"I'm Going To Trust This Until It Burns Me"

Parents' Privacy Concerns and Delegation of Trust in K-8 Educational Technology

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The predominantly Black college in Illinois announced they were closing their doors as a result of COVID-19 and cyber attack disruptions. Who's next?

May 17, 2022 • Dan Lohrmann

An Outage, Silence and Finally, Acknowledgment of a Cyberattack

For three weeks, Whitworth University stayed mostly mum about network and website outages, prompting speculation about ransomware and frustrating professors and students. Wednesday it acknowledged a cyberattack.

Regis University paid ransom after cyberattack last fall

The ransomware attack in August impacted 1,800 computers on campus and crippled the university's network. Regis University paid the ransom several days later.

NetWalker ransomware continues streak of college attacks

The University of California, San Francisco and Columbia College in Chicago were hit by the same malware that recently targeted Michigan State University.

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Big data trove dumped after LA Unified School District says no to ransomware crooks

Confidential incident reports, personnel records, and more are leaked online.

U.S. Secret Service joining investigation of Miami-Dade schools' cyber attack

Questions swirl around $15.3 million contract for the K-12 platform

A cyberattack in Albuquerque forces schools to cancel classes

January 14, 2022 · 1:07 AM ET

45,000 NYC students among the victims of MOVEit global data breach, DOE officials say

By Julian Shen-Berro | Jun 23, 2023, 7:00pm EDT

DDoS Attacks Are Already Creating Chaos While Schools and Universities Are Reopening During the Pandemic

South Redford Schools closed again after cyber attack

George Hunter
The Detroit News

Jay schools working to recover from cyber attack

New Haven Public Schools hit by ransomware attack

Winthrop Public Schools, town offices targeted in cyber attack which prevented access to Google Classroom, email, video conferencing

First Pandemic, Now Ransomware: Attack Forces Hartford to Postpone School

Officials were not sure when the Connecticut city's 18,000 public school students would be able to return to class.

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Illuminate Data Breach

>820k

>1M

>3M

Total Affected

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What privacy and security concerns did parents have?

RQ1: Did they have any concerns?

What informed these concerns (or lack thereof)?

RQ2a: How did parents' experiences with security incidents (or lack thereof) and knowledge of data flow inform their privacy and security concerns?

RQ2b: How did trust in their children's' schools and the NYC Department of Education influence their privacy and security concerns—or lack thereof— around classroom technologies?

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Semi-structured Interviews

New York City Parents w/ children in public school in grades K-8

Conducted May – July 2022[1]

Recruited via Parent Teacher Organizations

Qualitative Analysis

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[1] approximately nine months after NYC had resumed in-person classes

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Background

13 used school issued iPads, 1 Chromebook, 4 Personal Devices

Zoom or Google Meets, iReady, and Raz-Kids

Accounts were created by schools

All but one participant's children continued using these platforms after returning to in-person

Unable to opt-out without "significant concerns."

Paper packets available to some but inconvenient
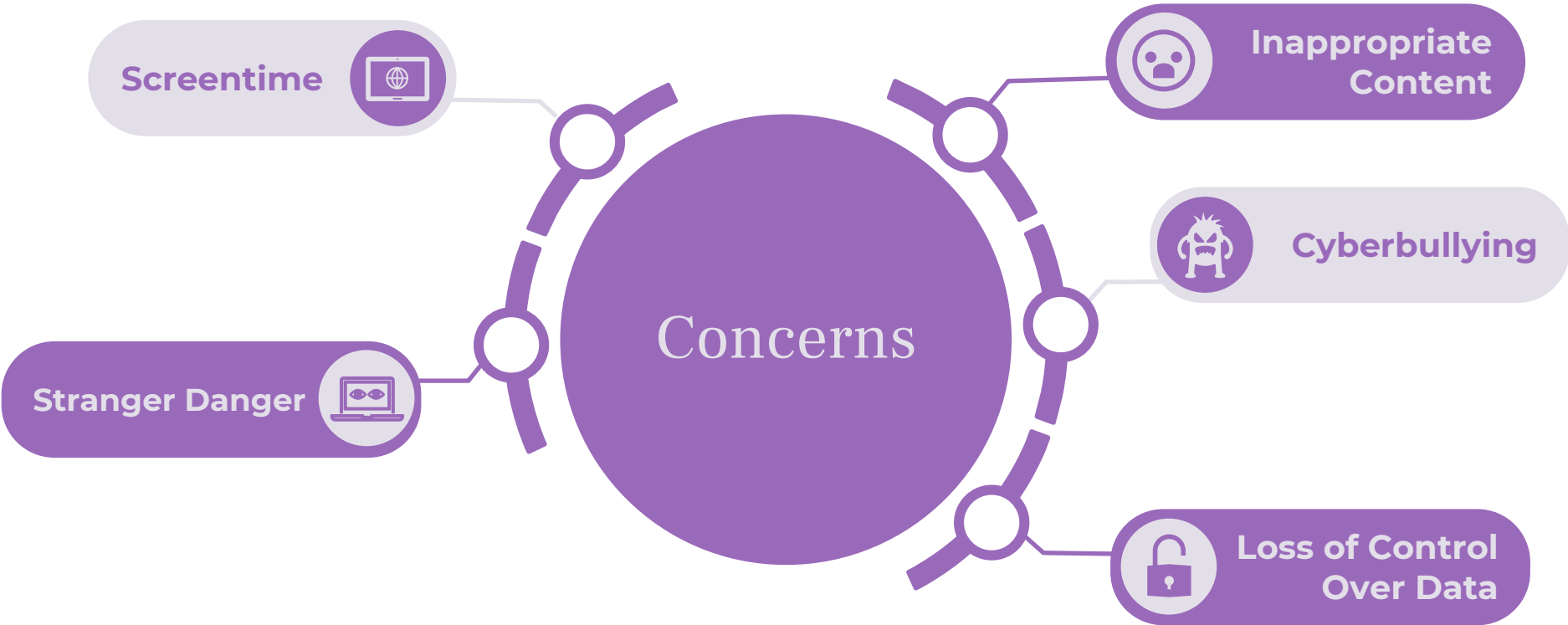
Unauthorized Access

"The school servers are in the school […] and sometimes IDs don't get properly checked" – I4

"[Schools] shouldn't be [going through student information] on like public WiFi because… [then] it could fall in the hands of anybody." – I5

Unwanted Handling/ Disclosure

"I tell the teachers: make sure when you're discussing like her grades with me, it's outside…I wait for all the parents to leave because you know [teachers will] say 'Oh this person received this [grade]'" – I6

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"I think families with an IEP student—we have no privacy" - I4

Why did participants have concerns?

Experience/ Word of Mouth

Security Knowledge
and Preferences

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Participants felt that the DOE did not provide training for technology used and thus worried that security best practices were not being followed

They were also concerned that the DOE was reactive rather than proactive

"We were in such a rush to get in you probably didn't spend much time reading [the ToS] and so we

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They were also concerned that the DOE was reactive rather than proactive

"*We were in such a rush to get in, you probably didn't spend much time reading [the ToS] and so we may have agreed to things that we should have thought about a little bit more.*" – I14
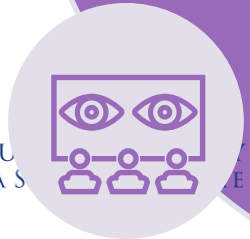
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Why did parents *not* have concerns?

Belief that data collected and stored was uninteresting, not sensitive, or anonymous

If there was a breach, what are they going to do? Take her homework? – I6

Desire and expectation for schools to monitor their children's activities

If my son, even by accident [did something] that was inappropriate...I would want someone to email me, or give me a phone call or something – I7

"*I know that other parents have had unfortunate events. They've used it [the child's data] in CPS cases regarding attendance and just regarding the amount of times the parent moves [...] On one side right there is community concern right?..But on the other, for family to feel threatened with CPS action is also [a problem]*" – I4

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Belief that the platforms used were "safe" and non-privacy invasive

We didn't know not to feel safe...we just assumed that it was fine until it wasn't.– I14

Trust in schools and DOE to keep their children safe

These [applications] are educational...they're picked by the DOE, and [so] you know that they can be trusted..– I10

Trust in schools and DOE to keep their children safe

Major factors that contributed to this trust was communication and transparency about problems and lack of incidents.
Parents cited that an instance of a data breach would definitively decrease their trust
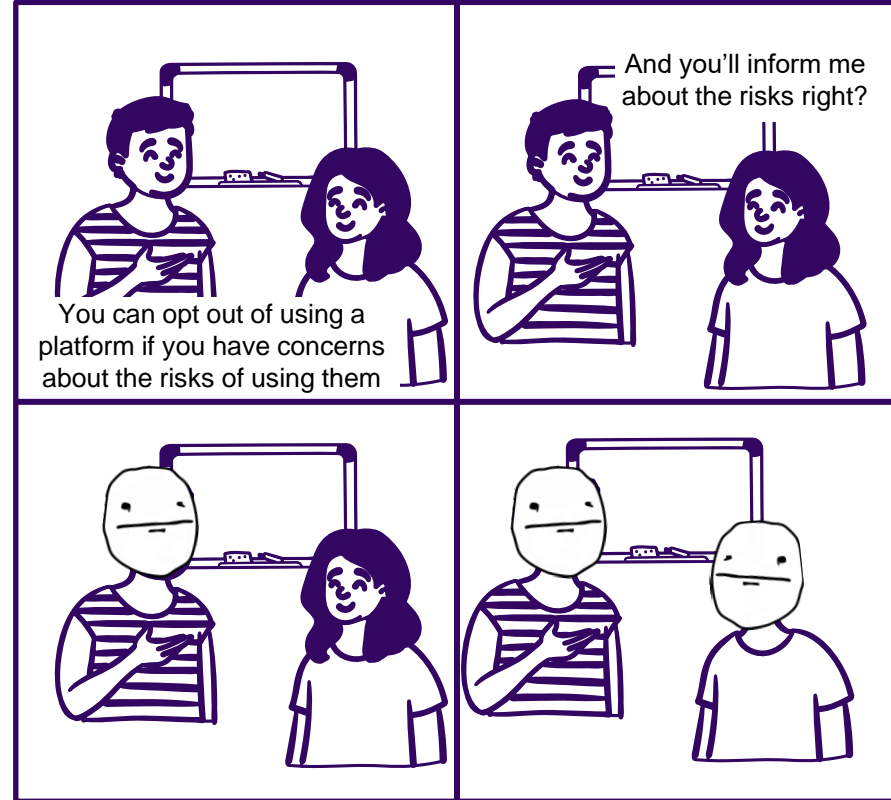
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Implications

Lack of Meaningful Choices/ Guidance

Can "opt out" if have concerns, but not given information upfront about potential risks

Documentation, *if users can find it*, is inaccessible especially for those who are not tech savvy and those for whom English is not their primary language

Is Trust Warranted?

Because parents trusted schools to keep their children safe in general, they also trusted schools make sure the tools they use are also safe.

Delegating trust to professionals is nothing new. We delegate trust to professionals all the time. Going to see a doctor, hiring a contractor are forms of delegation of trust.

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Is Trust Warranted?

While participants almost ubiquitously cited communication and transparency about as the reason they trusted schools and administration

However ONLY two participants had even heard about the Illuminate Data Breach.

Both stumbled upon this information incidentally and one only noticed when they were "throwing out old papers" (I9)

No, That Data Breach Letter From Illuminate Education Is Not A Scam

Did you receive a letter saying that your child's personal data was part of a data breach? Millions of students nationwide were affected.

Jeff Edwards, Patch Staff ℗

Posted Sat, Jun 18, 2022 at 10:13 am ET | Updated Sat, Jun 18, 2022 at 10:51 am ET

Many parents in our area admitted they assumed the letter from Illuminate was just a scam and tossed it out. Other parents quickly noticed that this was the same company involved in the massive data breach in NYC public schools affecting 820,000 students. That scandal resulted in the NYC

Jeff Edwards. "No, That Data Breach Letter from Illuminate Education Is Not a Scam."

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Is Trust Warranted?

New York City officials claim that Illuminated Education inaccurately described the company's data security measures. The company previously assured officials that all student data was encrypted, when in fact, some data was not encrypted. Officials have asked the NYPD, FBI and New York Attorney General to investigate the cybersecurity event.

Richard Console Jr "Data Breach Alert: Illuminate Education." JD Supra,

Raz Kids a commonly used app by the participant's children was found to have not encrypted teacher and parent's account [2].

Zoom was banned from use by the DOE temporarily for various security incidents

In the Illuminate Data Breach, the DOE claims that Illuminate "misrepresented the security measures" they had in place [3].

This all indicates lack of verification of vendor claims.

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Recommendations

Informed Consent

Inform and obtain consent from parents about things their children will be using (including risks), provide alternatives

Open Questions

How can we better communicate data breaches and incidents?

How can we help schools verify vendors' security claims?

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Thank You!

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[3] Console, Richard. "Data Breach Alert: Illuminate Education." *JD Supra*,
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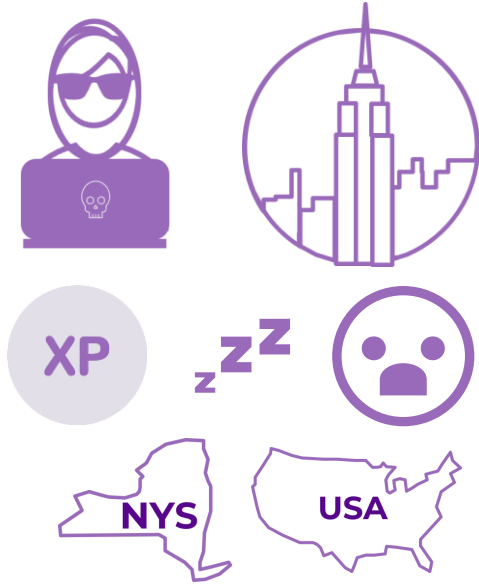
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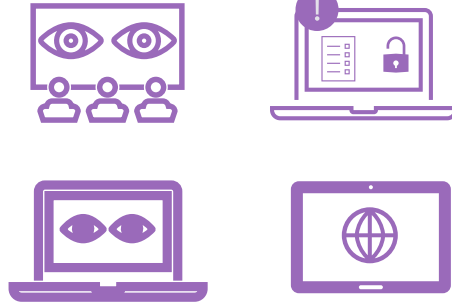
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