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Digital Storytelling: An Opportunity for Libraries to Engage and Lead Their Communities

La narration numérique : une opportunité pour les bibliothèques d'engager et de diriger leurs communautés

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Abstract: This article describes a case study investigation of the “Love Your City, Share Your Stories” digital storytelling initiative in Hamilton, Canada, led by the Hamilton Public Library, McMaster University Library, and the City of Hamilton. Results suggest that digital storytelling is a viable mechanism by which memory institutions, such as libraries, can engage and lead their communities. These initiatives also offer opportunities for collaboration among institutions. However, libraries must heed a variety of challenges and concerns that can potentially limit or constrain these benefits. Recommendations are provided for organizational actions that memory institutions can take to overcome such challenges.

Keywords: digital storytelling, libraries, memory institutions, case study, qualitative research, activity theory

Résumé : Cet article décrit une étude de cas portant sur le projet de narration numérique « *Love Your City, Share Your Stories* », initiative menée à Hamilton, au Canada, et dirigée par la bibliothèque publique de Hamilton, la bibliothèque de l'Université McMaster et la ville de Hamilton. Les résultats suggèrent que la narration numérique est un mécanisme viable par lequel les institutions mémorielles, telles que les bibliothèques, peuvent s'engager et y diriger leurs communautés. Ces initiatives offrent également des possibilités de collaboration entre les institutions. Cependant, les bibliothèques doivent tenir compte d'une variété de défis et de préoccupations susceptibles de limiter ces avantages et imposer certaines contraintes. Des

recommandations sont fournies en vue d'actions organisationnelles que les institutions mémorielles peuvent prendre pour surmonter ces défis.

Mots-clés : narration numérique, bibliothèques, institutions mémorielles, étude de cas, recherche qualitative, théorie de l'activité

Introduction

This article discusses the art of telling stories through digital media (Couldry 2008; Hartley and McWilliam 2009; Lambert 2013) as a new opportunity for libraries to exercise their capacity as community leaders, improve relationships with the public, and deliver enhanced services their communities expect. Specifically, the article describes a case study investigation of the “Love Your City, Share Your Stories” (LYCSYS) digital storytelling initiative in Hamilton, Canada, led by the Hamilton Public Library (HPL) in partnership with McMaster University Library (MUL) and the City of Hamilton’s Tourism and Culture Division (TCD). The initiative involves the capture and dissemination of digital stories from Hamiltonians concerning significant cultural icons, such as historical figures and events, in various digital formats (e.g., audio, video, text). To enrich and support these stories, a variety of library resources were used (e.g., photographs, archival material). The initiative is viewed as a significant community-based mechanism to promote Hamilton’s cultural and historical identity. A micro-site (www.hamiltonstories.ca) allows citizens to view stories about Hamilton cultural icons, upload their own digital stories, and provide comments on archival pictures pertaining to the cultural icons. At HPL’s Central Branch in downtown Hamilton, a large interactive wall display and iBeacon application provide the public with two additional means to experience these stories.

The LYCSYS project was initiated in 2013. Though work is still ongoing, the promotion of the LYCSYS micro-site and full public access to its stories occurred in September 2016 when a “big reveal” was made during Hamilton’s “City Cultural Days” celebration event. For the launch, stories were organized according to four cultural icons: Tim Hortons, Gore Park, music, and libraries. Since then, stories about newcomers’ experiences arriving in Hamilton have been collected. The purpose of this case study is to better understand the phenomenon of library-led digital storytelling initiatives from an internal stakeholder’s perspective and the opportunities they offer libraries to engage and lead their communities. The high-level research questions guiding this case study are as follows:

1. What are the benefits and challenges of library-led digital storytelling initiatives?
2. What factors maximize these benefits and minimize the challenges?

Such questions are important. A report by the Rockefeller Foundation (2014) entitled “Digital Storytelling for Social Impact” identifies “supply-side” issues in digital storytelling and, in response, calls for comprehensive strategic and tactical guidance on how to tell, store, share, and curate compelling and motivating stories on a consistent basis. The report describes how many social impact organizations,

such as libraries, lack the capacity to create stories that capture public attention and imagination. Few employ people with the knowledge and skill necessary to craft stories strategically and engage their stakeholders in conversations that lead to action. Many struggle to identify the right platforms to use to reach their target audiences. Few understand how to evaluate their success at storytelling. The report succinctly describes how social impact organizations often dive into storytelling without articulating clear goals, understanding the interests and motivations of target audiences, or setting measurable objectives. Help is needed to produce and share stories that contribute to an organization's goals and to use technological tools to create, render, store, and disseminate stories. Strategic guidelines are necessary to craft effective story content, use appropriate technological platforms, and devise an effective public engagement plan. Finally, senior managers must understand the importance of dedicating time, talent, and resources to designing and producing high-quality stories.

To respond to this call, the LYCSYS case study examines the benefits and challenges of one particular library-led digital storytelling initiative and the actions undertaken by the three involved organizations to succeed. The goal is to provide general recommendations for libraries wishing to embark on a digital storytelling initiative. Note that this article is from an internal stakeholder point of view. Interpretations and reflections from the public who have viewed the digital stories are outside the scope of study.

Background

Storytelling refers to the use of stories as a unique and innate form of human communication. Well-crafted stories can communicate abstract and complex ideas in ways that encourage understanding; effective stories inspire people by creating human connection and emotional resonance (Rockefeller Foundation 2014). Digital storytelling is a subset of storytelling in that it combines the art of telling stories with the use of digital media to create, collect, store, retrieve, find, share, and use stories captured in digital form (Couldry 2008; Hartley and McWilliam 2009; Lambert 2013). As with traditional storytelling, digital storytelling revolves around a chosen theme and contains a particular viewpoint. Digital stories tend to be short and have a variety of uses, including telling personal tales and recounting historical events (Robin 2006).

There are many different types of digital stories (Robin 2006). Of relevance to this article is the historical documentary perspective. Historical digital storytelling frames the practice of digital storytelling within the context of public history—usually that of a particular community, place, or group of community members. Historical digital storytelling is typically led by cultural institutions, such as museums and libraries, and is overwhelmingly the most popular focus of digital storytelling around the globe (McWilliam 2009). With respect to historical digital storytelling projects, a team-based approach to participatory content creation—where members of the public work with cultural organizations in the collection, creation, and distribution of digital stories—is considered both appropriate and necessary in order to render historical stories of relevance and value. Co-created

historical digital storytelling projects led by cultural organizations, such as libraries, offer many benefits. They provide the public with the means to articulate their own stories and opportunities for these stories to be valued (Mackay and Heck 2013; Thumim 2009a). In this sense, such projects empower the public with two-way communication with cultural institutions that have in the past represented their voices for them (Mackay and Heck 2013).

One of the challenges with participatory content creation led by memory institutions is for these organizations to produce and share historical digital stories that reflect a wide, yet accurate, range of diverse and authentic community experiences and not just those that represent top-down curatorial practice. However, it is well recognized that sponsoring organizations rarely play a neutral role in the digital storytelling process and, in fact, mediate (that is, influence and shape) the stories by not only being involved in the transmission of information (Dush 2012), but also in the formation and transformation of that information (Couldry 2008; Silverstone 2002).

In this sense, institutions that collect, shape, and transmit information have an effect on the production of meaning behind the information being shared (Thumim 2008). Here, mediation is more than the role of technology in transmitting self-representations; it is the effect that cultural memory institutions themselves (that is, their mandates, purpose, goals) have on the information being distributed on their behalf (Thumim 2009a). For example, public cultural institutions may assist in the production, collection, and curation of digital stories gathered from the general public, but full archives of these stories are not necessarily accessible or maintained; not all stories are put into full circulation or even included in the archive (Spurgeon and Burgess 2015). Further, institutional objectives and editorial policies of the cultural institutions involved often shape and limit the capacity of project participants to have an authentic voice. That is, cultural institutions impose their own broadcast values and themes that result in a more polished, coherent, and articulate account of storytellers' experiences in order to arrive at digital stories that appeal to a wider audience and meet the institution's own production goals. In this sense, cultural institutions inherently alter the authenticity of stories provided by project participants (Friedlander 2008; Mackay and Heck 2013; McWilliam 2008; Thumim 2008, 2009a, 2009b).

A report from the Council of Canadian Academies (2015) entitled "Leading in the Digital World: Opportunities for Canada's Memory Institutions" advocates ways in which memory institutions, such as libraries, archives, and museums, should take a leadership role in today's digital world. Here, memory institutions are viewed as collectors and preservers of cultural heritage, and digital technologies are described as offering many opportunities for the public to both access and contribute materials entrusted to memory institutions. Specifically, the report outlines important benefits to memory institutions with participatory digital initiatives among their communities, including exercising their leadership capacity, establishing sustainable and authentic relationships with the public, leveraging collaborative opportunities with other institutions, and delivering the enhanced services that users expect in today's digital era. The report

also identifies numerous challenges inherent with such digital initiatives, including defining basic technical requirements; dealing with large volumes of digital data; selecting and appraising digital heritage, including its user relevancy; determining reliability and authenticity; and understanding legal, accountability, and copyright issues. Last, the report outlines a variety of organizational actions that can impact the successful implementation and roll out of such digital initiatives, such as prioritizing digital opportunities; developing new business models and human resources; promoting a standardized and generic information and communication technology infrastructure; and managing collaborations, outsourcing, and copyrights.

Conceptual framework

For this case study, activity theory serves as the theoretical mechanism by which to investigate the implementation and roll out of digital stories led by libraries. Activity theory was chosen because it provides a language for understanding and making sense of complex real-world activities situated in cultural and historical contexts (Engestrom 1987, 2000; Hasan and Kazlauskas 2014; Leont'ev 1981; Vygotsky 1978). Rooted in 1920s Soviet psychology, activity theory has evolved as a theoretical tool for studying human activities situated in the social contexts in which a user acts (Nardi 1996). Recently, the fields of both information systems (Allen et al. 2013; Karanasios 2018; Karanasios and Allen 2013; Malaurent and Avison 2015; Simeonova 2017) and information studies (Allen, Karanasios, and Slavova 2011; Spasser 1999; Wilson 2008, 2013; Hasan, Smith, and Finnegan 2017) have seen a growing and keen interest in the application of activity theory because of the theory's ability to bring together both technology and context under the same unit of analysis—namely, an activity or activity system.

For this study, Engestrom's (1987) "third generation" model of activity theory is utilized. Engestrom's model is the most widely adopted by researchers today (Allen, Karanasios, and Slavova 2011; Chen et al. 2013). As figure 1 illustrates, an activity system is composed of a subject, object, tools, community, rules, and division of labour. A subject is a person or groups engaged in an activity system, while an object is the "objective" of the activity. The object gives the activity motivation and specific direction. Simply put, an activity system incorporates a subject who is motivated to achieve an object. The object itself is not necessarily a singular goal; objects can be poly-motivational (Kaptelinin 2005). Further, the same object can be shared by more than one activity (Allen et al. 2014). Both physical artefacts (e.g., technology) and cognitive signs (e.g., memory, language, skills) form the tools that a subject uses to achieve an object. A community consists of all of the people, groups, or organizations that have a stake in the work surrounding an activity, while rules are the norms, regulations, and conventions that mediate the subject–community relationship and guide the activity. Finally, the division of labour refers to the manner in which work is allocated among various actors in an activity.

It is important to distinguish between an activity's outcome (results) and its object (objectives) because activity systems may lead to unintended results.

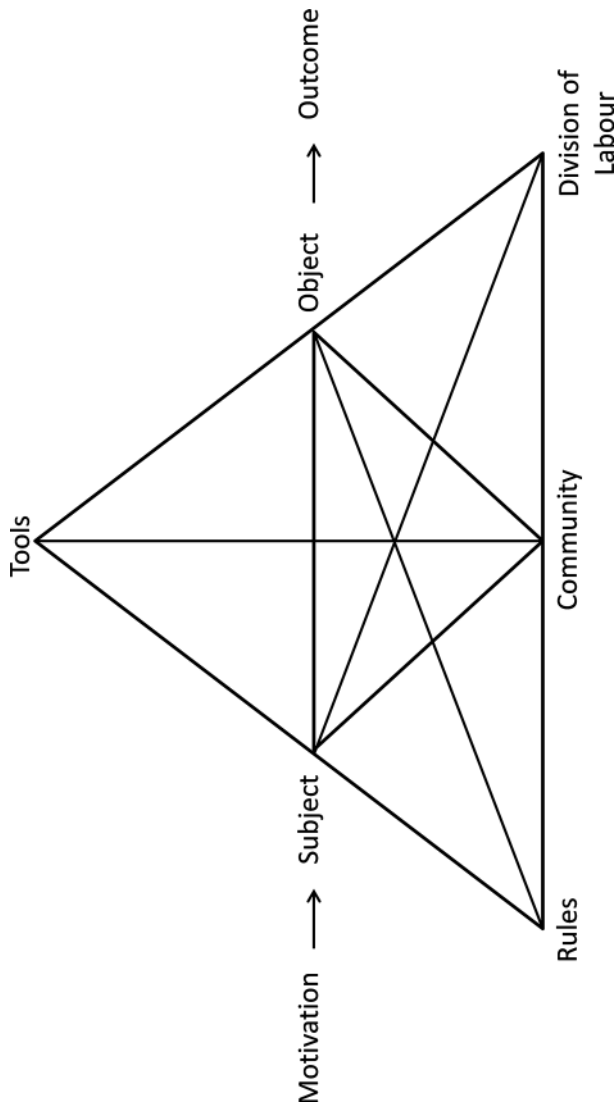


Figure 1 : An activity system adapted from Yrjö Engeström
Source: [Engeström 1999](#)

Further, even though there often is some stability over time, objects are not static and may be transformed in the course of an activity. Changes in objects are not trivial because they can change the fundamental nature of an activity (Nardi 1996). According to Leont'ev (1981), activities have hierarchical structures where a subject's motives determine the goals within an activity, and these goals result in actions (that is, an activity comprises actions). In this sense, an activity is composed of actions, and each action has a goal (Kaptelinin and Nardi 2006).

A fundamental concept in activity theory is the notion of contradictions within an activity. As contradictions arise, they expose the dynamics, inefficiencies, and, importantly, the opportunities for change within an activity (Engestrom 1999; Helle 2000). Contradictions exist at four levels: (1) within the elements of an activity (e.g., tools, rules, subjects); (2) between elements of an activity (e.g., between a subject and a tool); (3) between a central activity at one point in time and more advanced form of the activity at a later point in time; and (4) between co-existing or neighbouring activities (Engestrom 1999; Karanasios and Allen 2013). Contradictions are sources of change and development leading to the possibility of transformation and the re-conceptualization of the object and the motive.

Opposite to contradictions is the notion of congruencies (Allen et al. 2013; Karanasios and Allen 2014). Congruencies are forces within an activity that promote stability and reproduction of the activity in its current form. Drawing upon systems theory (Buckley 1967) and the work of Archer (1995), the notion of congruency is similar to the notion of morphostasis (i.e., internal forces for balance), while contradictions are similar to the notion of morphogenesis (i.e., internal forces for change). As Allen et al. (2013) suggest, congruencies are stabilizing forces within activity systems and, in a sense, counteract changes to activity systems brought about by contradictions. That is, contradictions challenge activities, while congruencies help stabilize them (Allen et al. 2013; Karanasios 2018; Karanasios and Allen 2014).

Activity theory has a rich tradition of being applied in many fields of study, ranging from education, to ethnography, to human computer interaction. Because it provides a holistic perspective for investigating an entire work/activity system, beyond that of one actor or user, activity theory was a particularly appropriate framework for the current case study analysis of the digital storytelling three-partner initiative.

Methodology

The LYCSYS digital storytelling initiative was examined using qualitative case study techniques. Data collection involved one-on-one interviews with governance stakeholders from the three participating organizations (HPL, MUL, and TCD). The study adopts a subjective, interpretive approach to the collection and analysis of data. In total, eight semi-structured interviews were conducted with key informants from the three participating organizations. Seven of the eight informants were involved in the management of the LYCSYS digital

storytelling initiative through their membership on the project's steering committee; all informants were involved in varying capacities during the project's implementation. The interviews ranged between thirty and sixty minutes and were held in private meeting rooms. Activity theory informed the design of the interview instrument. That is, questions were asked that probed participant perceptions of the digital storytelling initiative in terms of its underlying motivations, goals, outcomes, tools, rules, and divisions of labour as well as any contradictions and congruencies that occurred. In addition, interview questions polled participants on the purpose and history of the project as well as the impact the project had on the organization and their own personal roles. Seven of the eight interviews were digitally recorded and transcribed. Transcripts were reviewed by the participants to ensure accuracy of the data collected.

To facilitate data analysis, a qualitative textual analysis software package (Dedoose) was used. Data analysis involved the first three steps of grounded theory, as advocated by [Strauss and Corbin \(1990\)](#); [Corbin and Strauss 2015](#); [Myers 2013](#)): (1) open coding; (2) axial coding; and (3) selective coding. Open coding involved discovering categories in the data based on theoretical constructs from the study's conceptual framework (that is, activity theory) as well as thoughts elicited by participants and insights from the researchers themselves. Open-coding techniques included asking questions of the data (e.g., who, what, when, where, how much, and why?), using the flip-flop technique, exploring far-out comparisons, and making constant comparisons. The application of activity theory for open coding was pivotal in eliciting findings because it provided the framework for exploring the central activity of libraries leading a community digital storytelling initiative. Axial-coding techniques involved the use of [Strauss and Corbin's \(1990\)](#) coding paradigm tool to identify and explore relationships between categories generated during the open-coding process. Selective coding involved selecting a core category from the many categories generated during both the open- and axial-coding stages and systematically relating this core category to other categories produced. The goal was to create a central storyline around which other categories could relate.

In terms of the validity of research findings, a draft working paper was shared with a subset of digital storytelling steering committee members. Feedback was sought on the accuracy of the facts presented and the interpretations made on the collected data—that is, how “truthful” the facts and interpretations were ([Golafshani 2003](#)). This feedback was used to modify and/or correct inaccuracies or misinterpretations. In this sense, feedback on the draft working paper served as a form of “member check” to ensure the validity of research findings made, recommendations suggested, and conclusions drawn ([Creswell 2013](#); [Miles, Huberman, and Saldana 2014](#)). In addition, a presentation of the study's findings was made to those involved in the design, management, and implementation of the LYCSYS digital storytelling initiatives at various seminars. A final working paper was also produced and disseminated. Overwhelmingly, the attendees at these seminars and the readers of the final report acknowledged and validated the accuracy of the study's research findings.

Reliability in qualitative research can be achieved by showing the credibility and trustworthiness of both the researcher and the way in which data was collected and analysed. In this respect, the lead researcher responsible for this case study was well versed in qualitative research methods. He has successfully conducted several qualitative research studies over the last 20 years and has published numerous journal articles, books, and book chapters based on his qualitative investigative work. He was “theoretically sensitive” to the topic being investigated (i.e., he is knowledgeable of the literature in the areas of digital storytelling and information systems; he has over 10 years work experience in information system project development and implementation). His personal involvement in the LYCSYS digital storytelling initiative as a member of the steering committee over the last five years facilitated awareness and understanding of the project’s history, goals, challenges, and accomplishments, which was helpful in terms of evoking conversation during participant interviews (i.e., the lead researcher was present at all participant interview sessions), establishing trust with interviewees, and achieving insight on the categories and relationships between those categories found in the data during the data analysis process. Rigorous data analysis techniques were employed (e.g., open coding, axial coding, selective coding, coding for process).

Findings

Activity theory provides a structure to report findings. [Figure 2](#) summarizes the findings using [Engeström’s \(1999\)](#) activity theory model as an analytical lens. The central activity under investigation was the implementation of a library-led digital storytelling initiative. There were three subjects: MUL, HPL, and TCD. The object of the activity was the creation of digital stories for the Hamilton community. The community was broad and included local residents, citizen groups and associations, businesses, and visitors. Each subject had a different motivation for engaging in the digital storytelling activity system. TCD’s motivation was its support of the city’s cultural plan that identifies cultural vibrancy as a pillar of sustainable development, equal to economic prosperity, social inclusion, and environmental balance.

There were many reasons why HPL was motivated to launch a digital storytelling initiative. The original impetus was a desire to help advance TCD’s cultural plan by celebrating iconic landmarks, getting the community to share their stories, and promoting the city as a place to be, especially for those who live in the city. However, the digital storytelling project was also consistent with HPL’s strategic priority of being a community beacon for the city. HPL is a leader in the community. The project elevates the profile of the library with the community, which includes residents, students, workers, and so on. The project also fosters community engagement. In this sense, the city’s cultural plan was a catalyst for HPL to create compelling digital stories about the city. The city’s cultural plan was also a catalyst for HPL to increase the momentum to digitize its Local History and Archives collection. That is, the project was a motivator to start the research work about what repository technology to adopt, which

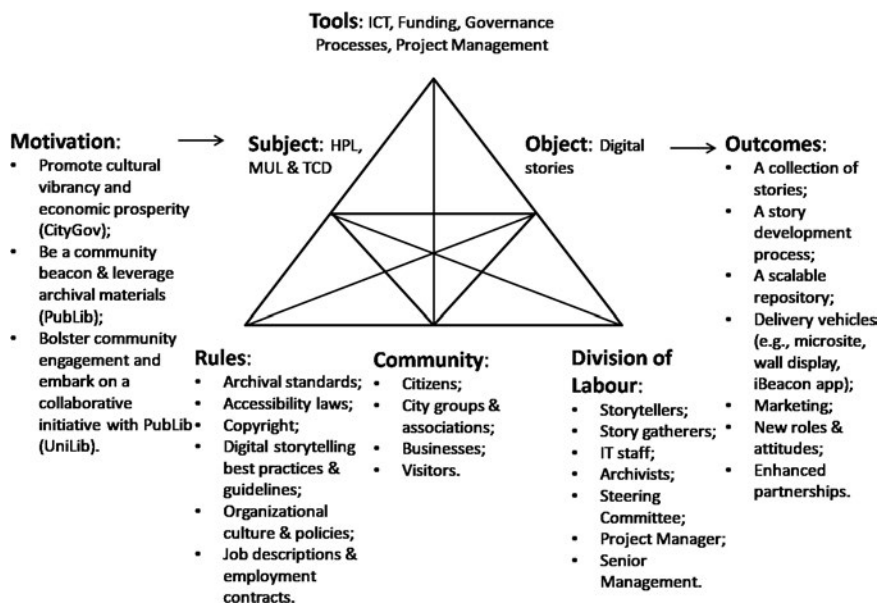


Figure 2: The activity of digital storytelling as per this article's case study

Source: [Detlor 2017](#)

involved discussions with other libraries (including MUL) and museums around the world. MUL was motivated by the increased opportunity for community engagement advocated by the university's strategic plan. Participants from all three organizations indicated that the digital storytelling project aligned well with specific plans to promote collaborative partnerships and carry out joint initiatives. Different motivations among the three partner organizations were considered strengths.

The goals of the activity were numerous. Some participants indicated that one of the goals was the need for HPL to capture important events that currently are being bypassed. Some participants discussed the need for HPL to gain expertise in digital storytelling. Other participants talked about the need for HPL to support research on the city and its citizenry. Several participants talked about the need to capture city-based stories for now and for the future. One participant talked about the goal of increasing knowledge sharing between partner city cultural organizations. Many participants talked about the goal of using storytelling to foster emotional attachment to the city, leading to greater community pride, engagement, and involvement in the community and a greater sense of place. Another goal was to provide a mechanism through which partner organizations on the digital storytelling initiative could demonstrate their strengths and value as an organization to others. A few participants thought the digital storytelling initiative was an opportunity to rebrand HPL. In this sense, participants thought the initiative would help portray the public library as doing more than

lending books. Specifically, through this digital storytelling project, participants thought this project would position HPL as a facilitator of community building, an appreciator of history, and an advocate of community engagement.

A variety of specific actions were identified by the participants. These included, but were not limited to, the following:

- communication actions (e.g., identification and set up of communication channels, as well as marketing approaches, to let the community know about the digital storytelling initiative)
- story actions (e.g., identification of cultural icons/stories to collect, creation of methods to collect stories, determination of story parameters), including the identification and evaluation of cultural icon suggestions; story-gathering approaches (recruitment of people to tell their stories such as library host events, senior citizen writing events, interviews, story creation workshops, public submission of stories such as Speaker Corner events); the development of story collection instruments (e.g., interview templates, format of workshops, story submission templates); the identification of story parameters (e.g., length of story, minimum number of photos required); the identification and collection of story metadata elements; the creation of curated stories
- infrastructure actions (e.g., design and implementation of a story database to house the storage of stories, microsite actions, large well-displayed actions, iBeacon actions)
- governance actions (including the coordination of activities among project partners and the need for some sort of governance structure).

A variety of tools mediated the activity. Of particular importance was the use of information and communication technology to gather, store, and render digital stories (e.g., the micro-site, the large wall display, the iBeacon app) as well as to promote the digital storytelling initiative (e.g., Twitter, Facebook). Funding awarded through a city grant allowed the hiring of story gatherers to collect stories from the public that pertained to specific cultural icons. This funding also facilitated the purchase and implementation of information technology to implement and render the digital stories. In terms of project governance, a steering committee comprising representatives from each of the three participating organizations met once a month to discuss the project. Specific individuals on the steering committee were assigned particular action items, and progress on these action items was discussed at these monthly meetings. Project management tools, such as time lines and a charter, helped to keep the digital storytelling initiative on track and were useful for communicating accomplishments and next steps.

Several rules mediated the activity. One rule was that the four cultural icons selected for the launch phase should be the immediate focus for story collection but that other cultural icons and stories that did not align with these four cultural icons should not be excluded. The selection of icons and stories also should engage the input of community members. Care was taken to ensure that input from the community was representative, inclusive, and diverse. Another important rule was

that the collection of stories respected copyright concerns (i.e., people contributing stories had to provide copyright permission to publish their stories). In addition, rendered stories had to comply with provincial accessibility legislation; this legislation imposes laws on organizations to improve accessibility for people with disabilities. Further, stories housed in HPL's archival database were required to comply with general archival principles and practices (Millar 2010) and were to follow best practices in digital storytelling as much as possible (Dietz and Silverman 2014; Forman 2013; Matthews and Wacker 2007). Other rules included following organizational policies and employment contracts. The technology used to house collected stories needed to comply with the standards advocated by provincial, national, and international archival bodies. Information stored in the city's archives needed to flow easily and compatibly with other institutions that follow these provincial, national, and international standards. In addition, the technology had to handle the ingestion (i.e., import) of text, images, and video.

With regard to the division of labour, HPL was the lead organization on the project. HPL provided the necessary equipment to collect, house, and render the digital stories as well as the staff and resources to manage this equipment and the stories themselves. HPL also provided meeting space, recording space, and interview space in support of the digital storytelling initiative. Post-project, HPL was committed to supporting the micro-site and facilitating the ongoing collection of stories that celebrated the city and its heritage in collaboration with project partners. MUL provided staff and archival material pertaining to the four cultural icons. TCD provided resources for the identification of cultural icons and the promotion of the digital stories that were produced.

Outcomes from the initiative included several components:

- a collection of stories that celebrate important city cultural icons and their history
- a story development process that includes identification and selection of the cultural icons around which the stories are centred, recruitment strategies to encourage people to tell their stories, tools, and approaches for collecting stories, story parameters (i.e., story requirements), story curation approaches (i.e., methods of developing stories), and story dissemination guidelines (i.e., recommendations for how stories should be told or displayed)
- delivery vehicles to showcase the stories, including a dedicated website, a large interactive wall display, iBeacon apps, and a scalable digital repository to house the stories
- marketing approaches to promote the stories (i.e., approaches to inform the general public about the stories and how to access them)
- enhanced partnerships between HPL, MUL, and TCD were another outcome of the digital storytelling initiative.

Additional components included new roles—for example, the project encouraged HPL's Local History and Archives Department to think about new processes that would facilitate the ingestion of digital stories into the library's archives as well as how the department could better interact with the public. One

participant talked about how, once the micro-site was launched and processes were firmly in place for the collection, curation, and sharing of stories, the roles of the partner organizations would change from development and implementation to communication, promotion, financial support, and “connecting with other organizations to bring them into the story-making machine.” Overall, there was a general awareness that one of the digital storytelling outcomes was having the three involved organizations become more “outward facing.” New attitudes were also integral. Attitudes, both inside and outside of HPL were altered. Participants reported that there was an improved appreciation of HPL by outside parties. For example, participants discussed how the general public was excited and pleased about the digital storytelling initiative led by HPL and were impressed by HPL’s ability to roll out and implement such an initiative. Participants also reported an increased sense of pride among HPL employees because of HPL’s leadership in the digital storytelling initiative.

As with any large-scale information systems project implementation, especially those involving multiple partners and stakeholders, contradictions occurred. Such contradictions are important as they play a central role in the change and development of the activity over the lifetime of the activity itself. Five contradictions were exhibited in the digital storytelling initiative investigated: (1) choice of cultural icons and stories; (2) adherence to archival standards; (3) look and feel of developed outcomes; (4) technical obstacles; and (5) project management concerns.

Choice of cultural icons and stories

Several participants advocated the need to find a balance between the selection of cultural icons and stories that satisfied local community interest and TCD’s desire to promote the city in a positive light. The governance mechanism to achieve this balance was unclear. Some participants advocated for the need for corporate approval of cultural icons and stories. Others wanted a more grassroots approach where the community would ultimately decide the final selection of cultural icons and stories based on popularity. Yet others expressed a desire to adopt a middle ground. For instance, one participant suggested a governing committee should collect input from both corporate and community stakeholders and then use that input to decide on the best cultural icons and stories to promote. Another participant thought a good compromise would be to have a committee that came up with a few cultural icon and story suggestions and then have the community vote on which ones to select, perhaps via social media or some other form of online contest/input. That participant also suggested that such a process need not be done once, but could be revisited every year or so, as needed.

Adherence to archival standards

Another important contradiction that emerged concerned differing viewpoints regarding adherence to archival standards. For example, archivists were concerned with capturing the totality of the story, such as the details of the

photographic and auditory equipment used to record the story, but story gatherers in the field felt little need or concern for such minute detail. Those favouring close adherence to archival standards often used the phrase “metadata is a love letter to the future” as a means of summarizing their feelings and beliefs about collecting proper and complete metadata information on the digital stories collected. This is a passionate stance concerning the need to collect full and complete metadata information. It speaks to this group’s strong belief to uphold archival standards and a desire to ingest archival materials properly and according to rigorous professional standards. This group strongly believed that collecting full metadata information would best position the usefulness and value of the digital stories in the future. One participant in this group expressed frustration with one of the story gatherers, who was in the field collecting stories from the public, but who was tardy in filling out the requisite archival forms needed by the Local History and Archives Department. According to this participant, certain metadata information was needed and the person in the field was not compliant in collecting or supplying this information in a timely fashion. This stance was in contrast to others who felt the collection of a complete metadata set as per archival standards was more than what was required. One participant described the strict adherence to archival standards as “the biggest stumbling block.” This group felt that the archival standards advocated by those responsible for storing collected stories in the story repository were too stringent and served as a barrier that would limit or prevent any story from being ingested in the first place. Others recognized both viewpoints as valid and advocated for a middle ground. One participant was not sure if the digital storytelling initiative was collecting the right metadata information and expressed the need for better communication and dialogue between the person collecting stories in the field and the persons responsible for archiving this information in the archival database.

Look and feel of developed outcomes

Contradictions concerned the look and feel of technical platforms used to render stories. For example, some participants voiced dissatisfaction with the layout and design of the micro-site. Some participants did not like the layout of the micro-site in that it required users to scroll down to the bottom of the page to see the four cultural icons displayed. The first micro-site rendering did not include a “share your story” link; this was added later after feedback was given that part of the mandate of the digital storytelling initiative was to “share your story.” There was some opposition to the use of a pastel colour scheme. However, this colour scheme was already established by the creators of the digital storytelling initiative and was not really an option to change by those at HPL responsible for creating the micro-site. Some participants felt the micro-site’s design was too oriented toward promoting HPL’s Local History and Archive’s collection as opposed to promoting the city as a place to be. There was some opposition internally at HPL in posting videos on the micro-site; some felt the library did not have the requisite expertise and should not be going down this road. There was some

internal opposition at HPL toward the use of the iBeacon app. Some felt this was not a viable technology. However, the iBeacons had strong support from key members on the steering committee.

Technical obstacles

Contradictions were exhibited with the learning curve with the technology used to render digital stories. For instance, contradictions were experienced with the implementation of the iBeacon application. The technology was described by some as temperamental. In general, it was difficult to get it to work. For example, if the iBeacons were situated too close together, then the app that was developed to work with the iBeacons would get confused and not work correctly. The iBeacons were selected primarily because they brought a certain “cool” factor to the project. However, some participants pondered that if it were known ahead of time that the technology would be plagued with so many technical problems, and at a relatively large expense in terms of licensing, they may not have gone ahead with this technology. Some technical concerns came up in regard to how technology could be used to have the general public contribute stories via the micro-site if they wanted to contribute a story. Though it would be great to have citizens upload their own digital stories with video and images, the initial approach was to only provide submission of text; the submission of pictures, videos, and so on from the public would come at a later date.

Project management concerns

A variety of project management concerns were associated with the digital storytelling initiative. These concerns were a result of the fact that (1) work on the project was secondary; (2) there was a lack of staff and resources dedicated to the project; (3) improvements in internal communication were needed; (4) new work roles and activities constituted the initiative; and (5) future governance was uncertain. Specifically, work on the project was not a major role or sole responsibility of any of the employees allocated to the project. Consequently, contradictions arose because of the struggle between each person’s primary job responsibilities and the work that had to be done for the digital storytelling project. For example, the project manager dedicated to the project was holding down two positions during the rollout and implementation of the digital storytelling initiative. Several participants acknowledged that not having a single person whose sole responsibility was to be in charge of the digital storytelling initiative was a detriment to the project.

All staff workers assigned to the project had other work obligations and responsibilities, many of which were of higher operational priority. Consequently, work on the project slipped. This in turn affected the goals of the project. When the deadline of the project neared, more emphasis was put on the underlying infrastructure so that, after the deadline of the project occurred, work could concentrate on collecting stories rather than on setting up the technology. Lack of sufficient resources contributed to project slippage. To some, taking on the digital storytelling initiative was stressful in that the project caused additional work

without a corresponding increase in resources. Certain responsibilities were added on to already overloaded workers. For example, some Local Archives and History staff at HPL felt the project required a significant additional workload for them without any increase in human staff resources. One participant said that the digital storytelling project was being implemented when HPL was undergoing a significant amount of organizational change/upheaval: one director had retired; another director was seconded to another project; and an interim director was pulled in. It would have been better to have permanent staffing throughout the project lifecycle.

Lack of communication among project stakeholders was noted by a few participants as a source of contradiction. One participant expressed confusion about what constituted a story, what type of stories were being collected, and how all of it should have been better defined and communicated upfront, before even worrying about technology requirements. When asked about what advice one would give to another city that wished to start its own digital storytelling initiative, one participant stated: “Make sure all the key resources are involved early so they have an ability to feel engaged in what the vision of the project is.” He or she further elaborated on this point by describing how, even though some departments had important roles on the project, internal road bumps could have been prevented or minimized had these departments been consulted earlier. In regard to the impact of the project on work roles and activities at HPL, the project forced HPL’s Local History and Archives Department to re-examine their intake procedures so that the procedures would fit with the new requirement of ingesting digital stories.

In terms of future project governance, contradictions were identified in terms of how digital storytelling activity would be carried out once the project was officially over. The digital storytelling initiative was a project. Projects, by definition, are one-time events. Decisions have to be made how to operationalize digital storytelling into the daily work activities and routines of HPL. However, it was unclear how this future work would be structured and who should take ownership. One participant raised the need to conduct regular performance measurement on the uptake of digital stories as a means to ensure the digital storytelling initiative was sustainable into the future. A performance measurement would necessitate collecting performance metrics on the impact of the stories on a regular basis (such as the number of Facebook shares or Instagram photo shares each story generated) and then reacting to those metrics accordingly, especially by responding to any trends and patterns in the performance measurement data. The participant stated that performance measurement would help demonstrate sustainability and would be of high importance to “any city councillor, or any city executive, who is looking at a social ROI [return on investment] for libraries, or for very specifically, for social storytelling.” It was not clear if future story-gathering phases would necessarily use cultural icons.

As described earlier in this article, congruencies are forces that promote stability and the carrying out of activities. Data analysis identified six congruent forces that facilitated the digital storytelling initiative moving forward and

reaching its original goals: (1) cooperative partnerships; (2) sufficient funding; (3) senior management commitment/leadership; (4) good project governance; (5) strong community support; and (6) flexibility.

Cooperative partnerships

Strong cooperative partnerships between the three organizations involved in the digital storytelling initiative helped move the project forward. For example, TCD, the originators of the idea to leverage storytelling as a cultural asset as a means to promote the city as a place to be, benefited from HPL agreeing to take the lead role in implementing digital storytelling in the city. HPL benefited from MUL's previous experience with archival database software and from the lead researcher's background in project management, which helped facilitate the development of a project charter early on in the project. MUL benefited from having an opportunity to get involved in a project with the outside community. Researchers at MUL's university benefited from having access to a digital storytelling initiative and city cultural organizations that were open to research (i.e., HPL, MUL, and TCD provided opportunities for university faculty and students to conduct research). There was consensus among the participants that by having the three city cultural organizations work together more was accomplished than if they had worked alone.

Several participants said that the university research component of the digital storytelling initiative added value to the project, raised the project to a new level, and brought legitimacy and credibility to the project. Many thought getting students involved in the project was an added value. Importantly, trust between partners was seen as a key necessitating condition for cooperative partnerships to happen. Another necessitating condition for partnerships to happen was a spirit and desire among the city cultural organizations to build collaborative partnerships and work together to foster community and build community engagement. What was interesting about the three city cultural organizations partnering together on the digital storytelling initiative was that it self-evolved. In a way, the "stars aligned" by having people in each of the three partner organizations who were interested in digital storytelling find and connect with each other. Finding these connections takes work and constant effort. One example of this is the research symposium held at MUL that brought together representatives from HPL and MUL. Another example is people interested in storytelling making efforts to go out and talk with other potential partner organizations.

Sufficient funding

The provision of funds from the city (\$150,000) and a federal research agency (\$200,000) facilitated project activities and research opportunities. The funding was pivotal in promoting stability and carrying out all of the actions comprising the digital storytelling initiative. The grants not only provided needed funds to ensure work on the initiative was carried out, but the grants themselves imposed an incentive to get work done by their reporting deadlines.

Senior management commitment/leadership

When asked what needs should be in place to help secure a successful digital storytelling initiative, several participants pointed out the need for top-level, senior management support to provide the resources, help convince others to come on board, and make things happen. There was a general consensus that a champion or leader was required to kick-start the project and keep it going. In this case study, HPL was the lead organization that stepped forward and committed resources to make things happen. Leadership involves a degree of bravery to do something new, to embrace a new role, or to do a new task. Senior management could easily have said “no” to the digital storytelling idea.

Good project governance

Many participants felt that good project governance was an important piece that led to the success of the digital storytelling initiative. That is, many participants felt the steering committee played a pivotal role in keeping the project on track and moving forward. The steering committee met monthly and grappled with many of the contradictions described above. In response, the steering committee would devise solutions (i.e., ways of moving forward) to keep the digital storytelling initiative on track. The steering committee served as a good sounding board as the project deadline neared. The steering committee discussed and agreed with changes to the project schedule and the restructuring of the project’s goals to concentrate on the delivery of the technological infrastructure, as opposed to the delivery of digital stories. The steering committee was supportive of getting the technical infrastructure in place as a priority, with the understanding that the development of more digital stories would occur once the technical foundation was firmly set in place.

Strong community support

Participants commented on how community interest and support was strong for this initiative. This was a key factor in keeping project team members motivated and rallying work on the project to happen, especially when contradictions ran high. One participant commented that community support should be a necessitating condition before any memory institution decides to proceed with a digital storytelling community project.

Flexibility

Tolerance and acceptance of how the digital storytelling initiative morphed over time was a strong necessity in helping to keep work on the initiative going. Flexibility was given in many aspects of the project, including, for example, the selection of which cultural icons to pursue; the reduction of the number of cultural icons from 25 to four; the decision to concentrate on getting the technical infrastructure in place as opposed to generating numerous stories; the method by which story gatherers could collect stories from the public; the variations in renderings of the digital stories collected; and the composition of the steering committee membership over the duration of the project.

Discussion

The findings presented above provide insight on a specific digital storytelling initiative led by the public library in Hamilton, Canada. Though it would be inappropriate to make broad generalizations of these findings to other digital storytelling initiatives led by libraries around the world, there is value in discussing major insights or discoveries from the findings that are likely to be of general relevance and interest to digital storytelling initiatives led by libraries. Overall, the findings indicate that digital storytelling offers many benefits to libraries but that these benefits are constrained by certain challenges. In order to maximize benefits and minimize challenges, a variety of organizational actions need to be in place. In terms of benefits, the case study highlighted the positive outcomes of increased pride in, and appreciation for, the library leading the digital storytelling initiative, both by the general public and the internal staff workers. The case study also illustrated how the digital storytelling project led to enhanced partnerships among the three memory institutions involved.

With respect to challenges, the analysis of the study's data revealed five challenges in the LYCSYS initiative: (1) the choice of cultural icons and stories; (2) the adherence to archival standards; (3) the look and feel of developed outcomes; (4) technical obstacles; and (5) project management concerns. Concerns around the choice of cultural icons and stories was interesting and is perhaps a generic issue that almost all digital storytelling initiatives carried out by libraries will have to manage. What stories should be told? From whose perspective should these stories be told? Should negative or less savoury stories be included? Should authenticity of the stories be a consideration? Should all stories from the public be accepted? These questions should be answered early on before any attempts are made to collect a single story. Further, there are likely no "correct" answers to these questions. Libraries will have to define for themselves answers that best suit their own specific situations and contexts. Answers for one digital storytelling initiative may be completely different than answers for others in different cities or regions.

Having said this, the LYCSYS case study does indicate that libraries should limit the number of stories (cultural icons) at the outset to make the project more manageable. Further, conscious oversight is needed at the project's inception to determine the themes, perspectives, and types of stories to collect. There should be good debate and discussion on this subject, with ample input and feedback from the public and partner organizations. At some point, however, discussion on this issue should stop as consensus will likely never be reached and the project must move forward. The strategy that motivates the digital storytelling initiative should align with the decision of what stories to collect. Further, the digital storytelling initiative should concentrate on the collection of compelling stories with emotional impact, regardless of whether they are positive or negative. While ensuring authenticity is an important goal, it is unlikely that all stories can be verified, especially those submitted by the public. Finally, stories collected from the general public should be accepted within the normal limitations of free speech (e.g., no hate speech) and rules of politeness (e.g., no

profanity). Cultural institutions that incorporate wide participatory content creation from the general public in their digital storytelling formats are known to achieve a more sustainable and widespread interaction with their target communities (Watkins and Russo 2009).

The challenges around the adherence to archival standards in the LYCSYS example points to a concern that most digital storytelling initiatives led by libraries likely will need to consider. That is, to what extent should metadata be collected on the digital stories collected? The LYCSYS case study calls for a balance in the collection of story metadata information, recognizing the need to collect a core set of metadata elements that adhere to archival best practice but which are not so onerous that they deter or prevent stories from being collected. A report by Allard et al. (2016) from the Council on Library and Information Resources (CLIR) sheds light on this issue. The report speaks to new US government requirements for exposing and managing federally funded research data so that this data can be used, re-used, and exploited by future generations. Importantly, the report identifies significant implications these new requirements have for cultural heritage institutions. The report describes how US government metadata requirements for the management of research data by cultural organizations are an unrealistic barrier and how metadata “satisficing” is essential. Satisficing is a term introduced by Herbert Simon (1956) to characterize a decision-making process that involves settling on an option that is “good enough” to meet a certain threshold of acceptability rather than attempting to find a single optimal solution to a problem. It applies particularly well to decisions about metadata because, although it is impossible to predict precisely which metadata elements will be most valuable in the future, one can make educated guesses about the types of metadata that are likely to be valuable (Allard et al. 2016). Further, the CLIR report describes how no institution or project has unlimited resources and flexibility as well as how trade-offs will be necessary. For example, digital curation professionals can identify a relatively limited core set of metadata elements that can then be extended in particular cases to accommodate additional data.

Challenges in the LYCSYS example concerning the look and feel of developed outcomes are likely another common contradiction that digital storytelling activities led by libraries will experience. What the LYCSYS project illustrates, however, is the need for clear guidelines upfront to prevent, or at least to minimize, these tensions from occurring in the first place. Providing story gatherers and story curators with clear guidelines on how stories should be rendered will achieve more consistent results that meet certain professional standards, promote the development of stories that are as emotionally compelling and intriguing as possible, and better ensure that developed stories support the underlying strategy that first motivated the digital storytelling project. These guidelines should provide expectations on acceptable boundaries regarding the length of the story, the number of images, the degree of emotional impact, the amount of text to display, the use of background music, and so on.

Technical obstacles should be expected, especially for initiatives like the LYCSYS example where a wide variety of new technologies were employed (e.g., the new digital repository database; iBeacons; the large interactive wall display). The use of newer information technologies certainly added value and not only helped brand the project as one that was forward thinking and cutting-edge but also significantly steepened the learning curve. Digital storytelling projects may want to consider minimizing the number of new technologies to mitigate technical obstacles and reduce the time and energy needed for new learning.

Project management is another area that all digital storytelling initiatives led by libraries likely will see as a concern. As the LYCSYS example illustrates, a project with insufficient guidance may lead to problems that affect the rollout and implementation of the digital stories. Project management is an especially important consideration as digital storytelling is most likely a new activity for libraries and will inherently involve a significant degree of change. For example, there is likely to be a change in roles for some library workers and a change in work processes. Budgets will need to be modified to ensure digital storytelling work is funded and sustained. This may necessitate an increase in staff and resources to certain departments or units. To manage this change, libraries should look to best practices from the change management literature. These include communicating the reasons for change to organizational workers early on in the project, having stakeholders buy in before work commences, establishing clear roles (i.e., agreement on who does what) and expectations before work begins, and keeping stakeholders up to date as work proceeds.

The analysis also revealed five factors that maximize the benefits and minimize the challenges of a library-led digital storytelling initiative: (1) a core set of actions comprising communication actions, story actions, infrastructure actions, and governance actions; (2) sufficient funding; (3) senior management commitment/leadership; (4) good project governance; and (5) flexibility. These factors collectively smoothed over any challenges that occurred in the LYCSYS initiative (i.e., provided stability) and encouraged the project to proceed and meet its original goals. As the LYCSYS case study shows: cooperative partnerships allow memory institutions to work together to overcome obstacles that may arise; senior management commitment and leadership help champion the project and provide the resources needed to get work done; good project governance, such as the establishment and active involvement of a steering committee, provides a digital storytelling initiative with oversight and direction; and flexibility provides a digital storytelling initiative with enough elasticity and sufficient tolerance to keep things moving forward.

Based on the results of this study, several recommendations for digital storytelling initiatives led by libraries are suggested:

- With respect to the collection of stories and cultural icons, libraries are advised to limit numbers at the project outset and seek out compelling stories rather than only those that are positive. It also is important to decide upon not only the theme of the stories (i.e., what cultural icons to use) but also the perspective and

flavour of the stories themselves. Importantly, these decisions should align with the project's original motivation.

- Specific guidelines for the look and feel of developed outcomes should be established. Those who are gathering stories should understand story parameters such as length, tone, perspective, emotional engagement, and alignment with the project's overarching strategy. In addition, storytelling institutions, such as libraries, should develop a reduced set of metadata requirements that balance archival standards with operational and practical concerns.
- With regard to technology recommendations, libraries should consider minimizing the number of new information technology components to manage learning curves.
- Where project management is concerned, the LYCSYS case study results indicate the importance of following best practices from the change management literature (e.g., communicating the need for digital storytelling with key stakeholders at the start, getting stakeholders to buy in at the start; establishing clear roles and expectations with stakeholders at the start; keeping stakeholders up to date as work proceeds). Project management will be facilitated by ensuring that adequate budgets, staff, and resources are in place and by establishing a governance structure that will provide oversight and direction so that deliverables are on time, within scope, and within budget.
- Scheduling of communication, story, infrastructure, and governance actions should occur while allowing for flexibility in terms of how these actions are actually carried out.
- Senior management commitment and leadership must be in place.

Concluding remarks

This article discusses how digital storytelling can provide libraries with an opportunity to engage and lead their communities. In order to better understand digital storytelling initiatives led by libraries, a case study investigation of Hamilton's LYCSYS digital storytelling initiative was carried out. Results point to the strong benefits such initiatives provide libraries and the need for certain factors to be in place to maximize benefits and minimize inherent challenges likely to impact any digital storytelling project led by a library. In this respect, the article provides empirical evidence of the "supply-side" issues in digital storytelling endeavours led by social impact organizations identified by the report of the [Rockefeller Foundation \(2014\)](#), including the institution's capacity to create compelling stories, engage their stakeholders, and identify appropriate platforms for delivery. More importantly, the LYCSYS case study has led to a comprehensive set of strategic and tactical recommendations to help libraries overcome such "supply-side" issues and achieve success with digital storytelling projects that engage their communities.

Limitations of the study include the collection and analysis of data at a single case study site and the incorporation of views solely from an internal governance perspective. In response, future research should investigate other library-

led digital storytelling initiatives not only in Canada but also internationally. In addition, studies that include input from citizens who view rendered digital stories collected and curated by libraries would further ascertain the value of such library-led digital initiatives.

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