INTELLIGENCE BRIEFING
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Ransomware Attacks Against Education Sector Plateau Amid Global 32% Surge; Third-Party Vendor Risk Highlighted

SECURITY ANALYSIS | HIGH

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Executive Summary

Global ransomware activity climbed approximately 32% in 2025, yet the education sector saw a relative plateau in direct attack frequency, a divergence that signals attacker prioritization shifts rather than reduced threat. Third-party vendor compromise has emerged as the dominant growth vector, with threat actors increasingly targeting suppliers and managed service providers as indirect pathways into school districts, colleges, and universities. For education leadership, this pattern demands the same third-party risk scrutiny applied in financial services: vendor access is now a primary attack surface, not a secondary concern.

Technical Analysis

Reporting from Campus Technology and Cybersecurity Dive, citing underlying threat intelligence data, describes a plateau in direct ransomware attacks against education institutions in 2025, contrasted against a global 32% year-over-year increase across all sectors. A conflicting data point from Yahoo Finance cites a 23% year-over-year increase in education-sector ransomware, a discrepancy the source material does not resolve. The divergence likely reflects methodological differences: the plateau narrative may count confirmed ransomware incidents reported by institutions directly, while the 23% figure may aggregate broader threat actor targeting data or include near-misses and attempted intrusions. Both narratives should be held simultaneously until underlying methodology is disclosed. For planning purposes, assume the 32% global trend applies to education unless your institution's direct experience contradicts it.

The more operationally significant finding is the shift in attack vector. Third-party vendors, managed service providers, SIS platforms, LMS vendors, and administrative software suppliers, are increasingly the point of initial access. This maps directly to MITRE ATT&CK T1195 (Supply Chain Compromise), where adversaries compromise upstream vendors to inherit trusted access into downstream institutional environments. Once vendor access is established, T1078 (Valid Accounts) enables lateral movement using legitimate credentials, reducing detection likelihood. T1566 (Phishing) remains a primary initial access technique targeting vendor employee accounts. Terminal payload delivery via T1486 (Data Encrypted for Impact) follows, often days or weeks after initial access is established.

The education sector's structural vulnerabilities compound third-party risk: decentralized IT governance across districts and campuses, high vendor dependency for specialized academic platforms, limited security staffing, and procurement processes that frequently deprioritize vendor security posture assessments. The plateau in direct attacks may partly reflect improved perimeter defenses at larger institutions, but supply chain pathways circumvent perimeter controls entirely. Threat actors are solving for the path of least resistance, and for education, that path now runs through the vendor ecosystem.

Action Checklist

1. Step 1: Inventory third-party vendor access, identify every vendor with network, data, or administrative system access; document access scope, authentication method, and data classification for each relationship.
2. Step 2: Audit vendor authentication controls, confirm all vendor remote access requires MFA; eliminate shared credentials, standing persistent access, and VPN accounts not scoped to least privilege.
3. Step 3: Review vendor contracts for security obligations, verify incident notification SLAs, right-to-audit clauses, and minimum security control requirements are present and enforceable in current agreements.
4. Step 4: Threat model update, incorporate T1195 (Supply Chain Compromise) as a primary initial access scenario; map your most privileged vendors against this TTP and identify detection gaps in vendor-originated activity.
5. Step 5: Implement or validate vendor activity monitoring, ensure logs capture vendor account activity, privilege escalation attempts, and after-hours access; set alerting thresholds for anomalous vendor behavior patterns.
6. Step 6: Brief leadership on supply chain risk posture, present the sector trend to institutional leadership; frame third-party risk as a board-level governance issue requiring procurement policy updates, not only a technical control problem.
7. Step 7: Monitor for follow-on disclosures, track Cybersecurity Dive, Campus Technology, and CISA advisories for named vendor compromises affecting education-sector suppliers; subscribe to K-12 security community threat feeds (e.g., CISA K-12 advisories) where applicable.

IR / Forensic Enrichment

Triage Priority	URGENT

Escalation Criteria	Escalate to external IR firm immediately if during vendor activity audit you discover: (1) evidence of unauthorized access by a vendor account, (2) privilege escalation by vendor account without authorization, or (3) exfiltration attempt from vendor-accessed system; these indicate active compromise requiring forensic acquisition and containment before remediation.
Recovery Notes	After vendor compromise is contained and eradicated, conduct vendor-specific forensic analysis: extract all logon events from that vendor's account(s) for the full dwell-time window (NIST 800-61r3 §4.1), identify all systems accessed and data touched, and assess lateral movement scope via network logs and process execution chains. Implement compensating detective controls (Step 5 monitoring) on all vendor accounts for 90 days post-incident, and update the threat model (Step 4) with TTPs observed during this incident to tune detection rules. Schedule a post-incident review with leadership (30 days out) to document lessons learned, update vendor contracts with new security requirements, and report findings to your board's Risk Committee.
Forensic Artifacts	Windows Event Log 4624 (successful logon), 4625 (failed logon), 4688 (process creation), 4672 (privileged access), 4698 (scheduled task creation), 4697 (service installation) — focusing on vendor account names and service accounts | Linux /var/log/auth.log and /var/log/audit/audit.log (sudo usage, privilege escalation attempts, authentication events) with auditd configured for sensitive file access | VPN/RDP connection logs with source IP, username, timestamp, and session duration — identify after-hours, weekend, or geographically anomalous access | DNS query logs and proxy/firewall logs showing vendor account-initiated outbound connections, especially to known C2 infrastructure or external paste sites | File system artifacts: file access logs (MFT on Windows, filesystem journals on Linux), registry hive backups (SAM, SOFTWARE, SYSTEM on Windows) for credentials, and SSH authorized_keys modification times to detect unauthorized key additions

Per-Action IR Details

Step 1: Inventory third-party vendor access, identify every vendor with network, data, or administrative system access; document access scope, authentication method, and data classification for each relationship.

NIST Phase: Preparation

Reference: NIST 800-61r3 §2.1 (preparation phase — establishing baseline controls and asset inventory)

Controls: NIST 800-53 SA-9 (External Information System Services), NIST 800-53 AC-2 (Account Management), CIS 6.1 (Establish Access Control Policies and Procedures)

Compensating: Use `net user /domain` and `Get-ADUser -Filter *` (PowerShell) to enumerate domain accounts; cross-reference with Active Directory user descriptions and group memberships to identify vendor-owned accounts. Export to CSV with access scope manually documented from access request tickets or ticket system. For non-domain systems, query local admin group membership via `net localgroup administrators` and correlate against procurement records. Use free tool Bloodhound Community Edition to visualize high-privilege vendor paths in AD.

Evidence: Before inventory: capture baseline AD snapshot (Export-ADUser, Export-ADComputer with all attributes to JSON), document current VPN user lists from firewall CLI, export all configured service accounts from domain controllers (dsquery user), and screenshot all remote access tools (RDP, SSH keys in authorized_keys, VPN config files) to establish pre-remediation state for later audit.

Step 2: Audit vendor authentication controls, confirm all vendor remote access requires MFA; eliminate shared credentials, standing persistent access, and VPN accounts not scoped to least privilege.

NIST Phase: Preparation

Reference: NIST 800-61r3 §2.1 (hardening systems and implementing access controls before incident onset)

Controls: NIST 800-53 IA-2 (Authentication), NIST 800-53 IA-4 (Identifier Management), NIST 800-53 AC-6 (Least Privilege), CIS 6.2 (Ensure User Access Review and Revocation)

Compensating: Query VPN logs for shared credential usage via grep for duplicate source IPs authenticating with same username across non-overlapping time windows: `grep 'vendor_account' vpn.log | awk '{print $3, $5}' | sort | uniq -d`. For Windows RDP, audit failed MFA attempts in Event Log 4771 (pre-authentication failures). Use open-source tool Auditbeat to forward authentication events to a text file; set alerts when one account logs in from >3 geographic locations in 30 days.

Evidence: Before remediation: export current VPN user database with last-login timestamps, capture firewall rule set (vendor IPs and allowed ports), extract Windows logon events for vendor accounts (Event ID 4688, 4624 from past 90 days), retrieve SSH authorized_keys files and SSH key metadata (ls -la, stat), and screenshot RADIUS/MFA configuration to prove baseline MFA status.

Step 3: Review vendor contracts for security obligations, verify incident notification SLAs, right-to-audit clauses, and minimum security control requirements are present and enforceable in current agreements.

NIST Phase: Preparation

Reference: NIST 800-61r3 §2.1 (preparation — establishing relationships and communication channels with external parties)

Controls: NIST 800-53 SA-3 (System Development Life Cycle), NIST 800-53 SA-9 (External Information System Services), NIST 800-53 IR-6 (Incident Reporting)

Compensating: Maintain a contract obligation matrix in a shared spreadsheet: vendor name, contract expiration, SLA for breach notification (target: ≤24 hours), audit rights (yes/no), required controls (MFA, encryption, backup), and last audit date. Cross-reference against NIST 800-53 SA-9(a)(1)–(3) requirements. For vendors without formal contracts, issue a 30-day notice requiring completion of security addendum using CISA C3 Vendor Management template (free, downloadable). Document all responses in writing via email.

Evidence: Before renegotiation: collect and scan all existing vendor contracts into a single repository, timestamp each document's collection date, create a 'control gap' log listing which vendors lack MFA clause, audit rights, or breach notification SLA, and photograph/archive any hand-signed agreements or side letters that modify security terms.

Step 4: Threat model update, incorporate T1195 (Supply Chain Compromise) as a primary initial access scenario; map your most privileged vendors against this TTP and identify detection gaps in vendor-originated activity.

NIST Phase: Preparation

Reference: NIST 800-61r3 §2.1 (threat and vulnerability analysis as foundation for detection strategy)

Controls: NIST 800-53 RA-3 (Risk Assessment), NIST 800-53 SI-4 (Information System Monitoring), CIS 6.3 (Configure Trusted DNS)

Compensating: Create a two-column document: 'High-Privilege Vendors' (left) mapped to MITRE ATT&CK T1195 sub-techniques (right). For each vendor, list: (1) access level (e.g., domain admin, database admin), (2) attack chain from compromise (e.g., credential theft → lateral movement → exfil), (3) current detection gap (e.g., no alert for vendor account creating new user). Use free tool ATT&CK Navigator to mark T1195 and dependent TTPs; share with SOC. For each gap, assign a compensating detection (e.g., 'alert on any new user created by vendor_svc account').

Evidence: Before modeling: export current detection rules/signatures and compare against MITRE ATT&CK T1195 sub-techniques to document which are monitored (create a coverage spreadsheet); capture baseline process execution logs from a vendor-accessed system (Event ID 4688, sysmon Event 1) to establish normal vendor activity baseline for anomaly detection tuning.

Step 5: Implement or validate vendor activity monitoring, ensure logs capture vendor account activity, privilege escalation attempts, and after-hours access; set alerting thresholds for anomalous vendor behavior patterns.

NIST Phase: Detection Analysis

Reference: NIST 800-61r3 §3.2 (detection and analysis — log monitoring and alert triage)

Controls: NIST 800-53 AU-2 (Audit Events), NIST 800-53 SI-4 (Information System Monitoring), CIS 8.5 (Centralize Log Management)

Compensating: On Windows: enable audit policy for vendor account logons (auditpol /set /subcategory:Logon /success:enable /failure:enable) and privilege escalation (auditpol /set /subcategory:Sensitive Privilege Use /success:enable). Forward Event ID 4624 (logon), 4672 (privilege use), and 4698 (scheduled task) to a central text log via Windows Event Collector or PowerShell remoting. On Linux: configure sudo logging (Defaults log_output, log_input in sudoers), enable auditd for file access (auditctl -w /etc/passwd -p wa -k vendor_changes). Use open-source Sigma rule format to write detection logic: alert if vendor_account logs in outside 0800–1800 Mon–Fri, or if vendor_account attempts privilege escalation. Grep logs hourly: `grep 'vendor_svc' /var/log/auth.log | grep -E '(sudo|su:|privilege)' | wc -l`.

Evidence: Before implementation: baseline vendor account activity over 30 days by exporting logon events (4624), privilege escalation events (4672), failed logon attempts (4625), and file modification logs for system directories. Document 'normal' behavior: typical logon times, source IPs, target systems. Create a vendor activity baseline report showing access patterns, then use this to tune alert thresholds post-implementation.

Step 6: Brief leadership on supply chain risk posture, present the sector trend to institutional leadership; frame third-party risk as a board-level governance issue requiring procurement policy updates, not only a technical control problem.

NIST Phase: Preparation

Reference: NIST 800-61r3 §2.2 (mitigation strategies — organizational communication and policy alignment)

Controls: NIST 800-53 RA-3 (Risk Assessment), NIST 800-53 SA-9 (External Information System Services), CIS 1.1 (Establish Cybersecurity Program)

Compensating: Prepare a one-page executive summary: (1) sector benchmark (32% global surge, education plateau = attacker shift to third-party), (2) institutional exposure (number of vendors with admin/data access at your org), (3) recent education-sector incidents naming compromised vendors (reference CISA alerts), (4) risk rating using NIST 800-30 matrix (likelihood = high, impact = critical → risk = critical), (5) three policy actions: (a) vendor security baseline (MFA, audit rights, SLA), (b) procurement checklist requiring security sign-off before vendor onboarding, (c) annual vendor risk review tied to board reporting cycle. Distribute to CFO, General Counsel, CIO, and Board Risk Committee.

Evidence: Before briefing: collect incident summaries from CISA and Cybersecurity Dive for 3–5 named education vendors compromised in past 18 months; document your org's current vendor count and access levels (from Step 1 inventory); calculate cost impact of a ransomware outbreak (NIST 800-34 recovery cost model, add sector-specific dwell time and public relations costs); photograph or record attendance at the briefing to document governance decision-making.

Step 7: Monitor for follow-on disclosures, track Cybersecurity Dive, Campus Technology, and CISA advisories for named vendor compromises affecting education-sector suppliers; subscribe to K-12 security community threat feeds (e.g., CISA K-12 advisories) where applicable.

NIST Phase: Post Incident

Reference: NIST 800-61r3 §4.3 (post-incident activities — lessons learned and monitoring for follow-on threats)

Controls: NIST 800-53 SI-4 (Information System Monitoring), NIST 800-53 IR-6 (Incident Reporting), CIS 4.1 (Establish and Maintain a Secure Configuration Management Process)

Compensating: Set up free threat intelligence intake: (1) subscribe to CISA K-12 alerts (https://www.cisa.gov/news-events/alerts) via email; (2) create a Google Alert for 'education vendor ransomware' and 'K-12 breach'; (3) manually check Cybersecurity Dive (K-12 section) and Campus Technology weekly; (4) use free RSS reader (Feedly or Inoreader) to aggregate education security blogs. When a vendor name matching your inventory appears in disclosure, immediately cross-reference against Step 1 vendor list. If match found: escalate to IR lead, search logs for that vendor's account activity (Event 4624, 4688, file access logs) over past 30 days, and check for lateral movement indicators (new accounts, privilege escalation, data exfil). Document findings in an incident log with timestamp and action taken.

Evidence: Before monitoring phase: create a baseline spreadsheet of your top-30 vendors by access privilege; tag each with their primary function (email, backup, SSO, network monitoring, etc.). As disclosures occur, maintain a log: [date, vendor name, disclosure source, match_to_inventory (yes/no), investigation_initiated (yes/no), findings]. Archive CISA and vendor advisories in a shared folder with discovery date documented.

Detection Guidance

Focus detection engineering on vendor-originated access patterns rather than perimeter indicators, as supply chain compromise inherits trusted credentials and bypasses conventional perimeter controls.

Log sources to prioritize: identity provider logs (Okta, Azure AD, Google Workspace) for vendor service accounts; VPN and remote access gateway logs for off-hours or geographically anomalous vendor sessions; privileged access management (PAM) logs for credential checkout patterns; endpoint telemetry on systems vendors are authorized to access.

Behavioral anomalies to hunt for: vendor account logins outside contracted maintenance windows; lateral movement from vendor-accessed systems to unrelated network segments; bulk file access or enumeration activity originating from vendor credentials; new scheduled tasks, services, or persistence mechanisms created during or shortly after vendor access sessions; outbound data transfers to non-standard destinations following vendor activity.

ATT&CK-mapped detection priorities: T1195, monitor software update channels and third-party integrations for unexpected binary changes or configuration pushes; T1078, baseline vendor account behavior and alert on deviation; T1566, enforce anti-phishing controls on vendor employee-facing communications and monitor for credential harvesting attempts against vendor domains; T1486, deploy canary files in shared directories and high-value data stores; monitor for volume shadow copy deletion (vssadmin, wmic) and mass file rename events indicative of encryption activity.

Policy gaps to audit: confirm vendor accounts are deprovisioned immediately upon contract termination; verify no vendor accounts have persistent always-on access when not actively engaged; ensure vendor access is logged to a SIEM with retention meeting your incident response investigation window (minimum 90 days, 12 months preferred per CISA guidance).

Framework Mappings

MITRE-ATTACK

- **T1195** — Supply Chain Compromise
- **T1486** — Data Encrypted for Impact
- **T1078** — Valid Accounts
- **T1566** — Phishing

NIST-800-53R5

- **SA-9** — External System Services
- **SR-2** — Supply Chain Risk Management Plan
- **SR-3** — Supply Chain Controls and Processes
- **SI-7** — Software, Firmware, and Information Integrity
- **CP-9** — System Backup
- **CP-10** — System Recovery and Reconstitution
- **AC-2** — Account Management
- **AC-6** — Least Privilege

- **IA-2** — Identification and Authentication (Organizational Users)
- **IA-5** — Authenticator Management
- **AT-2** — Literacy Training and Awareness
- **CA-7** — Continuous Monitoring
- **SC-7** — Boundary Protection
- **SI-3** — Malicious Code Protection
- **SI-4** — System Monitoring
- **SI-8** — Spam Protection
- **IR-4** — Incident Handling

NIST-CSF-2

- **RS.MI-01** — Incidents are contained
- **GV.SC-01** — Cybersecurity supply chain risk management program

HIPAA-SECURITY

- **164.308(a)(7)(ii)(A)** — Data Backup Plan

ISO-27001-2022

- **A.5.29** — Information security during disruption
- **A.5.21** — Managing information security in the ICT supply chain

CIS-V8

- **15.1** — Establish and Maintain an Inventory of Service Providers

SOC2-TSC

- **CC9.2** — Manages risks associated with vendors and business partners

MITRE ATT&CK Mapping

Technique ID	Technique Name	Tactic
T1195	Supply Chain Compromise	Initial-Access
T1486	Data Encrypted for Impact	Impact
T1078	Valid Accounts	Defense-Evasion
T1566	Phishing	Initial-Access

Sources

Source	URL	Tier
Campustechnology	https://campustechnology.com/articles/2026/01/22/ransomware-attacks...	T3

Source	URL	Tier
Ransomware attacks against education sector slow worldwide	https://www.cybersecuritydive.com/news/ransomware-attacks-against-e...	T3
Ransomware Attacks Plateau in Education Sector, While Third-Party ...	https://journeyed.com/report-ransomware-attacks-plateau-in-educatio...	T3
Education Ransomware Attacks Plateau Despite Global Increase	https://www.linkedin.com/posts/educationtechnologynews_report-ranso...	T3
Ransomware attacks in education jump 23% year over year	https://finance.yahoo.com/news/ransomware-attacks-education-jump-23...	T3

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