Use of Personal Learning Devices: Device Management Application (DMA)

Intended Outcomes of a Personalised Learning Environment

The use of the personal learning device (PLD) for teaching and learning aims to:

Support the Development of Digital Literacies

Support Self-Directed and Collaborative Learning

Enhance Teaching and Learning

Supporting Students in the Safe and Conducive Use of the Devices

The school has measures in place to enable a safe and conducive learning environment for students in the use of PLDs for teaching and learning, e.g.

- Educating students on Cyber Wellness
- Classroom management and routines
- Device Management Application (DMA)

We need to partner you in ensuring that your child is well supported both in and outside of school.

Role of DMA
In Supporting Student Learning

Cyber Wellness Concerns Identified by International Studies*

Harmful online content

50% of Singaporean teenagers are exposed to cyber threats & 28% of them are exposed to violent content.
(COSI, 2020)

Distraction from learning

72% of teens feel compelled to immediately respond to texts, social posts and notifications.
(Kimball & Cohen, 2019)

Excessive screen-time

Teens who don't sleep enough report higher levels of depressive symptoms than well-rested peers (31% vs 12%).
(Kimball & Cohen, 2019)

Parents' Sentiments on DMA

Why parents are supportive of DMA

This is a positive direction from MOE to normalise the use of technology and **it will support and enable the teachers to be more effective on HBL.**

- Parent of 2 children in secondary school

I am of the view that DMA is a **compulsory tool** which will overall benefit all stakeholders. We like it or not, there are a lot of disinformation.

- Parent of a child in secondary school

Parents prefer to have such monitoring software all this while in order to **safeguard students' cyber wellness, and necessary/appropriate action can be taken if the device is not used for the intended purpose**. Some parents even request the school to extend the monitoring hours from during school hours to 24/7 365 days. However, we help to explain to parents that behaviour is considered as the tip of iceberg, parents need to find out the underlying causes. I have also noticed these parents feel relieved when they know that monitoring software will be installed for monitoring purpose.

- Parent of 2 children, who is a PSG leader in a secondary school which has implemented Mobile Device Management (MDM) in students' PLDs since 2015

What Parents Needed Clarification On

- Value proposition of the DMA

- Features of the DMA – what it can or cannot do

- Control over the DMA – by parents and/or school

- Data collected by DMA

Device Management Application

The Device Management Application (DMA) software will be installed* on all students' devices** to provide a safe learning experience for your child, and to prevent misuse of the device.

The DMA will be **funded by MOE** and will be **uninstalled** from the device **when your child graduates / leaves the school**.

*Installation of the DMA will be performed after the collection of the device. Students will be guided on the installation.
**Both devices purchased through the school and pre-existing student-owned devices.

Components of DMA

The Device Management Application (DMA) software consists of the following three components:

1. **Mobile Device Management Service**
2. **Classroom Management Service**
3. **Usage Management Service**

DMA Service Components and their Functions

1. Mobile Device Management Service (MDM)[1]

This facilitates the **updating and management of the PLDs, protects PLDs from malicious software**, and **protects students from objectionable internet content**.

- Automatic installation of apps required for teaching and learning
- Filtering of objectionable content (e.g. pornography, gambling, violence)
- Configure PLD security
- Capture and report hardware information (e.g. processor, RAM, storage space, serial number and mac address of the device) for registration and management of PLD

[1] MDM is **a core service** that is required to deliver Classroom Management Service and Usage Management Service (which includes the Parental Control app).

DMA Service Components and their Functions

2. Classroom Management Service (CMS)

This enables teachers to **manage the student's use of the PLD** during lesson time to improve classroom management and support effective teaching and learning

- Activated only during class time
- Monitoring of student use of PLDs in class – e.g. view students' screens
- Manage and control student PLDs in class – e.g. device lock-down
- Launching of specific applications and/or websites for teaching and learning
- Facilitate sharing of content

DMA Service Components and their Functions

3. Usage Management Service (UMS)

This enables the school and/or parents to **better supervise and set helpful limits for students' use of PLDs after school**.

- Screen time control
- Control access to applications, and permission to install applications
- Safe search and additional web content filtering
- Monitoring of usage and activities by students

Data Collected and Access Rights

The DMA does **NOT** collect any of these data:

- Student login IDs and passwords
- Student's activities and data (e.g. posts, online comments, shopping cart, etc.) when they visit websites and use apps
- Documents and photos stored in the PLDs
- PLD location
- Webcam videos and microphone recordings

Types and Purpose of Data Collected by DMA

Data for DMA Administrative Purposes

Essential for DMA and lesson set up and management of devices through DMA

Examples:
- Students' and parents' information (Name, school name, email addresses, and class)
- Apps installed in your child's PLD
- Device and hardware information (e.g. device model, storage space)

Accessible by:
- Teachers
- Parents **(for activities after school hours)**
- DMA administrators in school and at MOE
- DMA contractors

Data for Web Content Filtering

Filtering of harmful content to ensure students' cyber safety

Examples:
- URLs accessed on the PLDs (*Activities on the websites are **NOT** captured*)
- Date and time of the access
- Student profile (Name, School name)

Accessible by:
- Teachers (for activities during lessons)
- Parents **(for activities after school hours)**
- DMA administrators in school and at MOE
- DMA contractors

Types and Purpose of Data Collected by DMA

## Data for Application Management

To ensure that the installed apps are updated and functioning properly

Examples:
- Installed apps and programs
- Date and time that the apps and programs were last updated
- Application error data

Accessible by:
- Teachers (for activities during lessons)
- Parents (for activities after school hours)
- DMA administrators in school and at MOE,
  - DMA contractors
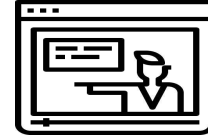
Data for Sharing Students' Screen

To allow teachers to check that students are on task, and address possible questions in class

Example:
- Only the streaming of 'live' screen view. *(The screen view will **NOT** be stored)*

Accessible by:
Teachers **during class only**

DMA Settings for In-school and After-school use of Devices

Providing parents with

greater choice

for
after-school PLD use

More information on how parents can exercise your option will be provided soon.

Default

MOE/school DMA settings will continue after school hours*

For parents who want their child's use of the devices to be restricted only to teaching and learning, and prefer to leave it to the school/MOE to decide on DMA settings both during school and after school hours.

Option A

Parents can determine DMA settings after school hours*

For parents who want more leeway over the use of the device, and to want to take charge of the level of restrictions for their child's use of the device after school hours.

Option B

Parents can choose to disable DMA after school hours*

For parents who do not want their child's use of the device to be regulated by DMA after school.

*School hours refer to the time within which students are involved in structured learning activities within the school, including time allocated for CCAs and enrichment programmes. The hours are defined by the school.

- **Having default school settings continue after school hours is the best option for parents who prefer not to, or do not feel ready to manage their child's device use on their own.**
- **Parents can request to change their choice of DMA settings at any time.**

In-School DMA Settings (Default)

Schools will determine DMA settings for in-school use that are designed to help **students focus on learning in a safe and conducive online environment. As a default, these settings will continue to be in place after school as well.**

1. MOE/school determines level of web content filtering including social media sites, pornography, gambling, extremist and violence-related sites

2. School will determine any restrictions to PLD usage time

3. School will determine the apps and programs to be installed for teaching and learning

4. Parent account will be enabled to allow parents to monitor child's PLD activities and partner school to ensure child's cyber well-being

Consider the following questions before deciding on opting out of the Default DMA settings

Child's current device usage habits

o   How much time does my child spend on their device?

o   How well is my child able to regulate their device usage on their own?

o   Does my child get easily distracted while doing online learning?

Parental involvement

o   How confident and familiar am I with managing my child's cyber wellness?

o   Are there existing routines and open conversations on the use of the Internet at home?

o   Am I aware of how to prevent different types of cyber threats that my child might face?

Have a conversation with your child to talk about which setting is best for your child's learning.

Additional Resources for Parents

To support you in keeping your child safe online, you may refer to these additional resources:

- Parent Handbook (I) on Learning with a Personal Learning Device (shared by the school)
- Parent Kit on Cyber Wellness for Your Child (https://go.gov.sg/moe-cyber-wellness)

Thank you and we look forward to partnering you in our students' digital literacy journey!

References

Statistics cited on Slide 5 are obtained from:

1. DQ Institute. (2020). 2020 Child Online Safety Index (COSI): World-first real-time measure for online child safety. Retrieved 22 February 2021 from www.dqinstitute.org/child-online-safety-index

2. Kimball, H. & Cohen, Y. (2019). Children's Mental Health Report: Social Media, Gaming and Mental Health. New York: Child Mind Institute