1BestariNet
A Malaysian Experience
In 1996, the Malaysian government conceptualized the Smart School Project to bring ICT into all schools across the country. The vision is to transform the memory based learning with a new curriculum that will be complimented by technology.

The Malaysian Education Blueprint (2013-2025)

Blueprint establishes a clear sequence of priorities to ensure that the return on investments is optimized in terms of the results that matter most - “student outcomes.”

Main policies for ICT in education

- ICT is used as an enabler to reduce the digital gap between the schools
- Emphasizes the role and function of ICT in education as a teaching and learning tool, as part of a subject, and as a subject by itself.
- ICT to increase productivity, efficiency and effectiveness of the management system.

“Malaysia requires a transformation of its entire education system, lifting achievement for all students. Make no mistake; this will require an entirely new perspective, so that students develop skills needed for the 21st century. Rather than simply adding staff and facilities, there is now a need to understand and improve the dynamics of the teaching and learning process”.

Dato’ Sri Haji Mohammad Najib bin Tun Haji Abdul Razak
MAIN CONCERNS

1. **Gap in the access and quality of education** imparted across urban and rural regions.

2. Focus on industrial teaching **rather than ability based learning**.

3. **Opaqueness in the system** with respect to **governance** of schools, performance of students and teachers and overall quality of education.

4. **Limited infrastructure** for access and quality of education for all students.
1BESTARINET PROJECT

CLASSROOM

INDUSTRIALIZED TEACHING

VIRTUAL

ABILITY BASED LEARNING

40 min periods Classroom bells

2012

2013

SCHOOL IN CLOUD

CONNECTIVITY

CHROMEBOOK

COLLABORATIVE LEARNING

VLE

SCHOOL MANAGEMENT SYSTEM

Curated Content

FLIPPED CLASSROOM

Internet Access

From HOME

From SCHOOL

Yes 4G Network

MALAYSIA’S 1BESTARINET PROJECT: THE LARGEST PROJECT OF ITS KIND IN THE WORLD

Enable anywhere anytime learning via cloud

STUDENT

TEACHER

PARENT

CLOUD HOSTING

SCHOOL MANAGEMENT SYSTEM

ANALYTICS

EDUCATIONAL CONTENT

VLE

FROG STORE

Internet Access

From HOME

From SCHOOL

Yes 4G Network
HOW DOES THE EDUCATION COMMUNITY REALIZE THE VISION

- Access to **Formal** and **Informal** learning resources and ensure **Collaboration** and knowledge Sharing
- **Enhancing** delivery of learning resources and materials and **Shifting** focus to Ability-based learning
- **Standardized** and consistent learning platform and **Personalized** form of learning
- Interactive and **Engaging** content provides an incentive to learn and the rich and informative contents that can be accessed **Anywhere Anytime**
- Online **Collaboration** and **Knowledge sharing** with other teachers through Interschool teaching platforms
- **Impactful** teaching methods due to proven tools and content for education delivery
- Enable teachers to **Focus** on actual teaching than spending time preparing learning resources
- Flexible support for educators to **Resolve** student **Queries** at all times
- Better **Assessment** approaches
- Platform for the parents to **Collaborate** with the children and teachers and thus gain continuous **Access** to school updates
- **Informs** parents of their children’s progress through regular updates
- Enable parents to gain **Better Visibility** on their children’s learning potential and outcomes
- Provides **Easy to use tools** and interfaces for parents to **Access** school and children’s learning objectives, curriculum and results
Frog VLE is an interactive learning platform that embeds technology in teaching and learning.

Single Sign On
1 ID for all services
THE STRATEGY TO ENSURE ADOPTION OF 1BN

Leaders prompt the Domino Effect

20% Targeted Leaders  
60% Natural Followers  
20% Skeptic Laggards

1. Select the Right Leaders
   • “Friends and family” pilot schools
   • Existing system champions
   • Parents active in PIBG
   • Top scoring students, prefects

2. Provide the Right Tools
   • Opportunity to participate through Engagement Events
   • Channels for open feedback
   • Involvement in solution build advisory
   • Involvement in marketing material

3. Set the Positive Narrative
   • Publicize the success
   • Create the trend
ENGAGEMENT leads to SUCCESS

- Mutual recognition encourages positive sentiments
- A competitive environment results in winning together
- Role Modelling creates Leadership
- Interactive learning promotes peer teaching
- Sharing knowledge to leverage on benefits
Slow Adoption
Negativity
Confusion
Complaints
Mistrust

What happens without engagement?
The End Result…

disengaged teachers and parents = poor performing students
THE SMART SCHOOL APPROACH

Ensure **high adoption through a staged approach** to assess the success of each stage so that corrective measures can be taken to improve the overall process. A select group of SMART schools were selected for the pilot testing stage to lead by example and lay down the path for the other schools to follow.

1. Random Sample Deployment
   - 9.9% Pilot Testing
   - 72 schools x 14 states = 1008 random schools
   - 2 months

2. Full Solution Deployment
   - Pushed to remaining 9124 schools across 14 states
   - 8 months
   - 30% chance of gradual majority adoption
   - Most schools slowly accept to fulfill compliance policies

3a. 70% chance of rapid failure within 2 months
   - Schools revolt and refuse

3b. 30% chance of rapid failure within 2 months
   - Damage control possibly needed

Big Bang “Push” Approach
- Pilot testing with random users
- Developers push the solution to users
- 30% chance success, 70% chance failure, depending on dominant sentiment
- Costly training and compliance measures

Go Live!

Time

Dec Jan Feb Mar Apr May Jun Jul Aug Sept Oct
The champions of the cause will eventually have a knock on effect on the other schools and this will increase the adoption rate at a rapid pace once all the schools have a chance to see the benefits the new system brings to the SMART Schools.

**Targeted “Pull” Approach**
- “Family and friends” targeted testing
- Targeted users provide solution input
- Guaranteed success due to positive sentiments from the start
- Demand generated for rapid adoption
- Sunken cost savings
**SUSTAINING SUCCESS**

20% Leaders  
60% Followers  
20% Laggards

**Tipping Point**
At the 20% adoption mark, transformation gains enough traction to rapidly take off and gain critical mass.

Incentivize Followers to sustain momentum
- Recognition and rewards
- Positive reinforcement
- Role modelling
- Competitions and winners
**RESOLVING SLOW MOMENTUM**

**Capitalizing on Engagement Triggers**

**Leaders Engagement Triggers**
- Gamification opportunity
- Top 20% congratulatory message
- Sneak Peak Week messages
- Marketing material involvement invite
- Online engagement forums

**Followers Engagement Triggers**
- Chat channels and alerts
- Personal performance KPI versus peers
- Text alerts for attendance, grades
- Competitions and promotions
- System-automated messages

**Laggards Compliance Triggers**
- Surat Pekeliling from JPN
- Non-compliance peer statistics
- Reminders from Pengetua
- Name and shame technique

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**100% Adoption**

1. **Targeted 1.97%**
   - Pilot Testing (2 months)
   - 50 schools x 4 states = 200 selected schools

2. **Targeted 9.9%**
   - Deployment (2 months)
   - 252 schools x 4 states = 1008 selected schools

3. **Rapid 80% Adoption**
   - (4 months)
   - Total 8106 schools across Malaysia

4. **100% Adoption**
   - (2 months)
   - Final 2026 schools accept to fulfill compliance policies

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**Followers**

**Laggards**

**Leaders**

**What if solution uptake dampens?**

**Time**

Dec Jan Feb Mar Apr May Jun Jul Aug Sept Oct
85% of MOE teachers indicated that they would like to integrate more computer applications into their teaching.

Teachers’ perceptions towards ICTs are encouraging.

Teachers are positive towards further integration of technologies into classroom instruction.

Benefits:

- ICT has motivated students in their learning by bringing **variety** into the lessons
- ICT has sustained teachers’ own **interest** in teaching.

Malaysia Education Cloud – Frog Store

1) More than 5 applications developed in the FrogStore and 9 more are in development phase
2) More than 100 books got digitized
3) Sharing – Sharing of Frog Sites through FrogStore
4) Rich media - Support eBooks, images, videos, applications, Frog Sites, SCORM

Source: EXPLORING THE EXTENT OF ICT ADOPTION AMONG SECONDARY SCHOOL TEACHERS IN MALAYSIA
1BESTARINET RESULTS

Single educational network nation wide

10,154 SCHOOLS

4,427,730 PARENTS

5,120,802 STUDENTS

419,820 TEACHERS

1 Computer Lab Per School
WHAT 1BN HAS DONE TO OVERCOME THE CHALLENGES

The strategy below provides a snapshot of how the challenges outlined are addressed

**Eliminate rural-urban divide and provide access to quality education for everyone through:**
- Connectivity
- Open Learning Platform
- Centralizing IT in Education
- Cost Effective Devices

**Replace industrialized teaching by ability based learning by:**
- Enable self-paced learning
- 24/7 access to rich, multimedia learning material
- Learning platform that supports different learning types
  - Supporting system for teachers
  - Enable collaboration

**Change the economics of education to enable efficient and effective transformation**
- Make every home a classroom
- Centralize content development
- Off-load costs through crowd sourced content curation
- Replace hard copies by e-books

**Increase transparency to improve governance using:**
- Multi-tiered monitoring
- Software enabled auditing
- Centralized School Management System
- Enable parents to track students’ activities and results

**Transformation**
WHAT DOES THE TRANSFORMATION INCLUDE?

**Centralized Cloud-Based Platform**
- **Centralized** School Management System
- **Empowering** the ministry to effectively monitor and manage the schools
- **Framework** for collaboration
- **Platform** for centralized learner-generated content

**Cost Efficient and Quality Regulated System**
- **Enabling** a Virtual Learning Environment
- **Standardize** the learning platform in all schools thereby enhancing quality of imparted education
- **Education community** for schools to leverage and share the best standards

**Self Sustaining Ecosystem**
- **Collaborating** to form a secure education community with students, teachers and parents
- **Sharing** the best contents Engaging parents in the students educational journey
- **Enabling** Teachers to collaborate and exchange ideas
- **Empowering** Students to target limitless boundaries of knowledge

**Cross-Border Collaborated System**
- **Enable collaboration** across all schools
- **Use curated content** and the same learning platform to share the best resources for education