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MINISTRY OF EDUCATION
BRUNEI DARUSSALAM

DIGITAL TRANSFORMATION PLAN

2023 - 2027



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Ministry of Education
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TABLE OF CONTENT

PAGE

1. TITAH	3
2. FOREWORD	4
3. ALIGNMENT TO WAWASAN BRUNEI 2035	6
4. ALIGNMENT TO DIGITAL ECONOMY MASTERPLAN 2025	7
5. DECLARATION ON THE DIGITAL TRANSFORMATION OF EDUCATION SYSTEMS IN ASEAN	8
6. OVERVIEW	9
7. MOE DIGITAL TRANSFORMATION PLAN	10
7.1 VISION	10
7.2 MISSION	11
7.3 FOCUS AREAS	12
7.4 KEY ENABLERS	13
7.5 KEY INITIATIVES	14
8. MOE DIGITAL TRANSFORMATION GOVERNANCE FRAMEWORK	17
9. GLOSSARY	18




TITAH

“...sektor awam dan swasta untuk menerapkan budaya penggunaan **Teknologi Maklumat** dalam kehidupan seharian. Ini menjadikan kita perlu mempercepatkan pengukuhan **Transformasi Digital** bagi memastikan norma baharu dapat dilaksanakan dengan berkesan. Perkara ini adalah selaras dengan matlamat **Pelan Induk Ekonomi Digital 2025.**”

HIS MAJESTY SULTAN HAJI HASSANAL BOLKIAH MU'IZZADDIN WADDAULAH IBNI AL-MARHUM
SULTAN HAJI OMAR 'ALI SAIFUDDIEN SA'ADUL KHAIRI WADDIEN

Sultan and Yang Di-Pertuan of Negara Brunei Darussalam
Titah, in conjunction with the 38th National Day Celebration in 2022





FOREWORD

**Yang Berhormat Datin Seri Setia
Dr Hajah Romaizah binti Haji Md Salleh
Minister of Education**



All praises be to Allah Subhanahu Wata'ala, selawat and salam upon our beloved Prophet Muhammad Salallahu 'Alaihi Wassalam, his family, companions and faithful and honest followers till the end of time.

Digital transformation is a critical agenda for Brunei Darussalam following the launch of the Digital Economy Masterplan 2025 as it aspires to become a Smart Nation and realise the vision of Wawasan Brunei 2035. With direction from the Digital Economy Council, the Ministry of Education is pleased to publish its Digital Transformation Plan, which outlines the ministry's strategies in driving digital transformation for the Education Cluster.

The importance and urgency of incorporating digital technologies into education has been brought to light not just due to schools' disruptions during the pandemic. These efforts aim to equip our workforce with skills to manage changes brought about by the digitalization wave as well as to take advantage of it and deliver real quality education. Digital transformation is key to revolutionising processes, productivity and people, through the adoption and integration of emerging digital technologies.

It is important that we inculcate the digital culture early through our education system, encompassing teaching, teachers' skills, learning delivery, learning resources, curriculum, assessment, information management and infrastructure, that would help our educators and learners to be more flexible and adaptable in this ever-changing environment. Furthermore, this would also be aligned to the 21st century teaching and learning, that highlights the importance of technology integration and learning beyond conventional classroom, to create an engaging and personalised environment that meets the learning needs of current generation.

It is our hope that the Ministry of Education's Digital Transformation Plan, with the vision "Quality Education through Digital Transformation", will serve as a roadmap in implementing the digital transformation initiatives across the ministry, especially on teaching and learning, and public service delivery. The combination of technologies, such as Artificial Intelligence, Big Data, Blockchain and Mixed Reality, has transformed the interaction of physical and digital domains to a new level, redefining the way we live, work, teach and learn.

To conclude, I would like to express my appreciation and gratitude to the Digital Transformation Steering Committee of the Ministry of Education and all those who have contributed in the development of the Digital Transformation Plan. Insyah' Allah, through strong collaboration amongst all the stakeholders, we will strive forward onto realising Wawasan Brunei 2035 and the Digital Economy Masterplan 2025 aspirations towards becoming a Smart Nation.

Wabillahi Taufiq Wal-Hidayah, Wassalamu'Alaikum Warahmatullahi Wabarakatuh.

**Yang Mulia
Dr Haji Azman bin Ahmad
Permanent Secretary (Higher Education)
Chief Information Officer and
Chairman of Digital Transformation Steering Committee
Ministry of Education**



In the name of Allah, the Most Gracious and Most Merciful.

Alhamdulillah, as Chairman of the Ministry of Education Digital Transformation Steering Committee, I would like to express my appreciation and sincere thanks to all those who have contributed towards the documentation of the Digital Transformation Plan for the Ministry of Education.

With the rapid technological advancement and volatile environment the world has become, the call for digital transformation has increasingly become more crucial and inevitable. For the Ministry of Education, digital transformation is not only about utilizing technologies, but it is also to strengthen our education system that can adapt to any future needs and challenges.

In this regard, the Ministry of Education's Digital Transformation Plan is strategizing its transformation efforts through three focus areas, namely: Education Technology, Management Technology, and, Enabling Policies and Infrastructure. All these three components will work in synergy with one another to provide a unified ecosystem that would be more agile and sustainable to the current and future needs of our society, especially our learners.

With a vision of "Quality Education through Digital Transformation" and a mission "To Provide Quality and Holistic Education through Digital Teaching, Learning and Services", the Digital Transformation Plan aims to align the teaching and learning activities, and service offerings with the emerging technologies driving the Fourth Industrial Revolution, such as Data Analytic, Artificial Intelligence, Augmented / Virtual Reality and Blockchain. These will help ensure our various levels of stakeholders can benefit from the transformation and are ready for a world where this cyber-physical ecosystem will be more prevalent.

Finally, I take this opportunity to extend my heartfelt gratitude to members of the Digital Transformation Steering Committee as well as the Working Groups under this committee for their commitment in creating this Digital Transformation Plan, and for their cooperation and concerted efforts in identifying action plans, setting targets and timelines for the education sector, and in monitoring the implementation of action plans identified to realize the vision of the plan.

Let us all work together towards developing our beloved Brunei Darussalam as a Smart Nation with educated and highly skilled people who are successful and contributing to our dynamic and resilient economy.

Wabillahi Taufiq Wal-Hidayah, Wassalamu'Alaikum Warahmatullahi Wabarakatuh.

ALIGNMENT TO WAWASAN BRUNEI 2035

To shape the future vision of Brunei Darussalam, the Wawasan Brunei 2035 vision aspires that by 2035, Brunei Darussalam will develop into a nation that will be widely recognised for:

- i. The accomplishment of its educated and highly skilled people measured by the highest international standards
- ii. Quality of life that is among the Top 10 nations in the world; and
- iii. A dynamic and sustainable economy with income per capita within the Top 10 countries in the world.

This plan will support the first vision - to develop educated, highly skilled and accomplished people, by fostering technology adoptions in the day-to-day activities of our learners, educators and users, thus equipping them with the skills and characteristics of a Smart Nation.



ALIGNMENT TO DIGITAL ECONOMY MASTERPLAN 2025

The Digital Economy Masterplan 2025 was launched in 2020, with its five-year masterplan aligning with the aspiration of His Majesty Sultan Haji Hassanal Bolkiah Mu'izzaddin Waddaulah ibni Al-Marhum Sultan Haji Omar 'Ali Saifuddien Sa'adul Khairi Waddien, Sultan and Yang Di-Pertuan of Negara Brunei Darussalam, for Brunei Darussalam to become a **Smart Nation**. It outlines three Strategic Objectives: -

- A Digital and Future Ready Society**
- A Vibrant and Sustainable Economy**
- A Digitally Conducive Ecosystem**

As part of the masterplan, **Education** was identified as one of the nine clusters, which is expected to significantly impact economic growth through the implementation of digital transformation initiatives. Today, rapid technology advancement has not only changed the way we live and work, but it has also changed how we teach and learn. Modern citizens now expect more online services, which are more convenient, faster and cost-effective. Teachers and students expect more technology integration, to enhance teaching and learning beyond the conventional classroom settings.

This plan outlines the Ministry of Education's strategies for driving digital transformation of the Education cluster.

DECLARATION ON THE DIGITAL TRANSFORMATION OF EDUCATION SYSTEMS IN ASEAN

The Member States of the Association of Southeast Asian Nations (ASEAN) namely:

- i. **Brunei Darussalam**
- ii. The Kingdom of Cambodia
- iii. The Republic of Indonesia
- iv. The Lao People's Democratic Republic (Lao PDR)
- v. Malaysia
- vi. The Republic of the Union of Myanmar
- vii. The Republic of the Philippines
- viii. The Republic of Singapore
- ix. The Kingdom of Thailand
- x. The Socialist Republic of Viet Nam

collectively committed to **promote access to digital technologies, digital literacy, and transferrable skills** amongst the ASEAN member states.

In addition, the members are also committed **to ensure inclusion and equity in education, harness public-private sector partnerships, and safeguarding children and young people** in the digital transformation of education systems.

Hence, this plan outlines the various efforts by the Ministry of Education to support these commitments.

OVERVIEW

Our digital transformation plan sets out our vision and long-term intent through our three focus areas.

VISION

Quality Education through Digital Transformation

MISSION

To Provide Quality and Holistic Education through Digital Teaching, Learning and Services

FOCUS AREAS




Educational Technology

Educational Technology focuses on the technology for teaching and learning to improve student outcomes, enhance individualised and personalised education, and improve teaching effectiveness



Management Technology

Management Technology focuses on using technology to increase the efficiency of business processes and provide a better service experience to the public



Enabling Policies and Infrastructure

Enabling Policies and Infrastructure focuses on the relevant policies and infrastructure in place to support the successful implementation of the digital transformation



MOE DIGITAL TRANSFORMATION PLAN



VISION


Quality Education through Digital Transformation

Quality Education

Providing equitable quality education guided by the values of the Malay Islamic Monarchy to develop future-ready citizens who are equipped with knowledge and skills of the 21st Century, developing learners to become positive and responsible individuals who can contribute positively to the nation.

Digital Transformation

Digital Transformation is the process by which processes are fundamentally changed or reorganized to obtain benefits through the adoption and integration of emerging digital technologies, and deliver values to our customers (educators, learners and the public).



MOE DIGITAL TRANSFORMATION PLAN



MISSION

To Provide Quality and Holistic Education through Digital Teaching, Learning and Services

To Provide Quality and Holistic Education

As a professional and dynamic organization, the Ministry of Education will provide quality and holistic education system by offering educational programs that are relevant and responsive to the needs of learners, with meaningful curriculum that is guided by the values of the Malay Islamic Monarchy.

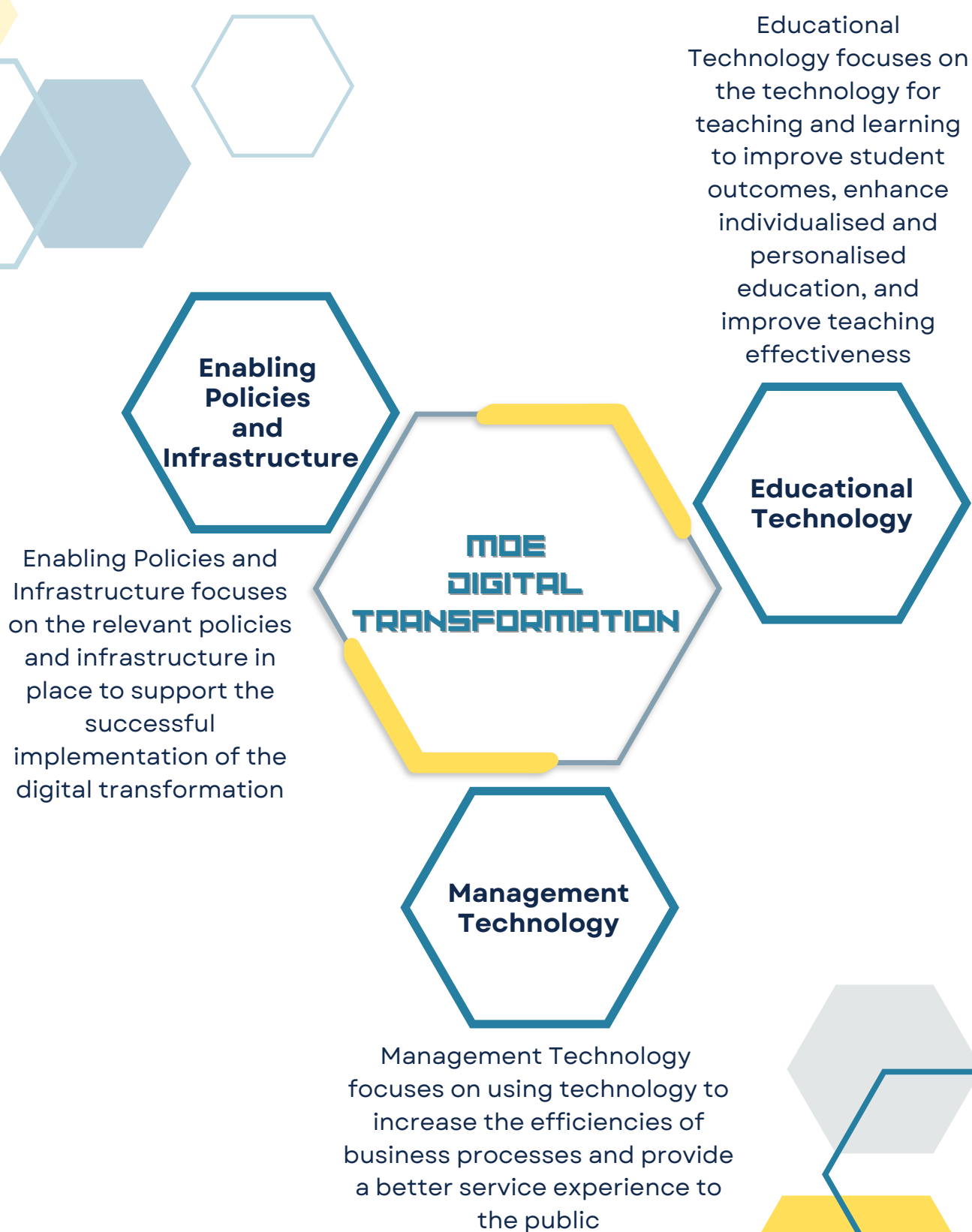
Through Digital Teaching, Learning and Services

The delivery of quality and holistic education, and services by the Ministry of Education will be accomplished through two fundamental transformations:

- i. Digital teaching and learning transformation, by improving access to digital technologies and learning contents for effective delivery of digital teaching and learning experience
- ii. Public service delivery transformation through the adoption of digital technologies for an effective and efficient organization

The ministry will focus on advancing organizational transformation, through the utilization of digital technologies and strategies that capitalizes on the ministry's core competencies, supporting our learners, educators and public users toward a smart society.

FOCUS AREAS



KEY ENABLERS

To ensure the successful implementation of the plan, the key enablers are:

i. Digital Curriculum:

A collection of digital content or resources, such as video, images, documents and interactive media, aligns with digital teaching and learning.

ii. Digital Assessment:

Data-driven platform to deliver continuous assessment on the learner's performance, learning behavior, tests and examinations, in order to establish personalized learner growth paths.

iii. Human Resource Upskilling

Build competencies on technology adoption and integration in day-to-day work including educators to implement digital pedagogy.

iv. Communication Plan:

Provide a clear communication plan to all stakeholders, in order to ensure a common understanding of the objectives and responsibilities.

v. Data Convention and Sharing:

To have a standard data convention on common data that would support data sharing and analysis across the ministry.

KEY INITIATIVES



*Refer to Glossary for descriptions



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*Refer to Glossary for descriptions



KEY INITIATIVES

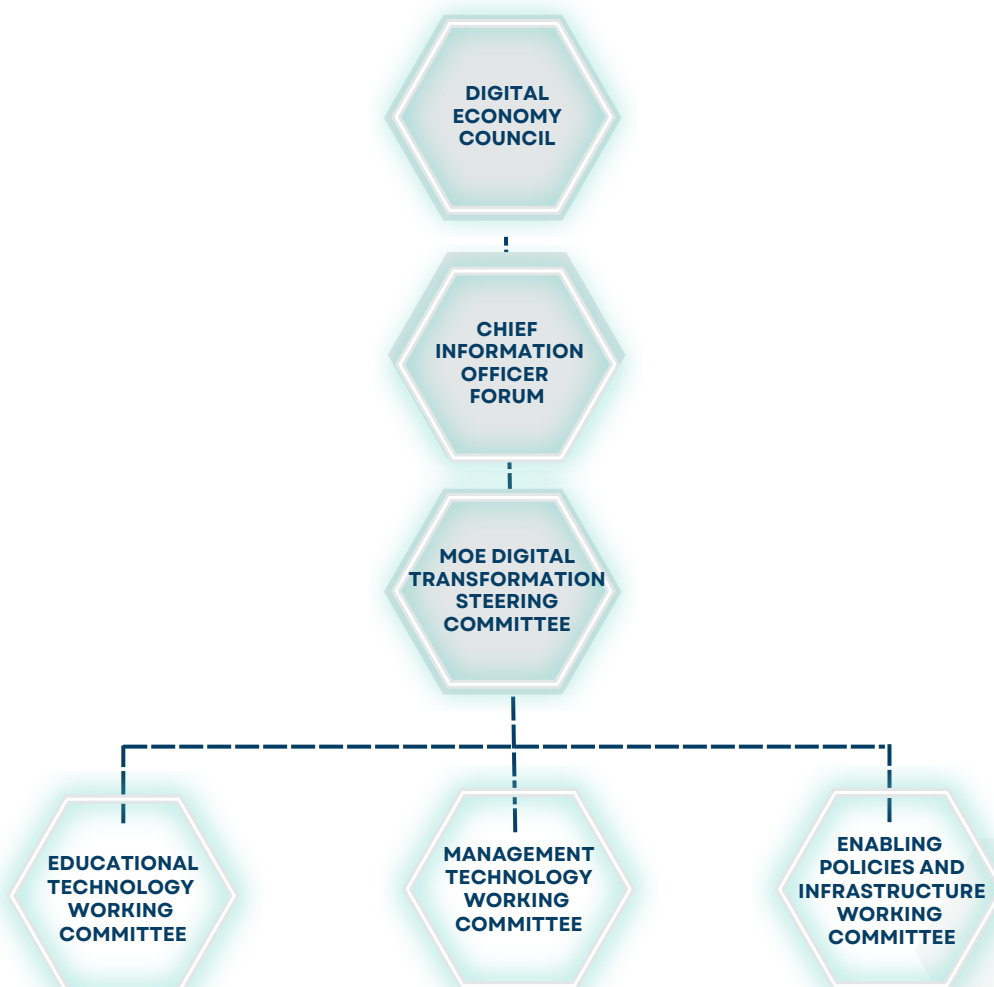


*Refer to Glossary for descriptions

MOE DIGITAL TRANSFORMATION GOVERNANCE FRAMEWORK

In order to implement the digital transformation initiatives, the Ministry of Education has established a framework to manage digital transformation in the Ministry covering two levels namely the Steering Committee and Working Committee.

The Digital Transformation Steering Committee, led by Chief Information Officer, Ministry of Education, is responsible for establishing the Ministry of Education's Digital Transformation Plan, including identifying and overseeing the action plans and the desired outcomes, according to the timelines.



Several activities have been planned for the next five years under each focus area, which is being monitored through working groups led by the Ministry's Deputy Permanent Secretaries. These working groups will meet regularly to ensure planned activities are executed according to the timeline and provide updates to MOE Digital Transformation Steering Committee.

GLOSSARY

1. Accreditation Management

A centralized platform that would allow students to apply for accreditations on their qualifications through online channels, as well as to provide the Ministry of Education with a holistic database on accredited qualifications, and the opportunity to leverage emerging technology in producing digital certificates.

2. Assessment Management System

A centralized platform to manage student assessments, and cohort tracking allows the Ministry of Education to have holistic data on student performance and progression.

3. Central Admission System

Centralized platform for students to apply programmes and/or courses offered by Higher Education Institutions (HEIs). The platform would facilitate applications, filter, and award admissions for prospective students to respective institutions, enhancing overall processes for institutions and applicants.

4. Data Conversion and Archiving

Digitization programme to increase digital copies of physical documents, thus reducing the dependencies on paper. This would also help increase productivity and efficiency in day-to-day work activities, as digital records can improve document management, including archiving and retrieval.

5. Digital Resource Management System

Digital repository that would allow departments or schools to share learning resources such as audio, animation, images and digital books readily accessible to teachers and students.

6. Education Data Management System

A centralized data management platform for the Ministry of Education, with standardized data structures ministry-wide, allows robust data analytics to support strategic decision-making.

7. Educator Management System

A centralized platform that would manage and monitor educators' data, including deployment, competencies, up-skilling activities, and their respective students' performances.

GLOSSARY

8. IT Network Infrastructure Upgrade

Enhancement of schools' Local Area Networks (LAN) that would provide higher bandwidth capacity and broader network coverage, allowing teaching and learning activities beyond the classroom.

9. Learning Management System

Online integrated platform used for creating, delivering, tracking, and reporting educational content and outcomes. It can be used to support traditional face-to-face instruction, blended/hybrid and distance learning environments.

10. MOE Online Services

Centralised platform to provide online service delivery as an added value to the services available to the public and international users for better experience and efficiency.

11. MOE TV

A TV Channel hosted by MOE that offers a safe environment where educational videos developed by the EduTV Unit or by teachers are readily accessible with no inappropriate links or adverts.

12. National Education Network

A dedicated network for educational institutions would provide better internet experiences and access to educational resources.

13. Policy Development and Enhancement

To support digital teaching and learning across schools, relevant policies would be reviewed or established, ensuring overall objectives be met with proper control measures.

14. Provision of Devices

To allow better adoption of technologies by our students, this initiative is to replace desktop computers in the school's ICT labs with notebooks. Thus, providing flexibility in utilizing computers for teaching and learning activities beyond the ICT lab.

GLOSSARY

15. School Management System

An online platform that allows schools to manage and monitor school day-to-day administrative activities, including allocation of assets and facilities, financial and procurement matters.

16. Smart Classroom

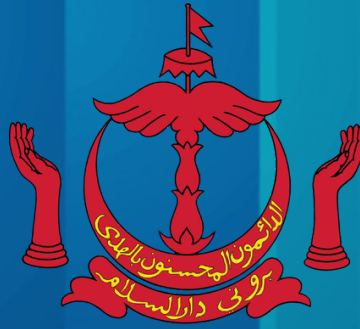
A unique space in a given school rich in physical and virtual-space technologies, constantly connecting and collaborating, as a singular ecosystem through the interoperation of smart technology and IoT.

17. Student Information System

A centralized platform would allow the Ministry of Education to manage and monitor student data, including student ID, student personal information, class enrolment, performance and co-curriculum activities.

ACKNOWLEDGEMENT

The Ministry of Education would like to express its sincerest gratitude to all that were involved, for the time, effort and dedication, in the development and publication of the Ministry of Education Digital Transformation Plan 2023-2027.



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BRUNEI DARUSSALAM