



Information Technology

CLOUD COMPUTING AND PRIVACY CURRENT PRACTICES IN FAIRFAX COUNTY PUBLIC SCHOOLS

JCOTS Committee Meeting
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AGENDA

- **Cloud Computing in FCPS**
- **Assuring Privacy, Security and Safety in FCPS**
 - FCPS Technical Assessment Process
 - Lessons Learned and Challenges
- **Potential Policy Issues**
- **Questions**

FAIRFAX COUNTY PUBLIC SCHOOLS

■ District Profile

- 2014 - 15 enrollment of 186,785 (10th largest in U.S.)
- 14.4% of Virginia students are enrolled in FCPS
- Student/Computer Ratio (2:1)
- Enterprise-wide Wireless Infrastructure

■ Award Winning Technology Management

- 2013 CIO 100 Award for its Bring Your Own Device (BYOD) Program, in CIO Magazine's top 100 IT organizations in 2011
- 2012 Excellence.gov award finalists in the category *Excellence in Enhancing the Customer Experience*
- 2009 Virginia Governor's Technology Award for Innovative Use of Technology in K-12 Education

CLOUD COMPUTING IN FCPS

■ **Instruction**

- Online Textbooks, Research Database and Library eBooks, IB Program Tracking, Learning Management and Assessment, Guidance, Personal Learning Plans, Document Collaboration

■ **Community Outreach**

- School Board CMS, Emergency Notification, Surveys, Social Media

■ **Finance, Facilities and Transportation**

- Lunch Payments, Booster Club Management, Facilities Scheduling

■ **Human Resources**

- Applicant Tracking and Virtual Interviews, Substitute Scheduling, Professional Development and Online Training

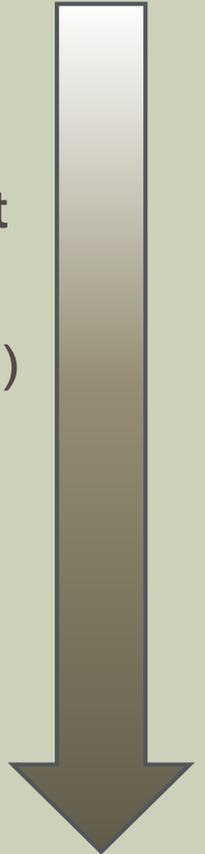
■ **Information Technology**

- Mobile Device Management, Streaming Video and Web Conferencing

COMMON MODELS OF “CLOUD” IN K12 AND THEIR PRIVACY IMPLICATIONS

- **Private:** District hosted SIS, LMS
- **Contracted:** Microsoft Office 365, Google Apps, Textbooks, iReady, or dedicated hosting
- **Operating Systems, App Stores:** Apple, Google, Microsoft
- **Freemium +:** Free for user/class use with fee for school/district use, or security (e.g. Edmodo, TypingClub)
- **Free with a catch:** Ads or data collection (data brokers)
- **Free (and clear):** No non-educational data collection
- **Identity Ecosystems:** Sign-in with Facebook, Twitter, Google, Microsoft, Yahoo
- **Extended Social Networks:** “Like” buttons, social commenting

School



End-User

FCPS APPROACHES TO CLOUD PRIVACY, SECURITY AND SAFETY

■ Parental Notice and Choice

- Annual Notice (FERPA/PPRA) and Comprehensive/Selective Opt-Out
 - www.fcps.edu/cco/pubs/optouts/hsoptout.pdf
- Student Information System Privacy Notice
 - sisparent.fcps.edu/PVUE/Privacy_PXP.aspx

■ Transparency and Communication

- Digital Citizenship and Privacy in FCPS
 - www.fcps.edu/is/instructionaltechnology/privacy/
- Internet Safety
 - www.fcps.edu/is/instructionaltechnology/internetsafety/
- Google Apps FAQ
 - www.fcps.edu/is/instructionaltechnology/googleapps/
- Online Contract Register
 - www.fairfaxcounty.gov/cregister/

■ Contracting: FCPS Confidentiality Addendum defines:

- Vendor as “School Official” under FERPA
- Data Use, Protection, Destruction and Breach Notification Requirements

FCPS APPROACHES TO CLOUD PRIVACY, SECURITY AND SAFETY

■ **Policies and Regulations:**

- Staff and Student Acceptable Use Policies (AUP)
- Social Networking Guidelines and Best Practices
- Data Classification and Security Guidelines on the Storage of Sensitive Data
- Regulations:
 - 3008 - Instructional Technology Identification, Evaluation, Approval
 - 6710 - Software Application Acquisition, Development, and Support
 - 6225 - FCPS Information Security Policy

■ **Governance:**

- Major System Project Teams
- Change Control Board (ITIL)
- Security Governance Board

■ **Training:** iSafe (for Staff)

■ **Processes:** Technology Assessment

FCPS TECHNICAL ASSESSMENT PROCESS

- **Goal is to Reduce Risk when Implementing Technology by**
 - Considering installation, deployment, and support requirements
 - Analyzing potential impact to resources and infrastructure
 - Identifying K-12 related privacy and security concerns
 - Establishing proof of concept environment and appropriate solution designs
 - Assessing the viability, scalability, sustainability of proposed technologies
- **National Recognition of FCPS Technology Adoption Process**
 - Gartner (2006)
 - U.S. D.O.E (Arne Duncan,., 2013)
 - School Efficiency Review of Fairfax County Public Schools (2013)
- **200-250 Assessments per Year**
 - Up 200% in the last 2 years, 68% mobile apps
 - Click-wrap agreements are the norm (5 contracts, 1 RFP)

FCPS TECHNICAL ASSESSMENT PROCESS

- Pass/Fail Criteria: Privacy Policy, Encryption in Transit
- Account Creation: Data Collected, Data Minimization
- Privacy Policies and Terms of Use
- Student Safety: Boundaries & Privacy Controls
- Advertising
- Mobile App Testing
- Network Bandwidth and Load Testing for Large Systems
- Security Scanning for Sensitive Data Systems
 - e.g. health, finance, parent portal

FCPS LESSONS LEARNED

CLOUD COMPUTING BENEFITS AND PRIVACY RELATED RISKS

Benefit	Risk
Leverage analytics capabilities	<ul style="list-style-type: none">• Without proper (and time consuming) review, student data could be collected and used for inappropriate purposes (e.g. targeted marketing)
Users access services over the Internet	<ul style="list-style-type: none">• Potential increased security risk (data breach, or accidental data disclosure by users)
Rapid provisioning and deployment of new services; large number of “free” services	<ul style="list-style-type: none">• Ease of signing up lends itself to unregulated/unapproved use
Cloud services are updated regularly	<ul style="list-style-type: none">• No control over changes• Changes to privacy policies and terms of service with consent/review• Privacy related “bugs” introduced through new features
Economies of scale/shared infrastructure	<ul style="list-style-type: none">• Risks of shared infrastructure/database

CLOUD SECURITY AND PRIVACY CHALLENGES

- **Risk:** Actual, Contractual, Perceived
- **Vendors and Online Service Challenges**
 - High rate of change
 - Contracts vs. click-wrap
 - Hard to understand, hard to validate and hard to negotiate
- **Regulation Challenges**
 - Gaps in interpretation (e.g. Education Record, Student Data)
 - Gaps in coverage (FERPA, COPPA, PPRA, HIPAA, School vs. Vendor)
- **School Practice Challenges**
 - Balance between edTech “innovation” and security
 - Managing opt-outs, parental consent/notification
 - Ease of signup/self disclosure
 - Maintaining a central list of vetted educational online services

POTENTIAL POLICY ISSUES

■ Gaps in Existing Virginia Law and Policy

- VA data breach notification laws do not appear to cover student data breach notification, accountability and redress
- Guidance is needed regarding K12 use of “consumer” services not specifically directed at K12
- Majority of “cloud” tools are not acquired through formal contracts

■ District Guidance and Support

- State role to help school districts with privacy issues (e.g. Chief Privacy Officer)
- Provide resources, model policies, tech assistance, guidance
- Privacy Impact Assessment for state mandated/provided technologies
- Privacy training, e.g. VA cyber safety training law (§22.1-70.2, 2006)

POTENTIAL POLICY ISSUES

■ Concerns Related to Potential Policymaking: Unintended Consequences

- Definitions and scope of any policy must be very clearly defined:
 - e.g. education record, student data, secondary use, contract, click-wrap, online educational service, profile
- Regulation may eliminate opportunities schools have today under FERPA, COPPA and PPRA by obtaining parental consent
- Regulation may have fiscal and workload impact on districts

■ Feedback on Legislation in other States

- FCPS's Confidentiality Addendum aligns with California's AB 1584
- California's SB 1177 Student Online Personal Information Protection Act ("SOPIPA") may help address concerns about online educational services for K12 students from non-contracted vendors

QUESTIONS