Why North American HEIs are advised to accept credential evaluation reports digitally

A POSITION PAPER FROM THE WORKING GROUP ON DIGITAL DELIVERY OF CREDENTIAL EVALUATIONS (WGDDCE)

KENNETH WARREN, EDITOR

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Introduction

The large-scale use of computers in higher education transformed the way institutions produce, transmit, and store student records. Academic transcripts, which were previously printed on paper, have undergone a process of digitization over time using various methods and available technologies. Currently, most institutions in North America produce digital versions of paper transcripts, while some issue official academic records in electronic form only. With the advent of artificial intelligence and advanced systems for storage, retrieval, and management of student data, it is only a matter of time before the paper transcript is wholly replaced with its digital version.

While colleges and universities have made great strides in digitization of academic records, credential evaluation reports which are integral parts of the international admissions process, continue to be requested by institutions in a paper format or delivered by email. Credential evaluation reports supplement a student's record if they completed any portion of their studies in a country other than that of the admitting institution. In North America, the content and format of evaluation reports are not regulated.

In this paper, we will discuss the many advantages of transitioning the receipt and management of credential evaluations and assessments to a digital format. Doing so will result in appreciable gains in productivity and security as well as substantial savings in human resources and time. Processing credential evaluations digitally in the same way as academic transcripts, will streamline admissions and registration procedures and bring advantages not only to higher education institutions but also to students, administrators, faculty, and others who benefit from these valuable tools.

Digitization of Academic Information: an historical perspective

Much has been written about the value and approach to the electronic exchange of educational records. Educational records convey the skills gained through academic programs to prospective employers and other academic institutions. As such, they represent an important vehicle to demonstrate a student's academic achievement.

The transfer of student data via educational records is a cornerstone of student mobility. The traditional method for transferring student data has been the paper academic record - also called a transcript. The process through which paper transcripts were issued has evolved to include a variety of security measures. As with any paper document, however, they are susceptible to forgery and fraud.

Paper delivery of academic information presents other challenges. Over the past three decades, the North American postsecondary student population has grown steadily. This growth coupled with a growing emphasis on student mobility, has resulted in a tremendous increase in the volume of paper academic records sent between institutions. The increasing volume of paper has had a significant impact on the labor-intensive, manual operations employed by institutions of higher education. With the surge of paper records also came an increase in personnel time and resources required for data entry.

Delivery times and dependency on the regular postal system compounded the problems with processing paper documents in a timely manner. The increased effort to process and find adequate storage to retain paper documents added to the challenge. Whether stored in hard copy form in filing cabinets, or converted to digital form using document imaging technology, a solution to this mountain of paper was needed. A call to action for education professionals to develop systems which aid in the digitization and exchange of educational records was needed.

Concerted efforts which focused on the electronic delivery of student data date back to the 1980s. Today, there are several technologies and mature approaches employed by educational institutions that support the electronic exchange of educational records.

Organizations such as the AACRAO (American Association of Collegiate Registrars and Admissions Officers), PESC (Postsecondary Electronic Standards Council), 1EdTech (a member-led non-profit edtech partnership that accelerates the digital transformation of learning), and the Groningen Declaration Network represent a few of the educational organizations which are focused on advancing the use of digitization in the administration of academic information. Each of these organizations provides a wealth of resources that outline the opportunities and benefits of digitization, and a variety of approaches to the adoption of digital processes.

What is meant by 'digital' delivery'?

Today, institutions leverage digitization to deliver education records using one of two main methods - by PDF (Portable Document Format), or a number of industry standard data formats including EDI (Electronic Data Interchange), XML (eXtensible Markup Language), and JSON (JavaScript Object Notation) to deliver data in machine readable form.

The PDF format, created by Adobe Systems, has long since become a shared standard available to everyone without the use of proprietary software since Adobe Reader, the software that renders PDF documents, is free and readily available. Adobe Reader is often packaged with new computers and easily available for download. It is also available for different operating systems, making it easy to use. Documents formatted in PDF display well and are printer friendly. A PDF will print as displayed making

the output on paper very predictable and reliable. In addition to PDF being a ubiquitous file format, PDFs can be secured through password protection and encryption.

EDI and XML, like PDF, are another way to represent data that is machine readable via SPEEDE (Standardization of Postsecondary Education Electronic Data Exchange) which many colleges and universities in Canada and the United States have been using for years. While delivery and receipt of PDF files may not provide for complete system automation that is possible with exchanging data in EDI/XML formats, significant gains can be obtained in terms of both delivery time and staff resources.

Credential Evaluations: from paper to digital delivery

In the international student context, credential evaluation services play a significant role in the transfer of student data by converting the data on student academic records from one country into easily understood data in another country. Credential evaluation reports and assessments are prepared by academic institutions, government agencies, private agents, as well as evaluation agencies which specialize in this work. Regardless of the origin, the credential evaluation report becomes an important piece of an individual's educational record when academic study crosses international borders.

Credential evaluation reports, like academic transcripts, originated as paper documents. Initially, typed or prepared using word processing software, various security features that are available for other paper documents have been adopted by evaluation services over time. As a result of technological advancements, evaluation reports can now be digitized.

When an evaluation report is prepared for a learner, the evaluation typically becomes the property of that learner to distribute how they see fit. Evaluators, however, seek to maintain control over the content of credential evaluations and evaluation agencies seek to maintain control over how evaluation reports are delivered.

Paper delivery

Until recently, the most common method for issuing and delivering educational records, whether transcripts or evaluation reports, has been in the form of a paper document sent and received via regular post. However, it can easily take anywhere from six days to two weeks or longer to order, print, mail, transport, receive, open, record, process, and store paper educational records from sender to receiver. As a manual process, it is subject to delays, human error, lost or misfiled documents, and several other factors that lead to lost productivity. The process is inefficient and can also be insecure.

Scenario 1:

An institution received a paper evaluation that was supposedly issued in 2017, by a well-known evaluation agency. Staff noted that the font and safety paper were slightly different from what they see currently. Although the institution normally receives evaluation reports in sealed envelopes via regular mail, they have occasionally accepted original reports in-person, directly from a student bringing in their documents. In this case the format received mimicked the standard format of reports issued by the agency. Upon review with the agency, it was confirmed that this person had never applied for an evaluation report or submitted documents. Two weeks later another institution contacted the evaluation agency for confirmation of the same falsified report.

Digitized credential evaluation delivery methods

Email delivery

As demonstrated above, educational records can be digitized utilizing the PDF format. PDF credential evaluation reports are easily attached to email programs by the sending agency, but PDF attachment and delivery by email is arguably the least secure way to deliver an evaluation report. The chief benefits are that it is instant, requires little technical expertise or software, and is almost universally accessible. The challenges, however, lie with security.

Digital documents can be altered by recipients unless they are protected. While the sender can take measures to protect original digital document files via password encryption, it is not a perfect solution. Password protection may hinder alteration of an authentic evaluation report, but it cannot protect against the wholesale fabrication of an entirely different evaluation report.

Email addresses can also be spoofed. Spoofing refers to a type of fraud that alters the sender's email address to resemble that of the intended sender, such as an evaluation agency. Thus, when evaluation reports are delivered as email attachments, they can be completely fabricated and sent by a private party but made to resemble original digitized evaluation reports sent from the evaluation agency itself. A third challenge to secure delivery of evaluation reports relates to the security of the personally identifiable information found on evaluation reports and the academic records that typically accompany an evaluation report. Unless an email is encrypted, delivery of evaluation reports by this method has risks.

Scenario 2:

The evaluation agency received an emailed PDF copy of an evaluation report with a facsimile of the agency's logo that was obviously faked. Very rarely do we hear from institutions about faked evaluation reports that "look good," which leads to the conclusion that there are many falsified paper evaluation reports that are done well and are never caught.

Electronic delivery through a third party

Technology companies have created digital document portals for the delivery or 'sharing' of educational records and other documents to combat the risks of unsecure digital document delivery by email. These portals are marketed to academic institutions and evaluation services alike because of the ease and security of document delivery. Similar platforms have already been in use for domestic records, test scores, and sharing and transfer of various other types of student data. As long as the technology provider and platform for delivery is trusted, electronic report delivery is more secure than email delivery.

Depending on the vendor chosen for electronic delivery, academic institutions and credential evaluation agencies can upload academic records and evaluation reports for secure delivery to other registered account holders. Educational records are either transmitted electronically to an employer's or educational institution's account or uploaded to a learner's digital 'wallet', through which the learner can then share the contents of their wallet in a secure and controlled manner. Electronic delivery via trusted portals provides the advantage of allowing institutions to easily share educational documents and maintain control of the content of the documents, thus making them secure and tamperproof.

Scenario 3:

Institutions, employers, and licensing bodies often request that individuals submit all of their application materials at one time. To aid in this request, one well-known evaluation agency delivered a legitimate evaluation report to an applicant who then passed the evaluation on to another individual who created approximately 500 falsified reports based on that initial report. It is nearly impossible for an evaluation agency to track down fake reports, even when we know they are out there.

Consider these factors and risks:

- Whether delivered by post, courier, or email, wrong recipient addresses can result in misdelivered mail, missed deadlines, or lost documents.
- Evaluations received as paper (or PDFs) typically require data entry by the receiving institution, adding additional processing time.
- Evaluations received as paper or PDF documents make it harder to tell if the evaluation received is authentic.
- It is easier to alter or completely fabricate a paper document in order to have a later expiration date, higher grades, degree award, etc.
- Evaluation reports contain personally identifiable information; if the reports are sent via regular mail or email, the information is very exposed.
- Email addresses can be spoofed; emailed evaluation reports that appear to be coming from an evaluation agency, may not be.

Electronic delivery of evaluation report data through system integration

Evaluation reports are traditionally seen as documents, either paper or digital. However, it is the data on the document that has real value, not the document itself. Many modern organizations employ robust data management systems, or customer relationship management systems (CRM)s. They no longer store files of documents, be they transcripts, certificates, or evaluation reports, but instead input this data directly into CRMs. The traditional way of doing this requires manual data entry from a document directly into the CRM. However, emerging technology allows evaluation services to export the data from their evaluation reports directly into compatible CRMs via a web service export. This process bypasses the 'document' stage of the evaluation report, and transfers data directly. The benefits are many – when there is no document, it cannot be forged or altered by a third party. However, the data is only available to users of compatible technology. Even when evaluation services employ web service export technology, it requires integration with the recipient's CRM.

Making the case for digital delivery of credential evaluation reports

A reliance on paper documents poses risks to the learner as well as the institution. Where there are natural disasters or conflicts that can destroy paper documents, having the educational records housed electronically - in a digital wallet or similar technology – allows the learner to benefit from their educational achievements, even if the paper documents have been destroyed. Having a process by which individuals can share credentials with evaluators, who can then share credential evaluations electronically, allows for the entire process to happen without reliance on mail service, improves efficiency, and reduces opportunities for fraud and document alteration.

Ultimately, treating credential evaluations like secure electronic educational documents benefits the institution and the learner. It expedites the admission process, allowing the institution to make decisions

more quickly, and allowing them to integrate the credential evaluation into their systems much like receiving a digital transcript from another institution.

Incorporating digital credential evaluations into an institution's admission processes helps ensure that the institution is making its decisions based on authentic documents, and authentic assessments. It allows the learner to share their assessment with employers and institutions quickly and securely, regardless of the availability of mail service or other infrastructure challenges and ensures that admissions personnel are basing decisions on secure and accurate documentation.

How to get started

A good starting place to ensure your process and standards are in line with the recommendations within this position paper is to ask questions of your internal process. Some of the starting questions for yourself can be:

- 1. Who oversees and receives foreign credential evaluations at your institution? How does your institution receive credential evaluations currently?
- 2. What are your institutional policies and guidelines for secured receipt of education records in general? Do your processes for receiving foreign credential evaluations follow these policies and guidelines?
- 3. Who has ownership over document submission fraud mitigation? And international document submission fraud mitigation?
- 4. Who has ownership over document submission fraud mitigation? And international document submission fraud mitigation?
- 5. Are your processes and procedures up to date with current security standards, intended to mitigate fraud to the greatest extent possible?

Conclusion

Technology has enabled higher education institutions to record, preserve, and reproduce student academic records with greater certainty and efficiency than ever before. The same technologies used to facilitate the secure issuance and transmission of transcripts can be applied to credential evaluation reports.

There are clear advantages to electronic and digital delivery of credential evaluation reports over paper and email delivery. Institutions should be mindful of the risks for document manipulation, email spoofing, and compromising of personal information inherent to methods other than secure electronic and digital delivery. Delivery through a third-party platform is secure but may require account setup or a subscription to initiate, but these are easily managed. Integration with CRM systems is the most secure but necessitates a high level of technical expertise to operate and maintain.

North American academic institutions should use the lessons and resources used in the digitization of academic transcripts and apply them to the processing of digital credential evaluation reports. This will speed up their efforts to admit and enroll students who have completed part or all of their education abroad. Institutions who adopt these recommendations will save staff resources, lower the cost for the prospective students, and increase the security of the entire process.

The Working Group for Digital Delivery of Credential Evaluations (WGDDCE)

WGDDCE Participants:

Margaret R. Donaldson, Senior Evaluator, Global Credential Evaluators, Inc. (GCE)

David Haynes, CEO, International Education Evaluations (IEE)

Leah McCormack, Founder/Senior Evaluator, InCred – International Credential Evaluations

Aleks Morawski, Director of Evaluation Services, Scholaro, Inc.

Alex Popovski, President, Ucredo, LLC.

Bernard Ramos, Vice President, Educational Perspectives, Nfp. (EP)

Margit Schatzman, President, Educational Credential Evaluators, Inc. (ECE)

Shelby Stanfield, Foreign Credentials Service of America (FCSA)

Beka Tavartkiladze, Senior Director, Global Education and Knowledge, World Education Services, Inc. (WES)

Emily Tse, Director of Evaluations, International Education Research Foundation, Inc. (IERF)

Anthony Uljanec, Senior Director of Technology, Educational Credential Evaluators, Inc. (ECE)

Kenneth Warren, President, Educational Perspectives, Nfp. (EP)

Kimberly Wheeler, Senior International Credentials Evaluator, International Consultants of Delaware, Inc. (ICD)

Margaret Wenger, Senior Director of Evaluation, Educational Credential Evaluators, Inc. (ECE)

Editor:

Kenneth Warren, President, Educational Perspectives, Nfp. (EP)