Extending the Heritage Language Classroom: Effects of Digital Asynchronous

Interactions in Alberta Community Schools

By

Valeria Palladino

Submitted to the Faculty of Extension

University of Alberta

in partial fulfillment of the requirements for the degree of

Master of Arts in Communications and Technology

August 15, 2013

Acknowledgments

I wish to acknowledge my family for their patience and support during the completion of my graduate studies. I also would like to acknowledge my supervisor, Dr. Martin Guardado, for his guidance, contributions and support to complete this project.

This project is also the fruit of a close collaboration with the International and Heritage Languages Association, IHLA and the friendship of its member schools and heritage language teachers that I will forever cherish and respect.

Abstract

This paper explores the experiences and impact of the use of asynchronous text-based digital tools on participants from two heritage language (HL) schools in Edmonton, Alberta, whose teachers attended a series of technology-based professional development sessions about integrating digital tools in their HL classrooms. An increasing amount of research supports the idea that using even some form of online learning can enhance any learning experience. Access to tools like wikis and blogs is relatively easy, free and intuitive, even for beginner level users.

These characteristics of the tools (mediums) make them appealing to HL teachers and schools, whose access to resources is usually limited. However, very little research has been carried out to investigate how the use of these tools affects HL community learning. Participants in this study shared their enthusiasm for using wikis and blogs in their HL classes. Teachers seemed to intuitively use these tools according to their basic affordances, while students seemed very excited about using "computers" to learn their HL. However, fundamental characteristics of the tools, like establishing connections with native speakers of the HL to engage in real life communications, locally and remotely, were not part of the current uses that the participants made of the specific digital tools discussed in the research.

List of Tables

Table of Contents

Chapter 1: Introduction

Digital technologies are now part of everyone's experience, including teachers and students in HL community schools. Digital media in educational settings, considered as a negotiation of meaning that uses the Internet as its primary medium and fosters collaborative environments (Daga & Gecer, 2009), offers a number of potentials for HL teachers and students that have yet to be fully explored and understood. Specifically, the notion of utilizing each tool to its best use, based on the tool's affordances and inherent communication characteristics (Daft & Lengel, 1984) and connecting the impact that using these tools may have on HL students' investment in their learning (Norton, 1995) has not been specifically examined.

Between 2008 and 2012 the International and Heritage Languages Association (IHLA) offered technology integration sessions to its member school teachers. This study set to explore how these teachers implemented asynchronous media technologies in their lessons and what impact these activities may have had on their HL students. The project included interviews with two teachers and two of their respective students in junior high and high school level HL programs and analyzed their responses based on the framework of Media Richness Theory (MRT) (Daft & Lengel, 1984) and the construct of *investment* for HL students (Norton, 1995).

Purpose of the study

      This study aims at exploring the impact that digital technologies may have on current deliveries of HL programs in HL community schools. Digital technologies, or digital media, can be considered a reality in the lives of students and teachers of HL schools in 21st century school communities. And while access to school computers may not be a given in all HL community school programs, it is safe to assume that HL teachers access online tools from home or public libraries, while students may own an internet-connected device, whether a mobile handheld tool or a laptop or computer. Even students who do not own a personal computer are likely to have access to one at their regular schools and they can access the Internet through portable digital devices such as smart phones or iPads.

      However, personal access to devices and even frequent uses of digital media in HL classes cannot be directly connected to intentional uses of digital tools to improve language learning (Bordonaro, 2003). The need of being aware of what tools are being used for learning and how they can be better integrated in the planning and practice of language classes seems to be emerging in the last decade or so (Newberry, 2001). Brill and Park (2008) invite us to keep sound pedagogical steps at the forefront of any planning in language learning practices that include uses of online media. Several studies indicate how teachers, who venture in the use of new technology-based tools and environments, often feel a sense of loss of the "known," while they benefit from engaging in reflective practice, sharing learning challenges with more experienced colleagues, and by understanding how different tools affect communication and pedagogy in their lesson

planning (Diekelmann, Schuster & Nosek, 1998; Ertme & Ottenreit-Leftwich, 2010; Shin & Lee, 2009).

Statement of the Problem

Some of the promises and potential benefits of using digital support for language learning range from extended access to resources and practice in asynchronous settings, to promoting self-directed learning; from mediation of collaboration to supporting users' control of the resources and interactions they afford (Centre for Technology in Learning, 2009). These potentials may directly appeal to HL teachers who usually have limited access to scheduled times with computers and other available digital resources for their classes, often offered during weekends. For example, using asynchronous online spaces with a variety of digital media assets can assist HL learners through completing activities in the classroom supported by a projector and a laptop. The same online tools can support homework assignments and online collaboration. These resources may prove advantageous to increase motivation, commitment and investment on the part of learners (Hao & Liu, 2006; Kim & Frick, 2011).

Additionally, online environments have the potential to expand access to communities of speakers beyond geographical constraints and promote negotiations of meaning in the HL, which can directly affect students' language learning experiences. As Norton and Toohey (2001) suggest, access to conversations with the language communities, in all their complexities, is at the core of successful language learning experiences. If used effectively, digital asynchronous technologies have the potential to facilitate these transactions. There is virtually no information about the impact these

digital tools may have on teachers' practices and students' learning in HL schools in Alberta. This study hopes to begin a new conversation around this challenge.

Relevance

This study opens the door to researching a specific aspect of the potential benefits of using digital text-based asynchronous tools in HL classes, including motivation to participate in the HL school community, enhancement and promotion of self-directed learning, commitment and self-investment in the HL on the part of students. Limited research has taken place, to date, around HL learning and the use of digital media, specifically to explore how these new tools affect learners' and teachers' social identities and learners' investment in language learning. By beginning to explore how teachers plan around the use of digital media in asynchronous settings for their HL classes, to arrange and deliver their lessons and by default, extending the physical and temporal borders of their HL classrooms, this research can shed light on pedagogical approaches to using innovative tools for teaching. The specific use of these tools will be reflected upon through the lenses of Media Richness Theory (MRT), specifically to understand the range of effectiveness that such tools may have brought to the HL classroom learning experience as a whole.

Additionally, by asking students in their HL classes about the new experiences in learning the HL through these digital tools, the research will begin to establish connections between students' personal commitments to invest energies and dedication to studying the HL, outside their regular school programs and schedules, while possibly engaging in practices they are already exposed to in their Monday through Friday classes.

Heritage Language Schools in Alberta - Background

Heritage Language learners have been described as students with an ethnolinguistic affiliation with the HL and a certain level of proficiency in the language that usually require additional practice to enhance their language competence to more fully communicate in the HL environments (He, 2010). According to Kagan (2005), HL schools are one of three key dimensions that HL learners naturally utilize as the source of their language learning, along with family and community.

In Alberta, HL community schools have been running programs for over fifty years, expanding the access to structured learning opportunities for the language and culture, traditions and values of a wide variety of languages, thanks to the efforts of volunteer associations, often led by parents and elders in their respective communities. HL community schools face many challenges, including attracting and retaining students and motivating them to attend weekend school programs, as well as accessing affordable learning resources.

In Northern Alberta (North of Red Deer), many of these HL community schools have become and remain members of an umbrella organization called the International and Heritage Languages Association (IHLA), which was initially formed in 1978, under the name of Alberta Ethnic Language Teachers' Association (AELTA) and later named the Northern Alberta Heritage Languages Association (NAHLA). IHLA, as an umbrella not-for-profit association, supports HL community schools, mainly in the Edmonton area, through curriculum building, resource gathering, networking and HL awareness initiatives that allow its member schools to access professional development opportunities on a regular basis. IHLA schools join the association on a voluntary basis

and renew their membership annually. All teachers in member schools are invited to attend professional development sessions for free, usually offered outside of office hours and heritage language school class hours. These sessions vary in scope and focus. The sessions are highly practical in nature and focus on providing strategies for HL teachers to implement in their weekend and evening language classes, to enhance motivation and engagement of students. The strategies take into account the specific nature of HL weekend classes delivery models, often combined in two or three hour sessions once or twice a week.

Through provincial funding, in the last few years, IHLA has been able to offer technology-based sessions to introduce IHLA member school teachers to the uses of modern digital tools, as fully integrated tools in lesson plans for HL classes at all levels, and for all languages. Qualified staff that are certified teachers and have ample experience in online design and delivery of second language activities have been offering these technology sessions.

A group of teachers attended several of such sessions between 2008 and 2012 and responded enthusiastically to the idea of using these tools for their language classes, especially since they are available for free and allow them to create resources that directly meet the curricular outcomes of their locally developed programs of studies. Since the tools are available online, teachers can assign homework and collaborative online projects that HL students can complete outside of the school scheduled classes, and that provide additional access to practice and communication with teachers in the HL. The study aims at gathering information about these activities and how they are impacting the learning experiences of both teachers and students.

Research Questions

The two research questions guiding this study are:

- How do HL teachers in community language schools in Edmonton use asynchronous digital tools such as blogs or wikis in their classrooms?

- How do these tools affect the participation, motivation and investment in the language learning process of their HL students?

The research set to understand how two key stakeholders in the HL learning environment, namely teachers and students, used digital tools in their HL classroom. Teachers interviewed had received some form of professional development training in the use of digital tools and had begun to implement them in their HL classes. Students interviewed belonged to these teachers' classes and already made some use of digital tools at home, in their regular classrooms and for entertainment purposes. The research aimed at discovering what was their experience of these tools with a new purpose, to learn the HL. It also asked them to reflect on the impact these tools had on the learning and their sense of belonging to the HL school community. The key focus of the research was on asynchronous digital tools, specifically with regards to written texts, media and links that can be shared online through the use of wikispaces (wikis) and or blogs, in the classroom as well as at home.

Chapter 2: Literature Review

Online Learning Pedagogies

In today's world, access to information and communication tools is no longer a privilege of the few. However, making sense of the overload of information and using the right tools to support any type of learning has become even more challenging, for all subject areas and at all age levels (Hamid, 2001). Online technologies, most of which have come to invade our daily lives in pervasive fashions, have found their way into many classrooms and courses in HL community school programs in Alberta. Schools that belong to IHLA have shared comments about their access with computer desktops they borrow from regular school program facilities, they rent over the weekend, or they purchase for their schools. Often schools invest in one or two projectors that allow them to show the class as a whole presentations and websites used to support learning. Additionally, students and teachers carry along portable devices that are now part of people's lives, which are one click away to opening doors to information in any language and on any topic. Such technologies, in the form of websites, software or computer-mediated activities can now be defined as online leaning tools (Saade', He & Kira, 2005).

Online learning opportunities, in all subject areas, have been on the rise since late 1996. Studies have demonstrated, across age levels and through a variety of delivery formats that, when established according to set criteria and through long-term deliveries, online learning offers the opportunity to students to perform better than students in face-to-face (F2F) conditions (Centre for Technology in Learning, 2009).

With this promise and potential in online learning environments it is safe to assume that some form of use of digital media for learning a HL may present benefits to teachers and students in HL community schools. While clear definitions of online learning are hard to come by, one of the most reliable seems to be the idea of considering it a negotiation of meaning in educational settings that uses primarily the Internet as its key medium, and that fosters collaborative environments in its very nature (Daga & Gecer, 2009).

In the field of online learning, a critical major difference is the immediate definition of pure online vs. blended online learning environments. While the first seems easier to define as courses that take place entirely over the Internet, with little or no face contact between students and teachers and students with one another, the latter can take on more than one definition. Köse (2010) describes it as a "kind of learning approach that combines different types of education techniques and technologies" (p. 2794). For the purposes of this research, elements of both pure and blended online learning will be reviewed and discussed, as supporting the findings around experiences of HL community language teachers and their students, using a variety of technologies that sustain both types of learning.

Digital environments can be synchronous and asynchronous. Synchronous tools are often linked to what is called the first generation of technology tools (Godwin-Jones, 2003). These include tools such as emails and chat rooms. The second-generation tools include wikis and blogs, spaces where information is placed, such as course content and resources, while reactions, comments and collaboration opportunities are mediated through the inherent characteristics of the tools, such as comments and discussion forums.

Kassop (2003) reflects on the fact that students who are engaged in discussion forums, guided and monitored by instructors, often feel they have more time to truly ponder on a point, which usually results in improvements in the writing process.

Asynchronous interactions, in particular, can provide that constant and ever present resource for self-reflection and negotiation of meaning that students may need, especially when internalizing new language structures and practice at their own pace (Coryell & Clark, 2009). Access to enriched and more meaningful and relevant material is also another characteristic of uses of such digital tools. Asynchronous technology can facilitate and enhance collaboration, reflection and foster independent learners to make very conscious and well thought-out learning choices. With less noise as a possible source of distraction, learners can be more focused and communicate with each other more effectively (Garrison & Kanuka, 2004).

No matter the types of tools utilized for online supported learning, and no matter what type of learning online teachers embrace, plenty of studies directly stress the fact that the use of sound pedagogical approaches that fully support understanding and utilization of the "right tools for the right job" are the number one reason for successful implementation of learning that is based on online delivery and communication (Centre for Technology in Learning, 2009; Henry & Meadows, 2008;Kassop, 2003;) as Brill and Park (2008) indicate "… sound teaching and learning approaches should remain at the forefront of such scholarly agenda for improved learning" (p. 75).

A wide range of potentials that HL community school teachers can tap into and take advantage of are clearly offered by online learning opportunities that allow students to make meaningful choices and contribute to a variety of messages with personal

reflection (Centre for Technology in Learning, 2009); where students receive timely and personalized feedback (Kassop, 2003); and through which students become independent thinkers and interdependent collaborators (Garrison & Anderson, 2003).

Oliver (2000) reminds us that, while there is no one recipe to make sense of digital tools' potential and characteristics to fit a specific learning environment, effective online deliveries can take place by embracing a constructivist approach that includes negotiation of meaning, collaboration and a solid instructional presence. Online tools allow for the "learning-as-a-participation" metaphor (Coryell & Clark, 2009), which is, in fact, the foundational approach of second language and HL learning at its best: students participate in the meaning-making process of communicating through different language and culture tools, in specific communities of speakers.

Using technology to support teaching and learning brings about a paradigm shift (Garrison & Anderson, 2003; Henry & Meadows, 2008; Kassop, 2003; Oliver, 2000;), where the educational transaction moves from the "transmissional model" to the "collaborative and constructive model" (Garrison & Anderson, 2003). Lectures and teacher-centered environments, where students attend classes and receive new knowledge, in pre-set times and spaces, are more often integrated and even substituted by learning opportunities where students build their way through new information until it becomes knowledge they have owned all along (Oliver, 2000).

Concepts such as "the online world is a medium onto itself," "technology is a vehicle and not a destination" and "building a sense of community and social presence" through online tools (Henry & Meadows, 2008) define, in part, the foundations of these new pedagogies that can be constructed through the use of digital tools. These elements

constitute the basic direction of this research, that sets to explore how uses of asynchronous online digital tools for HL classes affect the way in which teachers plan and deliver their lessons, as well as how students perceive these new deliveries and how they affect their commitment and investment in the learning of their HL.

Teachers and Uses of Digital Tools

To bridge the gap between potentials and integration of online tools in the HL classroom, one must pay attention to research highlights around uses of technology that teachers adopt at different stages of their professional development. From Teo's (2009) Technology Acceptance Model, TAM, which stresses the critical function of three factors that influence teachers into using technology: personal, computer and environmental; to interpretive phenomenology studies (Diekelmann, Shuster & Nosek, 1998) whose findings pinpoint to elements such as loss of the familiar (traditional educational settings), questions around the reliance on the visual and physical presence, to added new complexities to the delivery of any educational program, we discover that reflection and access to support and professional development opportunities is paramount to successful adoption experiences.

Research around perceptions and reflections of practitioners who have ventured, in the last two decades in integration of technology pathways in their classrooms, even if not specifically in HL education, seem to highlight similar findings. Stobaugh, McDonald, Tassel, Gibson and Dodge (2010) worked on reviewing how expectations of teachers and their actual skill sets, once they set to use their technology skills in the classroom, are quite disassociated. Often teachers used limited technologies only for personal use and

when they listed technologies in their classrooms, student teachers admitted to: "[...] use word processing technology to create documents such as handouts and tests" (p. 49).

Similarly, Bordonaro (2003) stresses the fact that expectations of uses of technologies in the classroom continue to be a mismatch. Mutonyi and Norton (2007) follow along the same line of thought, reflecting on the importance to provide professional development opportunities for teachers as a way to "address the need to develop teachers' competencies with ICT [Information Communication Technologies] and [...] the need for critical ICT skills (p. 267).

This specific point appears to resonate with the reality of HL teachers in Alberta community schools, where teachers, for the most part, belong to older generations of educators from a pre-digital era and who are familiar with more traditional approaches to teaching. These findings point to the lack of understanding of the exact fundamental paradigm shift, which is required to adopting and successfully integrating digital online tools to support any learning environment, and specifically HL classrooms.

A variety of models are proposed, not as prescriptive steps but rather as options to consider the complexities of using different media to achieve learning outcomes. As the conventional idea around pedagogical approaches as being "neutral" seems to fade away (Diekelmann, Shuster & Nosek, 1998), tips and directives to support successful transitions into using digital tools in full and blended online learning settings, include:

- Focus on knowledge and skills, self-efficacy, pedagogical beliefs and culture of teachers (Ertmer & Ottenreit-Leftwich, 2010)

- Support professional development of teachers at the institution level, encourage

  and build on practical tips to ease the transition into using online tools (Instructors'

  Vantage Point: Teaching Online vs. Face-to-Face, 2010)

- Increase teachers' understanding of the tools and reflect on their complexities,

  engage in professional sharing of experiences and creativity with colleagues

  (Diekelmann, Shuster & Nosek, 1998)

- Tap into students knowledge and skills of using ICT (Mutonyi & Norton, 2007)

Ideally, situated professional development opportunities, in depth sessions, vicarious

experiences with opportunities to share and reflect, lesson studies, strong school

leadership and adequate resources and support would make for the most successful

transition into using digital online tools (Ertmer & Ottenreit-Left, 2010). Research shows

that this is in fact an exception in regularly funded schools and a rare occurrence in HL

community schools, where access to funds is nearly inexistent and teachers are often

native speakers with few educational certification credentials.

Learners and Uses of Digital Tools

When appropriate instructional tasks are provided, along with models and timely

individualized feedback as well as high levels of students' interactivity, online learning

appears to be working and students become engaged with interactive online environments.

(Durrington, Berryhill & Swafford, 2006). While this position seems rather intuitive,

based on research considered this far from the use of online tools, the pedagogical

implications and the way in which these new approaches affect teachers' adoption of new

technologies for teaching, Coryell and Clark's (2009) view is worth considering:

Online delivery is rapidly becoming the preferred instructional technology of

post-secondary institutions. In the rush to provide online instruction across the

educational spectrum, students' affective experiences in online courses were not

initially considered in research (p. 486).

Studies on students' perceptions of uses of online tools for learning indicate an

overall satisfaction with the use of technologies for real life communicative tasks on the

part of students. Szecsi and Szilagyi (2012) completed a study of HL families'

perceptions of uses of new media technologies to support HL learning in their children,

noting that children's HL skills were positively affected by regular uses of spoken

synchronous interactions with family members through uses of video-conferencing tools

(such as Skype). Even in writing skills children who used chat rooms and wrote emails to

HL relatives improved their writing with minimal instructional support. The study also

indicated how "virtual environments have the potential to foster intrinsic motivation of

using the language" (p. 12).

Learners have been shown to have more positive attitudes towards the types of

interactions that give them specific and timely feedback or information about tasks and

content (Hao & Liu, 2006). When engaged in authentic tasks, interaction with the tools

and the time-on-task increase noticeably (Centre for Technology in Learning, 2009;

Comeaux, 2005; Stepp-Greany, 2002;). Guardado and Shi (2007) suggest that, although

"not a simple alternative to face-to-face feedback" (p. 458), English as a Second

Language (ESL) students who engage in online peer feedback, if supported by training

and by teacher's guidance, as well as in balanced blended online learning situations, may

in fact engage more actively and attend to writing tasks more effectively than in other

forms of peer feedback. Comeaux (2005) provides a practical suggestion indicating that by uncovering students' attitudes towards the use of online technologies at the beginning of a course can help predict the success of the use of the specific online tool or tools integrated in that course.

Some of the factors that contribute to the positive and enhancing effects of online tools for learning include: relevance, use of multimedia ways to deliver content, access to practice for self-pace learning, respect of social constructivist principles and presence of articulated feedback (Kim & Frick, 2011). An interesting finding from the research is the dual natural use of technology by ESL learners: using the Internet and its tools either to access content or to practice the use of the language (Bordonaro, 2003). Interacting through blogs and wikis could foster the use of the HL for true communicative purposes, contacting native speakers outside of the HL community schools, and possibly even outside of the province. The digital tools would become at the same time a learning tool and an authentic communicative tool that may positively affect the way students interact with it and the HL classroom lesson plans.

Online Presence

A recurring theme around the implementation of full online learning environments or the integration of digital tools to support learning in blended settings is the idea of online presence. Social and Teaching Presence are two of the three elements of the online presence model developed by Anderson, Rourke, Garrison, & Archer (2001). Cognitive presence is the last of the elements in this model, and studies demonstrate how this presence, the ability of online community members to manipulate and work with information through collaboration tasks, is usually higher in online supported

environments (Akyol, Garrison & Ozden, 2009). Teachers as designers of online spaces have a great deal of impact in the way the learning experience can occur for students. Such impact ranges from the ability to design the experiences for students, to determining timelines and negotiating collaboration activities that can lead to students' success (Andreson, Rurke, Garrison & Archer, 2001). Kanuka (2008) goes as far as stating that ultimately, the impact teachers and educators have on effective uses of online technologies resides in their own philosophies of learning, in the same way as it has impacted their approaches with more traditional tools and in strictly face-to-face settings.

The concept of social presence has been defined as "the perception that there is another real person taking part in the interaction" (Wise & Chang, 2004, p. 249). The idea is that interaction through a specific media rather than from the medium itself students gain the sense of presence of others in the learning experience. Even small tools such as visual avatars[1] seem to bring us closer to the sense that we are communicating with other human beings, rather than just through and to machines. And that specific perception can immensely affect our interactions using online tools. Ultimately, online presence remains at its best when we engage in synchronous video chats, where all users can see the person they interact with as they communicate, using video cameras and speaking devices.

The concept of online presence is important for the research as it appears to support the idea that by using a specific medium, such as a blog or a wiki, students can engage in learning activities that make them perceive they are still part of a human interaction, even though they are not in the same room or working at the same time with each other and with their teachers. Through the use of feedback, students can also perceive the same presence from their teachers. Social presence is also thought to

---

[1] The image one chooses to represent and accompany one's username in an online environment.

increase students' satisfaction levels and perceptions of the learning experience through online tools (Wise & Chang, 2004).

Computer Mediated Communication (CMC) is a term also used when talking about asynchronous text-based communication, making use of e-mail exchanges, participating in discussion forums or commenting on website posts. Some research supports the fact that this specific communication method does have an impact on enhanced social presence and learning (King & Ellis, 2009). Factors such as timing of response and personalized messages affect the sense of enhancing social presence in CMC.

The role of the instructor, while modified, remains pivotal to the online learning experience (Stepp-Greany, 2002). Teachers' presence through online tools is presented as a causal variable in students' learning, according to Wise, Chang and Del Valle (2004). Teachers who demonstrate a deeper understanding of the affordances and challenges of the online tools they use in their classes may have greater successes with creative integrations of online tools in their planning and positively affect students' attitudes and perceptions of the new activities, completed using digital tools.

Wikis and Blogs

A Blog is a Web-log, usually conceived as a personal documenting space where individuals write down thoughts and ideas and share them with readers on the Internet. The entries in blogs are saved in reversed chronological order (Boulos, Maramba & Wheeler, 2006), and more than one author can write in them. Using blogs as teaching tools offers an almost unlimited opportunity to teachers to present new content, through online spaces that are easy to manage and build (Meloni, 2010), and often available at no

cost. As online tools, blogs host practically an infinite number of media, from text, to hyperlinks, to images, sounds and interactive widgets. For students, the individual nature of the blog as a space for reflection and documentation, they are the ideal space to practice writing skills in authentic environments.

While like almost other online tools, not created specifically for pedagogical purposes, these tools provide a fitting territory to explore new horizons for HL community schools. By nature these tools are available free of charge and by simply having access to a browser and an Internet connection. Teachers can work on the tools in their own spare time as they prepare for new classes in the HL school program they teach, and place a wealth of resources and information tailored to their students. The sites offer the ability to create appealing and simple content pages, embed audio, visual and interactive tools that students can practice on, both in class and at home. There is no added cost for duplicating materials, as students access the sites through a URL (Uniform resource locator). Homework and files can be easily stored and shared through these tools, allowing teachers to review work from students in between classes, store and retrieve information away from filing cabinets in the schools or hard copies that may only be accessed once a week, and they can provide detailed, timely and personalized feedback on students' work that can be easily shared in between classes.

Like blogs, wikis are also online spaces that are by nature even more collaborative than blogs, to all members who have access or have been invited to take part in the wiki (Boulos, Maramba & Wheeler, 2006). They can easily become not only sources of information on a specific topic, but their collaborative nature allows for a great deal of group work, research, correction and participation in knowledge building amongst

26

members of the same wiki. Wikis are literally online collaborative spaces that by default demolish all logistical barriers that students and teachers in HL school programs may encounter in any other delivery method used this far. Like blogs they are free and require only the use of a browser.

In wiki-based collaborative projects, students become authors and audience at the same time. This opportunity to truly negotiate meaning and build new knowledge has proven to be at the same time an attractive and daunting alternative to more traditional learning environments, especially when presented without scaffolding and supporting devices (Ducate, Andreson & Moreno, 2011). The use of a wiki to support a specific learning task without any explanation on how it works and how students can interact with the tool suggests, once again, that familiarity with the medium is paramount to its most effective use in a learning environment.

In highly collaborative environments such as wikis and blogs, the teacher's ability to set the stage for success and to promote trust and collaboration is fundamental. Ease of use, which appears inherent to both asynchronous tools, ensures a more pleasant experience with the online environment (Hsu & Lin, 2007). Frequent use of the tools usually determines greater familiarity with its characteristics and it lowers the learning curve that may be initially present as an added cognitive load, on top of the specific language-learning task. Discussions that can easily occur within wikis, lower the barriers of dealing with experts and allow all students to feel at the same level, in the learning process (Meyers, 2008). By using asynchronous features of blogs and wikis, students can truly build relevant knowledge based on engaging tasks. Correction features in wikis

allow students to review each other's work and to propose different ways to achieve both fluency and accuracy.

Theoretical Frameworks

There are two framework theories that this study will refer to, namely Media Richness Theory (MRT) (Daft & Lengel, 1984) and the concept of *investment* as proposed by Norton (1995). While the first proposes a model to interpret the innate qualities of communication tools, the second provides a basis for a different way to look at students' motivation and dedication and perseverance to learning a HL, considered as an investment, rather than more traditional concepts of intrinsic and extrinsic motivation factors.

Media Richness Theory

MRT will allow the researcher to identify salient characteristics of the asynchronous communication tools of blogs and wikis to understand how HL community teachers make use of these tools to create effective online learning environments for their students, while the concept of investment will present a basis for observations and considerations around the type of impact that the use of digital tools may have on students' identities and sense of belonging to their HL community.

MRT resonates with the cybernetics school of thought that believes in the communication transaction as a process system, whose parts can be clearly identified and explained. MRT is also widely accepted as a basic framework to understand the uses of digital tools and how the medium affects the message (Tang, Zhao & Zhang, 2012). MRT states that different media impact communication in different ways. Task performances that match the medium's ability to convey a message will result in more

effective communication (Dennis & Valacich, 1999). In other words, tools chosen to complete a task can have a direct impact on the abilities of communicators to exchange the message effectively. The level of understanding of the capabilities of blogs and wikis on the part of HL community teachers may impact their ability to use these online tools to be very effective channels of communication to enhance HL learning.

The theory also identifies two inner qualities of every medium to carry information: the data carrying capacity and the symbol carrying capacity. Data carrying refers to the medium's ability to transmit information, while symbol carrying capacity refers to the medium's ability to carry information about information or about the individuals who are communicating. In a way, as already reviewed in these literature reflections, teaching presence through the organization and structure of a wiki or a blog may very well be a way to determine the symbol carrying capacity of the tools, as teacher's presence can transpire through the design of the uses of the tools. In learning theory, data carrying capacity is the learning itself, while the symbol carrying capacity is the meta-learning (Newberry, 2001). All educators can benefit from a deeper understanding of how communication tools can enhance, facilitate or hinder certain types of communication (Newberry, 2001).

Depending on the importance of a variety of characteristics of the specific medium and the message one wants to communicate, the ratings of that medium ability to carry information can be ranked from high to medium to low. For example: if immediate feedback is deemed essential, face-to-face communication is usually considered the ideal medium, for instructors and learners. Video Conferencing, Synchronous Audio and Text-based chats are examples of technology-mediated tools to have the potential to reach this

29

goal if used effectively. Kassop (2003) lists the merits of self-assessment tools and asynchronous individualized feedback that can enhance comprehension, the understanding of errors and the building of relationships in different ways.

According to MRT communication has two central issues: equivocality and uncertainty. Equivocality deals with:

[T]he extent to which data are unclear and suggest multiple interpretations about the environment...[such that it] is reduced through shared observation and discussion until a common grammar and course of action can be agreed on (Daft & Weick, 1984, p. 285).

Equivocality in e-learning experiences may bring confusion about a topic, in the mind of the teacher and the students. In this case the medium hinders communication. Uncertainty can be understood as insufficient information to perform a task. Uncertainty is not as tied to the nature of the medium as equivocality, as participants in the learning experience can add more support to ease lack of information. However, it is easy to fall into the trap of information overload to compensate for uncertainty issues.

The four criteria of MRT include feedback, multiple cues, use of natural language and personal focus of the medium. Feedback can be immediate, delayed and the medium can offer the possibility of recording feedback or replicating it in repeated sessions. In case of online learning, feedback has been found on recurrent studies to be one of the key reasons for achieving optimal goals in the learning environment. Feedback that is consistent, relevant, well timed and personalized seems to bear the highest educational effects.

The Concept of "investment"

The second framework considered for this research is the concept of "investment" as offered by Norton (1995). Norton proposes the construct of investment rather than motivation as a better fit to explain how second language (SL) learners come about successes and commit their time and energy when faced with challenges in light of long-term rewards, that are personal but also intimately connected to the milieu in which they find themselves learning. In her initial research Norton calls upon Krashen's Affective Filter and Comprehensible Input concepts (1982), indicating their limited ability to provide direct connections with the learner's social context, and more directed at individual justifications for focus on learning and achievement of success. Terminology such as Social Distance and Acculturation (Schumann, 1976) are also brought into the conversation, drawing a line between approaches that focus on the individual on one hand, and on the group on the other, but never in a complex and dynamic interaction, where one influences the other:

> I suggest that this confusion arises because artificial distinctions are drawn between the individual and the social, which lead to arbitrary mapping of particular factors on either the individual or the social, with little rigorous justification (p. 11).

Norton's framework of integration between the learner and its context as a social identity theory can be summarized in her words:

> […] a conception of the language learner as having complex social identity that must be understood with reference to larger, and frequently inequitable social structures which are reproduced in day-to-day social interaction (Norton, 1995, p. 13).

31

Norton rejects the idea that successful language learning is solely or mainly the result of one's cognitive and personality traits that can be extracted and analyzed, hence reproduced in a systematic fashion and set as exemplars for others to follow. Norton and Toohey (2001) place focus on the "situated experience of learners" (p. 310) to better understand the complexities of their learning successes:

> [...] we approach the explanation of the success of good language learners on the basis of their access to a variety of conversations in their communities rather than on the basis of their control over a wider variety of linguistic forms or meaning than their peers or on the basis of the speed of acquisition of linguistic forms and meanings (p. 310).

The idea of these conversations seems to connect with the communication potential of digital technologies, their affordances and their ease of access, which may support leveling the ground between native speakers of the language and learners and their communication wishes. Competency is seen as being part of a specific group that uses the language for a specific purpose, and this specific skill is gained through repeated access to fluent speakers and members of a specific social group. Digital technologies can open doors to such types of access, with relative low-cost access to resources, if teachers can engage students in effective uses of the media in the HL. Digital technologies could open doors to the life of the HL community, beyond the walls of the classroom, and these innovative uses of learning tools could mean a different context for learners to practice access to the language beyond the walls and the schedule of their classrooms.

The two case studies reviewed in the article present findings from both adult and children learning experiences. The key message remains the idea that language is used to

negotiate meaning, and that such negotiations take place in specific learning contexts, as well as community contexts, where individuals abide by social roles and their placement in the speaking community. Extensions of these contexts and expansion and diversification of the roles can amplify access to new practice opportunities and increase rates of learning successes.

An affordance of digital technologies is the ability to open doors to a variety of contexts and extend access in space and time. Research reminds us of the importance of the strong emotional connections that HL students feel and their attachment to the language to communicate with family members near and far (Guardado, 2008; Guardado, in press; Guardado & Becker, forthcoming; Titus, 2012). This need may be supported by the idea of proposing learning experiences on digital platforms, which may build bridges, to connect to family members as well as communities of speakers in a variety of roles.

Summary

Online learning can occur on a spectrum of pure to blended settings. Online tools have found their way into HL community schools and programs. Research does indicate that, if used appropriately, online tools can be as effective in supporting learning as more traditional methods. However, little research exists that identifies areas of concern and progress taking place in HL programs by teachers utilizing these tools for learning purposes. Theoretical frameworks such as MRT and the concept of "investment" will support this study in trying to begin to shed light on what takes place in HL classrooms, where teachers do use some of these tools, and how these uses affect students' success and personal sense of identity and belonging to the HL community.

Chapter 3: Methods

Qualitative Research

Selecting the appropriate research methodology is as important a task as ensuring accuracy in the data collected. "[…] research methods should be chosen based on the specific task at hand" (Silverman, 2010, p. 9). Qualitative research seems to be the methodology of preference in any context where educational technologies, and online tools are studied around learning environments (Fuller, Wyzard, Snelson, & Rice, 2011). In the case of this study, qualitative research directly connected with the research questions, which aimed at beginning to explore uses of digital technologies in HL classes. The research tried to discover dynamics and relationships in new HL learning environments, created by innovative teachers' attempts to engage students through asynchronous digital technologies, such as blogs and wikis.

In order to begin to depict scenarios around these uses of digital tools to support HL learning in HL community schools in the Edmonton area, individual semi-structured interviews proved the most effective tool to address these questions, within limitations of time and project scope. Topics that led the creation of questions and helped set the research direction included:

- what selected technologies teachers seemed to be using,
- why they felt comfortable using them,
- how these technologies (mediums) supported their teaching;
- what impact these uses had in the learning process of their students; and
- how this affected students' sense of "investment" in the learning of the HL

The study was completed in a limited amount of time as access to the selected participants was limited by school schedules. Additionally, the researcher had personal insights in the field of study as well as an insider perspective into the community of HL teachers, which supported contextualized reflections on the types of responses gathered through participants.

Research Sites and Participants

The study took place between the fall of 2012 and the spring of 2013 and it included recruitment and participation of two teachers and two students of IHLA member schools. The teachers had attended at least two professional development sessions offered by IHLA in the previous 18 months around the use and integration of digital tools in HL classrooms. The students identified by their respective teachers had both experiences in using digital tools in their HL classes.

The schools in this study were identified as School One and School Two. Schools were contacted through email provided as members of IHLA. Two teachers volunteered and each teacher suggested contacting a student in their classes to take part in the study. The table below provides an overview of the key features of the sites. Features listed below allow for a basic understanding of the schools without providing specific information that would easily reveal identifying characteristics of the school and of the participants. Teachers and students were identified according to the school they belonged to. School characteristics highlighted in this table are provided to support contextual information that can help understand specifics of the responses from each participant.

Table 3.1 – Profile of Schools

School Name	School One	School Two
Size	5 different levels – fewer than 25 students	9 different levels – fewer than 75 students
History	Over 20 years running	Over 40 years running
Facility rented/used for HL classes	Heritage Community centre	Public School
Integration in HL community	Very high	Very High
Number of schools teaching the same language and culture	Several other schools	Only school in the city
Types of HL programs	Different levels – language and history	Different levels – language and culture
Language program focus	History, writing and reading, traditions	Communicative language approach
Alberta High School Credit Courses (locally developed)	No	Yes – three levels
Access to computers during program hours	Limited	None
Access to Internet service connection during program hours	None	Yes

School One was a smaller school, teaching the language in an HL community centre, with a program that run classes once a week aligned with important community traditional weekly events. The school was an integral part of the life of the community. It had been running for the past two decades and the school was one of many that offer heritage language and culture programs in the city. It offered about 5-6 different levels of language programs each year, with focus on traditions, history and culture. A focus was given specifically to writing and reading historical documents. The school teachers run community language programs that were not formally aligned with Alberta Education (provincial) locally developed credit programs. Access to computers for students in the programs was very limited and there is no direct access to Internet connection, but students attending the school did have personal access to Internet at home and through their regular school programs.

School Two was a larger school, with a program running for over forty years. This school offered the only formal HL program in the community and three of its courses were credit courses according to the Locally Developed High School Courses from Alberta Education. The community school rented a public school facility, offering courses twice a week outside of the regular school programs. It offered several language levels and it focused on a communicative language approach. Native speakers who taught at the school were both certified and non-certified teachers in Alberta. The school had limited access to Internet connection and no access to the school computer lab. However students in certain classes accessed the Internet at school through their own portable digital devices.

Each teacher identified one student in her class who accepted to take part in the study. Teachers' and students' key characteristics are listed in the table below and explained further in detail.

Table 3.2 – Profile of Teachers

Participants	Teacher One	Teacher Two
Native speaker	Yes	Yes
Years of experience teaching the language	Over 10	Over 5
Certified teacher	Yes	No
Levels of ability using technology tools	Beginner	Beginner
Uses own resources for the HL program	Yes	Yes
Assigns homework regularly	Yes	Yes

Teacher One was a native speaker of the language, born and raised in the native country. She was also a certified teacher in Alberta and had been teaching with the HL school for the last decade. She prepared her own resources and activities for the HL lessons, usually recycling material from previous years, and assigns written homework

regularly to her students. She attended a few sessions of professional development through IHLA and had been using at a beginner level some digital tools to support her HL classes.

Teacher Two was a native speaker of the language. She was not a certified teacher but had been working with the school for over five years and teaches one of the locally developed credit courses in the HL that the school offers, under the supervision of a certified teacher. She made her own resources to teach, mainly Power Point presentations that incorporate a variety of media to support the teaching of the heritage language. She assigned some homework but does encourage students to complete language work in class. She had been trying to use some digital tools as a follow up to technology-based sessions through IHLA and was experimenting with additional technologies in her HL class.

Table 3.3 – Profile of Students

Participants	Student One	Student Two
School Grade	Junior High	High School
Gender	Female	Male
Length of years studying in the HL program	4	7
HL class level	Intermediate	Level 25
Self-reported ability with computers	Good	Very Good
Uses at regular school program	Yes, in lab sessions	Yes

Student One was a girl who attended junior high in her regular school program. Her mom was a teacher in the regular school program and also a native speaker of the

language. She had been attending the HL school for the past four years and was completing the intermediate language level at the school. She liked and used computers at her regular school as well as at home, to complete homework and for personal use. She seemed familiar and at ease around technology tools, such as web pages, and wiki pages.

Student Two was a boy in high school, completing level 25 of the high school program of the HL at the school. He indicated his fondness and ability for using technology and computers, using them for homework and regularly at school. He had been at the school for many of the school years. Members of his family spoke the language at home.

Data Collection

Given a list of teachers of IHLA schools who had attended technology integration professional development sessions in the previous 18 months, through IHLA, selected teachers were contacted via email and informed about the study through an information letter. Two teachers responded to the invitation and identified two students in their classes who would also be interested in participating in the study. Parental consent and student assent were sought and obtained before setting a date and location to complete the semi-structured audio-recorded interviews. The interviews took place at the IHLA office as well as at one of the school sites. Teachers and students from the same school were interviewed on the same day, separately. The guided questions to the interviews were shared in advanced so participants had an idea of what the interviews were going to be about. Each participant was interviewed for about 20-30 minutes, answering a series of questions that had been shared in advance. The interviews were audio-recorded and transcribed. The languages taught in the two schools were Portuguese and Punjabi.

Data Analysis

To gain both a general as well as a somewhat more detailed insight into participants' perceptions in their experiences with digital tools to support learning of the HL a qualitative research approach was followed. The key steps included:

- Identification of themes from the information gathered from the guided interviews, using key responses from participants;

- Exploration of these initial themes based on the framework of MRT and the concept of "investment";

- Consideration of perspectives of both teachers and students when a common theme emerged;

- Cross-reference of themes based on key words, and

- Identification and exploration of similarities and differences

The interviews were based on a set of guiding questions that participants were given in advance and that were followed very closely during the interview process (Appendix A & B). In addition to guiding questions, on the spot prompts were suggested to participants, especially when some expansion on a specific topic would be required to better understand the point the participant was trying to make. However, the interviews could not be considered as in-depth and therefore a minimal amount of data reduction was attempted (McLellan, MacQueen & Neidig, 2003). Whenever possible participants' responses were maintained in a "verbatim" fashion to honour the original meaning of the statement or response.

A key technique used in the early stage of the process was repetition. As Ryan and Russell (2003) indicate, this is one of the easier ways to go about in identifying

themes. Recurring words, expressions and explanations of similar experiences bring key global themes to the surface and allow for initial categories to be established. While the interviews were recorded and transcribed, given the small size of the sample, the researcher did not attempt to make quantitative correlations between how often a certain word or expression was mentioned by participants, but rather what was the key tone and overall perception and feeling of that specific concept and what question it directly related to. Given similar questions, a set number of responses were expected, with several similar words to be mentioned by participants in their explanations of a technique or an activity using digital tools.

Once key global concepts were identified through a master table, the researcher went back and extracted the quotes from the interviews that directly addressed the concepts. One further round of considerations in relation to the questions that generated that response and which participant (teacher or student) responded in that way was also completed, to ensure the context for interpretation of similarities and differences of the themes would be the correct one.

Role of Researcher

The researcher of this study is an immigrant who has been working with IHLA for the past decade, in the role of coordinator. Being a second language teacher, fluent in three languages, and having taught in regular school programs as well as in an heritage language school (member of IHLA) for over ten years, the researcher had an insider view and perspective of the challenges of teaching HL programs at the community level and is well versed in curriculum design as well as integration of technology and digital tools in HL lesson planning and programs.

41

The researcher had personal knowledge of the teachers who volunteered to be interviewed, as IHLA member school teachers who have been actively involved in professional development sessions offered by IHLA. The researcher did not speak the heritage languages of the participants, however she did have an inside understanding of the school curriculum of both community schools where participants attend HL programs.

Summary

This qualitative study set to research a very specific and highly selected group of participants, both teacher and student members of IHLA member schools in the Edmonton area. The teachers were identified from a pool of instructors who had attended and implemented, to a certain degree, some techniques using digital tools to support their HL classes. The methodology used to gather and analyze the responses included the transcription of semi-structured audio-recorded interviews, which were examined following steps of repetition, similarities and differences, to gather and validate a set key of global themes, supported by direct quotes.

Chapter 4

Findings and Discussion

The interviews from the four participants were audio-recorded and transcribed. Key high level thematic sections were tabulated based on the guiding questions provided to participants ahead of the interviews. Guiding questions can be found in Appendix A. Participants' responses were first viewed at the participant category level: students and teachers. Based on this initial review the following observations were made:

- Reading and writing are key activities in the HL classroom. Text-based reference can be enhanced and supported by using tools such as blogs and wikispaces pages. The preferred activities using digital tools based on the participants' responses require text-generated content. Text-rich tools such as wikis and blogs seem ideal tools to try out first.

- Using digital tools increases motivation and engagement ("it is fun!"). Motivation and engagement of students and teachers seems to be directly correlated to the use of digital tools in the HL classroom – the more digital tools are used the more teachers and students are engaged and feel motivated to commit to the learning.

- Using digital tools at home for homework or to review or prepare for the next classroom increases and optimizes use of class time.

- Using computers can foster students' independence and self-directed learning. Self-directed learning is impacted by the presence of activities and content created and delivered using digital tools. Even with limited access, HL students and

teachers can easily envision the positive effects of using technologies for the HL classroom.

The set of themes that emerged from this global approach is the following:

- The Primacy of Reading and Writing

- Fostering Motivation and Engagement

- Home use of Digital Tools Optimizes Class Time

- The Role of Digital Tools in Fostering Autonomous Learning

- Digital Tools and Teacher Empowerment

Based on the identified themes, the researcher proceeded by selecting specific quotes from the interviews, both from the students and the teachers' perspectives. Key findings and more refined observations emerged from this deeper analysis and connections were made between the data gathered and research in the specific field of digital technologies and HL learning at the community level.

Main Themes

Although the HL of the respective schools were quite different from each other the comparison of data gathered through the interviews revealed a number of common traits about the school programs, the attitude of the students towards their HL classes, the limitations and access to resources and the beginner's level of familiarity and use of digital technologies of the teachers, to support their teaching of the HL.

Key themes of the questions in the interviews focused on the experiences of students and teachers with successes as well as challenges in designing, using and practicing through activities that made use of digital technologies, and computers in general. The interviewer asked participants to describe their personal experience using

technologies, in the classroom and at home, preferences and possible reasons for not using digital tools to teach and learn. Participants had the opportunity to provide examples of how they used digital tools in the HL classroom and what made these uses interesting, motivating and engaging. The following section highlights the main themes identified through a close analysis of the data.

Use of Digital Tools in the HL Classroom

Both HL schools had challenges accessing digital tools, whether the challenge resided in access to hardware (computer labs) or gaining access to wireless connections using students' own devices. This did not seem to prevent teachers and students from valuing the potential that digital tools carry in themselves as learning platforms for their HL classes. Both teachers indicated gaining a wealth of knowledge from attending the professional development sessions offered by IHLA in the previous 18 months, around creative uses of technology tools for their HL classes and planning. As Teacher One indicated below:

> It was the best thing to do as a personal PD, because I always thought I was not good with technology, so I always had a fear in my mind, oh, how am I'm gonna do it with computers and so on...So after learning about digital tools, like Wikispaces, even in the classroom we made assignments, tasks, that made me so confortable using it, because I was like if I go back home and then work on it, I will forget what to do. But it was very interesting that we were taught in the class on how to do it. We worked in the class, we even made our own assignments and it was nice and I was very confident that I could use it tomorrow in my classroom.

Mutonyi and Norton (2007) indicated how professional development support is at the core of appropriate uses of Information Communication technologies for teachers of languages. The sessions that the teacher participants attended seemed to align with these interpretations.

Specifically addressing the HL teachers' practical needs, these sessions seemed to have given teachers enough confidence to try new things in their classrooms and for homework, with specific needs being addressed by the tools used, namely free access to tools, ubiquity of the tools and the ability to offer students spaces where self-directed learning could take place. According to MRT (Newberry, 2001) by their innate characteristics, digital tools are bound to affect the message (communication) that teachers will engage students in during the learning experiences of the HL. Teacher One said:

> Actually, after learning in the class, after my PD, learning about these tools, especially Wikispaces, I used it the next week in my classroom. Because that was the unit I made in the (PD) class that was just what I used in my classroom, and the kids were amazed to see that, because they had never worked on the wikispaces before.

Affecting the message, making it more exciting, seemed to directly correlate with supporting the teachers' confidence of using these tools.

As far as defining the type of approach that teachers took with regards to pure online or blended versions of integrating digital tools, it appeared that the teachers interviewed were directing their energy at a discovery stage, trying to use the tools to define and assign homework or post class notes. Tools were implemented as a support to

existing activities and resources and were offered as an extra step to keep up with the workload or peak ahead about content for future lessons. Teacher Two referred to this when talking about using digital tools for students to look up homework assignments for the next class:

> Absolutely – and that is something else that happens. I tell them in advance this is what is going on next week you can go online and look it up. And then we go from there and then when you get to class you get actually working.

> Either way, these teachers seemed to intuitively embrace the constructivist

characteristics of the tools used, allowing students to build their own understanding of a new concept, cultural topic or language element. The move from the more traditional transmissional model towards the collaborative model (Garrison & Anderson, 2003) seemed to be gaining ground in the planning and approach of both teachers interviewed.

The use of wikis and blogs by both teachers, while at a very basic and beginner level, indicated the teachers' ability to utilize the tools for text-based asynchronous communication in effective ways. Teacher One prepared her vocabulary-based lessons on thematic units on a wiki, with support of images and sound tools as well as pre-prepared online quizzes for students to practice on. She stated:

> So I had put one You Tube video about these HL specialty foods, and it was a perfect fit for my unit and kids loved it. They learned, they had visuals, they were supposed to have activities there were different levels on the assignments...It was nice to work with that.

> By sharing the links she allowed students to engage in self-directed study sessions

for homework, empowering students to take charge of their own learning. The matching

of task performances and medium's ability to convey a specific message certainly seem to increase the support of effective communication (Dennis & Valacich, 1999). Wikis and blogs are tools that can be primarily thought of as asynchronous and text-based. Teachers using these tools to host content and guide students through sequenced activities and steps can easily find the tools accommodating their needs and most likely fulfilling the educational goals set to be achieved in the process.

Teacher Two had begun to use a blog to place notes and plans for future classes so that her students can look ahead of next lessons and content, as well as projects. She also utilized the wiki for writing projects, where students shared ideas in brainstorming sessions.

Sharing or providing feedback in writing, through peer to peer online tools, is a strategy aligned with the body of research around online peer reviews and comments and if this strategy is supported by a well thought and devised scaffolding system of teacher support and guidance, it can bear positive results in engaging learners in the active use of written communication in the HL (Guardado & Shi, 2007).

These teachers interviewed went ahead and tried new tools taking advantage of the multidimensional characteristic of tools such as wikis and blogs. The use these teachers were making of these tools to support asynchronous text-based communication is aligned with several of the major affordances of wikis and blogs, as digital free online tools. Both teachers seemed to be more adventurous than many, as research indicates that most willing teachers of second languages remain faithful to using Word text authoring tools and managing grades when provided with online tools for their classes (Stobaugh, McDonald, Tassel, Gibson & Dodge, 2010).

Research seems to sustain, as well, the default approach of using students'

abilities and knowledge of technologies and digital tools to help teachers figure out things

(Mutonyi & Norton, 2007). Teacher Two indicated:

> So I get that, engaging with technology, and often they [students] teach me.
>
> Oh, I got this but I don't know how to work it! And I play dumb, do you guys
>
> know how to post this or that, and they do it.

Undoubtedly this approach seemed to also increase levels of engagement and

motivation in HL students. Teachers in any SL and HL learning settings have for years

counted upon the support and skills of their students to help them figure out how pieces

of technology would work. In fact students are the first, and often the only, technology

support many teachers can count on while using technology in their classes, from

overhead projectors, to SMART Boards, to digital cameras, to computers and beyond.

Both teachers also indicated that they would benefit from collaboration with other

teachers in their same language community and across community schools and IHLA

member schools, by sharing ideas and lessons built together, as they both recognize the

increased requirements in planning and preparation steps needed to create suitable and

pedagogically sound online environments for their classes (Godwin-Jones, 2003).

Teacher Two stated:

> I really really want to continue with the idea of more PD sessions, cause I think
>
> you benefit a lot especially what IHLA offers, when you are in that setting. And
>
> often there is a bit of frustration, how can I do this. And then you realize that there
>
> are so many people trying to understand the same way as you.

Additional uses of online tools included online translation tools and videos, selected for specific learning goals and objectives. The teachers emphasized the presence and support they provided to students, when they asked them to utilize these tools. Submissions of work completed online was also another way the teachers used these digital tools, which seemed to address a more convenient and effective way to track students' progress and provide a quick retrieval of completed assignments. As Teacher One stated:

> And all the homework that they submit I make them submit it online. Cause then this way I keep a record for me as well, and that is what we are doing.

By providing extra support to students in these ways, teachers demonstrated an awareness of the limitations of possible misinterpretations caused by using digital tools in incorrect ways. The teachers felt they had to supplement whatever environment they create for their students using digital tools, with additional ways to remain in contact, go ahead with further practice and remember how to complete certain steps. This approach, directly speaks to the MRT model for interpreting online tools, specifically to the symbol carrying capacity of wikis and blogs, which may require additional and supplemental support to avoid confusion and miscommunication (Newberry, 2001).

One element that research indicates to be of importance in the use of digital technologies for HL learning purposes is the ability to open doors to collaboration with native speakers of the HL (Norton & Toohey, 2001). These teachers in their recent and new attempts to use digital tools did not mention such uses in their experiences. Connecting with native HL speakers in the community as well as across the world did not appear to be a focus of their attempts. It is important to notice that both HL school

communities had a prominent role in their HL community in the city, and that access to

native speakers may have been easily achieved by actually having community members

come to the school and participate in school activities. This may have been one of the

reasons why the additional potential of the digital tools in this regard had yet to be

thought about or exploited.

Digital Tools Impact on Students Motivation and Engagement

The use of wikis, blogs, Power Point presentations, online quizzes and videos, as

well as images and audio elements to support lessons and homework assignments in the

two HL schools that participated in this study, clearly appeared to support the overall

increase in engagement levels of students. Students interviewed expressed their pleasure

whenever a language activity was presented through the computer, or a task was given

that could be completed independently and /or in groups through the use of online

research tools, in class and at home.

Students appreciated the use of digital tools they seemed to be familiar with from

own personal uses in the HL classroom, and anticipated satisfaction when they knew that

a set of activities done away from computers led to the reward of a computer lab session

in the HL. As Teacher One indicated:

> I put them on a points system that will gain them going to the computer. They
>
> become so much more motivated to do that. Oh we get to go to use computers.
>
> They will do everything I ask them to do – they behave in the class. So the day we
>
> go to the computers, they are so full of energy, they are so excited to use
>
> computers, and they do not even realize that they are learning while using the
>
> computers.

In this specific case, for example, students became part of a social arrangement between the teacher and the class as a whole. They took part in the arrangement and agreed to complete less exciting tasks in view of a more rewarding experience. As Norton tells us the "situated experiences of learners" are ideal tools to understand the successes of learners (Norton & Toohey, 2001, p. 310). As Student One set to describe her experience of the negotiation between her teacher and the students as a group, her words and expressions seemed to support this interpretation of the group and the context impact on the individual learner, who completed less engaging tasks for a tangible but delayed more satisfying activity, such as practicing in the computer lab on language activities using digital tools.

While the ability to speak and listen in the HL seems generally higher in HL students at different levels (Harrison, 2000) students in HL classes, especially when these classes are offered outside of regular school hours, may find it challenging to remain motivated and engaged in the learning. One reason for motivation in the HL classroom might lie in the idea of identity and belonging to the specific community or group. Both students interviewed in the study indicated specific places and times when they do speak the language, as Student One indicated: " I do it [speak] sometimes at home, and sometimes at Sunday school. Mostly at Sunday school." Both students shared an overall sense that it was understood they could and should speak the language in certain locations and with certain people. Lee (2006) states that students "attach" themselves to the language and culture as a function of their identity, and Comanaru and Noels (2009) support the idea of "relatedness" and "belonging" that HL students have towards their communities.

Teacher Two explained in her own words how challenging it was still for her students to actually feel engaged and motivated to come to her Saturday classes.

> Well the biggest one is that more of these kids come here because they are forced. They have no interest to come whatsoever. And my main focus is to get them engaged, and shift the idea of I am here because my parents want me to come to "no, I want to go, it's fun!" So I get that, engaging with technology, and often they teach me. Oh I got this but I don't know how to work it. And I play dumb, do you guys know how to post this or that, and they do it. So they get them engaged, to see them. And that is my main thing in class. So for that I think technology is a fantastic tool. Cause that is the reality now.

She explained how technology had become this one strategy to involve students more and make them learn without noticing.

Student One felt quite passionate about the fact that if content from the HL classroom is on a computer screen that is by default "more fun".

> Yes. Number one because I like going on the computer and having fun doing whatever, and it's also much easier for the teacher rather than handing in paper homework assignments, you can just put it on wikispaces.

Student Two expressed his sense of satisfaction for those instances when he could find a word or the meaning of a sentence on his own using an online translator.

Student One also shared her idea of feeling engaged with activities in her HL classroom as she feels empowered by determining the level she is at with a unit and how ready she is to move ahead.

Hmmm... If you do not know a word you know you are starting too soon. Or if

you know you are starting a brand new level and you have no idea you can just go

on wikispaces and have a head start. And see where you are at and see if it easy

for you or if you are having trouble with a word you can do it more often.

Teachers supported the idea of how technology makes the class "more fun" and

less boring. Teacher One used the incentive of promising access to the lab or computers

to do certain activities online as a reward that puts the students in a more focused

direction and more willing to complete less engaging activities towards that special goal.

Kids love to use technology, they do not feel bored. Especially my younger kids. So

I show them first how to do something on my computer with a big screen. So I say

first you type this and then you get to do that. And then that is their best.

The Primacy of Reading and Writing

Research indicates that most classes of HL students present a level of

heterogeneity and diversity in linguistic competency in reading and writing (Titus, 2012).

In fact, most HL learners show lower skill levels in reading and writing than their

English-speaking peers in second language classes:

[...] even the most literate heritage learners enrolled in my class who can speak

fluently on everyday topics and possess listening comprehension skills

approaching those of native speakers have relatively undeveloped reading and

writing skills (p. 86).

Students interviewed in this study indicated that a lot of the activities completed

using digital technologies, as well as authoring tools such as digital presentation

programs, supported reading and writing skills. Student One spoke of the routines in alphabet writing, memorizing and reading activities completed at each class:

First what we do when we get there we draw the alphabet. And then we do… we go over what we did the week before. And then we start from there. And keep on going. And when the Sunday school ends we do the exact same thing over again next time.

She indicated that being "tested" on certain words and sentence structures seems to be the focus of her HL classes. "Reading, writing and memorizing" appeared to be activities that represented the focus of her HL learning experience at the school.

Given the limited access to formal classroom time of HL weekend classes, solidifying reading and writing skills during the lesson is a need and a focus of teachers in HL schools. Digital tools such as wikis and blogs, which are text-based in nature, can easily and intuitively accommodate this need, with advantages such as home preparation of texts by teachers, access to these texts beyond the classroom walls and schedules and the ability to create or select unlimited numbers of resources free of charge.

IHLA students engage in a special writing project on an annual basis. The project involves them in writing an essay or a story based on a given theme. The text can be written individually or as a group. The students in School Two utilized the online digital tools of wikis to brainstorm ideas around the theme, built a basic vocabulary foundation and then wrote their own contributions as a group. The fact that a great number of students in Teacher Two's class had their own online access tools (mobile digital tools) allowed for a more collaborative environment and engaged students in meaningful writing processes:

And that is what makes it easy lately that most of them are High School or Junior

High students so they bring their tools. This helps. We are just finishing a

Christmas project which is putting together an essay for IHLA which is published

on Mother Language Day and they were doing research online, doing the project

with all these tools, let's go online together as a class. Let's put the title in the

middle, and then we have the tools and then they work together.

Teacher Two emphasized what she understood it to be the heart of the affordances

of a wiki:

It is just fantastic, cause you put your document there and that is it, and they can

develop an idea for an essay and put it there. Then see what everyone else is doing.

I think it is a fantastic tool.

The affordance of collaboration is an innate quality of a wiki and a blog. Users join the

online community together and contribute to the space, through adding of new text or

images and media, reviewing each other's work and posting questions or research ideas.

Collaboration and peer support in the writing process are certainly factors that promote

written expression in the HL but also positively impact motivation and a sense of

community building (Andreson, Rurke, Garrison & Archer, 2001).

Home Use of Digital Tools Optimizes Class Time

Access to text-based online resources in general, and teacher-created texts in

specific, seem to open unlimited doors and possibilities to HL students, and may

reinforce the exposure to original texts and forms, emphasizing the connections and

building concrete environments to practice the use of the language for meaningful

purposes. By opening access to selected texts online, teachers offer engaging

opportunities to students to see homework and units and planning ahead of time or as review chances to catch up on missed assignments. By allowing students to complete some form of homework online, students foster a sense of independence that can positively affect their commitment to learning the HL. And if the type of homework resembles activities and routines completed in class, such as reading words and sentences, recognizing symbols and learning new vocabulary, students learn to transfer those routines into their independent work at home. Student One indicated: "What do you do on Wikispaces? We read, then we first practice, and then I test myself." She stated how, when she did get homework online, which she loved as it was through the "screen" and therefore more fun than on paper, she indicated she read the text, completed practice exercises and then chose the test tool to see if she learned the words she was supposed to work on.

HL community programs by default present limited amount of time and exposure to the HL in classes that run at the most for a few hours per week. In environments where access to the language is limited by a number of factors, technology can broaden the linguistic horizons, whether through social networking sites or through more structured and selective environments such as wikis. Students find spaces to experiment with the language and build their own skills at their own pace and come to class with questions or to demonstrate their newly acquired skills.

Teacher Two stressed the fact that, even though more time consuming on her part at home, the use of technology in general and online homework in specific was something that was highly appreciated by her HL students:

Oh no, no, it's way better in class. It's more time consuming at home. As long as it is more time efficient in class that is what it's important for me.

While planning ahead and engaging was slightly more time-consuming planning for her classes, the teacher ensured students felt her presence in a variety of ways. These ranged from selecting the sequence to complete a certain series of steps, adding appropriate images and media to specific content, providing timely and personalized feedback and tailoring the content to the specific needs of her class. In other words ensuring that her teacher presence was felt through the use of the tool (Wise & Chang, 2004). Providing access to future activities and texts for the next lesson also engaged her students and freed classroom time for questions and more active participation:

Absolutely – and that is something else that happens. I tell them in advance this is what is going on next week you can go online and look it up. And then we go from there and then when you get to class you get actually working.

Homework management became also easier to attend to:

So this is fun to do HL homework. So they can do it online. So they cannot say: Oh, I forgot my paper! No, No! You can do that online. And they have fun doing this, they really enjoy it! And all the homework that they submit I make them submit it online. Cause then this way I keep a record for me as well, and that is what we are doing.

These opportunities to support the in-class work and plans in the HL classroom, through access to self-guided pages with texts, images, audio and practice activities also proved challenging from the teachers' perspectives. One of the key identified challenges

by Teacher One was the fact that not all students had access to Internet at home and access to computers at the HL school was also difficult:

> The challenges that sometimes I find are that some students do not have access [to computers] at home, so I take a step back to give them an assignment on a computer because they cannot access from home or the common school area online. So those are the kinds of challenges, and sometimes, especially when we are at Sunday school, we need access to computers, and we do not have that all the time.

Another way the use of digital tools optimized classroom time was through the use of strategies that transform more tedious tasks, such as grammar-based drills in fun games. Teacher Two explained how she created these presentations that followed songs and rhythmic drills based on verb conjugations:

> I use often, I give you an example, when I teach verbs, I remember learning verbs by singing them. And to this day I still do. By understanding the grammar you don't need to do this – this is like a puzzle. This is so much fun and I use a PP with a rule and my kids think that is so cool. It is so much fun and they love it. I actually have it in puzzle pieces that fit together.

She combined the verbs with animations and surprised students with her technology skills. The games proved a success in class and as tools for independent practice online.

The Role of Digital Tools in Fostering Autonomous Learning

Another factor that enhanced motivation and engagement was the sense of autonomous learning and feeling of being in charge that HL students may have

encountered when asked to use digital tools. As both students in the study mentioned repeatedly about their love of using computers and looking at activities on the screen, they indicated how computers helped them in several ways. Student One said:

> Yes – I find that it helps me a lot. Because you know you can practice and memorize the words better. Then when the test comes you'll know the right answer.

The fact that she could be in charge of determining whether she knew a word or a structure on the wiki page made her feel empowered to continue on through a path of self-paced learning, while completing work online at home. Working alone or in groups, having the choice to select research methods to find out about a specific topic and determine whether translations of texts are correct or need some adjustment were also other factors that foster autonomous learning. As Brandl (2002) indicates there is research to support the idea that some level of independent learning makes learning more effective.

Digital technologies were accessed through very personal devices that students use on the spot for immediate results, as Student Two indicated:

> I have an app on my iPad, called HL dictionary, it is really helpful as you can just type the word in the HL or in English and it translates it for you. Sometimes if you do not understand a sentence I can ask my parents or I can just go on the computer and translate it so I can understand it.

The level of familiarity and ease of use that students had with personal digital mobile devices fully supports the sense of being in charge of the language task and finding out new knowledge on one's own, as Student Two indicated below:

Well, the most appealing thing about using the Internet is that it is easier to understand and to, I guess say what you want to say in the HL, and find out something that you never knew, and yeah that's it.

The key message that was shared by Student Two was the fact that he could make personal connections, correlations between words and sentences from the HL to English and vice versa on his own. Nobody else would teach him or tell him that. While students saw this autonomous learning opportunity as a very positive factor in their HL learning experience at the school, teachers approached independent learning opportunities in somewhat more cautious ways. Teacher Two warned her students about the danger of trusting specific translator tools at their face value:

Yes, they do that but I tell them to be very very careful and be very suspicious. I gave them an example of a Google translator translating a newspaper and how bad it was, and they laughed, cause they translate names. Sometimes family names are named after animals so that was kind of my goal. Ok: do you see how dangerous this can be? So yes they are engaged but I am always cautious.

While Teacher One spent time planning and preparing pages on her HL classroom wikis so that students only accessed reliable resources and distractions or temptations to go to other online pages was limited. One specific strategy she loved was embedding You Tube videos for a specific HL topic in her wikis, void of distractions such as advertising and suggested next videos that users would normally see if they accessed the videos right on the main website pages. In her words:

[…] the You Tube video that I put in my Wikispaces and then... I was confortable, because when sometimes you use something on You Tube, you are scared,

61

because kids see the advertisement, the other stuff around the page. It is so uncomfortable for teachers, because when the kids see those are kinds of things… but when you put that You Tube, that you take it form there and you put it on the Wikispace it's so clean and you are so worry free that they can open that at home, and they will not end up somewhere else they are not supposed to be.

Digital Tools and Teacher Empowerment

The level of use of digital tools in any language classroom is largely determined by the teacher's own approach and sense of confidence in using the tools at hand (Brandl, 2002). The more a teacher feels confident in using a specific tool the more likely that tool will become an instrument in the classroom for delivering her lessons as well as allowing students to practice on their own. Teachers interviewed fundamentally shared the same view of the potential of online access to HL authentic material, at no cost and anytime and anywhere as key factors that enhance their HL classes. This appreciation seemed to go beyond the need to address scarcity of resources to actually engage students in real life uses of the language, through everyday mediums of communication to build their own understanding and language concepts, through self-directed as well as collaborative learning experiences, all characteristics of social constructivist approaches to learning (Lainema, 2009; McHaney, 2011).

Access to professional development opportunities to learn about the tools and how to use them in pedagogically effective ways was a factor that remains at the centre of any attempt to integrate technology in their HL classes. Teacher One stated:

This is something we did together with my partner

during the PD session – she did something different – she did learning

objects of school. At that time it was totally a different language. So I had

to put my own language to that wiki space page. So now I have more to

work with, we were sharing, I was thinking to ask from other teachers if

they are working on wikispaces so we can share our units, and so I do not

have to do much work. And that is the beauty of that.

The key to accessing these experiences and feeling empowered to try new

strategies and activities lies in the opportunity of practicing building new content with the

digital tools and sharing ideas and tips with colleagues, in sustainable ways, which

include ongoing professional development sessions and sharing forums to bounce off

each other ideas, challenges and successes (Mutonyi & Norton, 2007).

Teachers seemed to list a few key advantages of using digital tools in their HL

classes. These ranged from saving time and energy in duplicating content from one lesson

to the other and one year to the other:

...what I had last year, I used it for different classes and I did not need to change

anything, they were a perfect fit from last year into this year. Last what we did in

the special festival unit, I did a bit of editing but it was nicely done. And I felt like

– awesome – I need to make more units online like that.

The idea of saving time was also mentioned in the fact that, while spending a little

longer on planning and building content online, time management in the classroom

becomes less of an issue and organization and retrieval of information is also eased:

I think it takes me for maybe one or two units it takes me more time, but then I

find it is it so clear, and I do not have to flip my papers and find a title, and it is

just a click away. Especially in wikispaces, everything, like an index is right

beside you, you know where you are, what you are supposed to do next. It is more clear and rather than putting everything in a binder.

Teacher One seemed to also imply how independent access to teacher-constructed resources fostered autonomous learning and constructivist approaches to learning the HL.

Digital content had become the default format for Teacher Two who stated she "cannot teach without Power Point lessons". While resource writing does take longer to initiate and complete in online environments, especially given to the nature of non-linear access to content and opportunities to construct new meanings through the associative nature of digital content (Brandl, 2002).

It is interesting to notice how students felt that their HL teachers were still not as fully convinced of the benefits of using technology and digital tools for their HL classes. Student One said that maybe their teachers did not want students to "get addicted" to using computers, and that when they did get to access information in the computer lab they have to show they are focusing on a research project or the specific task at hand. This idea of a not yet full utilization of the potential of digital tools may also lie in the fact that teachers felt they had a long way to go in learning about these tools on their own.

I really really want to continue with the idea of more PD sessions, cause I think you benefit a lot especially what IHLA offers, when you are in that setting. And often there is a bit of frustration, how can I do this... And then you realize that there are so many people trying to understand the same way as you.

The teachers interviewed did share their curiosity and desire to investigate further digital tools, especially on mobile technologies, to increase motivation and interest in their students but also to diversify access to authentic material and resources.

64

Summary

Based on the qualitative process and data analysis of the responses gathered from the two teachers and their two respective students, about their experiences in learning a HL through the use of digital tools presented, a number of emerging observations were summarized in this section.

We considered what appeared to be a natural fit and tendency of teachers and students of HL towards using text-based tools, such as wikis and blogs, to create texts in the HL. Whether these texts were selected or created by teachers to present new information to students, or students use text-based interaction tools to share information with one another, the fit between the communication need and the specific communication tools (asynchronous text-based digital tools) seemed to work well. The tools appeared to support the primacy of reading and writing and the need to build spaces and time between input, practice and production that wikis and blogs offer to users.

Motivation and engagement, we discovered, also seemed to appear linked to the use of digital tools in general and students' investment in HL learning activities, either as homework assignments or as a reward for in-class work based on completion of non-computer related tasks. We noticed how students became part of the digital tool community that their teachers created and how collaboration was fostered through new channels of communication that go beyond the limits of the HL classroom (once or twice a week and for a limited amount of hours).

Class time appeared to be better used whenever teachers prepared a lesson using digital tools, as they set to plan ahead for their objectives, open their content to students

65

who wish to go ahead and for those who need to catch up. This specific characteristic speaks to the data carrying capacity of the communication tools according to MRT.

Similarly, an effective use of digital tools also seemed to foster autonomous learning in students, as they shared their ideas of what true learning experiences are all about, from finding meaning of specific words and expressions on their own, using online dictionaries, to trying out a specific quiz or test to prove to themselves they were ready for the next level of the language unit.

Finally, we reviewed key elements of teacher empowerment and how digital tools, along with sustainable and effective professional development and training, could support HL teachers in their journey to discovering the true potential of digital tools for their HL classes.

Chapter 5: Implications and Conclusions

Research Limitations and Delimitations

In order to answer the research questions, the study aimed at discovering emerging patterns and themes from the interviews and the impressions and experiences as told by participants around the use of digital tools in the HL classroom. The limited scope of the study provided only an initial insight in this specific area, hence large generalizations from the observations and analysis of results are not being proposed at this time.

Value of Observations

The findings from this study were quite specific to the context of the research, which comprises HL community schools in the Edmonton region, belonging to a non-profit umbrella organization and through teachers who attended a specific series of professional development workshops with focus on digital technologies. The observations made through the data gathered appear to be relevant to the specific school cases and might offer opportunities for further discussions and comparisons with HL community schools in similar settings. IHLA has an average of twenty to thirty member schools who teach a variety of HL programs in the same region and through similar characteristics, in size, history, types of teachers and students, curricula and access to resources. Where such similarities stand strong comparisons may prove helpful to define challenges and potential of digital asynchronous online tools to support the learning and teaching of HL programs.

Implications

This small study set to explore current uses of online digital tools and the impact they have on teachers and students of HL classes, by interviewing four participants of a selective group of instructors and learners, members of an umbrella organization of HL schools in northern Alberta. The highly localized nature of the study and the specific targeted audience were part of the design of the research from its inception. By knowing that a group of HL teachers had attended a series of professional development workshops, and begun to implement and experiment with digital tools in their HL classes, the research set to begin to peak into the effects these steps were having on the HL classes these teachers are teaching.

The key findings confirmed a number of concepts and basic understandings of both MRT and the concept of investment for HL learners. A true, in-depth understanding of the communication tools used to set the learning experience did carry a wealth of benefits for teachers as well as students. Essential needs of learning that ranged from receiving guidance and timely feedback in personalized ways were met, somehow, by asynchronous text-based digital tools such as wikis and blogs, as long as teachers as well as students are aware of how to use them. Data and symbol carrying capacity make up two fundamental characteristics of the tools, and teachers in this study seemed to intuitively make use of them accordingly and, to a certain degree, close to their potential. The wikis and blogs used and discussed in this study allowed teachers to transmit information in a personal way, and gave students information about their teachers, their styles and expectations, the meta-information that seemed to support the personal connection in the learning process.

Teachers and students interviewed shared their experience of connectedness with one another (social and teacher presence). Students appreciated the ability to work independently to improve their own language skills, specifically in vocabulary building and writing, by testing their own HL knowledge.

Both students interviewed seemed to share similar feelings towards the use of digital tools and computers in general in their HL classes, as fun ways to engage in the learning. However, students did not seem to make use of the specific tools to actually engage in real life communication tasks with native speakers of their HL, both locally and globally, as part of their HL weekly activities. This specific characteristic of the tools used was never mentioned by any of the participants, and appeared to be an area that could use further exploration and investigation, within the specific schools and across the community schools that belong to IHLA.

Teachers indicated their enthusiasm for the professional development opportunities they were given and took advantage of, and shared their hopes that such opportunities would continue to be offered to further their knowledge of the digital tools and enhance engagement, motivation and investment of their students in the HL.

Finally, the use of the tools addressed a fundamental challenge that all HL community schools face, which is scarcity of resources and access to real language texts. Setting up a blog or a wiki is free, relatively easy and quick, and the tools require simple access to a browser and an Internet connection. By placing and building content in their classroom communities, the HL teachers were beginning to explore the new frontiers of limitless spaces for HL learning opportunities. It may be only a matter of time when

wikis and blogs become the norm rather than the exception of the curriculum in HL community schools.

Conclusions

This study set to answer, at an initial and general level, the two questions of what and how uses of digital asynchronous, text-based online tools might impact HL community teachers and students in their learning goals. The goal of the research questions was to begin to build a context with concrete examples of what the uses of these tools may look like in HL community schools. Following this initial depiction was the question of what type of impact these new activities and strategies may have on students' engagement and investment in their HL learning processes.

The answer to the first question seemed to be that innovative teachers, with some initial training on the tools and a vision about their potential, were in fact using asynchronous digital text-based tools for their classes to create new content, spaces for self-paced practice and opening the door to individual and group uses for students to collaborate online, in class and remotely. The tools were shaping the format of delivery of the HL classes as well as the follow up required to support homework and additional access to the HL outside of the school walls. The study provided a number of concrete examples on what types of actual activities the teachers and students engaged in using these tools. From setting up units for new vocabulary building and exploration of meaning activities, to using presentation tools also posted online for additional reviews, to sharing links and discussion spaces where students build new content or comment on each other's ideas using the HL in the digital environments that teachers set up for them. The limited scope of this study did not permit us to investigate further how more

70

consistent attempts of setting lesson delivery, follow-up and evaluation activities might in fact look like in HL community classes, and further exploration is required for a more in-depth analysis on the uses of the specific digital tools based on their innate affordances and their ability to support learning goals.

The answer to the second question, about how these tools might impact students' engagement and sense of investment in the HL seemed to suggest an overall positive relationship between the use of the tools and students enhanced interest and investment of their learning efforts, as individuals as well as part of the HL school community. However, one specific use of the digital tools to connect and engage in real life conversations with native speakers of the community and remotely, through the use of shared links and blog posts or written comments seemed to be absent from the accounts provided by participants. The ability to connect to native speakers to exchange information and knowledge in writing, in asynchronous sessions was part of the characteristics and potentials of either tool (wiki or blog) that none of the participants actually reported about exploring or using. This specific void seems to warrant further consideration within the specific HL community schools that participated in the study as well as across similar HL community schools, and across all teachers who attended the specific professional development sessions offered by IHLA or similar sessions in the past.

Further explorations of specific examples of links between the use of the digital tools and students engagement in the HL community schools learning activities are certainly required to validate these initial findings, and build a useful suite of examples and models that all HL community school teachers can be inspired by and work from as

they begin to investigate the true potentials of online digital tools for their HL classes.

References

Akyol, Z., Garrison, D. R., & Ozden, M. Y. (2013). Development of a community of

 inquiry in online and blended learning contexts. *Science Direct World Conference*

 on Educational Sciences.

Anderson, T., Rourke, L., Garrison, R., & Archer, W. (2001). Assessing teaching

 presence in a computer conferencing context. *Journal of Asynchronous Learning*

 Networks, *5*(2), 1-17. Retrieved from

 http://www.aln.org/publications/jaln/v5n2/pdf/v5n2_anderson.pdf .

Bordonaro, K. (2003). Perceptions of technology and manifestations of language learner

 autonomy. *CALL-EJ Online*, *5* (1).

Boulos, M. N. K., Maramba, I., & Wheeler, S. (2006). Wikis, blogs and podcasts: a new

 generation of web-based tools for virtual collaborative clinical practice and

 education. *BMC Medical Education*, 6:41. Retrieved from

 http://www.biomedcentral.com/1472-6920/6/41 .

Brandl, K. (2002). Integrating Internet based reading material into the foreign language

 curriculum: from teacher -to-student-centered approaches. *Language Learning and*

 Technology, *6*(3), 87-107.

Brill, J. M., & Park, Y. (2008). Facilitating engaged learning in the interaction age taking

 a pedagogically-disciplined approach to innovation with emergent technologies.

 International Journal of Teaching and Learning in Higher Education, *20*(1), 70-78.

Centre for Technology in Learning. (2009). Evaluation of evidence-based practices in

 online learning. A meta-analysis and review of online learning studies U.S.

Department of Education. Retrieved from

http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf .

Comanaru, R., & Noels, K. A. (2009). Self-determination, motivation, and the learning of

Chinese as a heritage language. *The Canadian Modern Languages Review*, *66*(1),

131-158.

Comeaux, P. (2005). Assessing students' online learning: strategies and resources. *Essays*

on Teaching Excellence, Towards the Best in the Academy, *17*(3).

Dag, F., & Gece, A. (2009). Relations between online learning and learning styles. *World*

Conference on Educational Sciences, 220, 862-871.

Dennis, A. R., & Valacich, J. S. (1999). Rethinking media richness: towards A theory of

media synchronicity. *Proceedings Of the 32nd Hawaii International Conference On*

System Science.

Coryell, J., & Clark, M. C. (2009). One right way, intercultural participation, and

language learning anxiety: a qualitative analysis of adult online heritage and non-

heritage language learners. *Foreign Language Annals*, *42*(3), 483–504.

Diekelmann, N., Schuster, R., & Nosek, C. (1998). Creating new pedagogies at the

millennium. The common experience of University of Wisconsin-Madison teachers

using distance education technologies. Retrieved from

http://www.uwsa.edu/ttt/articles/98.pdf .

Ducate, L. C., Andreson, L.L., & Moreno, N. (2011). Wading through the world of wikis:

an analysis of three wikis projects. *Foreign Language Annals*, *44*(3), 495 - 524.

Durrington, V. A., Berryhill, A., & Swafford, J. (2006). Strategies for enhancing student

interactivity in an online environment. *College Teaching*, *54*(1), 90-193.

Ertmer, P. A., & Ottenreit-Leftwich, A. T. (2010). Teacher technology change: how knowledge, confidence, beliefs, and culture intersect. *JRTE*, *42*(3), 255-284.

Fuller, M., Wyzard, C., Snelson, C., & Rice, K. (2011). Learning From the Past: An Educational Technology Content Analysis. In M. Koehler & P. Mishra (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2011* (pp. 2445-2450).

Garrison, D. R., & Kanuka, H. (2004). Blended learning: uncovering its transformative potential in higher education. *The Internet and Higher Education*, *7*(2), 95-105.

Garrison, D., R., & Anderson, T. (2003). *E-Learning in the 21st century. A framework for research and practice*. New York: Routledge.

Godwin-Jones, R. (2003). Emerging technologies. Blogs and wikis: environments for on-line collaboration. *Language Learning & Technology, 7*(2). Retrieved from http://cmapspublic2.ihmc.us/rid=1131480053328_1801720929_4296/godwin.pdf .

Guardado, M., & Shi, L. (2007). ESL students' experiences of online peer feedback. *Computers and Composition*, *24*(4), 443-461.

Guardado, M. (2008). Language socialization in Canadian Hispanic communities: Ideologies and practices. Unpublished doctoral dissertation, University of British Columbia, Vancouver, Canada.

Guardado, M. (in press). The discourses of heritage language maintenance: Engaging ideologies in Canadian Hispanic communities. Heritage Language Journal.

Guardado, M., & Becker, A. (forthcoming). Fostering heritage languages and diasporic identities: The role of grassroots initiatives in Alberta and British Columbia. In K. Arnett & C. Mady (Eds.), Minority populations in Canadian second language

education: New perspectives on language and education. Bristol, UK: Multilingual Matters.

Hao, Y., & Liu, M. (2006). Students' attitudes toward online interaction. *Academic Exchange Quarterly*, *10*(4), 74-78.

Hamid, A. A. (2001). e-Learning: Is it the "e" or the learning that matters? *The Internet and Higher Education*, *4*(3-4), 311-316.

Harrison, B. (2000). Passing on the language: heritage language diversity in Canada. *Canadian Social Trends*. Retrieved from http://www.statcan.gc.ca/pub/11-008-x/2000002/article/5165-eng.pdf .

He, A. W. (2006). Toward an identity theory of the development of Chinese as a heritage language. *Heritage Language Journal*, *4*(1), 1-28.

Henry, J., & Meadows, J. (2008). An absolutely riveting online course: Nine principles for excellence in Web-based education. *Canadian Journal of Learning and Technology*. Retrieved from http://www.cjlt.ca/index.php/cjlt/article/view/179/177.

Hsu, C., & Lin J. C. (2007). Acceptance on blog usage: The roles of technology acceptance, social influence and knowledge sharing motivation. *Science Direct*, *45*, 65-74.

Instructors' Vantage Point: Teaching online vs. face-to-face. (2010). *Chronicle of Higher Education,* 57(11), B47-B49.

Kagan, O. (2005). In Support of a proficiency-based definition of heritage language learners: the case of Russian. *International Journal of Bilingual Education and Bilingualism*, *8*(2-3), 213-221.

Kanuka, H. (2008). Understanding e-learning technologies-in-practice through

    philosophies-in-practice. In T. Anderson & F. Elloumi (Eds.) *Theory and Practice*

    of Online Learning, (pp. 91-118). Edmonton, AB: Athabasca University Press.

Kassop, M. (2003). Ten ways online education matches, or surpasses, face-to-face

    learning. *The Technology Source Archives*. Retrieved from

    http://technologysource.org/article/ten_ways_online_education_matches_or_surpas

    ses_facetoface_learning/ .

Kim, K., & Frick. J. T. W. (2011). Changes in student motivation during online learning.

    Educational Computing Research, *44*(1), 1-23.

King, K., & Ellis, T. J. (2009). Comparison of social presence in voice-based and text-

    based asynchronous computer conferences. *Proceedings of the 42nd Hawaiian*

    International Conference on System Sciences. Piscataway, NJ: IEEE.

Köse, U. (2013). A blended learning model supported with Web 2.0 technologies.

    TOJSAT : The Online Journal of Science and Technology, *3*(2), 18-27.

Krashen, S. (1982). Principles and practice in second language acquisition. Retrieved

    from

    http://www.sdkrashen.com/Principles_and_Practice/Principles_and_Practice.pdf .

Lainema, T. (2009). Perspective making. Constructivism as a meaning-making structure

    for simulation gaming. *Simulation & Gaming*, *40*(1), 48-67.

McHaney, R. (2011). *The new digital shoreline. How web 2.0 millennials are*

    revolutionizing higher education. Stylu Publishing: Virginia.

McLellan, E., MacQueen, K., & Neidig, J. (2003). Beyond the qualitative interview: Data

    preparation and transcription. *Fields Methods*, *15*, 62-84.

Meloni, J. (2010, October 31). Technologies for teaching online: strategies and pitfalls. *The Chronicle of Higher Education*, *57*(11) pNA.

Meyers, S. A. (2008). Using transformative pedagogy when teaching online. *College Teaching*, *56*(4), 219-224.

Murray, J. (2006). Cybernetic circularity in teaching and learning. International. *Journal of Teaching and Learning in Higher Education*, *18*(3), 215-221.

Mutonyi, H., & Norton, B. (2007). ICT on the margins: lessons for Ugandan education. *Language and Education*, *21*(3), 264-270.

Newberry, B. (2001). Media richness, social presence and technology supported communication activities in education. Retrieved from: http://learngen.org/Resources/lgend101_norm1/200/210/211_3.html.

Norton, B., & Toohey, K. (2001). Changing perspectives on good language learners. *TESOL Quarterly*, *35*(2), 307-322.

Norton Peirce, B. (1995). Social identity, investment, and language learning. *TESOL Quarterly, 29*(1), 9-31.

Oliver, R. (2000). When teaching meets learning: design principles and strategies for Web-based learning environments that support knowledge construction. Retrieved from: http://www.ascilite.org.au/conferences/coffs00/papers/ron_oliver_keynote.pdf.

Ryan, G., W., & Russell, B. H. (2003). Techniques to identify themes. *Field Methods*, *15*, 85-109.

Shin, M., & Lee, Y. (2009). Changing the landscape of teacher education via online teaching and learning. Technology usage in the classroom. *Techniques: Connecting Education and Careers*, *84*(1), 32-3.

Schumann, J. H. (1976). Social distance as a factor in second language acquisition. *Language Learning*, *26*, 135–143.

Silverman, D. (2010). What you can (and can't) do with qualitative research. In Silverman, *Doing qualitative research* (pp. 5-16). London, SAGE Publications.

Sook Lee, J. (2006). Exploring the relationship between electronic literacy and heritage language maintenance. *Language Learning & Technology*, *10*(2), 93-113.

Stepp-Greany, J. (2002). Student perceptions on language learning in a technological environment: implications for the New Millennium. *Language Learning & Technology*, *6*(1),165-180.

Stobaugh, R. R., McDonald, M., Tassell Maddux, J. L., Gibson, C.D., & Dodge, B. (2010). Student teacher use of technology to facilitate teaching and learning. *Proceedings of Society for Information Technology & Teacher Education International Conference 2010* (pp. 1666-1673).

Tang, J., Zhao, Y., & Zhang, P. (2012, February 7-10). Moderating effects of perceived affordances on users' adaptive media use. iConference, Toronto, Ontario, Canada.

Teo, T. (2009). Modeling technology acceptance in education: a study of pre-service teachers. *Computers in Education*, *52*, 302-312.

Titus, J. (2012). Creating an online assessment test for heritage learners of Russian. *Heritage Language Journal*, *9*(2), 85-107.

Wise, A. J., Chang, T., & Del Valle, R. (2004). The effects of teacher social presence on student satisfaction, engagement and learning. *Journal of Educational Computing Research*, *31*(3), 247-271.

Appendix A - Guiding Questions for Teachers

- Describe your professional development experience with learning about digital tools for your HL classes.

- How long have you been working with digital tools for your HL classes?

- What types of digital tools do you usually use to support your HL classes? Why these tools?

- What do you think are some of the advantages and potentials of using these technologies for your HL classes?

- What are some challenges you have faced using these tools?

- Describe the effects of using these tools for your HL classes. How have they impacted your planning? Your students' access to resources? The ability to communicate beyond the time and space of your lessons?

- Can you provide an example of how you have used either a blog or a wiki in your HL classroom?

Appendix B - Guiding Questions for Students

- How long have you been a student in your HL school?

- What level do you currently attend?

- Describe, in your own words, the typical activities you complete in your HL classroom?

- Describe any activity that you have been engaged in, recently, in your HL classroom that require the use of digital (Internet) tools.

- How have you found these activities to help you learn the language?

- Describe how you have used the tools while in the HL classroom.

- Describe how you have used the tools while at home, as homework support or to complete group work, or research assignments.

- What do you find appealing about using these tools in your HL classroom? Why?

- What do you find challenging? Why?

- Do you feel that using these digital tools in your HL classroom has impacted your desire to learn the language? Has it facilitated your studying of the language? Has it increased your interest? If so, how? If not, why not?