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Secure & Protect:

Future Proof Your Credentials Management Ecosystem (SEA)
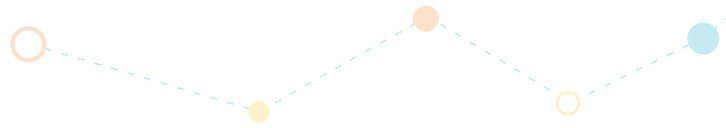
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Executive Summary

In a digital age where learner expectations are higher than ever, higher education institutions need a credential management approach that can keep pace. This white paper explores why transitioning to digital management solutions is crucial for addressing inefficiencies and fraud — all of which put institutions at risk of data breaches, operational delays, and compliance failures.

Key topics that will be covered include:

The growing problem of credential fraud, its causes, and the severe consequences it can have on the academic market.

How external threats, like cybercrime, affect higher education, including the most common types of attacks.

Challenges associated with relying on manual processes like spreadsheets and paper documents.

Best practices when switching from manual processes to a software solution that improves security, streamlines operations, and ensures compliance.

How credential management systems have enhanced efficiency, accuracy, security, and regulatory compliance.

Future-proofing credential management to avoid digital fraud and cybercrime.

Introduction

As digital transformation accelerates, technology is reshaping education. With the academic market embracing digital credentials, secure management is crucial to boosting security, improving the student experience, and maintaining institutional reputation.

What challenges highlight the need for safeguarded solutions?

Manual process inefficiencies: Outdated manual systems are prone to errors, data management headaches, and compliance issues.

Fraudulent credentials: Colleges are overwhelmed by fake applications, fraudulent credentials, and last-minute transfers — signs of a system that may be too easy to exploit.[1] Rising educational fraud jeopardises the integrity of academic qualifications and leads to legal, financial, and reputational fallout.

Inconsistent credentialing: When institutions use different credentialing processes, it can create gaps in verification and make it harder to ensure security.

Rising cyber threats: South East Asia's rapid digital growth has driven an 82% increase in cybercrime in recent years, putting sensitive data and institutional reputations at risk.t

Tougher compliance demands: Increasing regulations push institutions to uphold strict standards for data protection and credential accuracy.

Essentially, adopting digital solutions can streamline processes, enhance security, and ensure accuracy. However, achieving these benefits relies on embracing digital transformation and advanced credential management.

[1] https://www.insidehighered.com/news/global/international-students-us/2024/01/12/international-admission-offices-plagued-fraud-and
[2] https://www.weforum.org/stories/2024/10/southeast-asia-tackling-cyberattacks-underbanked/

What is Risk Management and Why Does it Matter?

With their troves of sensitive data, South East Asian academic institutions are prime targets for cyber threats. In fact, educational institutions experienced 16 times more cyberattacks than commonly targeted organisations in healthcare and retail.[3] Vulnerabilities like outdated software, lack of cybersecurity training, and weak response plans make them especially susceptible. That's where risk management comes in.

Risk management involves identifying, assessing, and mitigating potential risks to minimise their impact on an institution or its Student Information System (SIS). By proactively addressing threats, universities can safeguard their operations and data from potential threats and disruptions.

When it comes to digital credentials, risk management helps institutions:

• Identify potential threats and vulnerabilities within the system.

• Determine the severity of risks to prioritise resources effectively.

• Ensure adherence to relevant regulations and standards.

• Implement strategies to address identified threats proactively.

• Promote ongoing and effective risk management through continuous review.

Minimising institutional threats is essential for protecting universities from cyber risks and keeping data secure, making the credentialing experience better for learners and staff alike.

[2] https://www.gov.uk/government/statistics/cyber-security-breaches-survey-2024/cyber-security-breaches-survey-2024-education-institutions-annex#

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Risk Management:
The Impact of Cybercrime & Security in South East Asia's Education Sector

Hearing about rising cyber threats in the academic sector is one thing, but the numbers make it real. Here are key statistics on cybercrime in South East Asia's higher education sector, with similar impacts observed across the region:

- As many as **77%** of educational institutions worldwide reported experiencing cyberattacks in the past year.[4]

- The countries with the **highest digitalisation rates** in South East Asia — Singapore, Indonesia, Thailand, and Vietnam — are also the **most frequent targets of cybercrime.**[5]

- Fewer than **one in three** countries in the region have laws or policies to protect learners' data privacy — leaving students' personal information vulnerable.[6]

- Financial losses from cyber fraud in the region are estimated to range from **$18 billion to $37 billion.**[7]

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As a result, cybersecurity emerges as a critical focus for higher education institutions.

Why? Because:

- External bad actors pose significant risks as cyber attacks rise.

- Phishing, ransomware, DDoS attacks, and data theft are increasingly common threats.

- Cyber breaches lead to financial losses, data compromises, and operational disruptions.

- Leaders need to protect institutional integrity and maintain trust.

[4] https://campustechnology.com/articles/2024/09/12/3-in-4-education-institutions-have-identified-a-cyber-attack.aspx
[5] https://www.csis.org/blogs/strategic-technologies-blog/aseans-cyber-initiatives-select-list
[6] https://www.unesco.org/en/articles/fast-growth-digital-technology-challenging-education-priorities-and-practices-south-east-asia
[7] https://www.unodc.org/roseap/en/2024/10/cyberfraud-industry-expands-southeast-asia/story.html

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Risk Management:
Credential Fraud in Education

Learners' rising demand for credentials has created a lucrative opportunity for fraudsters to exploit fake qualifications. Credential fraud includes using false or manipulated academic records, often from degree mills, to deceive employers or institutions. This issue is escalating in the education sector, with degree mills now generating $7 billion annually in global sales.[8]

Some of the most common examples of credential fraud in the South East Asia's higher education system include:

- **Forged diplomas and certificates:** Fraudsters create and sell convincing counterfeit documents.

- **Misrepresentation of academic achievements:** Learners and others inflate grades and embellish academic records.

- **Manipulation of student records:** Unauthorised access leads to tampered academic histories, where external actors can alter grades and achievements without detection.

Degree mills now generate **$7 billion annually** in global sales, contributing to rising credential fraud.

Cases of counterfeit degrees and tampered transcripts can seriously tarnish an institution's reputation and spark legal troubles if negligence is involved. The costs of legal defence and remediation can also be hefty, putting a strain on resources and shaking up institutional trust and integrity.

[8] https://www.forbes.com/sites/emmawhitford/2023/02/21/how-thousands-of-nurses-got-licensed-with-fake-degrees/

Risk Management:
Universities Rely on Manual Processes for Credentials Management

While 72% of business leaders in South East Asia rank digital transformation among their top three priorities, the journey remains challenging.[9] Consequently, many institutions continue to rely on outdated credential management methods, such as spreadsheets and paper documents.

This leads to inefficiencies and risks, including:

- **Data management issues:** Scalability, real-time access, and timely updates are difficult to optimise, with a high risk of data loss.

- **Compliance and legal risks:** Keeping up with local data protection laws is challenging, heightening the risk of data breaches.

- **Operational inefficiencies:** Manual entry is laborious, error-prone, and less efficient than automated systems.

- **Limited data integration:** Manual systems often fail to integrate with other platforms, creating fragmented data and complicating analysis.

- **Increased costs:** Manual data handling is costly in terms of labour and time, compared to digital solutions.

Case Study: What do these issues look like in practice? Consider the Royal Melbourne Institute of Technology (RMIT). The institution's reliance on traditional manual processes led to high printing costs, slow delivery times, and inefficiencies — especially for international students. Through the My eQuals platform*, powered by Parchment, RMIT transformed their approach, making the process simpler and more sustainable. Now, students can access secure, certified academic records almost instantly. This digital shift not only saved RMIT $830,000 annually on printing costs but also freed up staff to focus on more impactful tasks.

*My eQuals is the official digital credential platform for tertiary education in Australia and New Zealand, powered by Parchment. It's a collaboration with universities and the Higher Education Standards (HES) governing body, providing secure, digital credentialing for students.

[9] https://prophet.com/2020/11/digital-transformation-in-southeast-asia-three-key-aspects-that-accelerate-growth/

The Need for EdTech Solutions

South East Asia continues to grapple with inefficient manual processes, rising credential fraud, and increasing cyber risks. However, the region's economic growth has spurred government and parental funding for educational technology to tackle these challenges, expand access to education, and support educators in enhancing learning outcomes.[10]

Meanwhile, with only 10% of South East Asian EdTech companies able to demonstrate the effectiveness of their products, education policymakers must base their investments on solid evidence and consider the long-term impacts of their decisions.[6]

As digital solutions gain more traction, digital credential management systems are becoming essential for institutions to efficiently issue, store, and verify academic credentials. And as educational technology gains traction, providers like **Parchment** are leading the charge with cutting-edge solutions for managing credentials and badges. These secure systems not only protect sensitive data but also deliver a seamless, user-friendly experience for students and academic institutions — transforming how credentials are handled in today's digital age.

With only **10%** of Southeast Asian EdTech companies able to demonstrate the effectiveness of their products, education policymakers must base their investments on solid evidence and consider the long-term impacts of their decisions.[6]

[10] https://info.solve.mit.edu/resources/edtech-in-south-east-asia

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Digital Solutions for Credential Management

Credential management is transforming the way institutions handle and secure credentials today. Discover the advantages for higher education switching to a digital system:

1. Boosted Security

With cutting-edge encryption and strong authentication methods, digital credential systems greatly reduce the risk of unauthorised access and tampering — offering top-notch protection against fraud.

Parchment ensures data security by storing it in the cloud under local privacy laws and protecting academic documents with digital signatures, hosted sharing, and blockchain notarisation. This includes partnering exclusively with accredited education providers to guarantee legitimate, tamper-proof records.

2. Instant Access to Reporting

Say goodbye to delays. Digital systems like Parchment provide immediate access to up-to-date and accurate records, so information is always current and at stakeholders' fingertips.

3. Streamlined Administration

Automating credential issuance means less paperwork and fewer errors. This not only cuts down on administrative burdens but also allows institutions to allocate their resources more efficiently.

With Parchment, what used to take weeks — printing and posting thousands of transcripts — can now be done in minutes, all online. Plus, the self-service platform allows students to access and share their records at any time, reducing the need for institutional involvement and enabling secure back-to-source verification for employers.

4. Effortless Scalability

Managing large volumes of credentials becomes a breeze with digital systems that scale. Whether you're handling hundreds or thousands of students, there's no need to worry about physical storage limitations. As institutions aim to increase learner registrations, digital solutions like Parchment can seamlessly expand to accommodate more learners ensuring your credentialing process keeps pace with your growth.

5. Cost and Time Savings

Digital credentials slash costs related to printing, mailing, and storing physical documents. Plus, they minimise the need for extensive administrative work, significantly cutting the time spent issuing credentials.

Digital Solutions for Credential Management

6. Improved Compliance

Digital credential systems ensure compliance with personal data protection regulations across the South East Asian region — from Singapore[11] to Malaysia's PDPA[12] and beyond. Plus, with built-in compliance tools, auditing and reporting are simplified.

7. Personalised Skills Representation

Institutions can create and customise digital badges and certificates to showcase individual achievements, reflecting each learner's journey.

8. Seamless Integration

Credential management systems integrate effortlessly with existing SIS and learning management systems. This creates a more unified and efficient workflow.

For instance, Parchment's modern REST APIs enable integration with any SIS, including Banner, Oracle (PeopleSoft Campus Solutions), SITS, Callista, and more. Parchment has been successfully implemented worldwide in partnership with leading universities, using web services and XML data standards for easy data export. As a result, institutions have noted improvements in student data accuracy and cleansing.

9. Sustainability

Reducing the need for paper-based processes contributes to sustainability efforts, promoting eco-friendly practices in line with modern environmental goals.

[11] https://www.pdpc.gov.sg/overview-of-pdpa/the-legislation/personal-data-protection-act
[12] https://www.malaysia.gov.my/portal/content/654

Implementation of Credential Management Systems

Once you've decided on digital credential management for your institution, what's next?

Choosing a system with strong security features and functionality tailored to your needs.
Key factors to consider include:

Customisation: Need flexibility? Ensure the platform can adapt to your unique requirements.

Vendor support: Pick a provider known for robust support during and after implementation.

Compliance requirements: Confirm the platform meets relevant regulations.

Scalability: Choose a platform that grows with your institution, handling future demands without frequent upgrades.

A global network: Opt for a platform with a global network to easily support student sharing across institutions, fostering trust and ensuring seamless learner mobility.

A few tips for successful implementation:

1. Use encryption and multi-factor authentication to keep credentials secure from unauthorised access.

2. Provide thorough training and highlight system benefits to win over stakeholders and ease the transition.

3. Plan your data migration carefully and leverage assistive tools for a smooth transfer of information.

4. Choose a platform with strong integration capabilities that grow with your needs and follow a well-planned migration strategy to seamlessly blend with your current systems.

Future Trends in Credentials Management

This is just the start of credential management in higher education. The future is brimming with exciting advancements, including:

A Lifelong Learner Account

The future of credential management is heading toward lifelong learner accounts, where individuals can securely store and share their academic achievements in one digital space. This gives students greater flexibility and control over their records throughout their education and career.

A Global Exchange of Credentials

As demand for a standardised credential system grows, a global exchange will allow learners to share qualifications across borders, opening doors to both regional and international opportunities. This global collaboration will make it easier for students to build an international academic profile and take achievements anywhere in the world.

Interoperability and Advanced Analytics

Looking ahead, emerging interoperability standards will enable seamless credential sharing and verification across different platforms, simplifying integration. At the same time, advanced analytics tools will provide deeper insights into credentialing trends, helping institutions refine their strategies.

Personalised Learning

Finally, and perhaps most importantly, personalised learning pathways will gain prominence — with credentialing systems increasingly supporting tailored achievements that reflect individual learning journeys.

Conclusion

A credentialing management platform with robust security protocols is crucial for higher education institutions to safeguard against evolving cyber threats, operational challenges, and credential fraud. Transitioning from manual to digital systems not only enhances security but also streamlines administrative processes.

Now is the time to embrace digital, and **Parchment** is here to make that transition seamless. With Parchment, institutions benefit from advanced security measures, including adherence to ISO 27001, SOC 2 Type II, and PCI DSS compliance. The platform also ensures:

• Compliance with the GDPR and local data protection laws.

• Transparent data handling practices.

• Encryption.

• Regular security assessments.

• Secure international data transfers.

• Adherence to WCAG guidelines and provision of VPAT.

By choosing **Parchment**, you can effectively manage credentials and digital badges to reduce administrative burdens and focus on what matters most — empowering student success.

Book a demo to explore how Parchment can support your transition to a smarter, more secure credential management system.

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