated “Not Stable”, 30.8% (131) indicated “Fairly Stable”, another 30.8% (131) indicated “Stable” and 4.5% (19) indicated “Very Stable”.

Urban vs Rural

Urban: (Mean=2.05; n=162; SD=.951);
Rural: (Mean=1.99 (n=264; SD=.994))

- Urban schools slightly higher rating compared to rural schools
Mechanism to ensure organisation’s voice is heard by policy makers

**Governance Structure**
- Periodic meetings with Minister
- Weekly report to Programme & Delivery Unit – conveyance to Sec. Gen & Dir-Gen.

**Problem-Solving Forum**
- Weekly operational meeting on connectivity between MOE, vendor and other stakeholders
- Forthnightly meeting with stakeholders on VLE
- Community involvement

**Linkage with Government Transformation Programme**
- Oversee role of PEMANDU (PM’s Department)
- Setting achievable KPI and objectives
Recommendations

Characteristics of VLE
- Functionality, usability and ability to facilitate collaborations

Broadband connectivity
- Good and stable broadband connectivity

Instructional resources
devolved by Community of Practitioners to facilitate instruction

Materials accessible by teachers and students

Buy-in from stakeholders
- Teachers and students must use VLE. Change management is necessary
Recommendations

• Teachers must be highly motivated to use VLE. To complement this, there must exist Continuous Professional Development in phases.

Effective Medium

• VLE must be effective, reliable, operable, functional, learnable, memorable, and efficient.

Learning Outcomes

• Focus on learning outcomes.
Conclusion

Learning needs to be placed in the correct social context - educational methods must be socially relevant in order to be effective.

Students need to see that education is keeping up with their “culture”.

The 1BestariNet is expected to result in fundamental shifts in the provision of a technologically-endowed and innovative way of delivering instruction.
Thank You
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