Privacy and Cloud Computing in Public Schools

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Introduction

• Private vendors are gearing cloud services specifically for the education sector to advance data-driven decision-making and IT based learning opportunities

• Cloud services in K-12 schools are increasingly becoming contentious as a result of privacy issues

• The treatment of privacy when K-12 public schools transfer or share student information with cloud service providers is generally unknown to the public
Goals

• Provide national picture of cloud computing in public schools

• Assess how public schools address FERPA, COPPA and PPRA requirements as well as generally-accepted privacy principles in their cloud service agreements

• Make recommendations on the protection of privacy that address any problems identified by the research
Methodology

- **National Sample**
  - Selection of Districts: 2 large, 2 mid-size, 2 small from each U.S. census geographic division (54 total)
- **Document Collection**
  - Phone calls
  - Open public record act requests
  - Web sweeps
    - **Documents Sought**
      - Agreements involving transfer of student data
      - Computer use policies for teachers/staff
      - Notices to parents about student privacy
      - Notices to parents about cloud computing services
- **Data Set**
  - Respondents: 23 districts
  - Data set: 20 districts
Methodology

• Analytic Approach

  • Checklist based on statutory obligations + FIPS norms
  • Research team coded documents based on checklist
  • Purpose: general assessment, not compliance audit of any responding district nor any vendor
General Findings

• 95% of districts outsource student data

• Wide diversity of cloud services in use across every type of school

• Typology of cloud services
  • Data analytics functions
  • Student reporting functions
  • Guidance functions
  • Special school functions
  • Hosting/Maintenance/Back Up functions
  • Classroom functions
  • Unidentifiable functions
General Findings

• **Weak transparency**
  • Absence of publicly available information
  • Districts failed to respond to public records requests
  • 55% of districts did not provide parental notice; only 25% addressed cloud computing explicitly

• **Obstacles to Public Disclosure**
  • Ignorance of district’s use of technology
  • Attitude
    “I have real problem [sic] with you using this law to complete a research project … thank you for your abuse of the system and wasting our time”
    *Letter from Superintendent (Western Region School District) to Professor Reidenberg*
  • Dubious motives
    • High fee request
    • Illegal confidentiality clause in contract
General Findings

• **Weak Data Governance and Contracting Practices**
  - Poor in-house understanding of student privacy implications
  - 20% of districts had no policies addressing teacher use of IT
  - Vendor agreements allow sharing to recipients without privacy policies
  - Agreements allowed for vendors to make unilateral modification without notice

• **Poor Documentation**
  - Rampant gaps in contract documentation, e.g. unexecuted agreements, missing appendices describing privacy policies, etc.
Analysis of Agreements

- Prevalence
- Contracts
- Types of student identifying data transferred to vendors
- Data control: sharing, mining, and re-disclosure
- Parental notice, consent and access to collected data
- COPPA obligations
- Data Security
Analysis of Agreements

• Prevalence

Data analytics functions: 25% of districts
Student reporting functions: 25% of districts
Guidance functions: 25% of districts
Special school functions: 25% of districts
Hosting/Maintenance/Back Up functions: 50% of districts
Classroom functions: 50% of districts
Unidentifiable functions: 25% of all agreements
## Analysis of Agreements  
*(Selected Findings)*

### Contracts

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Frequency Weakest for Privacy</th>
<th>Frequency Strongest for Privacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully executed agreement</td>
<td>50% (Guidance)</td>
<td>100% (Analytics; Student Reporting)</td>
</tr>
<tr>
<td>Incomplete agreements</td>
<td>55% (Special functions)</td>
<td>17% (Guidance)</td>
</tr>
<tr>
<td>Right to audit and inspect vendors’ compliance</td>
<td>0% (Guidance; Special functions)</td>
<td>33% (Analytics)</td>
</tr>
</tbody>
</table>
Analysis of Agreements
(Selected Findings)

• Types of student identifying data transferred

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Frequency Weakest for Privacy</th>
<th>Frequency Strongest for Privacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specifies any type of data</td>
<td>11% (Special functions)</td>
<td>83% (Guidance)</td>
</tr>
</tbody>
</table>
**Analysis of Agreements**  
*(Selected Findings)*

• *Data Control*

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Frequency Weakest for Privacy</th>
<th>Frequency Strongest for Privacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose specification</td>
<td>0% (Student reporting, Hosting, Classroom)</td>
<td>22% (Analytics)</td>
</tr>
<tr>
<td>Prohibition on re-disclosure</td>
<td>33% (Special functions)</td>
<td>89% (Analytics)</td>
</tr>
<tr>
<td>Prohibition on sale or marketing of student information</td>
<td>0% (Analytics, Student reporting, Special functions, Guidance)</td>
<td>7% (Hosting)</td>
</tr>
<tr>
<td>Allows vendor to amend unilaterally</td>
<td>67% (Guidance)</td>
<td>11% (Analytics)</td>
</tr>
</tbody>
</table>
### Analysis of Agreements

*(Selected Findings)*

- **Parental Notice, Consent and Access**

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Frequency Weakest for Privacy</th>
<th>Frequency Strongest for Privacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notice provided</td>
<td>0% (Guidance, Student Reporting)</td>
<td>36% (Classroom function)</td>
</tr>
<tr>
<td>Consent</td>
<td>0% (Student reporting)</td>
<td>41% (Classroom functions)</td>
</tr>
<tr>
<td>Access</td>
<td>0% (Student reporting)</td>
<td>17% (Guidance)</td>
</tr>
</tbody>
</table>
### Analysis of Agreements

*(Selected Findings)*

**COPPA Triggers**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Frequency Weakest for Privacy</th>
<th>Frequency Strongest for Privacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specification that service collects data from children</td>
<td>0% (Student reporting, Guidance)</td>
<td>20% (Hosting)</td>
</tr>
<tr>
<td>Specification that service enables tracking of children</td>
<td>0% (Student reporting, Guidance)</td>
<td>14% (Classroom functions)</td>
</tr>
</tbody>
</table>
**Analysis of Agreements**  
*(Selected Findings)*

- **Data Security**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Frequency Weakest for Privacy</th>
<th>Frequency Strongest for Privacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement for data deletion at end of contract</td>
<td>0% (Special functions)</td>
<td>67% (Analytics)</td>
</tr>
<tr>
<td>Requirement for data security</td>
<td>22% (Special functions)</td>
<td>78% (Analytics)</td>
</tr>
<tr>
<td>Requirement for data breach notification</td>
<td>0% (Special functions, Student Reporting, Guidance)</td>
<td>13% (Hosting)</td>
</tr>
</tbody>
</table>
**Recommendations**

- **Transparency**
  - Existence and identity of cloud service providers should be available on district websites
  - Notice to parents

- **Contracting practices**
  - Districts need executed agreements
  - Districts need complete documentation

- **Data Governance**
  - Districts must establish policies and implementation plans for the adoption of cloud services by teachers and staff
  - Districts must address directly and publicly policies on use of student data for advertiser supported services when not prohibited by FERPA
  - States and larger districts must have CPO
Recommendations

• **Contract Terms**
  - Specification of the purpose of agreement and the authority to enter into the agreement
  - Specification of the types of data transferred or collected
  - Prohibition or limitation on re-disclosure of student data
  - Prohibition or limitation on the sale or marketing of student information without express parental consent
  - Assurance that districts have exclusive control over data access and mining
  - Prohibition on new or conflicting privacy terms when parents are required to activate an account for their child
  - Allocation of responsibilities for granting parental access and correction capabilities
Recommendations

• **Contract Terms (continued)**
  • Specification of whether foreign storage and processing is allowed
  • Specification of whether other gov’t agencies may have access
  • Specification of data security and breach notification
  • Prohibition on unilateral modifications
  • Inclusion of a right for the district to audit/inspect vendors

• **Creation of a National Research Center and Clearinghouse**
  • Prepare academic and policy research
  • Convene stakeholder workshops
  • Draft model contract clauses, privacy notices and consent forms for common functions
  • Create repository for research, model contracts, and policies