





# Strategy, Progress and Solution on BYOD (Secondary)

HKCCCU Logos Academy  
Eric Chan, Nick Yu

- 
- » Ready to “Go”
  - » e-Learning Goals
  - » School Practice
  - » Reference
- 

# Technical specification of Wi-Fi services



Education Bureau  
The Government of the Hong Kong Special Administrative Region

HK 香港政府一站通

- Home
- Latest News
- Education Development Board (EDB)
- Press Release
- Education System and Policy
- Curriculum Development
- Parents and Parents Related
- Teachers Related
- School Administration and Management
- Technical Administration and Management
- Access to Information
- Contact Us

## Application for Technical Advisory Service

Schools wishing to request for technical advisory service, please state your need in the request form. The technical advisory team will serve schools on first-come-first-serve basis.

Documents for reference: (updated 2 December 2016)

<p>DL/UL Test Tools: OFCA or <u>WaaSchool</u> speed test tool Download URLs: <a href="http://gbcode.ofca.gov.hk/TuniS/speedtest.ofca.gov.hk/">http://gbcode.ofca.gov.hk/TuniS/speedtest.ofca.gov.hk/</a> <a href="http://www.hkedcity.net/waaschool/testing_tool">http://www.hkedcity.net/waaschool/testing_tool</a></p>	<p>DL _____Mbps (expected <math>\geq 1</math>Mbps per connection) 40 connection UL _____Mbps (expected <span style="border: 1px solid black; padding: 2px;">英</span> /Mbps per connection) 40 connections</p>
--	---


<https://www.edb.gov.hk/en/edu-system/primary-secondary/applicable-to-primary-secondary/it-in-edu/Wifi900/TechnicalAdvisory.html>

# Questions

- » How many devices are connected in school?
- » Number of mobile device in school?
- » Planned number of BYOD class?



# Before BYOD:

- » **Infrastructure ~ Wi-Fi 、 Broadband 、 Security**
    - ◇ **Number of room running e-Learning**
      - ◇ **Staff Room 、 General office**
    - ◇ **Bandwidth**
    - ◇ **Information security**
    - ◇ **Regular UAT**
- 

## Estimate data rate in school

1 Class

» 40 devices x 1Mbps = 40Mbps

1 Form

» 3 classes x 40Mbps = 120Mbps

# WaaSchool

[首頁](#)[WaaSchool簡介](#)[WaaSchool服務](#)[伙伴](#)[活動詳情](#)[技術支援](#)[常見問題](#)

## 測試工具

### 簡介

WiFi網絡是電子學習的基本設備。為協助學校測試網絡表現是否適合進行電子教學，教城為學校提供WaaSchool測試工具（WiFi網絡快速測試），模擬一班學生利用不同裝置上課的真實狀況，例如，40位學生正在上課，而每人需要1Mbps的頻寬。WaaSchool測試工具可顯示每位學生的平均頻寬，以評估學生所用的裝置能否流暢地連接WiFi網絡。此測試工具所收集的數據只供參考，並不適合取代其他專業測試工具及軟件。教城將會提供測試平台及軟件，學校只需派遣一位負責教職員於網上預約測試時段，並準備足夠的裝置便可。測試方法非常簡單、快捷，學校可自行進行測試或聯絡服務供應商一起進行測試。

### 服務對象

學校 - 只需以教城學校管理員帳戶預約測試時段

# How to...

## Service Time

---

Date: Mon - Sat (except public holidays)

Time: 8am - 10pm

Testing Session: Each session is about 2 hours

## Notes to Using Testing Tool

---

### Make Reservation

- Schools can reserve **up to 3 sessions** in 3 months shown in the online system

1. Log in to [Booking Portal](#) with School Administrator Account
2. Select testing session(s), click 'Confirm'
3. Confirmation email will be sent upon successful reservation. You may also check the details in 'My Booking' in [Booking Portal](#)

[Reserve Now](#)





# How to...

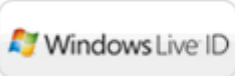
## » Login using School HkedCity Admin Account


### 會員登入 Member Sign In

以其他帳戶登入 /  
Login with third party account :

 Facebook

 Google

 Windows Live ID

 YAHOO!

以電郵地址或教城帳戶登入 /  
Login with email address or HKEdCity login ID :

登入名稱 / Login ID

密碼 / Password

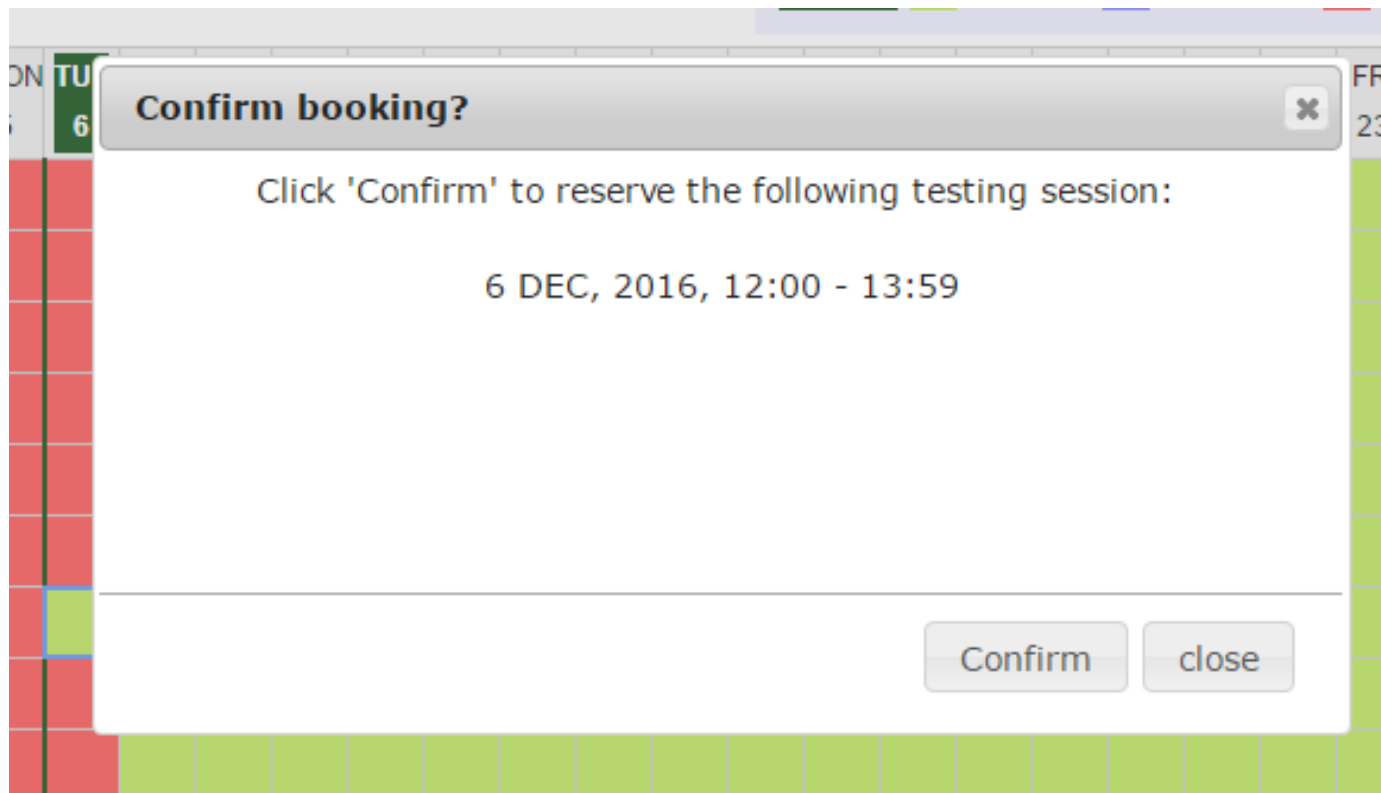
保持登入狀態 / Stay signed in ⚠

[忘記密碼 Forget Password](#) | [成為會員 Join Us](#)

[◀ 返回 Back](#)



# How to...







**Start Wi-Fi Test**

# Test Wi-Fi

- » Using HkedCity Admin Account to login again



## WaaSchool Testing Tool (Admin)

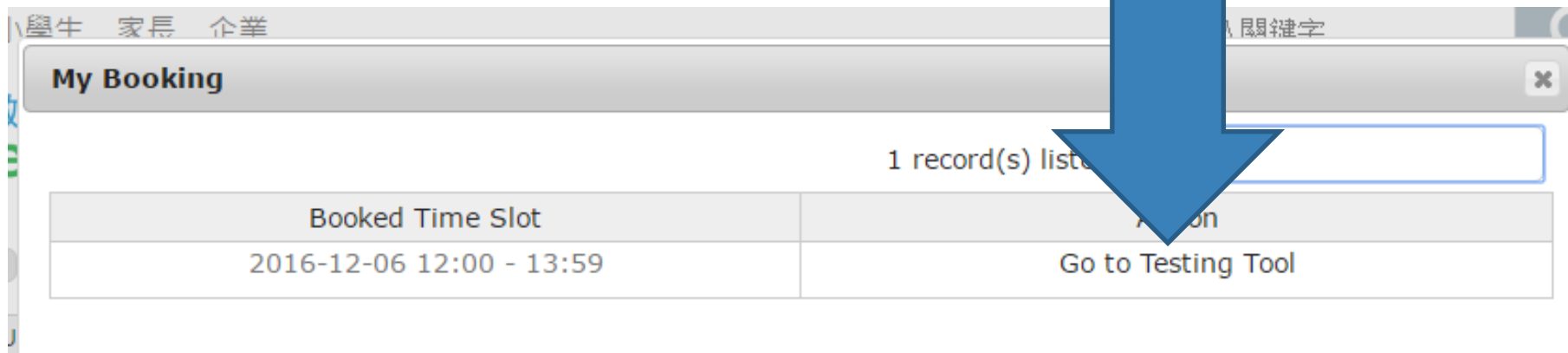
Username:

Password:

**Login**

# Test Wi-Fi

- » Login and click my booking



學生 家長 企業 關鍵字

**My Booking**

1 record(s) listed

Booked Time Slot	Action
2016-12-06 12:00 - 13:59	<a href="#">Go to Testing Tool</a>

# Test Wi-Fi

- » The code is arbitrary 4-digits number

## WaaSchool Testing Tool (Admin)

Username: ZH7

Code:

Login



# Test Wi-Fi

[Admin Panel](#)
[Report](#)

## WaaSchool Testing Tool



<http://104.155.196.38/SMC/1234>

### Speed Test

Speed:  Mbps (-1 for unlimited)

Duration:  second(s)

[Download](#)
[Upload](#)

### Movie / YouTube

Link:

[Play](#)
[Stop Test](#)
[Logout](#)

Session End Time: 2016-12-06 11:59:00  
Active client(s): (Refresh every 2 seconds)

#	Code	IP Address	Action	Last Access Date
1	1234	218.189.211.186	EXECUTING Upload 3Mbps for 60second(s)	2016-12-06 11:40:59
2	1234	218.189.211.186	EXECUTING Upload 3Mbps for 60second(s)	2016-12-06 11:40:59

# Test Wi-Fi

## Stress Test (Client) 1003

Logout

# 1

[10:03:43]

Received NOOP signal from server...  
[10:03:43] Received NOOP  
signal from server...

# Why promoting e-Learning?



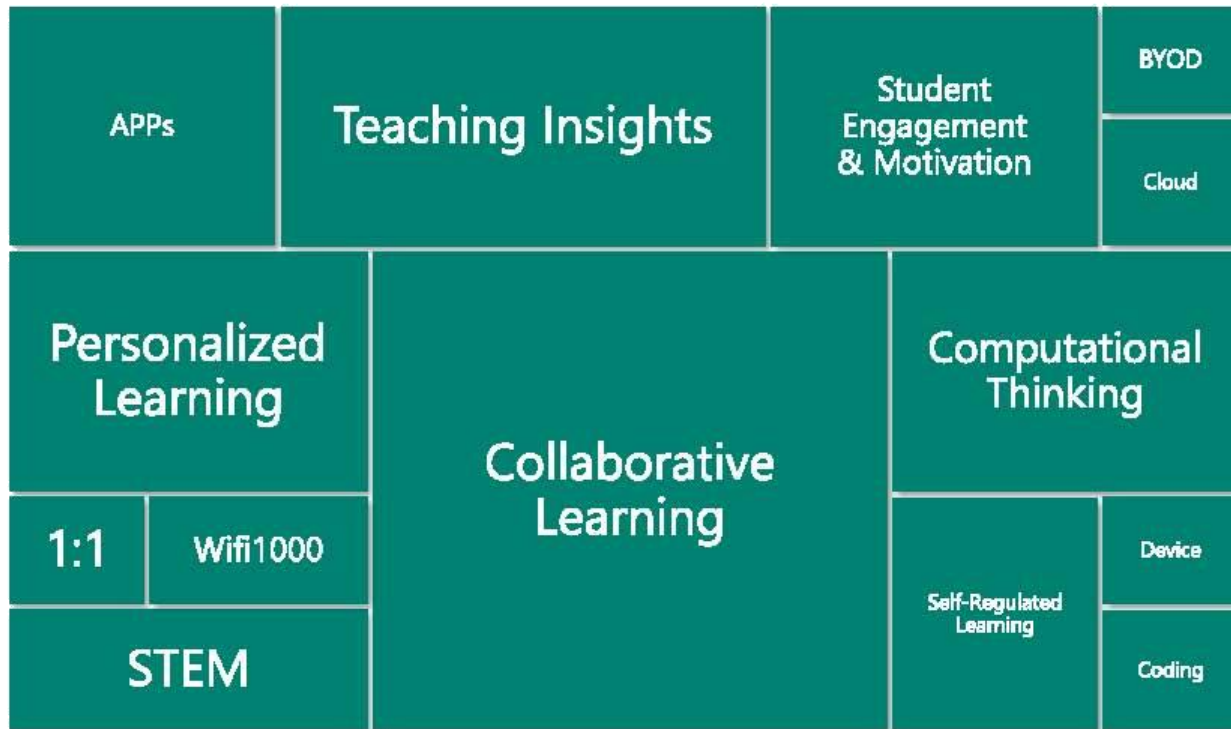
# Focus on Promoting e-Learning

» Device selection?

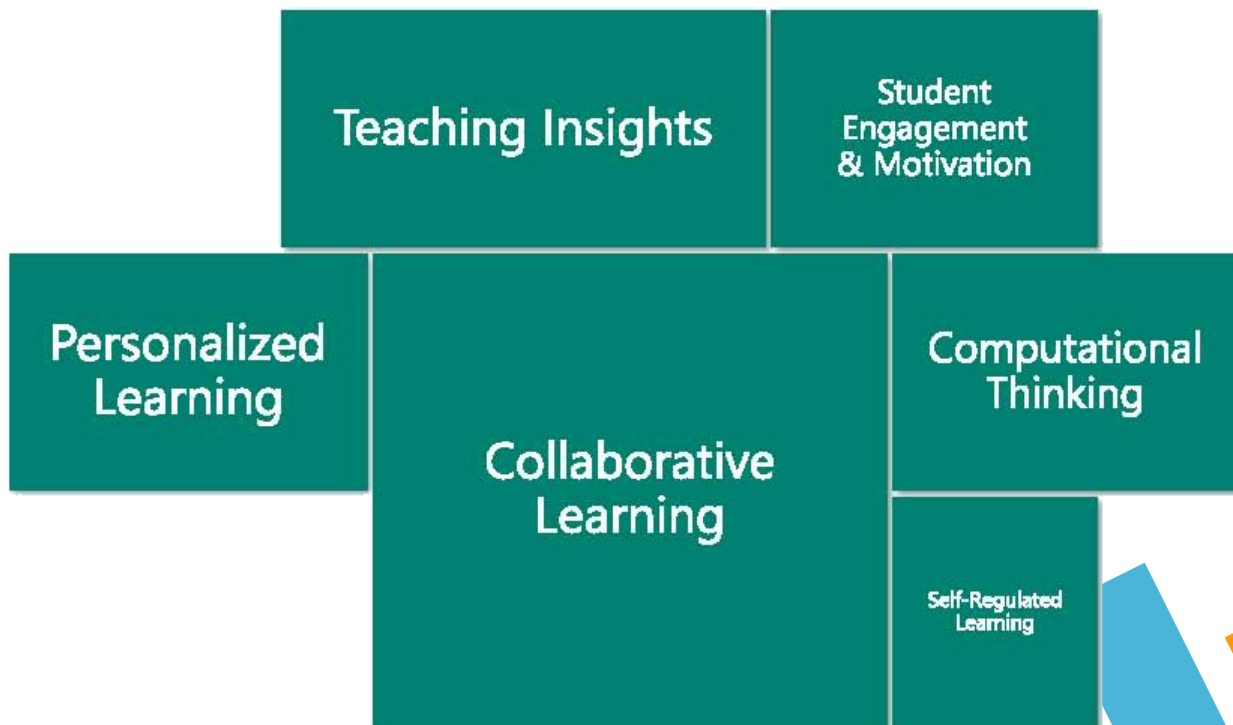
» Learning Focus?



# eLearning: Back to Basics



# eLearning: Back to Basics



# eLearning: Back to Basics

Teaching  
Insights

Personalized  
Learning

Collaborative  
Learning


Self-Regulated  
Learning

Computational  
Thinking


Student  
Engagement  
& Motivation




To enhance students'  
**motivation** and  
**interest** in learning







To increase the  
**interactions** with  
peers and teachers





To improve **generic skills** and promote  
**assessment for learning**



Starting from  
**BASIC!!!**

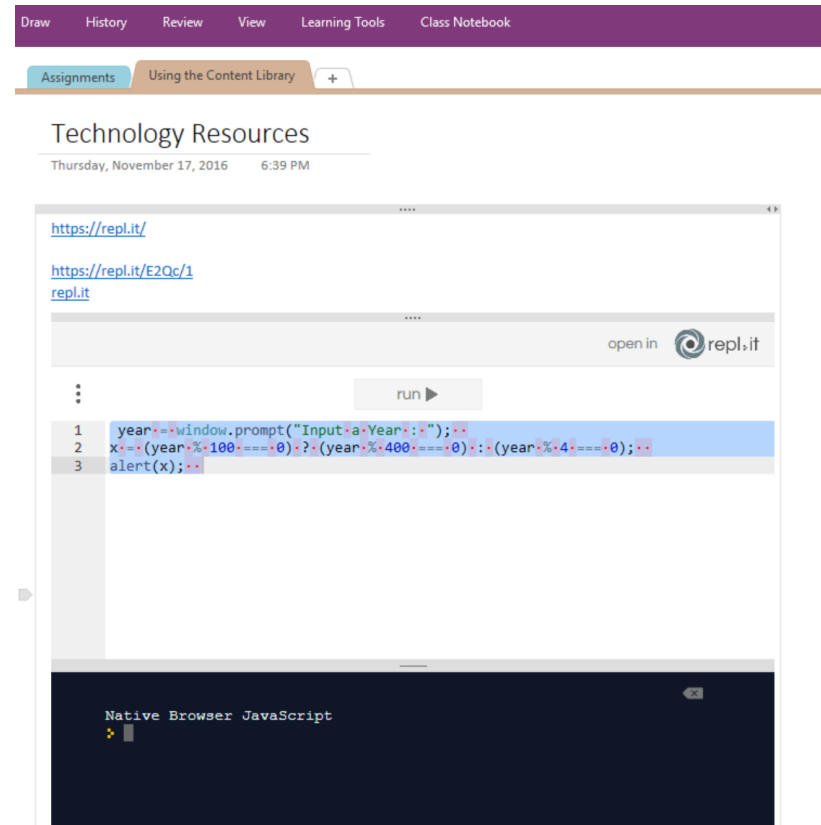
# Promoting Personalized and collaborative learning environment

- » Use of Office 365 to run collaborative activities with share folders, common notebook
- » During PBL, students research reference could be shared on their common notebook and track their progress
- » Common notebook will be used as individual working space, teacher notes and common working area

# Coding on digital notebook

- » Support various coding like Java, C, JavaScript, HTML, ...
- » Show live code
- » Run code in OneNote

**online coding platform**  
<http://repl.it>



The screenshot displays a digital notebook interface with a purple header bar containing navigation options: Draw, History, Review, View, Learning Tools, and Class Notebook. Below the header, there are tabs for 'Assignments' and 'Using the Content Library'. The main content area is titled 'Technology Resources' and shows a timestamp of 'Thursday, November 17, 2016 6:39 PM'. A browser window is embedded, displaying the URL 'https://repl.it' and a specific code editor view at 'https://repl.it/E2Qc/1'. The code editor shows three lines of JavaScript code: 

```
1 year = window.prompt("Input a Year:");  
2 x = (year % 100 === 0) ? (year % 400 === 0) : (year % 4 !== 0);  
3 alert(x);
```

 A 'run' button is visible next to the code. Below the code editor, a terminal window displays the text 'Native Browser JavaScript' and a cursor.

# How to kick-off BYOD program in school?

Experience Sharing

## Pilot Stage at 2014 Feb

- » In Feb 2014, define UAP on BYOD program.
- » One ICT class has taken part in pilot scheme.

## Students must obey the following rules:

- » The school will provide a personal Wi-Fi account to each student. The account should not be shared with others.
- » After getting permission from the subject teacher, students are allowed to use their own laptops/tablets in that particular lesson;
- » Students may also use their own device(s) in the library or self-study center during lunch time or after school;



## Students must obey the following rules:


- » Apart from the above situations, the power of the laptop/tablet must be in hibernation, stand-by or switched off mode;
- » Laptops/tablets should be used for learning activities only.
- » The screen size of the laptops/tablets must be greater than or equal to 7 inches.

## Students must obey the following rules:

- » Students should take care of their own personal properties in school; if the laptops/tablets brought to the school are lost, stolen or damaged, the school should not be held responsible in any way. Parents should pay particular attention to this.
- » Students should ensure that their laptops/tablets are fully charged before brought to the school to avoid inconvenience and potential dangers.



# Questions

- » How to manage device?
  - » Wi-Fi support?
  - » Power?
  - » Security?
- 

# Support on program

Our practices:

- » Free Web platform: Office 365, OneNote, Teams
- » Provide Office 365 download
- » Provide school Wi-Fi
- » Use of Remote App instead of app installation on student devices

## BYOD Kick off tips

- » Define device specification Screen Size, Battery life
- » Work with Discipline team on location of using laptop
- » Draft teaching and learning strategy on e-Learning
- » Host parent evening to share program details of BYOD [Invite student to share]
- » Consideration of new app adoption

# BYOD Kick off tips

Do ✓

- » Draft UAP
- » Duration of screen time in class

Don't ✗

- » Using too much IT tools on single activities
- » Apply one learning approach on learning activity

# Reference

<https://www.k12blueprint.com/toolkits/byod>



About

Toolkits ▼

Solutions

Publications ▼

Apps

News

Blogs

BYOD





### All BYOD toolkit files

A zip file containing all of the downloadable BYOD toolkit resources

▼ ZIP



### Getting Started with BYOD

Today's digital natives access information that is live and on-demand through mobile devices

▼ PDF



### Planning and Implementation Framework

Developing a successful BYOD program requires extensive planning, communication, and ongoing evaluation

▼ PDF

<https://www.k12blueprint.com/toolkits/byod>



### BYOD Implementation Challenges

Although there are many benefits to implementing a BYOD program, it is not without its challenges

▼ PDF



### BYOD Presentation for District Administrators

Introduce district administrators to the benefits and challenges of BYOD.

▼ PPTX



### BYOD Presentation for Educators

Introduce educators to the benefits and challenges of BYOD

▼ PPTX



## District Readiness Checklist

Determine your school or district's readiness for BYOD

▼ PDF



## Teacher Readiness Checklist

Evaluate your readiness before opening your classroom to student-owned devices

▼ PDF

## STEP 8 Consider Devices

### Mobile Devices

Although mobile devices offer many advantages, such as anytime—anywhere learning, there are times when students will require a “real” computer. Many software programs require a computer with a file structure and mouse input, even if they offer a companion mobile app to supplement the software program. Not all software features and file types are supported on mobile devices.

- What will students use when they require a keyboard?
- How will students use software programs that require a “real” computer?
- What will students use when they need a larger screen?
- How will students access files that are not supported on their mobile device?

### School-Owned Devices


Schools that implement BYOD programs must also provide mobile technology solutions for students who do not have their own device, and they must support the mix of the school’s technology with the students’ own devices. An effective program budget allows for purchasing or leasing school-owned devices, including costs for upgrading, repairing, or replacing the devices regularly. Some successful BYOD models report generous sharing of devices among students as well as donation programs for new and used equipment.





## Device Recommendations and Purchasing Guidelines

When it comes to purchasing mobile devices, parents and students will benefit from a general set of recommendations and considerations. An effective BYOD program will actively try to create an environment that will work with any device. However, it is still useful to post a Device Consideration Letter.



# Voice from different school

(Teacher) Choi Wai Kit +18 + 12h

List the possible problems that may arise when implementing BYOD in schools

資源配套

主科必須行電子書

教學成效未必能短期可見, elearning 難持續推行

課堂時間內處理機件問題或操作問題, 等待支援期間課堂已鬆散

Overuse of e-learning can also kill the curiosity of students' 要確保學生攜帶相關電子設備才能上課。

E-content is not ready

各科課程是否已有足夠準備?

並非每個科目皆合適使用ELEARNING

Teacher may refuse to bring his / her own

教師工作量大增

Teachers need to master e-learning pedagogy

gaming

Ss us iPad anytime, everywhere

手工上網

學生於自由時間使用, 會拍攝違規行為並上網

學生不恰當使用平板電腦, 增加違規問題

忘了帶device 回校

玩遊戲

課堂片段或聲音被學生拍攝上堂情況

sound recording.

off task

any recommendation

How to align learning through E-learning / mobile learning and the most important part in school -> Exam. Still, exam requires students to use pencils and eraser, right?

Human resources for monitoring / controlling / maintaining the network. Network stability is not that 中學未有完善教科書下, 學生同時攜帶課本及 devices, 加重書包負擔

學生及家長質疑為何 byod 下仍不讓同學在校內使用電話

電子化會否變成單一化的教學

保安問

Security

學校基建未能支援實際情況, e.g. wifi

Network Overload

彭SIR

須教導學生如何確保自攜裝置的安全, 避免發生失竊事件。

No. of manpower support needed other than the IT teachers?

IT 部成員 疲於奔命

Lack technical supports

Overwhelmed Tech

hardware man

若device 故障, 未能於即日維修, 影響日常該學生

學校是否全力支援

要處理許多技術問題, 令授課時間減少

人力資源不足

BYOD時, 個人電腦的軟件管理

不同OS

Ma

- 學生在上課時私自上網、打機
- 失竊及保安問題
- 要獲家長支持, 購買平板電腦予子女 (特別是經濟有困難的家庭)
- 偷拍老師上課情況再放上網
- 選購機種的考慮

learning effectiveness really enhanced? both parents and teachers may concern

\$\$

家庭經濟環境問題, 未能支援學生購買DEVICE.

Poor student may not able to buy iPad

長遠而言學生三年後要買新機, 會有阻力

有家長不買devices

學生會比較裝置的價錢

parents insist do not contribute even though everything has been done

Blamed by parents for causing the problem of addiction

影響學習表現

Special thanks:  
St. Stephen College  
Gavin Choi