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BYOD International: Diverse Backgrounds, Languages, Skills, and Curricula

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My Background

- Head of Learning Resources, German European School Singapore

- Member of the Board of Directors, ISTE

- 10+ years of experience
  - Teacher – IT, Informational Literacy, Math, PP, EE – US, IB, German
    - All grades PreS -> GradS
  - Senior Administrator

- Educational Doctorate in Educational Leadership
  - Dissertation research in 1:1 Student Learning Outcomes
- Worked in private schools, international schools, universities

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How do we define BYOD?

- Bring Your Own <u>DEVICE</u>
  (Not Laptop or something else)
  - How many schools are allowing "devices"
  - Many want laptops or tablets

- Brought to and from school everyday primarily for educational use

- Student/family owned machine
  - Any make, model, age, configuration…
  - …color, cleanliness, virus contagion, number stickers, missing keys…

- Operating system independent (often)
  - At times, software independent

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BYOD IS POPULAR—AND GROWING

38%
of US CIOs were
expected to support BYOD
by the end of 2012. [1]

82%
of surveyed companies
in 2013 allow some or all
workers to use employee-
owned devices. [2]

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Benefits of BYOD (for students)

- More control of the configuration of the device (specs, software, add-ons, etc) to meet specific wants or needs.
- More personalization, which leads to greater ownership of learning activities -> increased interaction, engagement, differentiated instruction
- More ownership of data and activities on the device.
- Fewer school regulations governing the device.
- Lower cost of ownership (potentially)
- Further blurs the line between learning (school) and living (home)
- Student owned content – eBooks, apps, etc.
- More representative of authentic environments (university classrooms, the workforce)

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Benefits of BYOD (for schools)

- Reduced costs
  - Device purchases
  - Software licensing
  - Time for configuration and update
  - Personnel
- Fewer policy decisions
  - More large scale/blanket policies
- Reduced maintenance and liability
- Greater focus on school services (rather than school devices)
  - Educational usage vs. device usage
  - Servers, networking, data, and the cloud vs. client-based software and data
- Provide a more authentic learning experience – representative of university classrooms and the workforce
- Encourages mobile

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Challenges of BYOD

- Standards
  - Different configurations, OSs, and software can be a barrier to classroom usage
  - Which OS do you support?
  - Complexity of the fleet = challenges of management and usage
  - Hard to enforce minimum standards for machines
  - Tech support challenges - Non-standard maintenance or loan out program
- Security
  - Virus protection for the network
  - Illicit or illegal materials (or pirated software) brought to school
  - Much more work needed on firewalls and content filters
  - Load balancing and traffic shaping
  - Data access concerns for both teachers and students

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Challenges of BYOD (cont'd)

- Control
  - Increased classroom management for teachers – BYO….Distraction
  - Technology usage less governed by the school
  - Monitoring becomes very problematic
  - Bandwidth problems
  - Less ability to help with data management
- Divide
  - Can be used to widen the educational digital divide
  - MBTY (Mine if Better Than Yours) Syndrome

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Let's Go International!
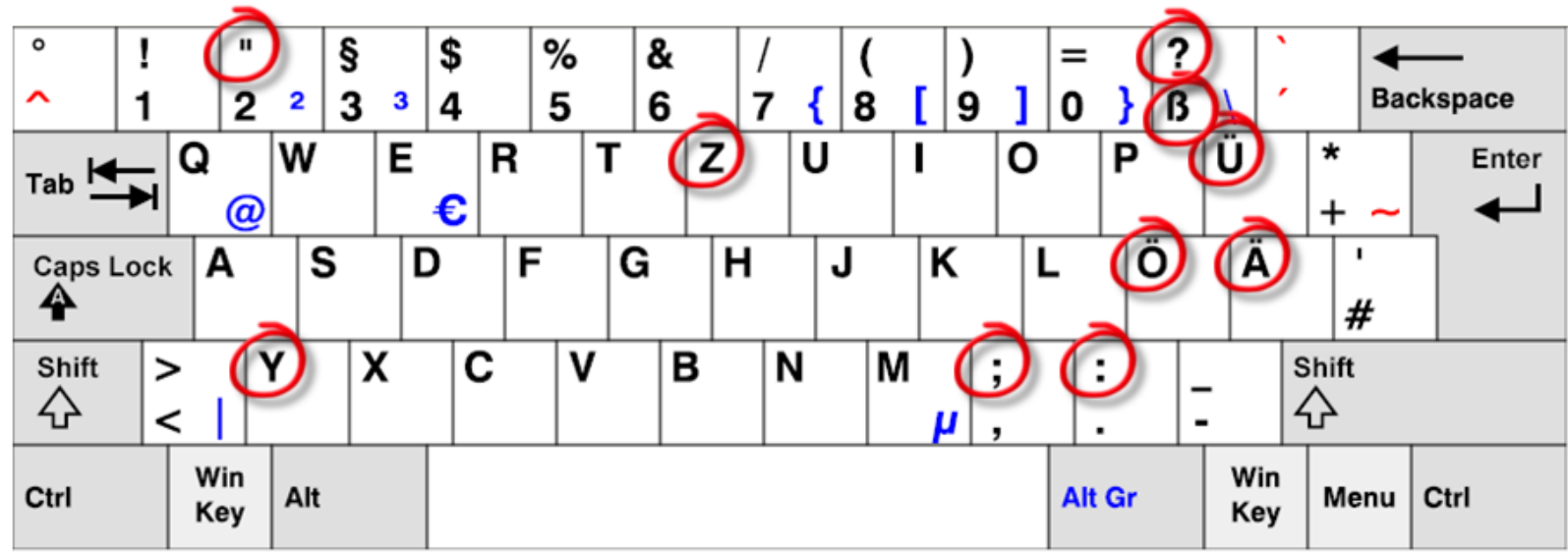
German European School Singapore

- 1500 students from age 18 months to 18 years
- Students from 40 different nationalities
- Staff from 25 different countries
- We teach 8 different languages
- Two streams
    - German School Abroad – grades 1-12 teaching German State Curriculum
    - IB World School – grades 1-12 teaching all three programs of the IB – PYP, MYP, and DP
- Two languages of instruction – German and English
    - Two more mother tongue (L1 language programs) in Dutch and Danish
- We are both an international school and a Foreign System School
- We are both strongly multi-cultural and strongly mono-cultural
- …and we are in Singapore

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Challenge for International BYOD

- Diverse cultures/backgrounds
  - Service Expectations
  - IT Support
  - Monitoring
  - Restrictive Access

- Languages
  - Most int'l students are polyglots
  - OS Language
  - Keyboard language and layout

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Challenge for International BYOD 2

- ## IT Skills and Standards
  - – Entry skills vary (far more than US schools)
  - – Student enter at any grade

- ## Curricula
  - – Int'l curriculum has different requirements and scheduling than US-based curriculum

Challenge for International BYOD 3

- Computer repair and maintenance
  - Replacement machines?
  - Hardware support?
  - OS support for language specific items?
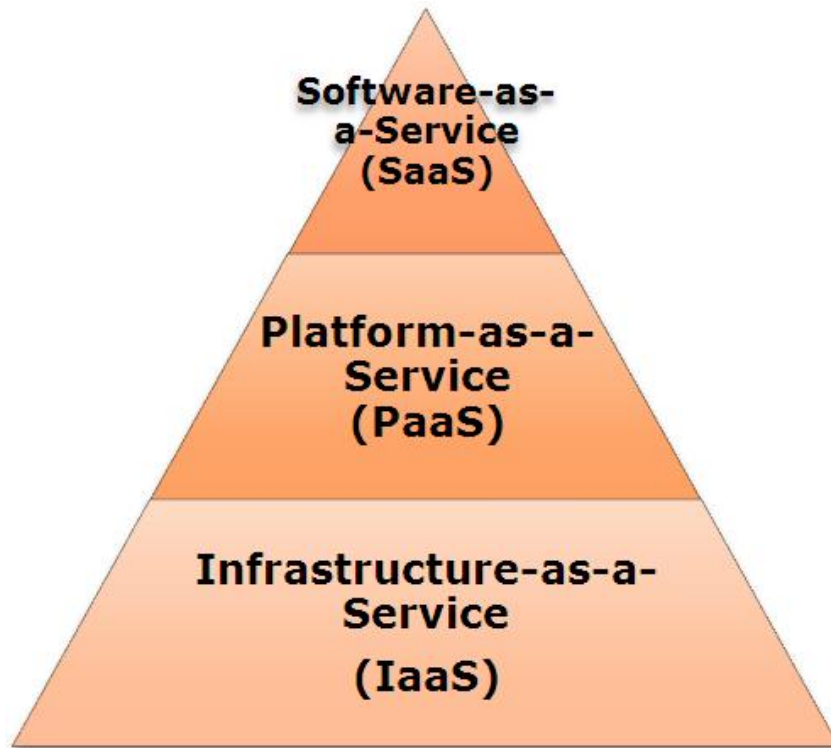 - Scope of responsibility for IT Staff
  - Knowledge base of local staff

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How do we cope?

- Policies and Procedures

- Cloud

- Training

- Lists of vendors and repair shops

- Community resources

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Policies and Procedures

- Policies: AUP, Device Requirements, Liability Policy, Student Discipline Policy, etc.
- Procedures: Repairs, Replacement, Network Connections, Communications Systems, Software/Service Access, Domain?, etc.
- Transparency and review are key
- Don't paid too much heed to the complainers…
  – they are new and won't be around too long…

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Cloud…cloud…cloud

Software-as-a-Service (SaaS)

Platform-as-a-Service (PaaS)

Infrastructure-as-a-Service (IaaS)

- SaaS and online systems
- IaaS and Hosted Data
- Aim for device independence whenever you can
- Look into virtualization (but don't do too much)

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Professional Development and Training

- Pedagogic PD – best practices, classroom management, IT issues, communications, school expectations, etc.
  - Include your administrators
- IT Staff Training – OS issues, dealing with languages, connecting to the cloud, learning how to deflect, customer service
- Student Training – Self management and attitudes, Basic IT support, data maintenance.
- CREATE LEGACY MATERIAL
- Be ready to translate

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Community Resources

- School community, look for:
  - Common backgrounds or languages
  - Similar hardware configurations
  - Current and former students
  - Ties to industry
- Keep an internal list

- Local market:
  - Corporate contacts
  - HW Vendors
  - Repair shops (general and HW specific)
  - Software dealers and support
  - Ties to home offices
- Keep an external list

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You never know…

You may be of assistance to families new to Singapore who just happened to bring a 17", 3kg (6.6 lbs) Acer laptop with a Korean, English, German keyboard who happens to need a new power cord that will work with Asian plugs.

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