LEVERAGING DIGITAL TRANSFORMATION TO BENEFIT STUDENT LEARNING – CREATING A DIGITAL STUDENT RECORD IN ALBERTA

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ABSTRACT

The use of a digital student record is transforming recordkeeping practices for the creation, management, and disposition of student records in Alberta. Student records document decisions that support student learning and their creation is mandated through provincial government legislation.[i] This article identifies what organizations need to consider for digital transformation projects. Specifically, it identifies strategies for Alberta school divisions preparing to upload digital student records into the provincial Department of Education's digital record repository. Successful implementation of digital student records requires collaboration, resource sharing and staff engagement.

INTRODUCTION

For schools in Alberta, uploading student records into an electronic repository is a transformational change creating both challenges and opportunities. Many school divisions have a long-standing practice of keeping hard copy student records. A student record is made up of content mandated by the provincial government through the *Education Act*, and specifically, through the *Student Record Regulation*[ii] and therefore identified through legislation. A student record is created when a student enters school and includes decisions made about the education of the student collected or maintained by a school division,

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[i] *Education Act* S.A. c. E-0.3 2012, *Student Record Regulation* Alta. Reg. 97/2019. The Regulation specifies the content to be included in the student record.
[ii] Ibid.

regardless of the manner in which it is maintained or stored.[iii] It is a vital record documenting decisions for and about student learning and is usually generated over a 13-year period with information gathered from more than one location (i.e. primary or elementary school, junior high, then high school).   Some examples of content include the student's registration, a birth certificate, and report cards. Adding to the complexity of managing student records, some students take programs in more than one location and multiple people add content to the student record. Many school divisions administer student records using paper files.   Over the last decade an increasing amount of content has become digital and is stored outside of a printed record, creating multiple information repositories. The way the student record is maintained varies across the province, and sometimes, even within school divisions.   The retention period for a student record is specified in the Student Record Regulation for a period of time after a student either graduates or leaves the school division.

BACKGROUND

More than a decade ago, the provincial Department of Education (The Department) began development of a digital record repository for student records, known as the Provincial Approach to Student Information (PASI). From the outset, PASI was identified as a solution for addressing the lengthy time it takes for transitioning a student record from one school division to another for transferring students. PASI is now the endorsed repository for storage of digital student records. By 2018, the Department had communicated that beginning in the fall of 2020 divisions must manage transferring student records[iv] by uploading content into PASI.

PRIOR TO PASI

For school divisions, the prior process to manage transferring student records involved physically moving hard copy files from one site to another. Historically, when a student was about to leave a school (e.g. primary or elementary school), the process for many school staff was to identify and transfer hard copy files onto the next school (e.g. junior high or high school). School staff sent individual student records through Canada Post when the student moved away, or boxed and delivered files for a particular grade to the new school, for example when all grade six students were leaving Elementary School and transferring to a Junior High School. Throughout a school year, a varying percentage of students transfer to other schools, some within the same city but another division, within Alberta, and others out of province. For some students, particularly students in foster care, their transition from one school to another is often poorly handled because these students move more frequently

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[iii] Records can include hard copy and digital records in several repository locations.
[iv] A transferring student record is the record for a student that leaves one division for another division (even if they do not move from their home).

than others. For students with complex needs, special reports and assessments are sometimes difficult to locate[v] and do not make it to a new school in a timely manner to be used by educators who need to support these transferring students into a new school setting.

Over the last decade, Alberta communities experienced forest fires and floods, which affected student records; water and fire, are a severe hazard for school buildings and resulted in the destruction of paper records!

The COVID-19 pandemic also highlights the need for a digital record that can be accessed outside a school building. In the spring of 2020, school buildings closed, preventing easy access to hard copy files. Layoffs and funding uncertainty created resourcing challenges for staff to perform administrative tasks. Throughout the summer of 2020, schools focused on developing and implementing school re-entry plans for ensuring student safety.

Digital records introduce a change in the ways staff work. Some school divisions have a greater capacity for a digitization project than others based on available resources and the volume of content already digital. .There is limited records management capacity at schools since school administrative staff have numerous tasks to accomplish on a daily basis. Managing records is mixed in with a long list of other priorities. The move to digitize records creates challenges and the perception of more work for staff who have a primary role in serving the front line needs of students. Additional funds to secure resources for digitizing records are not available.

OPPORTUNITIES FROM PASI

When PASI was initially developed, the Department of Education shared the benefit of how the process for transferring student records will be easier for schools. The focus of communications was "Katie's story", which showed how PASI would help a young girl in the foster care system to be welcomed when she moved to a new school. PASI was supported and endorsed within the province by the College of Alberta School Superintendents and by the Association of School Business Officials of Alberta.

The Department of Education built the digital repository, identified document types to be uploaded, implemented information security provisions, and created a tool for uploading content into PASI. Ultimately, PASI brings digital transformation to one of the most critical records produced by schools, the student record, and it supports the transition of these records from one school to another.

Some initial communication from the PASI team identified Service Bureaus as a solution to scan records for the schools. Some schools proceeded to have files scanned. Experienced

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[v] They may be kept in a resource or guidance teacher's office

and professional imaging service providers initiated scanning. Digitization standards from the province within The Government of Alberta's Digitization Guideline, which mirror the Canadian Standard, Canadian General Standards Board (CGSB) 72.34-2017, Electronic Records as Documentary Evidence, are followed. While outsourcing scanning works well for clearing out file cabinets, this transformational change requires that new content is continuously uploaded when new information is received. Staff need to understand the process and upload what is required when records are created. An example of an important record to be added to the student record is a guardianship document, typically provided as a hard copy Court Order from parents. A guardianship document specifies who has access to, and information about, a student, and is needed by school staff, particularly Administrators. As documents are received, school staff need to upload new content to the digital student record.

PASI requires everyone to work collaboratively, province-wide, to adopt a change that fundamentally alters the way that a critically important record to support student learning is managed in Alberta.

PASI provides an opportunity for school divisions to embrace the value of digital records management functionality. PASI also allows for electronic records disposition. With the transition from paper to digital records it will no longer be necessary for schools to inventory, box, or shred paper files. Without access to school buildings during the pandemic, parents are submitting records electronically more often than pre-COVID. This content needs to be verified and then uploaded into a secure repository, which makes the process more efficient.

PASI supports the transition of students transparently from one division to another. When a new student arrives from an Alberta school division, the new school will access the student's record electronically in PASI through a change in access permissions. The student is then assigned to the new school. The old process, where schools contacted the student's prior school to request the transfer of a record that required a hard copy file to be mailed through Canada Post, ends.

A digital student record provides an opportunity to strengthen information security measures with login and security features (e.g. password protection). Paper records often presented security challenges for schools where they were to be kept locked in cabinets and accessed in a centralized office location. There was inconsistency across most school divisions. The future is controlled access to student records through role permissions built into the system. PASI has built-in requirements to authenticate records and an audit trail that allows for monitoring who has accessed and viewed documents. This was not possible with paper records.

PASI also provides almost real time updating of content. Changes occur without a delay for batch uploading. The Department of Education is also granting limited, read only access to

students who can look up their marks and get access to generate their own transcripts. This ability is managed by the Department and removes the administrative burden currently on school divisions to disseminate routine information to former students, while supporting students transitioning to post-secondary institutions.

Successful implementation of PASI occurs when school divisions work collaboratively to create quality records. Consistent processes are required for good quality student records. Identifying what is to be specifically uploaded, how this can best be achieved, and using standards for quality are all crucial for success.

TECHNOLOGY IS TRANSFORMING BUSINESS PROCESSES

Before the COVID-19 pandemic, tools to support videoconferencing and online meetings were already in place; with the pandemic the use of these tools became critical. Schools were closed to students in the Spring of 2020. Access to facilities was limited for staff and student safety. Microsoft Teams, Google Meet, Zoom and other platforms were used to communicate between teachers, students, and support staff. Implementation of new processes during the pandemic required pivoting to these tools immediately. Working from home and the use of technology has helped many to see the value and necessity of digital records management.

In the world of the COVID-19 pandemic, school staff and specialized service providers (Psychologists, Occupational Therapists, Physical Therapists, etc.) cannot readily access paper files in file cabinets. PASI provides access to a student record through the use of technology. Staff have no access to a paper file in a cabinet in the schools when they are restricted to working from home. When the COVID-19 pandemic will be over is unknown, but access to digital documents supports student learning when educators can review prior assessments, analyze reports on student progress, and determine if interventions being used to support student learning are showing results. In a digital age we are responsive to the needs of staff serving students at multiple sites spread geographically throughout a school division. Ultimately there will be more support for student support and learning.

The transformation to digital records has been occurring within school divisions over a number of years as each division invests in its systems. PASI leverages the investments made in Student Information Systems in Alberta, provided by several vendors (e.g. PowerSchool, Maplewood). Vendors are working with school divisions and developing solutions for uploading content to PASI from these systems. Digital data was often stored separately from paper records in multiple repositories and work is well underway to find a way to upload information from the multiple repositories into PASI. PASI is now the "source of truth" for the province-mandated content of a student record.

Important to the successful implementation of a digital student record program is good leadership, with a vision identifying the goals and what is required. Within each school, the Principal has always had an important role in implementing change. Successful projects at schools include Administrators who lead staff. Success requires they be involved in projects of this nature.

In March 2020, at a Digital Student Records Symposium, a smaller school division, with extremely limited capacity, shared how they successfully scanned and uploaded student records to PASI once everyone in the school division knew the plan and expectations. With leadership and planning, their division completed the transformation to digital student records.

An important part of digitizing student records for many school divisions is to create clarity regarding the specific content to be included in the mandated student record. This includes information such as registration records, birth certificates, report cards or progress reports, psychological assessments, court orders related to custody and access, and Individualized Program Plans as required by the *Student Record Regulation*. Initial project documentation from the Department of Education consisted of a growing list of document types to guide schools on content and categories to be captured.

An important first step is to analyze existing record-keeping practices and ensure mandated content is only being uploaded and stored digitally. In many schools, hard copy student records included content that was not required (such as samples of student work, consent forms, anecdotal notes, etc.) and records were often duplicated in more than one location. School divisions then need to identify where other content, not part of the mandated student record will be stored, content that is supplemental student information.

Some larger school divisions were early innovators as they uploaded their records into PASI. They served as pilot organizations, and their work assisted others. Their questions to the Department of Education project group provided clarity about required documents, and their experiences improved processes. These divisions led the way and smoothed out some of the issues. Their insights and lessons learned were shared with others, proving that good information governance and leadership is critical to success.

PROJECT MANAGEMENT ESSENTIAL

To add their content to PASI, schools are able to use the PASIprep^{vi} tool provided by the Department of Education. It is up to each school division to identify how to upload student record content creating a strategy that makes sense to it. School divisions need to determine how to sort and prepare the files for scanning, scan the hard copy records, upload to PASI, perform quality assurance, and put in place a process for secure disposition of the original source documents.   School divisions need to purchase scanners and identify who will perform the work.

In a perfect world, one strategy would work for all; however schools and school divisions do not operate that way. Maturity levels for records management differ across the divisions. Resources are not equal across the province, and each school division operates by identifying its own priorities.   Even within a school division, there are often inconsistencies in how student records are managed. Involving staff in planning supports engagement in the project and ensures that the needs of the school division and school Administrators are addressed.

Each school division needs to identify an implementation strategy by identifying the current state and planning for what is required. This means determining resource requirements and how much can be achieved at each school within the school year. A customized plan is the outcome that identifies the phases of the project

The approach for getting into PASI is not a "paint by numbers" template, but requires thoughtful analysis. Multiple approaches will be used by school divisions in Alberta.

INCREMENTAL CHANGE

For school divisions challenged by existing priorities, limited resources, and budgets, the need to figure out how to implement the required digital transformation project is challenging. One way to achieve the goal of uploading all student records into PASI is a phased approach. The first priority is to focus on the current requirement to upload transferring student records.

The next priority is to identify an approach to upload the remaining student records. Depending on the particular division and school practices different solutions may provide a bigger benefit. Some strategies and considerations include:

- Digitizing and uploading content beginning with the kindergarten and grade 1 students, the earliest grades, and creating a plan to have only a digital student record; essentially a day forward approach. This is a quick win as you start from the

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^{vi} **PASIprep** provides a user interface to manage and access the information within PASI

beginning of a student's school career and introduce a digital student record from the onset.

- Implementing digital student records for students in early childhood learning programs.   These students often have a significant amount of reports and assessments.

- Seeking out opportunities to support digital transformation for "mobile" students, such as children in the foster care system, or students attending school at more than one site.   Electronic records that are easily accessible support efforts for a smooth transition by multiple individuals working with these students.

- Creating digital student records to support students learning from home. A portion of students are now learning at home. These students are great candidates for a digital student record. This is often a diverse group of students covering multiple grades.

- Digitizing student records for the students transitioning to the next grade at another school within the school division, the internal transferring process. For example, schools may digitize student records for students at the highest grade in an elementary school which avoids shipping physical files to the junior high when they transfer for the next year.

- Digitizing and uploading content for high value records such as program planning and assessment records and ensuring that records for interventions such as Individualized Program Plans are uploaded.

- Ensuring that the needs of Administrators at the schools are addressed to support implementation. Their endorsement and leadership are critical to implementing transformative change at schools. It is helpful to determine if there is consistency across the Division and if there are early innovators that the school can work with as a pilot project.

- Breaking the project into phases to introduce incremental change. This keeps staff focused on what is required which reduces change fatigue and the burden of asking too much of staff who already have enough to do.

- When outsourcing to a Service Bureau, clearly define your requirements so that you achieve a quality outcome. Ensure you know how the work of outsourcing will support your overall goal. Once existing student records have been digitized, the process for adding new content needs to be determined.

- Digitizing and uploading content from specialized service providers (e.g. Psychologists, Occupational Therapists, Physical Therapists, etc.) so it is accessible to staff who need the information (e.g. Teachers, Counsellors, Administrators). These staff provide their expertise to multiple schools sites and students who are now learning at home. Many of their records were created electronically so they only need to be uploaded. Some of this work is performed collaboratively with specialized

expertise of individuals who seek to share information with a multi-disciplinary collaborative approach.

- Seeking out quick wins such as uploading existing digital content. Some schools already have digital records such as online registration. This is an opportunity to upload born-digital content.

- Finally, acknowledging that some student records will remain as paper. For example, student records for 2021 graduates don't really need to be scanned as their school careers are ending. School divisions can continue to use existing processes in parallel with digital student records. Digitizing all student record content is not a requirement.   While this creates different approaches to managing records, some school divisions lack the resources (staff and financing) to fully implement digital student records at this time.

CHANGING LIVES

Supporting student learning, and identifying the value of interventions, such as the Individualized Program Plans (IPP) and other customized learning plans for accommodating a student's needs, is only possible when the information is in the hands of the educator working with the student.   Teachers change from one year to the next for a particular student, and multiple teachers are teaching students at the higher grades. Administrators, Counsellors, Psychologists, Occupational Therapists, Physical Therapists, and other service providers all need access to student records to support student learning. Information needs to be available to staff and remain accessible as the student progresses through the school system, from one site to the next, and from one grade to the next.

RESOURCE SHARING AND COLLABORATION

In order to make transformation to digital student records successful, several school divisions participated in stakeholder consultations with the Department of Education. Successful school divisions that have implemented digital student records described the collaboration required.

These projects are most successful when individuals such as Information Technology, Information Management, Registrars in Schools, Counsellors, and Administrators work together to identify requirements and strategies.

Resources to support school divisions implementing digital student records, along with case studies, have been created and shared by the Records Management Committee of the Association of School Business Officials of Alberta (ASBOA). The Committee, representing several school divisions, has a history of resource sharing starting with the creation of a model records retention schedule guideline. The Department of Education continues to engage Committee members for the benefit of all school divisions.

TRAINING AND CHANGE MANAGEMENT

Critical to the success of this project is the change management process. Many schools have other initiatives underway and the sudden closing of schools during the COVID-19 pandemic is unprecedented. It is important for staff to see the importance of this project to create a digital student record in the midst of all the other changes they are facing, and to understand the value of a digital record to support student learning. School staff have close relationships with students they see every day; the COVID-19 pandemic altered relationships and challenged teachers to connect with students remotely. Now it is necessary to make student records accessible to staff when they need them, from wherever they are, while ensuring personal information is protected.

CONCLUSION

Digital student records, accessible in an electronic records repository, support student learning when timely access to critical documents is made available to educators who support the student's learning. The electronic records repository contributes to information sharing among schools and educators and ensures that the investments being made in interventions for students are showing results. Digital student records reduce inefficiency and risks from boxing, shipping or mailing paper records. They allow for electronic records disposition when retention requirements have been met. They improve information sharing and provide staff access to information that supports student learning where they are learning, particularly when many are learning at home.

PASI was a decade in the making and creates the opportunity to share crucial information that supports the transitions that occur for students. It supports the transition of students coming into new school environments. It benefits students with Individualized Program Plans and assessments that need to be available in a timely manner. It also supports the student's transition into post-secondary education.

Alberta has created a digital student record repository, PASI, which demonstrates the value of digital student records for all Canadian jurisdictions. Alberta and the PASI implementation could be used as an invaluable case study for other provinces who may be struggling to manage paper student records, particularly during the COVID-19 pandemic.

Technology has transformed how we work and connect. The COVID-19 pandemic shut down the schools and emptied buildings. The future of sharing information is digital and the creation of this repository for Alberta school divisions is transforming information sharing. When information provided by specialized service providers (e.g. Psychologists, Occupational Therapists, Physical Therapists, etc.) is made accessible to educators who need it for student learning (e.g. Teachers, Administrators) better outcomes are likely.

Students are supported in their learning wherever they are receiving instruction when educators are able to access their student record.

ABOUT THE AUTHOR

Donna Molloy is the Principal Consultant for Dynamic Leadership, a company that has supported Alberta school divisions to successfully implement improved Information Governance through creation and implementation of records retention schedules, establishing records management programs, development of policy documents, tools and training.   Work to support student recordkeeping is an opportunity to find ways to improve the management of one of the most critical records generated by school divisions.   In an era of fires, floods, and a pandemic, this work is essential to protecting these vital records.

REFERENCES

Information about PASI :
https://extranet.education.alberta.ca/pasidevnet/Docs/Business/start.html

High school transcript information :
https://www.alberta.ca/student-information-high-school-transcripts.aspx

ASBOA toolkit :
https://asboalberta.ca/page/digitization-guidelines-and-toolkit