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Ministry of Education Plans For Expanding Inclusive Education In Malaysia

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Objectives

Provide an overview of key best practices on inclusive education via educational technology programmes which have contributed to learning, teaching and administration in Malaysia

Discuss critical success factors on the key best practices on inclusive education

Presentation Outline

- Journey towards a technology-enhanced approach in teaching and learning
- Current Education Transformation in Malaysia
- The 1BestariNet Initiative
- Role of instructional resources in inclusive education
- 5 Moving Forward
- 6 Conclusion

THE JOURNEY TOWARDS A TECHNOLOGY-ENHANCED APPROACH IN TEACHING & LEARNING

Wave 4 Wave 3 **Consolidate & Stabilize Making All Schools Smart** Wave 2 (2010 - 2020)(2005-2010)• Innovative practices using Post Pilot (2003 - 2005) Leveraging all ICT initiatives **ICT** Wave 1 Massive computerization phase to **Smart School Qualification** Standards - SSQS; WebTV Merging technology with all schools and School Access Centre best practices Pilot Phase (1999 – 2002) (Computer Lab Project, PPSMI, Inclusive education needs • 88 schools were selected SchoolNet, Courseware, ematerials)

Journey thus far...

2014... The Malaysia Education Blueprint: Wave 1

Why is there a need for a technology-based approach in inclusive education?



Technology-based delivery system enhances greater learning experience among special children



MOE's "No child left behind policy" – Education Blueprint, 2013 - 2025



Incorporation of virtual learning – bridging the digital divide between normal and special children in schools



Development of 21st century skills requires technology as an enabler for effective instruction via an integrated approach

TECHNOLOGY PERSPECTIVES UNDER MOE INITIATIVES WAVE 1 (2013 – 2015): ENHANCING THE FOUNDATION

Providing network infrastructure and a learning platform through 1 Bestari Net

- All teachers trained and competent in VLE by 2015

Delivering more ICT devices

- Devices must be "fit for purpose"

Ensuring all teachers and MOE officials are ICT literate – International Society for Technology in Education (ISTE) standards – pass diagnostic test by 2014 – if failed then online training by 2015

Shifting towards more user-created content – EduWebTV migrated to VLE – integrated platform – e-Guru video library

Integrated data management for schools (SPS) and MOE – integrate databases hosted on 1Bestarinet

WAVE 2 (2015 – 2020): INTRODUCING ICT INNOVATIONS

Exploring ICT solutions for specific groups, reviewing best practices for the sytem

- Introduce niche programmes in under-enrolled schools, rural schools, gifted students
- Use virtual delivery, adaptive learning tools, parental and community engagement

Achieving a critical mass in ICT devices gradually

- Lower student-computer ratio to 10:1

WAVE 3 (2021 – 2025): MAINTAINING INNOVATIVE, SYSTEM-WIDE USAGE

ICT to be fully embedded in pedagogy and curriculum

Up-scaling and intensifying ICT usage among students and teachers

- Device to student ratio comparable to South Korea

Expand distance and self-paced learning

Special Education in Malaysia Education Blueprint, 2013 - 2025

Preamble

"The Ministry will ensure that students with specific needs, such as students with special needs, indigenous and other minority students like *Orang Asli* and Penan, gifted students and students in under-enrolled schools have the opportunity to get a high quality education that is relevant to their needs."

- Students with visual impairment, hearing impairment, speech difficulties, physical disabilities, multiple disabilities and learning disabilities such as autism, Down's Syndrome, attention deficit hyperactivity disorder, and dyslexia
- To be successful, there is a need for stakeholder-driven approach.

The 1BestariNet Inisiative: Bridging the Digital Divide

Objectives

- Deploy and support broadband internet connectivity to all schools
- Deploy and support the Virtual Learning Environment (VLE) to all students, teachers, school administrators and parents
- Provide hosting and managed security services
- Implement change mangement and VLE training

Critical Success Factors

- Sufficient and functional ICT infrastructure
- User-friendly applications
- Suitable resources for instructional purposes

1BestariNet

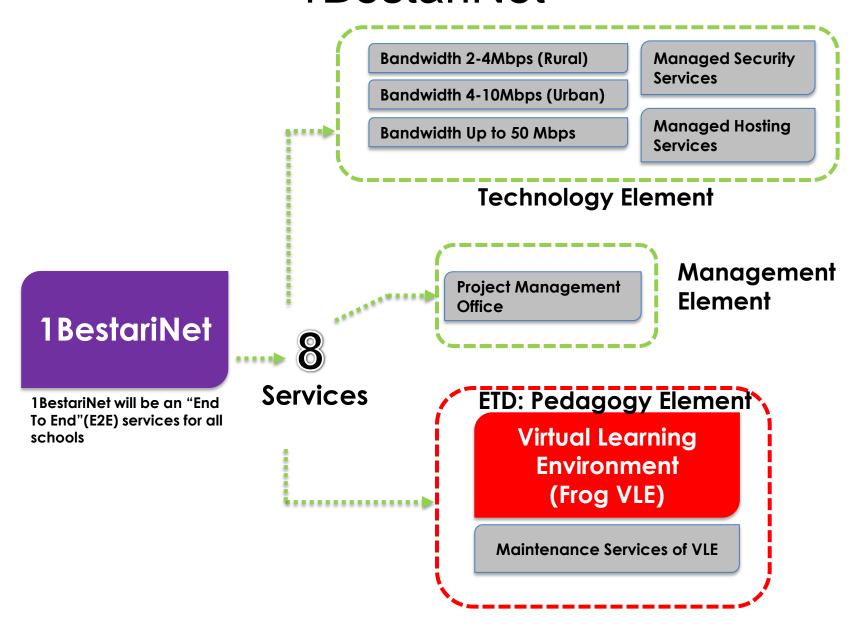
 Good broadband internet connectivity leading to effective instruction



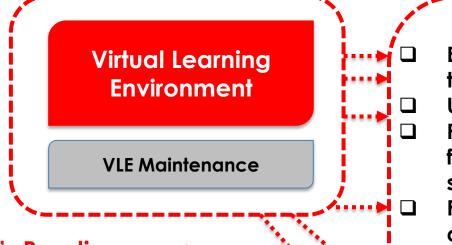


Technolgy-enhanced teaching and learning

1BestariNet



The Virtual Learning Environment



MOE's Readiness

- Schools must have sufficient ICT infrastructure
- School administrators and teachers must be endowed with:
 - knowledge
 - skills
 - "culture"

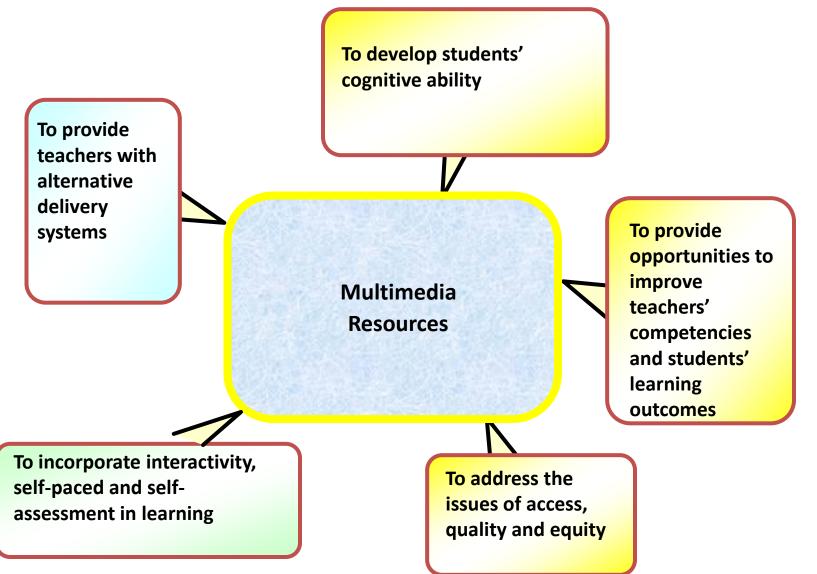
Ensuring standardisation of e-learning technology

User's ID for every teacher and student Personalised Dashboard with user-friendly interface configured via students' psychometric profiling Facilitate ubiquitous learning (anytime, anywhere)

Platform which facilitates sharing and collaboration in teaching and learning Teachers develop lesson plans/sites and students share learning materials in VLE

21st Century Learning Environment

Role of Instructional Resources in Inclusive Education



Constructivist Approach in Inclusive Education

The constructivist approach is a learning process which allows a student to construct knowledge through the learning environment.

The learning environment supports and challenges the learner's pace of learning – supporting the learner to become an effective thinker.

Constructivist Approach in Inclusive Education

Cooperative learning

Reciprocal questioning – students work together and ask questions

Problem-solving – students collaborate to discover ways to solve problems together

Integrative learning

Integrative learning

Knowledge should not be divided into compartments but integrated as a whole (holistic approach)

Discovery learning

"Inquisitiveness", High order thinking, Reflective thinking, Creative thinking to build knowledge

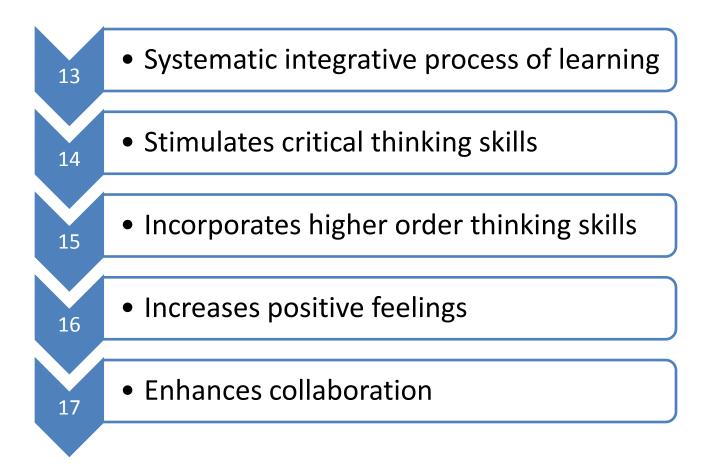
Effective Multimedia Courseware for Children with Hearing Impairment and Remedial Education

 Knowledge acquisition and application Increase efficiency of learning Self-instructional Self-paced Non-linear learning Learning content management system

Effective Multimedia Courseware for Children with Hearing Impairment and Remedial Education

Reflexive learning – reactive to responses Reflective learning - reflect on learning Arousing and sustaining interest Supports analysis and design activities 10 Supports cognitive and motivational needs 11 Caters to different student ability

Effective Multimedia Courseware for Children with Hearing Impairment and Remedial Education



Characteristics of MOE Courseware



Used in primary schools to improve pupils learning outcomes



Can be Used in compter labs



Structured levels of instruction



Incorporates learning and entertainment



Easy-to-use graphical user interface



Monitor and evaluate student's progress

Examples of School Multimedia Resources for Inclusive Education

- Disk1: Pendidikan Khas; Masalah Pendengaran; Bahasa Malaysia; Huruf A – Z
- Disk2: Pendidikan Khas; Masalah Pendengaran; Bahasa Malaysia; Nombor 1 – 20
- Disk3: Pendidikan Khas; Masalah Pendengaran; Bahasa Malaysia; Warna
- Disk4: Pendidikan Khas; Masalah Pendengaran; Bahasa Malaysia; Buah-Buahan
- Disk5: Pendidikan Khas; Masalah Pembelajaran Bahasa Malaysia; Cerita dan Lagu
- Disk6: Pendidikan Khas Disleksia; Bahasa Malaysia

School Multimedia Resources for Inclusive Education







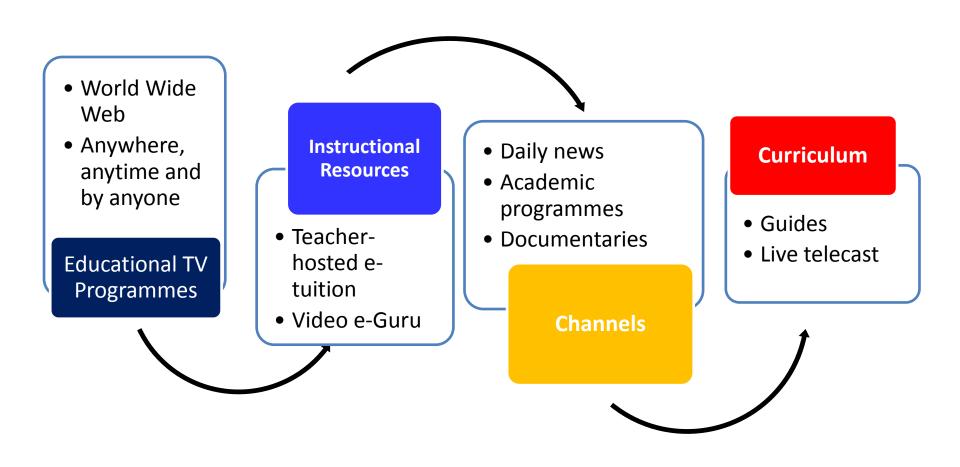




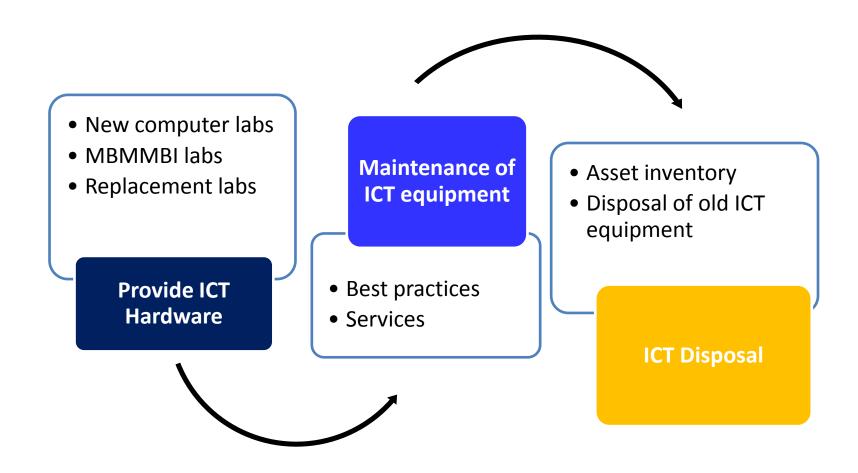


Other Support Programmes

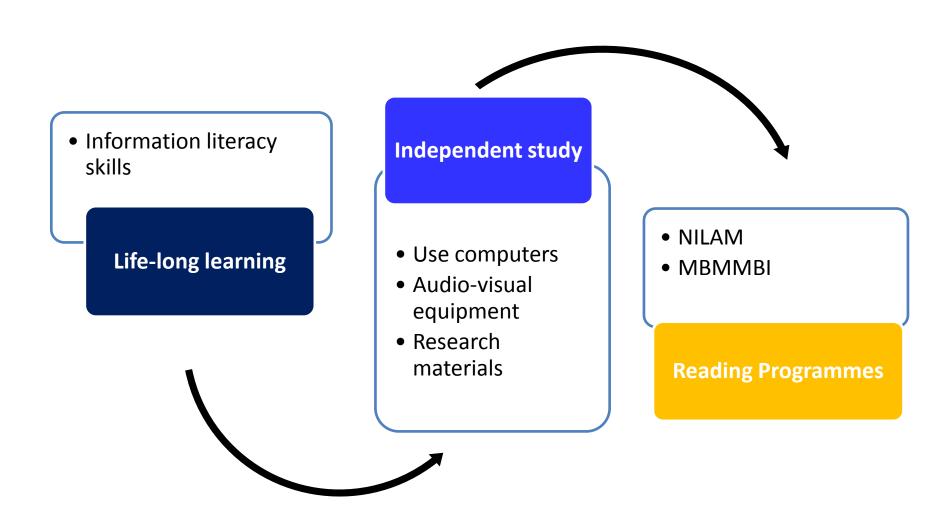
EduwebTV (www.eduwebtv.com)



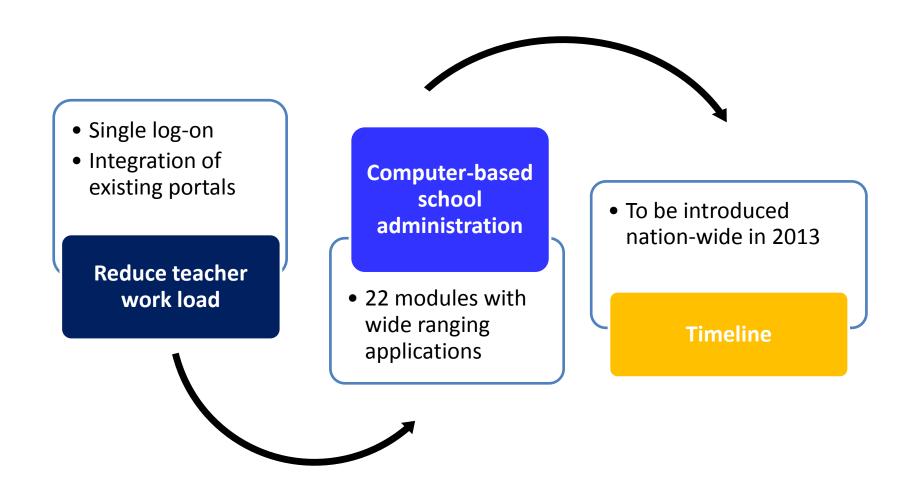
ICT Support for Schools



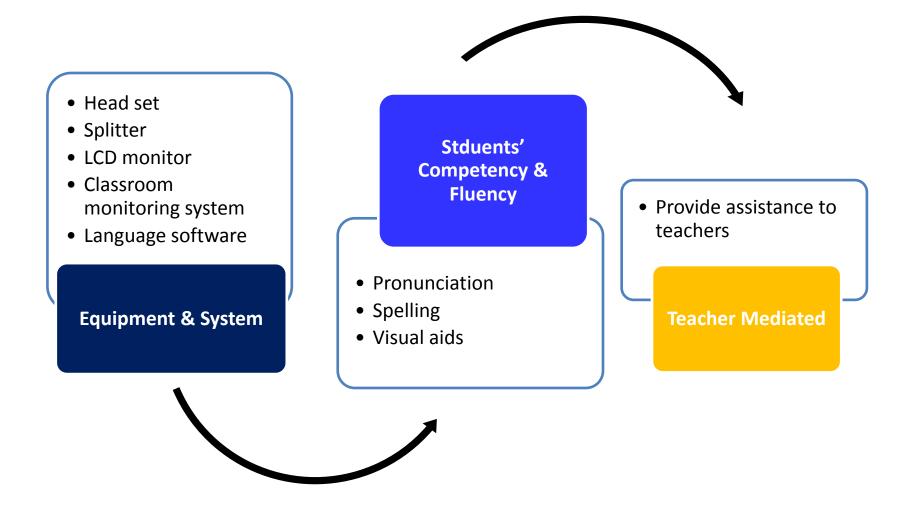
School Resource Centres



School Management System (SPS)



Language Labs



- Sustainance of procurement will be dependent upon allocation of financial resources in annual budget.
- Emphasis on MBMMBI (BM & English) programmes
- PADU Initiatives
 - 1BestariNet
 - Extension of initiative beyond 2014
 - Connectivity and VLE
 - Video e-Guru
 - Production of 100 videos in addition to 50 already produced
 - YouTube
 - Use of radio under Distance Education for Underenrolled Schools

- Use of radio under Distance Education for Underenrolled Schools
 - Underenrolled schools in rural and interior schools
 - Issue of access and equity PPPM 2013 2025 aspiration
 - Special education needs for under-priviledged children in isolated areas
 - Visually impaired
 - Sound generation via digital textbooks
 - Use of radio as a "feasible" alternative
 - Accesible via VLE or radio
 - Downloadable from the Cloud
 - Self-paced instruction/self-access learning

- Use of radio under Distance Education for Underenrolled Schools
 - Collaboration with:
 - Special Education Division, Ministry of Education
 - Malaysian Associaton for the Blind
 - Textbook Division, MOE
 - User-friendly Interface
 - Materials with voice activation to help visually impaired students
 - Interacitivity via keyboard
 - Voice-activated digital textbooks with collaboration from Textbook Division

- School Management System
 - Education Management Information System (EMIS)
 - Students' Online Application
 - Student Affairs Management

Thank You

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